AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.1 Transport Assessment

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

Document Ref: 6.3.22.1

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.1 Transport Assessment

PINS REF.: EN020022

DOCUMENT: 6.3.22.1

DATE: 14 NOVEMBER 2019

WSP

WSP House

70 Chancery Lane

London

WC2A 1AF

+44 20 7314 5000

www.wsp.com

DOCUMENT

Document	**6.3.22.1 Environmental Statement – Volume 3 – Appendix 22.1 Transport Assessment**
Revision	001
Document Owner	WSP
Prepared By	L. Jones / H. Shrimpton
Date	13 November 2019
Approved By	C. Williams
Date	13 November 2019

CONTENTS

TABLES

PLATES

APPENDICES

EXECUTIVE SUMMARY

This TA has assessed the impacts of the AQUIND Interconnector Project (referred to as the Proposed Development) on the transport network. The assessment has primarily focussed upon the construction phases of the Proposed Development due to this phase being forecast to have the most significant impact on the local transport networks, albeit temporarily.

The indicative construction programme is proposed to extend over three years between 2021 and 2024. The installation of the Onshore Cable Route is scheduled to start in the third quarter of 2021 and continue for 27 months to Q3 2023.

The majority of the Onshore Cable Route will be constructed utilising an open cut trench method. The cable ducts will be installed and the trenches reinstated before the cables are pulled through the ducts and connected at jointing bays. The installation of ducts minimises the duration of trenching operations, and allows highways to be reinstated more quickly.

A Framework Traffic Management Strategy (FTMS) has considered the construction programme for each individual section of the Onshore Cable Route (OCR) in order to ensure that disruption is minimised close to sensitive receptors and during busy periods. This is the key mitigation to the impacts reported within this TA.

An Outline Construction Traffic Management Plan (CTMP) sets out the construction methodology and framework for managing construction traffic associated with the Proposed Development.

The SRTM has been used to forecast the impacts of the of the traffic management proposals associated with the OCR. As a worst-case scenario, six individual areas of traffic management have been modelled simultaneously along the length of the OCR (as agreed with the Local Highway Authorities).

The SRTM outputs have been used to assess the impacts on the wider network of the redistribution of traffic caused by the six sections of traffic management. In addition, the outputs have been used to undertake extensive local junction modelling to further assess the temporary impacts of the OCR construction on the highway network in the study area.

Impacts on links within the wider highway network have been assessed through a combined qualitative and quantitative approach. Links for further assessment were identified based on the relative change in traffic flow and volume to capacity ratio on the link compared with the Do Minimum forecast. This assessment considered both the temporary change in forecast traffic flows, and the street typology to assess the relative appropriateness of links for traffic redistribution.

A local link assessment has been undertaken on areas where traffic management proposed the reduction of dual carriageway links to single lane operation for short periods and distances.

The assessment demonstrated that the flows on the assessed links are lower than DMRB standard capacities in the majority of cases. In addition, forecast link flows decrease in the 'Do Something' scenarios when compared to the Do Minimum as a result of traffic redistribution. Therefore the impacts are considered to be minimal and temporary.

The Strategic Modelling outputs have been used to undertake more detailed local modelling of the highway network along the route of the OCR, along with areas of the network likely to be affected by diverted traffic.

The majority of junctions across the study area experience either an improvement (through redistribution of traffic) or little/no change during the onshore cable route works. Those junctions that are operationally worse are the junctions that are likely taking the bulk of redistributed traffic or have significant traffic management in place which alters the junction considerably. It should be noted that the changes to the operation of the junctions (both positive and negative) are only temporary with all junctions returning to their normal levels of operation following the completion of the works.

An assessment has been carried out on links where it is anticipated that shuttle working temporary traffic signals will be required to control opposing traffic flow due to lane closures.

The assessment of the likely operation of the shuttle working traffic signals has indicated that the queuing and delay expected on each of the links is unlikely to be severe and can be accommodated within the length of each link.

During construction of the OCR some existing bus stops may need to be closed depending upon the exact location within the carriageway or footway. Where this is required, a temporary bus stop will be provided as close as possible to the original location, taking into account the highway safety of all road users.

Where impacts are identified along the OCR, temporary suitable alternative or diversionary routes will be put in place. The FTMS sets out the arrangements for footway and cycle route diversions and closures including relevant mitigation and parameters within which contractors can operate close to footways and cycleways.

The assessment has shown that, whilst there are localised areas on the highway network that show increased traffic levels and associated congestion, the redistribution of traffic does not generate severe impacts in any location. Any impacts are temporary and traffic management is shown to operate effectively by maintaining traffic flow whilst enabling construction works to be undertaken. Identified impacts will be managed effectively through the combined implementation of the programme set out in the FTMS and measures contained within the Outline CTMP.

APPENDIX 22.1 TRANSPORT ASSESSMENT

1.1. INTRODUCTION

1.1.1. BACKGROUND

1.1.1.1. This Transport Assessment (TA) has been prepared by WSP on behalf of AQUIND Limited (the 'Applicant') to accompany an application (the 'Application') for a Development Consent Order (DCO) submitted to the Secretary of State ('SoS') for Business, Energy and Industrial Strategy ('BEIS'). The Application relates to the UK elements of AQUIND Interconnector, which constitutes the Proposed Development.

1.1.1.2. The purpose of the Project is to make a significant contribution towards increasing the cross-border capacity between the UK and France providing a net transmission capacity of 2,000 megawatts ('MW'). Greater cross-border transmission capacity improves competition in energy markets, delivers security and flexibility of energy supply in both countries as well as helping to tackle climate change by enabling countries to integrate more renewable energy sources like solar and wind in their electricity supply.

1.1.1.3. In broad terms, the Proposed Development will comprise the following components:

- The Marine Cable consisting of two HVDC circuits from the boundary of the UK Exclusive Economic Zone ('EEZ') to Eastney in Portsmouth;
- Jointing of the HVDC Marine Cables and the HVDC Onshore Cables;
- The Onshore Cable consisting of two HVDC Circuits from Eastney to the Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure;
- HVAC Cables, and associated infrastructure connecting the Converter Station to the National Electricity Transmission System at Lovedean Substation and;
- Fibre Optic Cable('FOC') together with each of the HVDC and HVAC Circuits and associated infrastructure.

1.1.1.4. The Proposed Development is to be carried out in part within a maximum parameter design envelope (the Converter Station Area and Optical Regeneration Stations) and in part within limits of deviation (the HVAC Cable, Onshore Cable and the Marine Cable).

1.1.1.5. On 19 June 2018 the Applicant submitted a request to the SoS for a direction pursuant to section 35 of the PA 2008 that the Proposed Development is to be treated as development for which development consent is required.

1.1.1.6. The SoS, being satisfied that the relevant legal requirements were met and of the view that the Proposed Development is by itself nationally significant, issued a direction on 30 July 2018 directing that the Proposed Development, together with any development associated with it, is to be treated as development for which development consent is required.

1.1.1.7. This TA assesses the nature and extent of the likely transport impacts arising from the construction, operation, and decommissioning of the Proposed Development. Whilst there are localised impacts due to construction over the short periods of time for which works are ongoing in a particular location, the TA has been prepared to provide assurance as to the likely level of impact during the peak periods of construction on the busiest parts of the highway network, as well as considering the operational and decommissioning impacts. The assessment of the traffic impacts should therefore be considered as a robust assessment of the worst-case, taking into account the measures to manage impacts to be implemented in connection with the works through the approval of traffic management strategies in accordance with the DCO.

1.1.1.8. The scope of the TA has been discussed and agreed with both Hampshire County Council (HCC) and Portsmouth City Council (PCC) in their capacity as local highway authorities for the areas in which the Proposed Development is located in advance of the submission of the Application. Highways England have also been consulted in their role as Highway Authority for the Strategic Road Network (SRN). Sections of the SRN form part of potential diversionary routes for traffic, as discussed later in the report, however the Proposed Development and the works to construct the Proposed Development are not located on the SRN. Further detail regarding the consultation undertaken with the relevant highway authorities on the scope of the assessment is provided at Chapter [2] of this TA.

1.1.1.9. This Transport Assessment should be read in conjunction with the accompanying Outline Construction Traffic Management Plan (CTMP) (discussed at Chapter [8] of this TA) and the Framework Traffic Management Strategy (FTMS) (discussed at Chapter [9] of this TA) both of which provide further details of the mitigation and management measures to be put in place in order to minimise the disruption of the works to construct the Onshore Cable.

1.1.1.10. A full description of the Proposed Development is provided in Chapter [1.3] of this Report.

1.1.1.11. The main elements of the UK side of the AQUIND Interconnector Arrangement are shown in Plate 1 below.

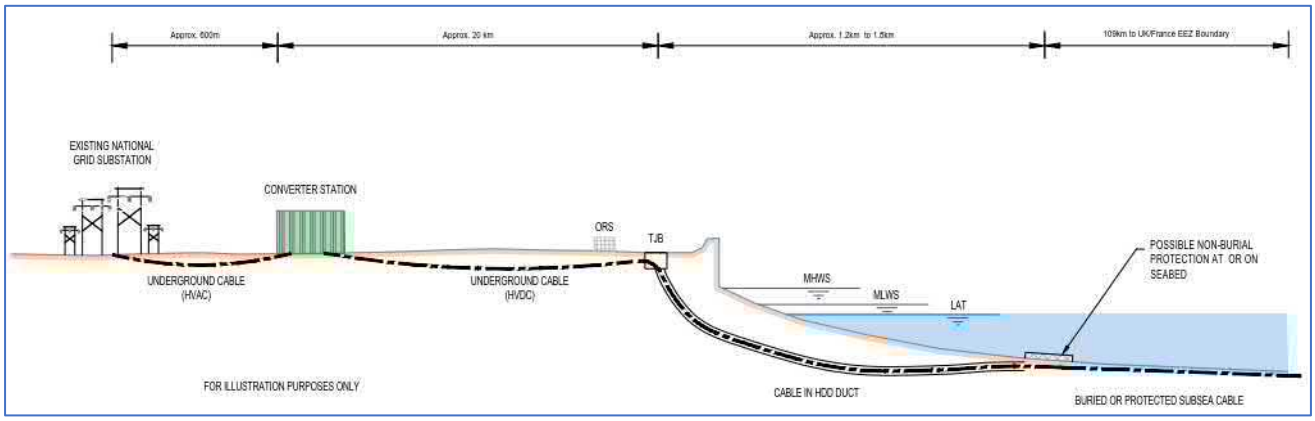


Plate 1 - AQUIND Interconnector Arrangement – UK-side

1.1.2. STUDY AREA

1.1.2.1. The study area for this assessment is proposed to be inclusive of the Converter Station Area, the Onshore Cable Route, and the proposed routing options for construction traffic to each component of the Proposed Development, as well as any adjoining / parallel roads likely to be impacted by construction, for example, diversionary traffic routes.

1.1.2.2. For the purpose of the assessment, the route will be split into two sections:

- The construction of the HVDC cables within the Onshore Cable Route (including proposed routing options for construction traffic to each component of the project, as well as any adjoining / parallel and nearby roads likely to be impacted); and
- The proposed construction and operational access route for the Converter Station.

1.1.2.3. All roads contained within the study area fall under the control of HCC, PCC or Highways England. The

1.1.2.4. The study area is shown in Plate 2. The routes within the study area are discussed further in Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3).

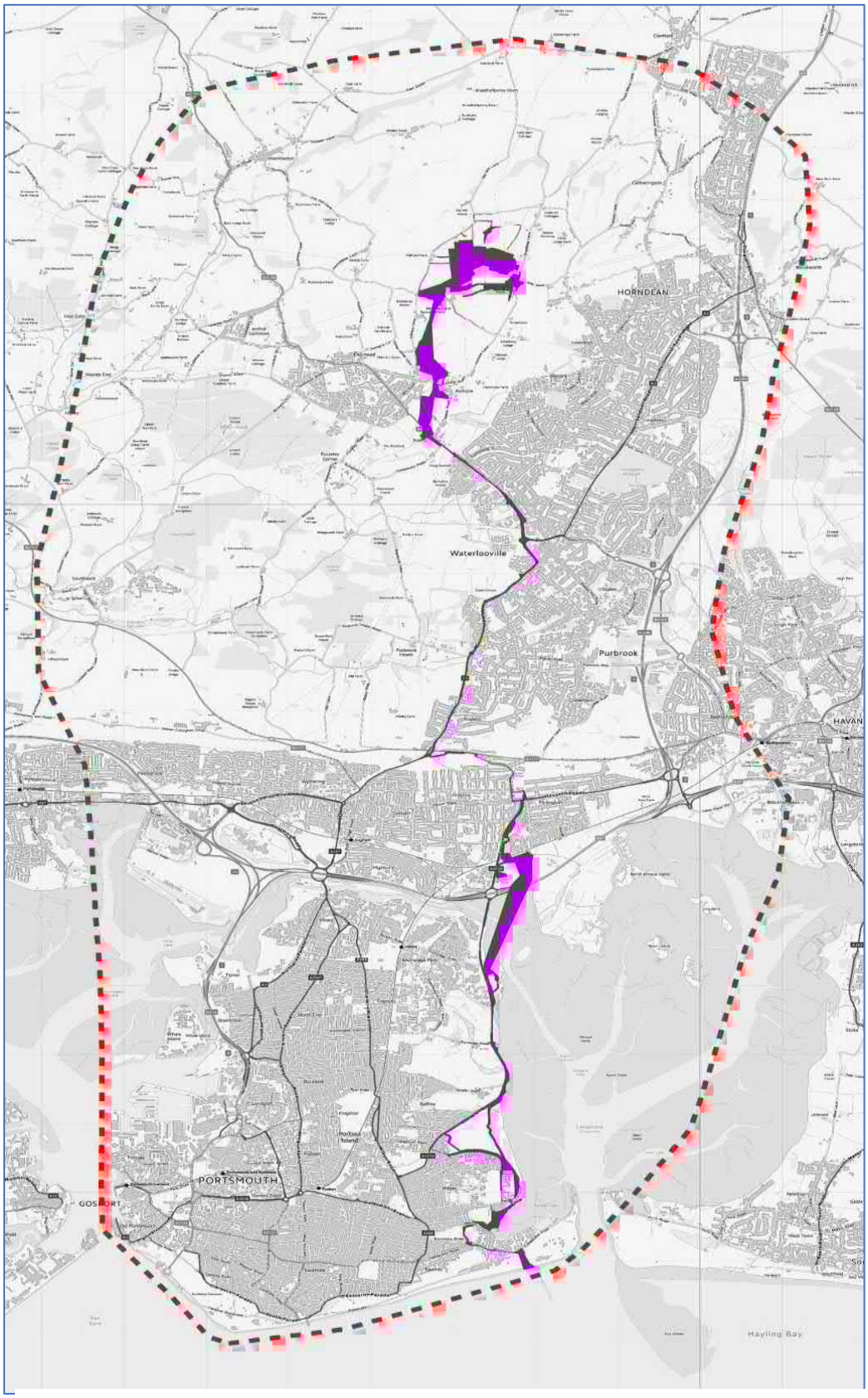


Plate 2 – Study Area

1.1.3. ONSHORE CABLE ROUTE

1.1.3.1. The Onshore Cable Route will encompass the following routes, which are detailed further in **Chapter [3].**

Hampshire

- Broadway Lane
- Anmore Road
- B2150 Hambledon Road
- A3 Maurepas Way
- A3 London Road

Portsmouth

- A3 London Road
- B2177 Portsdown Hill Road
- Evelegh Road
- Farlington Avenue
- A2030 Havant Road
- Fitzherbert Road
- A2030 Eastern Road
- Moorings Way
- Moorings Way – Furze Lane Bus Link
- Furze Lane
- Longshore Way
- Locksway Road
- Bransbury Road
- Kingsley Road
- Yeo Court
- Henderson Road
- Fort Cumberland Road

1.1.4. PROPOSED CONSTRUCTION AND OPERATIONAL ACCESS ROUTE

1.1.4.1. It is anticipated that all construction traffic movements will travel to and from the Converter Station via the following route, as identified within the Outline CTMP:

- B2149 Dell Piece West between Junction 2, A3 (M) and A3 Portsmouth Road;
- A3 Portsmouth Road between the junction with B2149 Dell Piece West / Catherington Lane and the junction with Lovedean Lane;
- Lovedean Lane between the junction with A3 Portsmouth Road and the junction with Day Lane;
- Day Lane; and
- Broadway Lane between the junction with Day Lane and Lovedean Substation.

1.1.4.2. This is also shown graphically in Plate 3.

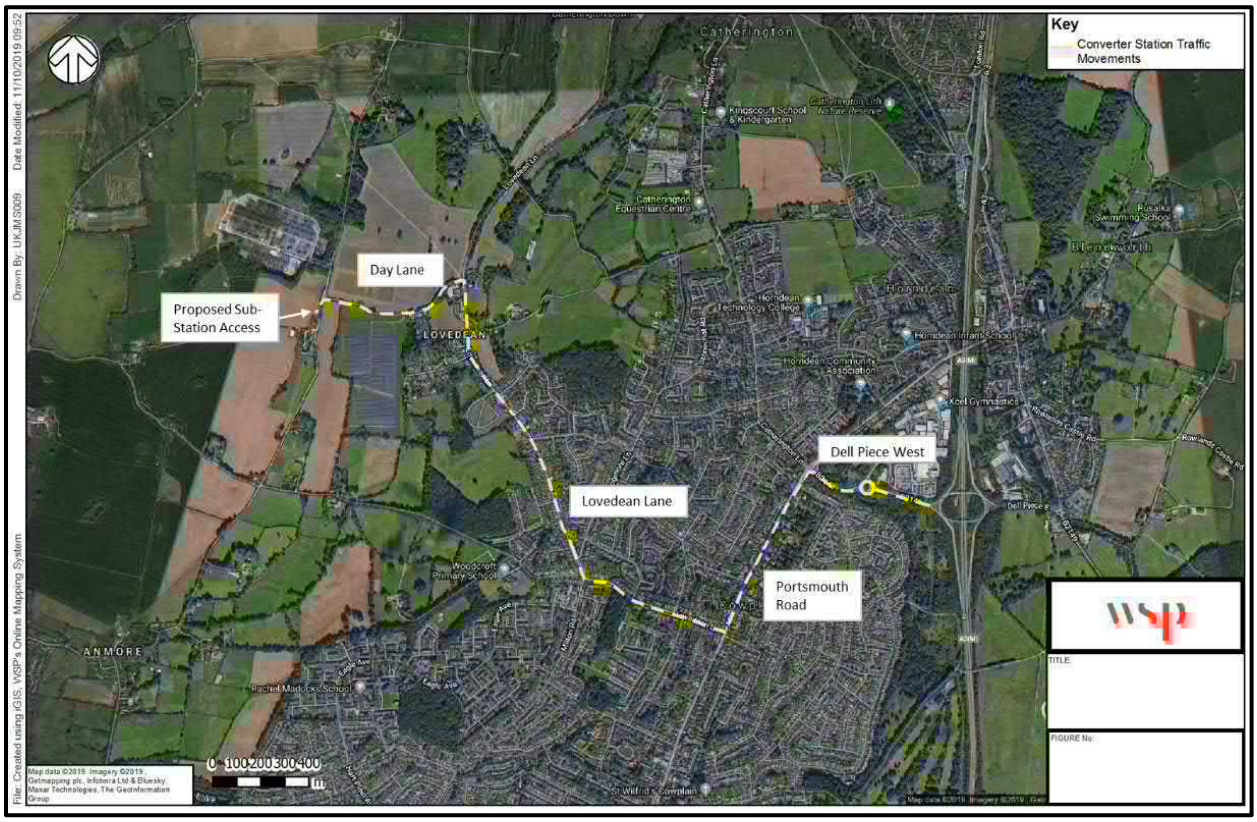


Plate 3 - Converter Station Traffic Movements

1.1.5. INDICATIVE PROGRAMME

1.1.5.1. The onshore construction programme is anticipated to run from late 2021 to mid-2024. A breakdown is shown in **Table 1** below:

Table 1 - Indicative Onshore Construction Programme

Activity	Indicative Programme
Converter Station Construction	Q3 2021 – Q1 2024
Onshore HVDC Route Construction	Q3 2021 – Q4 2022
Onshore HVDC Cable Installation	Q4 2022 – Q3 2023
Converter Station Commissioning	Q4 2023 – Q2 2024

1.1.5.2. Further details of this programme and the construction process are provided in **Chapter [8]**.

1.1.6. REPORT STRUCTURE

1.1.6.1. Following the introductory chapter, the report is structured as follows:

- Section 1.2 – Consultation and Scoping
- Section 1.3 – Proposed Development
- Section 1.4 – Local Policy Review
- Section 1.5 – Existing Conditions – Local Highway Network
- Section 1.6 – Existing Conditions – Sustainable Transport Network
- Section 1.7 – Highway Safety
- Section 1.8 – Outline CTMP Summary
- Section 1.9 – FTMS Summary
- Section 1.10 – Traffic Assessment Methodology
- Section 1.11 – Strategic Traffic Assessment Results
- Section 1.12 – Local Junction Modelling Results
- Section 1.13 – Impacts on Sustainable Transport Networks
- Section 1.14 – Summary and Conclusions

1.2. CONSULTATION AND SCOPING

1.2.1. OVERVIEW

1.2.1.1. This chapter provides a summary of the extensive consultation and scoping exercise undertaken in preparation for the submission of this DCO application. The process

of scoping out this TA and the wider planning application has been comprehensive and lengthy.

1.2.1.2. The Applicant has consulted and continues to consult with statutory and non-statutory stakeholders who are likely to be affected by, or interested in, the Proposed Development. This has included consulting on the transport and access impacts of the Proposed Development. A summary of the various stages of consultation is provided below:

- Non-statutory consultation: early 2018;
- TCPA EIA Scoping – February 2018;
- EIA Scoping (SoS) – October 2018;
- Statutory Consultation (including Preliminary Environmental Impact Report (PEIR)) – February to April 2019;
- Post PEIR Consultation;
- Transport Assessment Scoping Consultation; and
- Sub-Regional Transport Model (SRTM) Coding Note.

1.2.1.3. Summarised below are the main elements of the consultation process with regards to Traffic and Transport.

1.2.2. SCOPING OPINION

1.2.2.1. As detailed above, a Scoping Opinion was received by the Applicant from PINS (on behalf of the SoS) on 7th December 2018 including formal responses from statutory consultees and the Marine Management Organisation.

1.2.3. CONSULTATION PRIOR TO PEIR

1.2.3.1. Consultation is a key apart of the DCO process in relation to highways and transport given the extent of the Onshore Cable Route that will be constructed within highway land. The following consultation was undertaken prior to completion of the PIER:

- HCC: Written response dated 26/03/18 requesting further information on the Proposed Development, followed by meetings on the 15/05/18 and 22/05/18 to provide general project updates / overview;
- PCC: Meetings on the 21/05/18 and 07/11/18 to provide general project updates;
- Highways England: Meeting on 22/05/18 to discuss the project in general.

1.2.4. PRELIMINARY ENVIRONMENTAL INFORMATION REPORT (PEIR)

1.2.4.1. The PEIR was published in February 2019. The purpose of the report was to present a preliminary view of the likely significant effects associated with the proposals for the Proposed Development at the time of the consultation, to enable members of the public, Local Authorities, statutory bodies and persons with interests in the land which may be affected to provide feedback on the proposals whilst they were continuing to be developed.

1.2.4.2. The PEIR included a Transport and Access chapter which set out preliminary information regarding the impacts associated with onshore Traffic and Transport as a result of the Proposed Development. It served as a high level initial assessment, identifying the likely locations of greatest impacts and setting out the likely mitigation measures to be applied.

1.2.4.3. The PEIR also summarised initial Scoping Opinion responses from HCC and PCC Local Highway Authorities and statutory consultees including Highways England with details of how the Applicant and Application would respond to the points raised.

1.2.4.4. The PEIR provided details of the proposed construction methodology and programme and measures identified to minimise the impacts on the local highway network.

1.2.5. STATUTORY CONSULTATION

1.2.5.1. Consultation responses on the PEIR were received from HCC and PCC on 29/04/19. The key topics raised within these consultation responses are summarised below:

- Details required of the site access junction;
- Further information needed on traffic management proposals along the Onshore Cable Route;
- Additional information requested on how streetworks will be implemented in relation to the New Road and Streetworks Act 1991;
- Committed transport schemes should be fully considered along the A3 corridor;
- Additional assessment required of impact on pedestrians, cyclists and public transport users;
- Traffic analysis needs to consider the wider-scale impacts of construction of the Onshore Cable Route;
- Construction programme should be discussed and agreed with HCC and PCC.

1.2.6. POST PEIR CONSULTATION

1.2.6.1. A series of further meetings have been held with key stakeholders between consultation feedback on the PEIR and submission of the DCO. Overall, these meetings aimed to either provide responses to queries raised by consultees and agree the scope of the Transport Assessment, which has been used to inform this

Report. The scope of the TA, FTMS and CTMP respond to statutory consultation comments as required.

1.2.6.2. The following consultation was undertaken post PEIR consultation:

- Highways England: Meeting held on 31/05/19 to provide general project update and discuss scope of Transport Assessment;
- HCC: Meeting held on 20/06/19 to discuss Transport Assessment Scoping Note;
- PCC: Meeting held on 03/07/19 to discuss Transport Assessment Scoping Note;
- HCC: Meeting on 10/07/19 to discuss SRTM Coding Note;
- Highways England: Meeting held on 11/07/19 to discuss HDD methodology for installing Onshore Cable Route under the A27;
- PCC: Meeting to provide on 22/08/19 to provide general update on FTMS and results of SRTM modelling;
- First Group: Meeting to discuss Proposed Development and Onshore Cable Route route through Furze Lane bus link;
- HCC: Meeting on 23/08/19 to discuss initial results from SRTM modelling;
- PCC: Meeting on 10/09/19 and 08/10/19 to discuss FTMS, Outline CTMP and SRTM modelling results; and
- HCC: Meeting on 13/09/19 and 02/10/19 to discuss FTMS, Outline CTMP and SRTM modelling results.

1.2.7. TA SCOPING NOTE

1.2.7.1. The TA Scoping Note was prepared in June 2019. The note set out the proposed methodology for assessing the impacts of the Proposed Development and Onshore Cable Route. The Scope also set out the proposed study area, and the use of the SRTM to model and test the impacts on the local highway network.

1.2.7.2. The TA Scoping Note and was agreed with PCC and HCC through meetings and discussions as detailed above. The TA Scoping note is provided at **Appendix A**.

1.2.8. SRTM CODING NOTE

1.2.8.1. In addition to the TA Scoping Note, a coding note was prepared detailing the scenarios proposed to be tested within the Sub-Regional Transport Model in order to forecast the impacts of the Proposed Development on the highway network across the study area. The Coding Note was agreed with PCC and HCC.

1.2.8.2. This identified the six areas of Traffic Management to be tested on the network concurrently in order to effectively simulate a robust worst-case scenario in terms of traffic impacts. Further details of the SRTM modelling is provided at **Chapter [10]**. The SRTM Coding Note is provided at **Appendix B**.

1.3. PROPOSED DEVELOPMENT

1.3.1. OVERVIEW

1.3.1.1. This chapter provides an overview of the development proposals associated with the AQUIND Interconnector and a full description of the Proposed Development – during the construction, operational and decommissioning stages. The chapter includes details of the complex construction process and programme as this is a key element of the development that has been assessed within this report. Also provided is an overview of the Operational process and a summary of the Decommissioning stage.

1.3.1.2. The Applicant is proposing to construct and operate an electricity interconnector between France and the UK known as AQUIND Interconnector ('the Project').

1.3.1.3. The Project comprises a new marine and onshore High Voltage Direct Current ('HVDC') power cable transmission link between Normandy in France and Eastney, Hampshire, converter stations in both England and France and infrastructure necessary to facilitate the import and export of electricity between the high voltage alternating current ("HVAC") electricity transmission networks of both countries as well as Fibre-Optic Cables ('FOC') and associated infrastructure necessary for their operation.

1.3.1.4. The Project will be approximately 238 km in length and comprise the following Marine and Onshore components in France and UK:

- High Voltage Direct Current ('HVDC') Cables (Marine);
- HVDC Cables (Onshore);
- Converter Stations;
- High Voltage Alternating Current ('HVAC') Cables (Onshore);
- Fibre-Optic Cables (Marine and Onshore); and
- Associated infrastructure.

1.3.1.5. In broad terms, the Proposed Development will comprise the following components:

- The Marine Cable consisting of two HVDC circuits from the boundary of the UK Exclusive Economic Zone ('EEZ') to the UK at Eastney in Portsmouth;
- Jointing of the HVDC Marine Cables and the HVDC Onshore Cables;
- The Onshore Cable consisting of two HVDC Circuits from Eastney to the Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure;

- HVAC Cables, and associated infrastructure connecting the Converter Station to the National Electricity Transmission System at Lovedean Substation and;
- Fibre Optic Cables ('FOC') installed together with each of the HVDC and HVAC Circuits and associated infrastructure.

1.3.1.6. As outlined above the Proposed Development is to be carried out in part within a maximum parameter design envelope (the Converter Station Area and Optical Regeneration Stations) and in part within limits of deviation (the HVAC Cable, Onshore Cable and the Marine Cable).

1.3.2. DEVELOPMENT ENVELOPE

1.3.2.1. The Proposed Development envelope consists of the Order Limits, identified by the red line on the Site Location Plan within which the Proposed Development is to be located. The Order Limit is also shown on the Works Plans (document reference 2.4).

1.3.2.2. A maximum parameter envelope and design principles are utilised for a number of key project components. This is to ensure a robust assessment can be carried out taking into account the maximum built form of elements of the Proposed Development, whilst ensuring sufficient design flexibility for the chosen contractor to optimise the final design in accordance with those maximum parameters and design principles to enable 'worst case' assessment.

1.3.2.3. In respect of the Onshore Cables, this approach has been taken to ensure there is sufficient flexibility provided for the installation to be carried out around other utilities, whilst ensuring from the outset it is clearly known what the maximum area is that may be affected by this element of the Proposed Development. In certain areas, where Horizontal Direction Drilling ('HDD') is to be used to install the Onshore Cables, a wider limit of deviation is provided for to ensure the full extent of the area beneath the surface where the cables may be located is identified.

1.3.3. DEVELOPMENT DESCRIPTION

1.3.3.1. The Onshore Components of the Proposed Development comprise the Converter Station, the Onshore Cable Corridor and the Landfall.

1.3.3.2. The UK Converter Station is proposed to be located adjacent to the existing National Grid Electricity Transmission ('NGET') substation, north-west of the village of Lovedean within the administrative boundary of Winchester City Council ('WCC').

1.3.3.3. The proposed Onshore Cable Route will travel through the administrative boundaries of WCC, Havant Borough Council ('HBC') and PCC, reaching the proposed Landfall location at Eastney, a district in the south-east of Portsmouth.

1.3.3.4. This chapter provides more detail on the development proposals in relation to the areas affected and the Onshore Cable Corridor. Alongside this TA document, an Outline CTMP and a Framework FTMS have been prepared to provide more detail in relation to the management and mitigation of construction traffic and construction works affecting the highway network. These are summarised in **Chapters [8] and [9]** of this TA.

1.3.4. THE CONVERTER STATION

1.3.4.1. The NGET substation is located 1.2 km to the north-west of the village of Lovedean. The substation straddles the administrative boundaries between WCC (western side) and EHDC (eastern side). The town of Waterlooville is located approximately 2.5 km to the south with Denmead located 2 km to the south west.

1.3.4.2. The Converter Station Area spans a number of small fields divided by hedgerows. Individual farm properties are situated to the north, west and south of the Converter Station Area, connected by narrow lanes. The existing Lovedean substation, associated pylons and overhead lines are dominant elements in the landscape of the proposed location and immediate surrounding area. It is located approximately 180m – 200m from the South Downs National Park boundary at its closest point, to the north and west.

1.3.4.3. The location of the Converter Station in relation to the surrounding area is shown in **Plate 4**.

Plate 4 - Location of Converter Station

1.3.5. ONSHORE CABLE CORRIDOR (ORDER LIMIT)

1.3.5.1. This section explains the Order Limit within each section of the Onshore Cable Corridor.

1.3.5.2. A typical cross-section of the cable trench arrangement in the highway is shown in **Plate 5** showing each pair of DC Cables in its own trench. The normal burial depth across agricultural land and open countryside is typically 900 mm to the top of the protection covers. Where practicable, for cable rating integrity a minimum buffer of 2 m on either side of the cable trench to major tree roots will be employed. Where necessary, a spacing of approximately 5 m is maintained between trenches to sure the thermal independence of each circuit resulting in an overall working width of 23 m, which will vary depending on the local environment and selection of cable design.

Plate 5 - Typical Arrangement of HVDC Cable in Road, Verges and Footpaths (all measurements in mm)

1.3.5.3. The Onshore Cable Corridor represents the maximum extent of the area within which the Onshore Cables may be located, otherwise described as the limits of deviation. It is necessary to ensure flexibility for the siting of the Onshore Cables within the limits of deviation so as to ensure statutory undertaker apparatus can be effectively navigated and the installation of the Onshore Cables can be optimised by the chosen contractor following the making of the Order. The final siting will be required to be confirmed for each part of the Onshore Cables in accordance with requirements provided for in the Order.

1.3.5.4. Joint Bays will need to be positioned at approximately 600m to 2,000m intervals along the route. These will be used for pulling the cable through the cable ducts before joining one section of cable to another. The number of joint bays along the length of the cable route is dictated by the length of cable that can fit on a cable drum (the drum-shape reel on which the cable is stored prior to installation) and limits to the pulling tension required to pull the cable through the ducts. Joint Bays are likely to be positioned in highway verges, fields or car parks, where possible, to limit the need for road closures. The distance between Joint Bays will depend on the technique employed by the contractor and therefore flexibility as to the number and location of Joint Bays is sought in the Order.

1.3.5.5. The Order Limit has been split into 10 sections for ease of reference and assessment, which has been followed within this document as follows:

- Onshore Cable Corridor Section 1 – Lovedean (Converter Station Area);
- Onshore Cable Corridor Section 2 – Anmore;
- Onshore Cable Corridor Section 3 – Denmead/Kings Pond Meadow;
- Onshore Cable Corridor Section 4 – Hambledon Road to Farlington Avenue;
- Onshore Cable Corridor Section 5 – Farlington;
- Onshore Cable Corridor Section 6 – Zetland Field and Sainsbury's Car Park;
- Onshore Cable Corridor Section 7 – Farlington Junction to Airport Service Road;
- Onshore Cable Corridor Section 8 – Eastern Road (adjacent to Great Salterns Golf Course) to Moorings Way;
- Onshore Cable Corridor Section 9 – Moorings Way to Bransbury Road; and
- Onshore Cable Corridor Section 10 – Eastney (Landfall).

1.3.5.6. In some locations The Onshore Cable Corridor includes a number of route options. Where a number of options are present, these represent alternate routes which are still being considered due to constraints affecting the cable installations. In general, the Onshore Cable Corridor runs within roads, or at least within the highway boundary. The Cable Corridor Sections are shown in **Plate 6.**

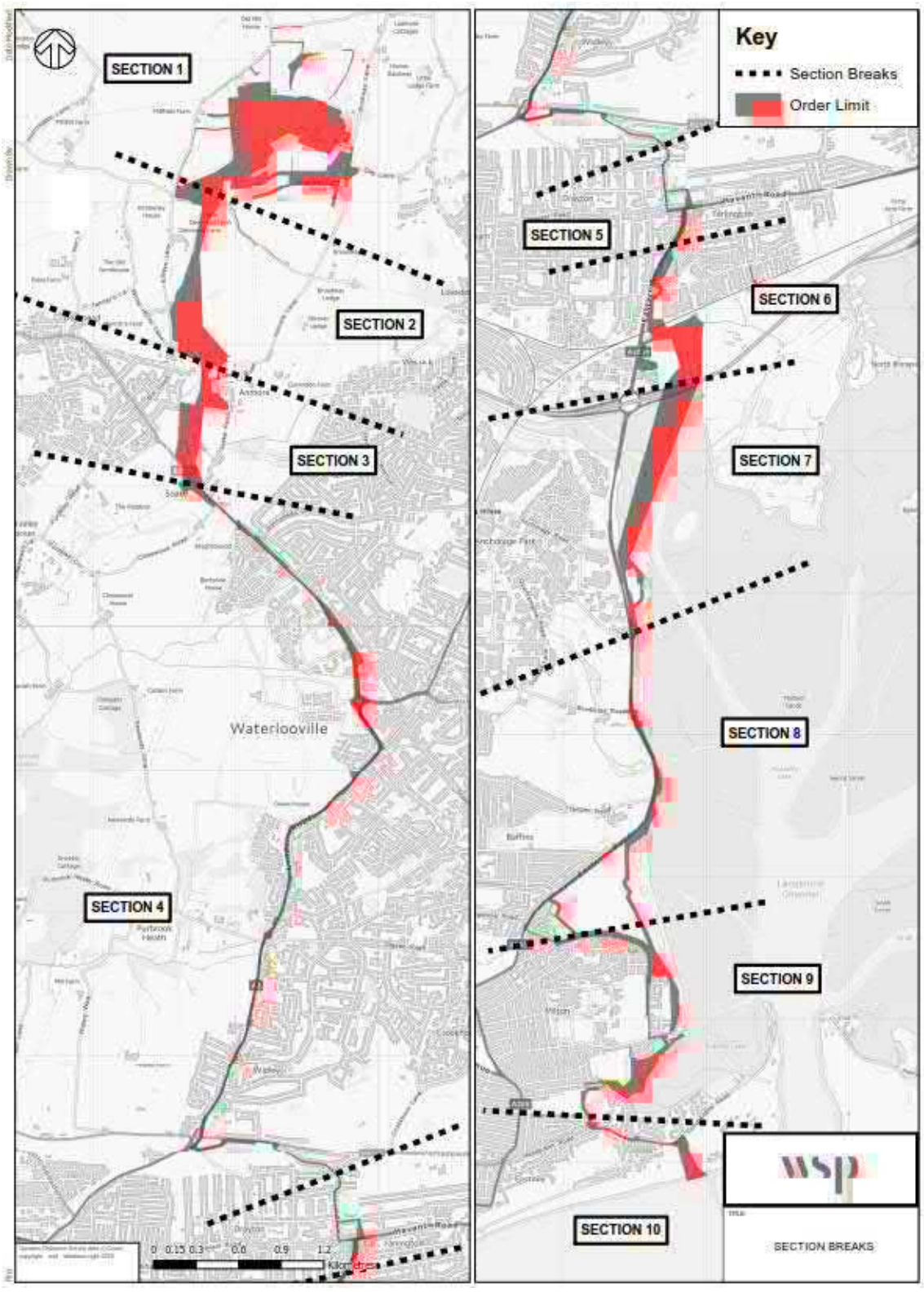


Plate 6 - Onshore Cable Corridor - Section Breakdown

Construction Methodology of Onshore Cable Route

1.3.5.7. During the Construction Stage, there will be a variety of construction zones depending on the phase of work, all of which will require traffic management measures when being completed in or immediately adjacent to roads. The construction zone activities will cover the following:

- Excavation of the trench, installation of the cable ducts and reinstatement of the final grade;
- Excavation of Joint Bays;
- Provision for cable pulling, requiring space for cable drums and winches;
- Cable jointing work; and
- Filling of ducts, if necessary, to maintain thermal performance e.g. at locations of unexpected service congestion.

1.3.5.8. The installation rate for cable ducts is approximately 18 m – 30 m per 10-hour day shift per circuit, on average, within urban areas and approximately 50 m per day in open country. These typical installation rates are per gang per shift and are dependent upon the level of obstacles and utility services encountered within the road or constraints that need to be observed to minimise the impacts during the Construction Stage. At this stage however it is estimated that construction of the Onshore Cable Route within the public highway will progress at a rate of 100m per week per circuit. The construction corridor will generally be 4.0-6.0m and 100-150m long, although can be reduced by use of smaller plant to 2.0-3.0m at local pinch points if required to avoid road closures.

1.3.5.9. The locations of the ducts within the road will be dictated by, amongst other factors, existing services. Where it is necessary to increase installation depth to clear existing services it may be necessary to increase the distance between ducts to avoid de-rating the circuits (i.e. when the cables operate at the maximum temperature and do not achieve the maximum required current carrying capacity).

1.3.5.10. Joint Bays will be positioned in highway verges, fields or car parks, where possible, to limit the need for road closures. It is preferable to avoid the need for the DC Cables to cross the highway to access a Joint Bay location. Typically, it would take approximately 20 working days to complete one joint bay location. This timescale includes the excavation, set-up, cable pulling, jointing, bonding connections, testing and reinstatement (i.e. site cleared and reinstated to its original state). Each excavation will be approximately 15 m x 3 m, with additional space required at ground level for construction, cable installation, jointing and reinstatement, including a 20m x 6m 'compound' during jointing (for approximately one week).

1.3.5.11. There are up to 6 locations along the Onshore Cable Route where the ducts will be installed by HDD / trenchless methods. These locations will not require traffic management measures.

Section 1 - Lovedean

1.3.5.12. The Converter Station will be located adjacent to the existing Lovedean substation and accessed via a new junction from Broadway Lane in the vicinity of the junction with Day Lane.

1.3.5.13. From the Converter Station the proposed Onshore Cable Route runs southwards through fields belonging to Winchester College and the field that lies to the east of Old Mill Road. The cables would be installed via two trenches in this section.

1.3.5.14. Construction traffic associated with either the Converter Station or the Onshore Cable Route within this section is intended to be routed to and from the strategic road network via Junction 2 of A3 (M).

Section 2 – Anmore

1.3.5.15. In this section, the study area generally relates to construction traffic associated with the Converter Station and the Onshore Cable Route. Cable installation will be primarily in agricultural fields. The section is located wholly within Winchester City Council.

1.3.5.16. The impacted public highways in this Section are likely to be at the intersection of the Onshore Cable Route and Broadway Lane and where the OCR is proposed cross Anmore Road to the west of Lavender House.

1.3.5.17. The Onshore Cable Route is anticipated to cross Broadway Lane at approximately 200m east of the junction with Edneys Lane. This will require a 1-day road closure. The Anmore Road/Anmore Lane sections between Soake Road and Broadway Lane are the responsibility of HCC.

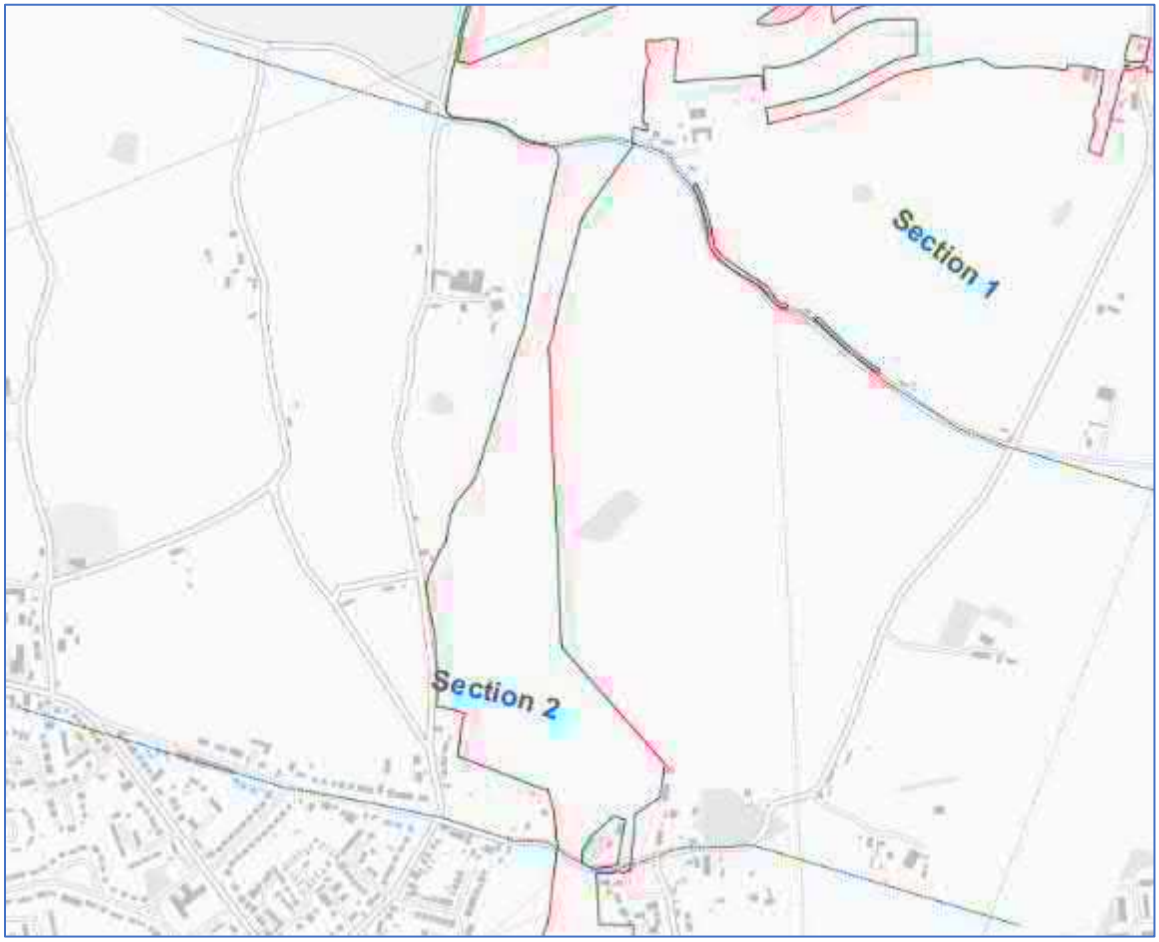


Plate 7 - Order Limit in Section 2

Section 3 – Denmead/Kings Pond Meadow

1.3.5.18. As with Section 2, the Onshore Cable Corridor within Section 3 is contained primarily within agricultural fields. However, there are two limited areas of public highway which are likely to be impacted within this Section. The impacted highway includes both a section of Anmore Lane, and a section of B2150 Hambledon Road. This section is located wholly within Winchester City Council, in Hampshire County Council.

1.3.5.19. The Onshore Cable Corridor runs south from Anmore Road through the Kings Pond Meadow and also comprises the field to the east which will accommodate the northern compound of UK HDD 5. The Onshore Cable Route would then be installed by HDD to the southern compound. Flexibility has been retained as to where the southern compound could be located. It could be located north of Hambledon Road where the Onshore Cable Route would join the B2150 Hambledon Road and run south-easterly towards Waterlooville. If the southern compound is located south of Hambledon Road the Onshore Cable Route will run in a south-easterly direction either within Hambledon Road or the northern extent of the fields south of Hambledon Road before re-joining Hambledon Road and continuing towards Waterlooville.

1.3.5.20. The Onshore Cable Corridor is likely to cross Anmore Road between agricultural fields to the north and south.

1.3.5.21. Within Section 3, the Onshore Cable Corridor includes a section of B2150 Hambledon Road between the point from which the cable exits the agricultural fields, to the junction with Soake Road. A maximum 180m of public highway will be impacted by cable construction in this Section. Each option will require a temporary road closure during construction works.

Plate 8 - Order Limit of Section 3

Section 4 – Hambledon Road to Farlington Avenue

1.3.5.22. This is the longest section of the Onshore Cable Corridor, running from B2150 Hambledon Road between Denmead and Waterlooville and Burnham Road in Farlington.

1.3.5.23. The Onshore Cable Corridor runs predominantly within the Highway Boundary, along the B2150 Hambledon Road. It continues south along the A3 London Road from Maurepas Way roundabout through Waterlooville, Purbrook and Widley and under the B2177 Portsdown Hill Road bridge before turning east up the slip road to Portsdown Hill Road. The Onshore Cable Route will run along Portsdown Hill Road or will run through the car park immediately south of Portsdown Hill Road before

continuing south-east down Farlington Avenue. The section spans Winchester City, Havant Borough (within Hampshire County Council) and Portsmouth City Councils.

1.3.5.24. The route will primarily be impacted by the cable installation process but may also attract some non-HGV construction traffic related to the Converter Station Area. Plate 9 to 11 provide show the order limits of Section 4.

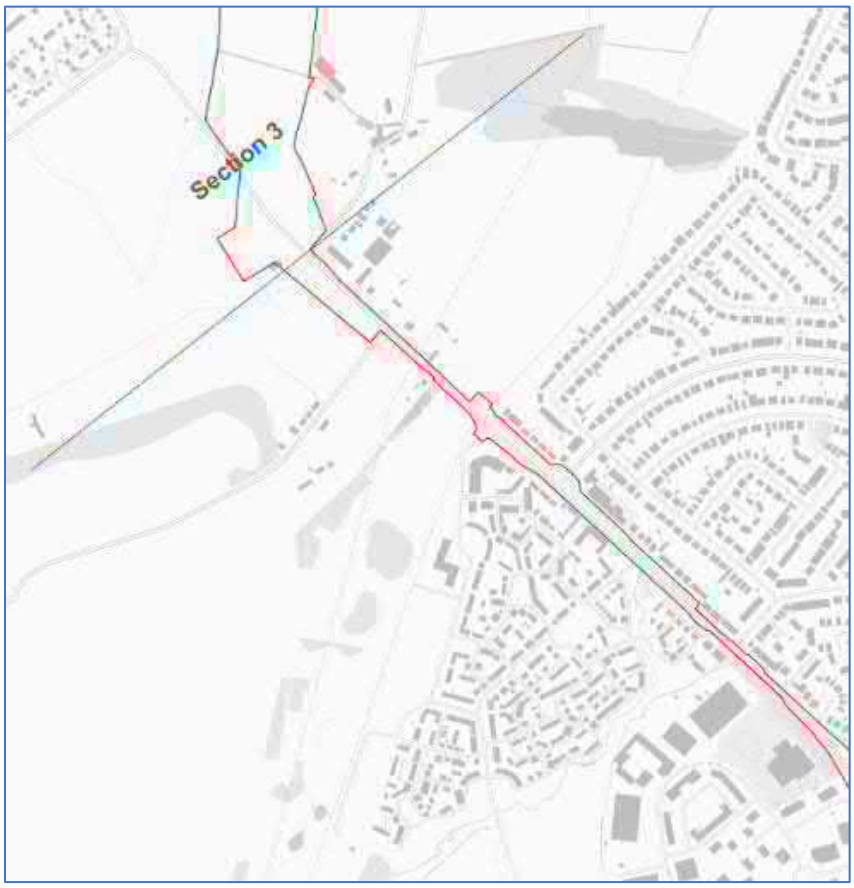


Plate 9 - Order Limit of Section 4 (1 of 4)

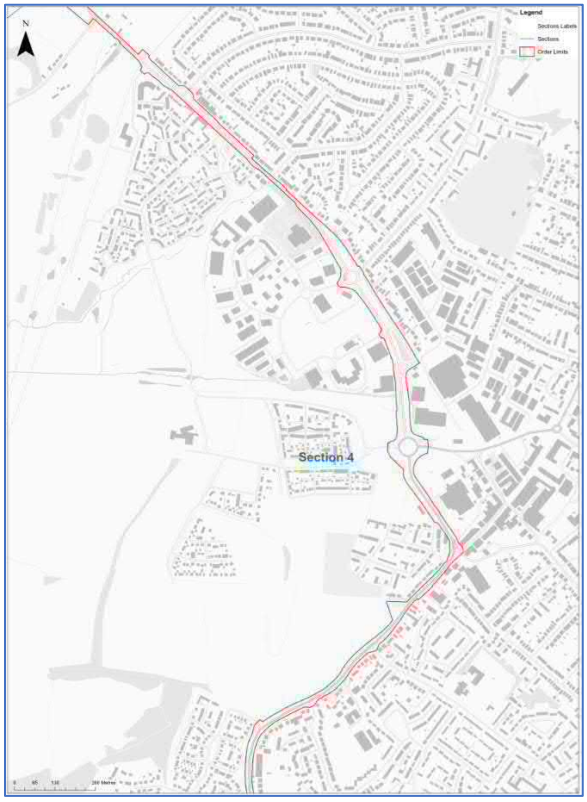


Plate 10 - Order Limit of Section 4 (2 of 4)

Plate 11 - Order Limit of Section 4 (3 of 4)

Plate 12 - Order Limit of Section 4 (4 of 4)

1.3.5.25. AS part of the FTMS, this section has been sub-divided into smaller sub-sections to reflect similar traffic management requirements. Further details of the traffic management to be employed in these sub-sections is provided in Chapter 8 and the FTMS appended to this report.

Section 5 – Farlington

1.3.5.26. Section 5 spans from the junction of B2177 Hambledon Road / Farlington Avenue in the north to the junction of A2030 Eastern Road / Fitzherbert road in the south. The section is located wholly within Portsmouth City Council.

Plate 13 - Order Limit of Section 5

1.3.5.27. Section 5 contains the entirety of Farlington Avenue. The section is approximately 1km long. This section also includes the western section of Evelegh Road, which spans approximately 150m, and links to the Portsmouth Water land that runs parallel to Farlington Avenue and provides an alternative route for one circuit.

1.3.5.28. This section of the route is in close proximity to Solent Infant School on Evelegh Road and Solent Junior School on Solent Road. Farlington Avenue is primarily a residential street, therefore access to properties will be considered in planning for the construction programme and traffic management. Further details are provided in the following chapters.

1.3.5.29. The Order Limits in this location also includes the section of Evelegh Road which spans from the junction with Farlington Avenue in the west to the 70th Portsmouth Scouts Hut in the east, providing an alternative route for one circuit along the Portsmouth Water land that runs parallel to Farlington Avenue. The part of Evelegh Road which is contained within Order Limit also provides the sole vehicular access to Solent Infant School.s.

1.3.5.30. Section 5 also includes parts of Havant Road, A2030 Havant Road and A2030 Eastern Road.

1.3.5.31. The section of Havant Road / A2030 Havant Road which is included in the Order Limit spans from the signal controlled junction of Farlington Avenue / Havant Road to the priority controlled junction of A2030 Eastern Road / Waterworks Road.

1.3.5.32. The section of A2030 Eastern Road contained within Section 5 spans from the signal junction with A2030 Havant Road / Havant Road to the junction with Fitzherbert Road. The part of A2030 Eastern Road that is contained within Section 5 is approximately 600m in length. Zetland Fields, located adjacent to the A2030 Eastern Road is also included within the Order Limit.

Section 6 – Zetland Field and Sainsbury's Car Park

1.3.5.33. The highway network contained within the Cable Corridor in Section 6 is inclusive of Fitzherbert Road between the junction with A2030 Eastern Road and the access to the Car Park of Sainsburys Farlington Superstore. Also included in this section is the part of Sainsburys Car Park which is included in the Cable Corridor. This section is located wholly within Portsmouth City Council.

1.3.5.34. Within the Fitzherbert Road component of Section 6, it is anticipated that construction can be accommodated with the use of single lane closures. The part of Fitzherbert Road contained within Section 6 is approximately 60m long.

1.3.5.35. The Cable Corridor contains a portion of the car park of Sainsburys Farlington Superstore. It is anticipated that partial closure of the car park may be required for the duration of works. Construction taking place in Sainsburys Car Park may require the temporary realignment of the Car Park's internal road. Further details of traffic management in this Section is provided in **Chapter 8**.

1.3.5.36. To the south of Sainsbury Car Park, the Cable Corridor runs to the east of Eastern Road, then southeast through Farlington Playing Field. It then runs south under the A27 and Farlington Marshes.

Plate 14 - Order Limit of Section 6

Section 7 – Farlington Junction to Airport Service Road

1.3.5.37. Section 7 is inclusive of the A2030 Eastern Road between the junction with A27 Havant Bypass and the junction with Airport Service Road. The section is located within Farlington and Baffins, both of which are urban areas of Portsmouth, and includes a large area of Farlington Playing Fields and Langstone Harbour. The Cable Corridor runs southwest back towards Eastern Road from Farlington Marshes at Anchorage Road. The section is located wholly within Portsmouth City Council.

1.3.5.38. As shown in Plate 15, the Cable Corridor lies to the east of Eastern Road in this Section and as such it is anticipated that construction in Section 7 will take place entirely off carriageway, and thus no traffic management measures are deemed necessary in this Section.

1.3.5.39. Access and egress to Farlington Playing Fields will be via the existing access road to the playing fields, accessed from Eastern Road. Flexibility has been retained to use the existing car park north of the Holiday Inn Express to support the construction works within Section 7.

Plate 15 - Order Limit of Section 7 (1 of 2)

Plate 16 - Order Limit of Section 7 (2 of 2)

Section 8 – Great Salterns Golf Course to Velder Avenue/Moorings Way

1.3.5.40. Section 8 is inclusive of the part of A2030 Eastern Road between the signal controlled junction A2030 Eastern Road / Airport Service Road in the north and the priority controlled junction of A2030 Eastern Road / Eastern Avenue in the south. Also included within Section 8 is the entirety of Eastern Avenue. This Section included approximately 2.7km of highway. This section is located wholly within Portsmouth City Council.

1.3.5.41. Whilst the majority of works are to be completed on-carriageway, works here will impact upon the shared-use path alongside Eastern Road which forms part of National Cycle Network Route 222.

1.3.5.42. Three traffic signals junctions intersect the A2030 in Section 8, these are as follows:

- Signal controlled junction of A2030 Eastern Road / Airport Service Road;
- Signal controlled junction of A2030 Eastern Road / Burrfields Road; and
- Signal controlled junction of A2030 Eastern Road / Tangier Road.

1.3.5.43. A2030 Eastern Road in Section 8 grants the sole vehicular access to The Great Salterns Mansion Harvester, and Harbourside Holiday Park, a complex of 69 holiday homes. Both the Harvester and Holiday Park gain access exclusively from the signal-controlled junction of A2030 Eastern Road / Burrfields Road, and thus access will continue to be facilitated through phasing of the construction to ensure access is possible at all times.

1.3.5.44. The access to Langstone Harbour Viewing Car Park may require temporary suspension throughout the course of construction on the southbound carriageway, although where possible it will be maintained by road plating of the access.

1.3.5.45. The section of the Cable Corridor south of Tangier Road is inclusive of multiple options for cable routing, these options are as follows:

- Both circuits exiting the carriageway at the junction of A2030 Eastern Road / Tangier Road, travelling south through the centre of Milton Common. If this option for the Onshore Cable Route used, the off-carriageway nature of this route would mitigate the majority of the need for any traffic management to be implemented south of Tangier Road;
- One circuit exiting the carriageway at the junction of A2030 Eastern Road / Tangier Road, running along the western side of Milton Common and one circuit continuing in the southbound carriageway of A2030 Eastern Road until the junction with Eastern Avenue;

- Both the circuits continuing along the A2030 Eastern Road until the junction with Eastern Avenue, then both circuits travelling in Eastern Avenue down before joining Moorings Way in Section 9

Plate 17 - Order Limit of Section 8 (1 of 2)

Plate 18 - Order Limit of Section 8 (2 of 2)

Section 9 – Moorings Way to Bransbury Road

1.3.5.46. Section 9 encompasses the area between Moorings Way and Bransbury Road at the south-east corner of Bransbury Park. This section is located wholly within Portsmouth City Council.

1.3.5.47. It should be noted that use of Moorings Way will only be required if the Onshore Cable Route is constructed within the A2030 Eastern Road or western side of Milton Common. If the Onshore Cable Route is constructed within the centre of Milton Common, Section 9 will start at the Furze Lane bus link.

1.3.5.48. As with Section 8, the Order Limit with Section 9 contains multiple options for cable routing in the vicinity of Moorings Way. These options are as follows:

- All works accommodated off-carriageway, with the Onshore Cable Corridor re-joining the carriageway at the start of the Furze Lane Bus Link.
- One circuit to be placed in the carriageway on Moorings Way.

1.3.5.49. The part of Moorings Way contained within Section 9 also provides the sole vehicular access to Mooring Way Infant School.

1.3.5.50. Furze Lane Bus Link is a bus only link the provides a connection between Moorings Way and Furze Lane. This link is contained entirely within Section 9, and is approximately 350m in length.

1.3.5.51. To mitigate the closure of the bus link, AQUIND will fund a shuttle bus service for the period of construction works. This will route along Moorings Way and Locksway Road, linking Service 13 route which will continue along Milton Road, therefore ensuring that continued access to the bus service for all existing passengers. The entirety of Furze Lane, is contained within Section 9. This link is approximately 150m long.

1.3.5.52. The Order Limit also runs to the east of the Portsmouth University site, accessed via Longshore Way and making use of the University playing fields. Section 9 contains the entirety of Longshore Way and the section of Locksway Road to the east of the junction of the access road to Milton Piece Allotments. Use of Longshore Way will only be required if the Onshore Cable Corridor uses Portsmouth University playing fields to the east of Furze Lane.

1.3.5.53. The remainder of Locksway Road contained within the Onshore Cable Corridor is intended for use for construction access to Milton Place Allotments only, and as such, it is not anticipated that any traffic management will be required on this link.

1.3.5.54. The Onshore Cable Corridor then runs southwest of Locksway Road around the edge of the allotments.

1.3.5.55. The section of Kingsley Road contained with Section 9 spans from the junction with Ironbridge Lane to the junction with Yeo Court. The Order Limit allows for two options for the Onshore Cable Corridor in Kingsley Road. These options are as follows:

- The first option is for the Onshore Cable Route to intersect Kingsley Road in a north-south orientation, whilst moving from the fields to the immediate north of the carriageway, to those in the south; or
- The second option is for the Onshore Cable Route to run along Kingsley Road in an east-west alignment for an up-to 150m section between Yeo Court and Ironbridge Lane.

1.3.5.56. The Onshore Cable Corridor continues south through Bransbury Park to the west of the skate park before running east of the pavilion to Bransbury Road.

Plate 19 - Order Limit of Section 9

Section 10 – Eastney (Landfall)

1.3.5.57. Section 10 contains the route of the Onshore Cable Corridor between the junction of Henderson / Bransbury Road and Landfall in Fort Cumberland Car Park. This section is approximately 700m long. This section lies wholly within Portsmouth City Council.

1.3.5.58. The highway links included in Section 10 are as follows:

- Henderson Road between the junction with Bransbury Road and the junction with Fort Cumberland Road;

- Fort Cumberland Road between the junction with Henderson Road and the junction with Lumsden Road; and
- The access road providing a connection between Fort Cumberland Road and Fraser Range.

1.3.5.59. The triangular car park on Fort Cumberland Road owned by Portsmouth City Council will be where the marine cables will be joined to the onshore cables.

Plate 20 - Order Limit of Section 10

1.3.6. LANDFALL

1.3.6.1. The Landfall, located at Fort Cumberland car park south of Fort Cumberland Road in Eastney, forms the transitional area between the Onshore Cables and Marine Cables. The Marine Cables will be pulled ashore and jointed to the Onshore Cables at this location at the Transition Joint Bays (TJBs). HDD has been identified as the most suitable cable installation method for the Landfall, as discussed in Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3).

1.3.6.2. Two Optical Regeneration Station(s) (ORS) are to be located within Fort Cumberland car park (one for each circuit). The compound for an ORS would have a maximum size of 18 m by 35 m. Within the compound there will be parking for up to two vehicles to facilitate maintenance of the ORS infrastructure.

1.3.7. PERMANENT ACCESS POINTS

1.3.7.1. There will be two permanent access to the completed construction project. The first will be at the Lovedean Converter Station from Broadway Lane in Denmead and the second to the optical regeneration building off Fort Cumberland Road.

Section 1 - Lovedean convertor station Access

1.3.7.2. To facilitate construction there will be an upgrade of Broadway Lane and Day Lane junction including a construction of a haul road and temporary holding area. The proposed access to the Converter Station for construction and operation will be taken from Broadway Lane and Day Lane, with associated highway improvements in the vicinity of the junction of these two highways. The proposed access junction is shown on Drawing AQD-WSP-UK-OS-DR-Z-200215 included in **Appendix C**.

1.3.7.3. The proposed access junction introduces a gated highway link between Day Lane east of the existing bend and Broadway Lane south of the existing bend. This will provide a managed facility for vehicles entering the site during the construction period with vehicle movements across Broadway Lane able to be marshalled. This link also provides for abnormal load movements and would be retained as a permanent feature (unadopted) to allow future access with such vehicles should it be required. General verge / vegetation clearance will be required on all sides of Broadway Lane to ensure visibility splay requirements are met, with all required land falling within the proposed Order Limit. The triangle of land remaining between the existing Broadway Lane / Day Lane junction and link road will be cleared of vegetation / hedgerow.

1.3.7.4. The location of the access junction has been constrained by existing SSEN underground infrastructure (shown on drawing AQD-WSP-UK-OS-DR-Z-200215) located to the east and west of Broadway Lane. As access is required at all times to both the SSEN infrastructure and Converter Station, the location of the access junction has been based on maintenance works not restricting access to the site.

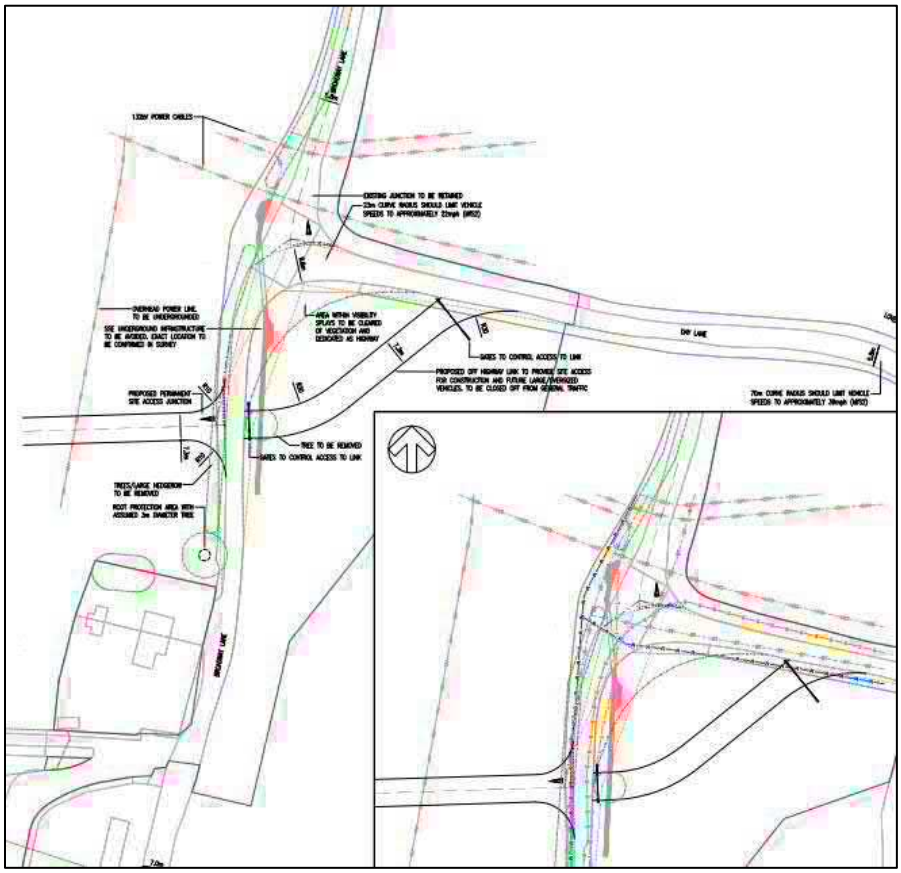


Plate 21 - Lovedean Converter Station Permanent Access Arrangement

1.3.7.5. ATC surveys were completed on Day Lane east of the junction with Broadway Lane in 2018, with a further ATC completed in 2019 on Broadway Lane 300m south of the proposed access. On Day Lane the 85th percentile speed for westbound traffic (approaching the bend) was 31mph. On Broadway Lane the 85th percentile speed for northbound traffic (approaching the junction) was 41mph although noting this location as south of the existing S-bends south of the proposed access location, which are likely to limit vehicle speeds to approximately 33mph (as defined by Manual for Streets 2). The proposed site access provides visibility splays of 2.4m by 45m to the edge of carriageway, which is an appropriate stopping sight distance for 31mph vehicle speeds. When extending this visibility splay along to the centre line of Broadway Lane, where oncoming vehicles will be driving due to the highway width, the actual visibility splay south of the junction is approximately 60m. This is an appropriate stopping sight distance for 37mph vehicle speeds.

1.3.7.6. The Access Road to the Converter Station will be approximately 1.2 km in length, and is expected to be a standard width (no wider than 7.5m) suitable for transportation of Heavy Goods Vehicles ('HGVs') and Abnormal Indivisible Loads ('AIL').

1.3.7.7. During general maintenance and operational outages, access by maintenance staff is typically light vehicles (e.g. cars, vans) and use of HGVs or AILs will only be required in the rare event of a major equipment failure. AIL vehicles would be required on the rare occasion that a transformer, or other similarly large plant, is required to be replaced at the Converter Station.

1.3.7.8. The Access Road is likely to cross up to four of the ten 132 kV oil filled cables associated with the SSEN substation adjacent to the Lovedean Substation. Crossing of SSEN circuits, if required, will be undertaken under a separate agreement with SSEN in the detailed design phase.

Section 10 – (Eastney) Landfall and Optical Regeneration Station

1.3.7.9. A new formal access arrangement will be required for the ORS Building located in the public car park south of Fort Cumberland Road, and will be designed to appropriate standards and will follow all relevant visibility splay and tracking requirements and subject to a full Road Safety Audit prior to approval with PCC.

1.3.8. COMPOUND AND LAYDOWN AREAS

1.3.8.1. The primary contractor compound will be located at the Lovedean Converter Station. This compound will be accessed from Broadway Lane via a new access which will serve as a haul road during construction but become a permanent access to the Convertor Station once construction is complete.

1.3.8.2. There will be satellite contractor's compounds. These will be mainly utilised as laydown areas for materials and include staff welfare facilities and will be located at:

- Land adjacent to Kendall Brothers Wharf and/or land south of the Langston Harbour viewing car park; and
- The car park of Fort Cumberland Road (the site of Landfall and the optical regeneration building).

1.3.8.3. To facilitate construction, laydown areas will be created to store materials such as cable ducting and arisings from the current work site this will prevent double handling and additional vehicular trips. A generic layout for laydown areas is shown below. The areas will be fenced from the public and vehicular access to them will be managed with arrangements detailed further in section 5

1.3.9. CONSTRUCTION PROGRAMME AND ARRANGEMENTS

1.3.9.1. The indicative construction programme is proposed to extend over three years.

Table 2 - Indicative Onshore Construction Programme

Activity	Indicative Programme
Converter Station Construction	Q3 2021 – Q1 2024
Onshore HVDC Route Construction/ Cable Installation	Q3 2021 – Q4 2023
HDD and Landfall Construction (Onshore)	Q3 2021 – Q4 2023
Converter Station Commissioning	Q4 2023 – Q2 2024

1.3.10. CONSTRUCTION ACTIVITIES

1.3.10.1. This section provides further detail on the different construction methods to be employed along the Onshore Cable Corridor. These methods are determined according to the complexity and constraints of the surrounding environment, and the type of infrastructure being installed.

Open Cut Trench

1.3.10.2. The majority of the Onshore Cable Corridor will be constructed utilising an open cut trench method. The cable ducts will be installed and the trenches reinstated before the cables are pulled through the ducts and connected at jointing bays. The installation of ducts minimises the duration of trenching operations and allows highways to be reinstated more quickly.

1.3.10.3. A significant proportion of the route will be within the public highway and typically one trench will be opened and reinstated before the second trench is opened in any particular section. It is anticipated that a 4m construction width will be required for works within the public highway. it is also noted that this width could be reduced if work is being undertaken at pinch points.

1.3.10.4. In some locations the Onshore Cable Corridor may cross fields or open land. The width of the temporary construction corridor within these locations will include land necessary for temporary access and construction works. Typically, the width of the temporary construction corridor required through fields/open land is approximately 23 metres (this includes a five-metre haul road and safety clearance distance of one metre either side of this haul road) between safety barriers.

1.3.10.5. The installation rate for cable ducts is approximately 18 metres to 30 metres per 10-hour day shift, on average, within urban areas and approximately 50 metres per day in open country. These typical installation rates are per gang per shift and are dependent upon the level of obstacles and utility services encountered within the road or constraints that need to be observed to minimise the impacts during the construction stage.

Horizontal Directional Drilling

1.3.10.6. There are up to 6 locations along the onshore cable route where the ducts will be installed by HDD. It allows cables to cross under certain constraints along the route namely water ways, railways and environmentally sensitive areas. The method will also be used to install the marine cables in the intertidal area. It limits disturbance to the environment when compared with open trenching techniques. These locations are:

- HDD-1: Landfall at Eastney;
- HDD-2: Milton and Eastney Allotments (between north-east of Bransbury Park and Thatched House public house car park);
- HDD-3: Langstone Harbour crossing (between Kendall's Wharf and Farlington Playing Fields);
- HDD-4: Farlington Railway Crossing (between Farlington Playing Fields and southern extent of Sainsbury's car park);
- HDD-5: Kings Pond near Anmore (between Kings Pond Field and field north of Anmore Road); and

- HDD-6: Milton Common, crossing under the sea defence.

1.3.10.7. The HDD operations require a suitable space for the temporary construction area (including temporary access / egress routes), which can typically be up to approximately 50 metres by 50 metres depending on the length and size of the HDD works. The HDD operations require a working area at the start and finish point to locate the drilling rig, water bowser/pump, generator, layout of ducts/pipes and other construction equipment. Adjacent land within the site boundary (e.g. car parks, fields etc.) is proposed to be utilised to facilitate the HDD construction works.

Micro-Tunnelling

1.3.10.8. A Micro-Tunnelling technique is common for crossing of Network Rail assets in comparison with other Trenchless techniques such as HDD, and for this reason, micro-tunnelling is anticipated to be the method used to cross the railway north of Farlington Playing Fields. This alternative method of trenchless installation enables cables to be installed within ducts or pipes under a feature with minimal impact on that feature.

Joint Bays

1.3.10.9. Joint Bays will be required at points along the route, and these will be used for pulling the cable through the cable ducts before joining one section of cable to another. The number of joint bays along the length of the cable route is dictated by the length of cable that can fit on a cable drum (the drum-shape reel on which the cable is stored prior to installation) and limits to the pulling tension required to pull the cable through the ducts. Joint Bays are likely to be required every 600m to 2000m along the HVDC Circuits and will be positioned in highway verges, fields or car parks, where possible, to limit the need for road closures. The distance between Joint Bays will depend on the technique employed by the contractor and therefore flexibility as to the number and location of Joint Bays is sought in the Order.

1.3.11. OPERATION OF CONVERTER STATION

1.3.11.1. Given the nature of the proposed scheme as HVDC underground cables and Converter Station, it is not anticipated that the proposed scheme will have an impact upon the current function of the highway network when operational.

1.3.11.2. The Converter Station is designed for unmanned operation, but a small team of maintenance staff (typically 3 – 4) will be responsible for maintaining the plant and will be on 24/7 callout, if required.

1.3.11.3. During general maintenance and operational outages, access by maintenance staff is typically light vehicles (e.g. cars, vans) and use of HGVs or AILs will only be required in the rare event of a major equipment failure. AIL vehicles would be required on the rare occasion that a transformer, or other similarly large plant, is required to be replaced at the Converter Station.

1.3.11.4. Minor traffic increases may be experienced in the vicinity of the Convertor Station; however, this is unlikely to extend beyond occasional servicing and thus no further consideration is deemed necessary for the impact of operational traffic within this Transport Assessment. The Proposed Development has been designed so that routine maintenance to the cables is not required during their operational lifetime. However, there may be the requirement to undertake unplanned repair works.

1.3.12. DECOMMISSIONING

1.3.12.1. The Applicant is seeking consent for installation of the Proposed Development for an indefinite period. The Converter Station will be designed, manufactured and installed for a minimum service life of 40 years. Major items of equipment (e.g. transformers, circuit breakers, reactors) are designed to meet the lifetime of the Proposed Development and should remain operational for their design life subject to regular maintenance, inspection and availability of spare parts. If the Proposed Development and associated equipment is deemed to have reached the end of its design life, then the equipment may be decommissioned in an appropriate manner, and all materials reused and recycled where possible.

1.3.12.2. It is anticipated that the HVDC Cable's operational lifetime will exceed that of the Converter Station equipment, however at the end of the HVDC Cable's asset life, the options for decommissioning will be evaluated. The preferred option with the least environmental impact is to leave the cable in-situ within the buried ducts.

1.3.12.3. Further information on the decommissioning and the potential impacts associated with it is provided in the topic chapters to this ES.

1.4. LOCAL POLICY REVIEW

1.4.1. INTRODUCTION

1.4.1.1. This chapter provides a review of the relevant and emerging transport planning policy at a national and local level.

National Policy

Overarching National Policy Statement for Energy (EN-1), 2011

1.4.1.2. The latest version of the National Policy Statement (NPS) was published in July 2011 and is part of a suite of NPSs issued by the Secretary of State for Energy and Climate Change.

1.4.1.3. The NPS has effect, in combination with the relevant technology-specific NPS, on the decisions by the Infrastructure Planning Commission (IPC) on applications for energy developments that fall within the scope of the NPSs.

1.4.1.4. All energy NPSs have been subject to an Appraisal of Sustainability (AoS), as required by the Planning Act 2008. Some key points from the AoS for EN-1 are set out below:

- The energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system.
- The energy NPSs are likely to contribute positively towards improving the vitality and competitiveness of the UK energy market by providing greater clarity for developers which should improve the UK's security of supply and, less directly, have positive effects for health and well-being in the medium to longer term through helping to secure affordable supplies of energy and minimising fuel poverty; positive medium and long-term effects are also likely for equalities.
- The development of new energy infrastructure, at the scale and speed required to meet the current and future need, is likely to have some negative effects on biodiversity, landscape/visual amenity and cultural heritage.
- Short-term construction impacts are also likely through an increased use of raw materials and resources and negative effects on the economy due to impacts on existing land and sea uses.

1.4.1.5. Part 2 of the NPS for Energy EN-1 outlines the policy context for the development of nationally significant energy infrastructure. Section 2.2 highlights the legally binding target to reduce greenhouse gas emissions by at least 80% by 2050, compared to 1990 levels. The section states:

- A low carbon energy system requires major investments in new technologies, the electrification of heating, industry and transport, prioritisation of sustainable bioenergy and cleaner power generation.

1.4.1.6. Paragraph 2.2.16 explains that with the total investment required in the electricity sector estimated at over £100 billion by the end of this decade, much more must be done to unlock this investment.

1.4.1.7. Paragraph 2.2.10 highlights the importance of secure energy supplies;

'It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy.'

1.4.1.8. Part 3 of the NPS highlights in detail, the need for new nationally significant energy infrastructure projects. It states that:

- Demand for electricity will increase as transport, housing, heating and industry is electrified. The Government needs to ensure that sufficient electricity generating capacity is available to meet peak demand, with spare capacity.
- In the UK at least 22GW of existing electricity generating capacity will need to be replaced in the coming years as a result of tightening environmental regulation and ageing power stations. These closures will be driven by the Large Combustion Plant Directive (LCPD), which regulates emissions of sulphur and nitrogen oxides.

1.4.1.9. Section 5.13 of the document details the transport aspects in relation to the delivery of new energy infrastructure. Mitigation should principally focus on demand management measures and a comprehensive Transport Assessment should be produced. Where road transport is involved, HGV movements should be fed along appropriate routes, and numbers should be controlled with appropriate provision on site to ensure that there is no overspill onto the public highway. Finally, the applicant should work in coordination with local authorities and where appropriate, the police force.

National Planning Policy Framework, 2019

1.4.1.10. The latest version of the National Planning Policy Framework (NPPF) was published in February 2019 and sets out the Government planning policies for England.

1.4.1.11. The NPPF is clear that there is a presumption in favour of sustainable development. This is highlighted in paragraph 11, which expands on this, saying that in relation to decision-making this means:

- Approving development proposals that accord with an up-to-date development plan without delay; or
- Where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:

- The application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
- Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.

1.4.1.12. Section 9 of the NPPF specifically considers the transport implications and in Paragraph 103 highlights the need to focus new development in locations where there are genuine choices for sustainable transport. It also highlights, the Government's recognition that:
"opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

1.4.1.13. Paragraph 104 states that planning policies should;

"Identify and protect sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development."

1.4.1.14. Paragraph 108 outlines that in assessing development sites it should be ensured that:

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location:

b) safe and suitable access to the site can be achieved for all users; and

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

1.4.1.15. Then Paragraph 109 states:

"Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or where the residual cumulative impacts on the road network would be severe".

1.4.1.16. What constitutes an unacceptable impact on road safety or a severe residual cumulative impact is not defined in the NPPF and is a matter for the decision maker to determine. Planning appeal decisions in relation to development and highway impacts indicate this is a high threshold which takes into account the transport context of the development proposals, and which may be met only where extreme, serious and/or very significant adverse impacts arise in respect of highway safety or on the road network.

1.4.1.17. The NPPF requires that all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed.

1.4.1.18. Paragraph 110 states that developments should:

- *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations".*

Local Policy

1.4.1.19. The Onshore Cable Corridor runs through both Hampshire and Portsmouth Council areas. Hampshire is a two-tier authority area with Hampshire County Council fulfilling the highway authority role and Havant Borough Council, Winchester Borough Council and East Hampshire fulfilling the planning authority roles along the Onshore Cable Corridor. Portsmouth City Council is a Unitary Authority, fulfilling both the highway and planning authority roles.

1.4.1.20. A review of all relevant local policy is therefore provided below.

The Portsmouth Plan, Portsmouth's Core Strategy, 2012

1.4.1.21. The Portsmouth Plan is Portsmouth's Core Strategy. It is the overarching planning policy document, which forms part of a wider set of local planning policy documents known as the Local Development Framework (LDF).

1.4.1.22. The Portsmouth Plan is designed to:

- Set out a vision and objectives for the development of Portsmouth up to 2027; Identify broad locations for development, protection or change and allocate strategic sites;
- Set clear policies that guide decisions on planning applications;
- Indicate how the plan will be implemented; and
- Show how progress will be monitored.

1.4.1.23. The vision for the Portsmouth Plan is taken from the Sustainable Community Strategy Vision for Portsmouth, which was developed by the Local Strategic Partnership, with input from local agencies, businesses and residents. By 2027 the aims are for Portsmouth to be a rejuvenated and sustainable city.

1.4.1.24. These aims are developed further through the Portsmouth Plan's Objectives:

- Objective 1: To make Portsmouth an attractive and sustainable city.
  - This objective addresses the issues of the quality of the urban and natural environment.
- Objective 2: To make Portsmouth an accessible city with sustainable and integrated transport.
  - This objective addresses the issue of transport and will be achieved by encouraging sustainable transport alternative.
- Objective 3: To develop Portsmouth as a city of innovation and enterprise, with a strong economy and employment opportunities for all.
  - This objective addresses the issues of accommodating development, improving employment opportunities and promoting the city centre. Key delivery policies for this objective are:
- Objective 4: To make Portsmouth a city in which everyone feels and is safe.
  - This objective mainly addresses the issue of flood risk and also that of improving the quality of the urban environment.
- Objective 5: To deliver affordable/quality housing where people want to live.

- This objective tackles the issues of accommodating development and housing mix & affordable housing.

- Objective 6: To encourage and enable healthy choices for all and provide appropriate access to health care and support.
  - This objective tackles the issues of health and inequalities.
- Objective 7: To enhance Portsmouth's reputation as a city of culture, energy and passion offering access for all to arts sport and leisure.
- Objective 8: To ensure there is adequate supporting infrastructure for the new development and growth of the city
  - This objective tackles the issues of accommodating development and transport.

Hampshire Local Transport Plan 2011-2031 (Revised 2013)

1.4.1.25. Hampshire's Transport Strategy as set out in this Local Transport Plan (LTP) will develop stronger and safer communities, maximise wellbeing and enhance quality of place.

1.4.1.26. Hampshire County Council aims to make sure transport;

- Respects and protects the physical quality of places;
- Serves places' economic needs;
- Minimises carbon emissions and the impact of climate change;
- Is fully integrated with other areas of policy affecting places (e.g. economic development, energy and land-use planning);
- Helps places be sustainable and socially connected.

1.4.1.27. The Local Transport Plan sets out a vision of how Hampshire's Transport Network will be developed over the next 20 years. Emphasis is on maximising efficiency of the existing network, and maintenance / management, rather than capital projects which centre on enlarging it.

1.4.1.28. There are 14 policy objectives, structured under five themes. The five themes are as follows:

- **Supporting the economy through resilient highways** – making the best of the existing network given current funding constraints and developing a 'whole-life cycle approach to maintenance;
- **Management of traffic** – using measures such as Intelligent Transport Systems to enable users to better plan their journeys and improve journey time reliability/utilisation;

- **The role of public transport** – providing greater choice and reducing car dependency;
- **Quality of life and place** – ensuring transport better harmonises with its local environment; and
- **Transport and Growth Areas** – exploiting the opportunity that new development provides to enhance transport provision and the use of more sustainable modes.

Transport Strategy for North Hampshire

1.4.1.29. The Road Network in North Hampshire provides important strategic inter-urban links and will continue to be the backbone of the transport system. The area has good connectivity to the strategic road network, including the M3, M4, M25, A34(T) and A303(T). Many locations in the vicinity of motorway junctions have developed into highly accessible business parks, but traffic congestion decreases the attractiveness of these employment centres.

1.4.1.30. A number of larger settlements within North Hampshire, in particular Andover, Basingstoke, Farnborough and Aldershot, are likely to experience growth that will create additional demand for social and physical infrastructure, as well as transport.

Transport Strategy for Central Hampshire and The New Forest

1.4.1.31. The transport strategy for Central Hampshire and The New Forest covers a broad swathe of the County, from the Wiltshire and Dorset border in the west and to western Surrey and West Sussex in the east.

1.4.1.32. In future years, the areas are expected to accommodate higher levels of housing and employment growth than would be the case within the Central Hampshire and the New Forest area. It is essential that management, protection and mitigation measures are introduced to ensure that traffic arising from this growth does not lead to significant damage to the quality of life of the rural communities within the strategy area.

Local Transport Plan 3, Strategy for South Hampshire, 2011

1.4.1.33. The Local Transport Plan (LTP) 3 was produced for South Hampshire through a combined process involving Hampshire County Council, Portsmouth City Council and Southampton City Council. The transport strategy for South Hampshire has taken into account national legislation, policy and guidance and a number of key sub-regional and local level plans and strategies.

1.4.1.34. The vision for South Hampshire is to create:

'*A resilient, cost effective, fully-integrated sub-regional transport network, enabling economic growth whilst protecting and enhancing health, quality of life and environment.'*

1.4.1.35. Transport for South Hampshire (TfSH) authorities have identified seven key outcomes for the delivery of the transport vision. All the seven outcomes are closely inter-linked and inter-dependant. The outcomes are as follows:

1. Reduce dependence on the private car through an increased number of people choosing public transport and active travel modes;
2. Improve awareness of the different travel options available to people for their journeys, enabling informed choices about whether people travel, and how;
3. Improve journey time reliability for all modes;
4. Improve road safety within the sub-region;
5. Improve accessibility with and beyond the sub-region;
6. Improve air quality and environment, and reduced greenhouse gas emissions; and
7. Promote a higher quality of life.

1.4.1.36. 14 policies set out the policy framework through which the TfSH authorities will seek to address the challenges preventing the outcomes. The policies are listed below:

a. To develop transport improvements that support sustainable economic growth and development within South Hampshire.
b. Work with the Highways Agency, Network Rail, ports and airports to ensure reliable access to and from South Hampshire's three international gateways for people and freight.
c. Optimise the capacity of the highway network and improve journey time reliability for all modes.
d. Achieve and sustain a high-quality, resilient and well-maintained highway network for all.
e. Deliver improvements in air quality.
f. Develop strategic sub-regional approaches to management of parking to support sustainable travel and promote economic development.
g. Improve road safety across the sub-region.
h. Promote active travel modes and develop supporting infrastructure.
i. Encourage private investment in bus, taxi, and community transport solutions, and where practical, better infrastructure and services.
j. Further develop the role of water-borne transport within the TfSH area and across the Solent.
k. Work with rail operators to deliver improvements to station facilities and, where practical, better infrastructure and services for people and freight.
l. Work with Local Planning Authorities to integrate planning and transport.
m. Develop and deliver high-quality public realm improvements.
n. safeguard and enable the future delivery of transport improvements within the TfSH area.

Havant Borough Local Plan

1.4.1.37. The Havant Adopted Local Plan comprises two documents

- The Core Strategy (2011); and
- The Site Allocations Plan (2014).

1.4.1.38. It should be noted that despite the Emerging Local Plan 2036 (discussed below), the adopted local plan remains the overarching document for current planning policy in the borough.

1.4.1.39. The Core Strategy describes the council's long-term vision and objectives for what the borough will be like as a place in 2026. It closely aligns with the Sustainable Community Strategy, Forward Together, produced by the Havant Local Strategic Partnership.

1.4.1.40. The Core Strategy vision will be delivered through the Core Strategy policies that are set out under the themes listed below; these broadly follow the key priorities of the Sustainable Community Strategy, Forward Together:

1. Health and Wellbeing
2. Promoting Havant Borough's Economy
3. Regeneration and Community Support
4. Community Safety
5. Housing
6. Caring for Our Borough
7. Infrastructure, Implementation and Monitoring

1.4.1.41. Paragraph 3.01 states that:

South Hampshire is supported by its designation as a growth point in the South-East Plan and as a 'Diamond for Investment and Growth' in the Regional Economic Strategy with an accompanying phased allocation of funds for key projects.

1.4.1.42. Policy CS9 stipulates that 6,300 new homes are required during the local plan period. In relation to the Proposed Development, 2126 (or 31%) new dwellings would be delivered in the Waterlooville area, with 2,000 provided in the West of Waterlooville Major Development Area ('MDA').

1.4.1.43. The key transport constraints for the West of Waterlooville MDA are:

- The barrier that the A3 Maurepas Way ring-road provides towards non-motorised user journeys between the Town Centre and the MDA; and
- The main vehicular access points into the MDA from Hambledon Road, Maurepas Way, and London Road.

1.4.1.44. Another 340 homes could be delivered at Woodcroft Farm, to the north of Wecock Farm and Milton Road.

1.4.1.45. Policy CS2 (Transport and Access Strategy) states that development will only be granted if:

- It meets the Reduce, Manage and Invest Strategy;
- Makes effective use of existing transport infrastructure and does not increase congestion;
- Improves accessibility;
- Provides transport management measures to enable the road network to operate safely and efficiently;
- Highway design considers the characteristics of an area;
- Is accessible by a range of transport modes with a particular focus on active travel; and
- Improves west-east links between Waterlooville and Havant.

1.4.1.46. Policy DM12 states that to mitigate transport impacts, any planning application which constitutes a major development, will be required to submit a Transport Assessment and Travel Plan.

The Havant Borough Council Draft Local Plan, 2036

1.4.1.47. Published on 8th January 2018 for consultation, it establishes the vision for future development within the Borough and the framework through which it can be delivered.

1.4.1.48. It identifies 10 keys sites for development. Of these KS9 Berewood and Wellington Park lie within the immediate vicinity of the Proposed Development. KS9 involves an urban extension to the west of Waterlooville comprising 3,000 dwellings. Therefore, the Proposed Development should, where possible, coordinate with works at this site and develop appropriate traffic management measures to minimise any delay inflicted upon road users.

1.4.1.49. Policy IN2 deals with the provision of transport infrastructure, reiterating the concept of 'reduce, manage and invest' as outlined in the Hampshire County Council Local Transport Plan. This concept promotes the aims of:

- Reducing the need to travel;
- Maximising the use of existing transport infrastructure; and
- Delivering targeted improvements

1.4.1.50. Policy IN3 concerns transport and parking with regards to new development. Of relevance to the Proposed Development, are three conditions for approving development:

- The additional traffic generated does not pose a severe impact to the transport network;
- Safe and suitable site access is provided; and
- Existing public rights of way are safeguarded.

Winchester District Local Plan Part 1, Joint Core Strategy 2013

1.4.1.51. The Winchester District Local Plan Part 1 - Joint Core Strategy is the key document in the Winchester District Development Framework (LDF). It has been prepared following extensive consultation and evidence gathering since 2007. It takes forward a range of issues critical to the future of the District, looking ahead to 2031.

1.4.1.52. Policy WT1 states that economic development and diversification will be achieved whilst ensuring that all new development is of the highest design quality in terms of architecture and landscape, fully considers and respects the context of its setting and surroundings to reflect local distinctiveness, and the historical and cultural heritage of the Town, and makes a positive contribution to the quality of the area.

1.4.1.53. The Access Plan focuses on improving accessibility and air quality, reducing the level of traffic in the city centre and therefore improving the situation in terms of localised congestion. It has four key aims:

- To ensure that the vitality and resilience of the local economy is strengthened by planning for movement and access which is economically and environmentally sustainable;
- To lead a transition to cycling, walking, public transport and low-carbon modes of travel, including low emissions private and commercial vehicles;
- To reduce the negative effects of transport-related carbon emissions on all neighbourhoods, including the Town's historic environment, particularly in relation to air quality and the safety of pedestrians and cyclists;
- To enhance the social and cultural wellbeing of Winchester by providing access for all.

1.4.1.54. Chapter 2 states the Spatial Planning Vision:

'Winchester District is a special place characterised by a rich historical and cultural heritage and attractive countryside and is home to a diverse population and a variety of business sectors. The District should retain the distinctive characteristics of the three key areas so as to maximise opportunities to address change in a positive way that ensures it remains an attractive place to live, visit, work and do business.'

1.4.1.55. The Spatial Planning Objectives follow the Community Strategy Outcomes:

- Active Communities
  - Maximise new and existing opportunities for walking and cycling, sport and recreation.
  - The provision of 12,500 new homes across the District by 2031.
  - Encourage sustainable transport alternatives that reduce the use of private car
- Prosperous Economy
  - Ensure that there are a range of sites and premises available for businesses and commercial enterprises to set up and expand to meet their full potential and adequate infrastructure is available, including the provision of communications technology.
  - Encourage the development and adoption of energy efficiency and renewable energy technologies and enable their take-up by new and existing businesses, through the creation and promotion of a low carbon economy.
- High Quality Environment
  - Maintain, protect and enhance Winchester District's valuable environments and wildlife assets, whether these are urban or rural areas or involve the built or natural environments. Ensure that change restores, maintains or enhances the biodiversity, landscape character and historic environment of the District as a special place, whilst respecting its setting within the South Downs National Park.
  - Provide, protect and enhance green infrastructure to include open spaces, green links and wildlife corridors.

1.4.1.56. Policy DS1 sets out the core principles. In relation to the Proposed Development, the nearest strategic allocation is that associated with the West of Waterlooville MDA. Primarily the principles largely reiterate those expressed in the Havant Local Plan, although there is the additional principle of applying a town centres first approach that reflects the size of the community and attracts footfall accordingly.

Winchester District Local Plan Part 2 – Development Management and Site Allocations 2015

1.4.1.57. The Winchester District Local Plan Part 2 (Development Management and Site Allocations) (LPP2) forms part of the District Development Framework (see below), which will guide future planning decisions in Winchester District. It follows on from the Local Plan Part 1 - Joint Core Strategy (LPP1) that was adopted by Winchester City Council and the South Downs National Park Authority in March 2013.

1.4.1.58. Policy DM18 states that development which generates pollution or is sensitive to it and accords with the Development Plan, will only be permitted where it achieves an acceptable standard of environmental quality. As a minimum, development should not result in unacceptable impacts on health or quality of life.

East Hampshire District Local Plan Part 2, Housing and Employment Allocations, 2016

1.4.1.59. This document outlines the parcels of land that have been allocated for development.

1.4.1.60. Of relevance to the Proposed Development, is parcel CF1 Land at Down Farm, Green Lane. This is situated north-east of the settlement of Clanfield, bordering Chalton Lane and the A3. It comprises 207 new residential dwellings. Most of these have been built and the development is now known as St James Place. Indicative timescales in the Local Plan stipulate a completion year of 2020.

1.5. EXISTING CONDITIONS – LOCAL HIGHWAY NETWORK

1.5.1. INTRODUCTION

1.5.1.1. This chapter provides a description of the existing highway network in the study area, it aims to highlight the key routes which may be temporarily affected by the construction of the Onshore Cable Route and the displacement and re-routing of traffic. For context the chapter also provides a summary of existing ATC flows at 36 locations across the study area. Please note that where average vehicle speeds are not provided it is due to the data not being available for those locations.

1.5.2. AFFECTED ROUTES

1.5.2.1. The routes listed below are likely to be the most temporarily affected across the study area as they are the locations of the proposed works or lie on routes likely to be affected by short-term traffic redistribution. Routes through Portsmouth, Havant and Waterlooville may be temporarily impacted by construction of the Onshore Cable Route, whereas routes in Waterlooville and Lovedean will be more impacted by construction traffic for the Interconnector Converter Station. It should be noted that construction traffic for the Converter Station will be required to use a set route to the site, and therefore the construction traffic associated with the Converter Station will have a limited impact on the greater Portsmouth area. This is covered in greater detail in the accompanying Outline CTMP.

1.5.2.2. Plans showing the locations of the affected links can be found below.

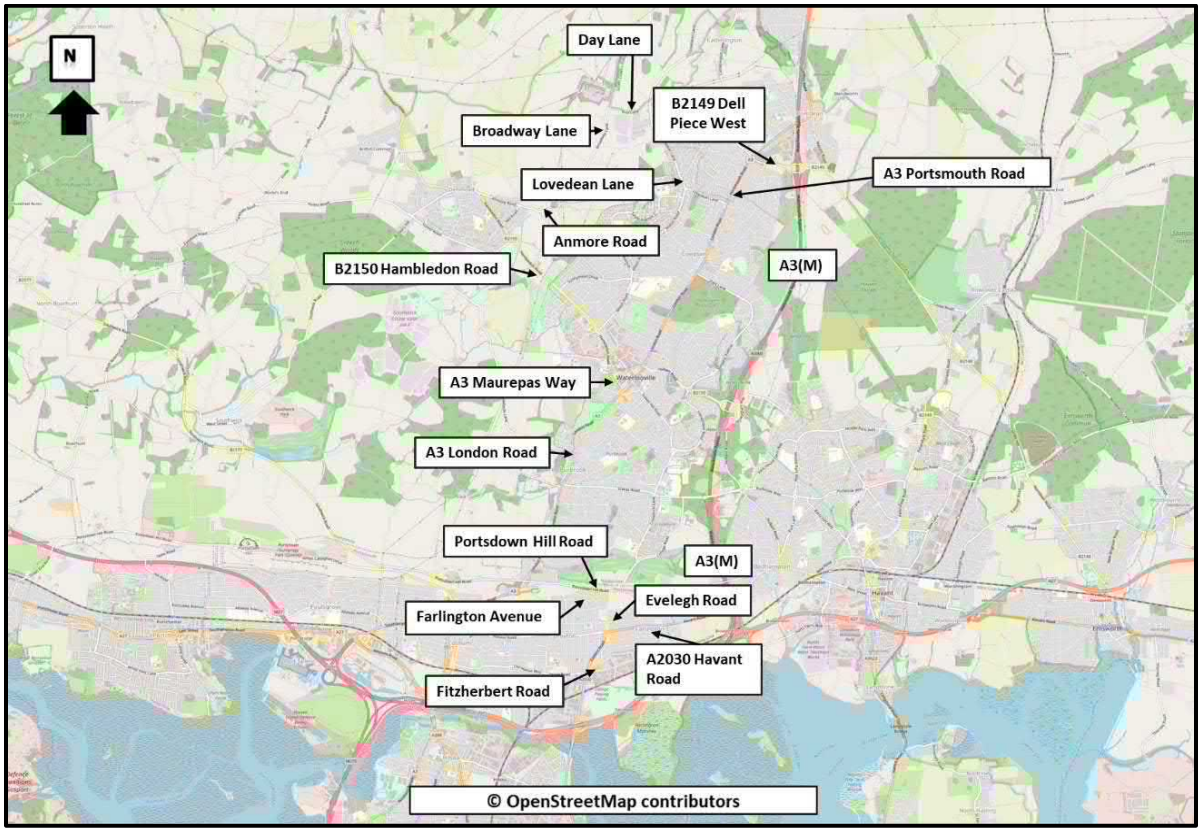


Plate 22 - Affected Links – North of A27

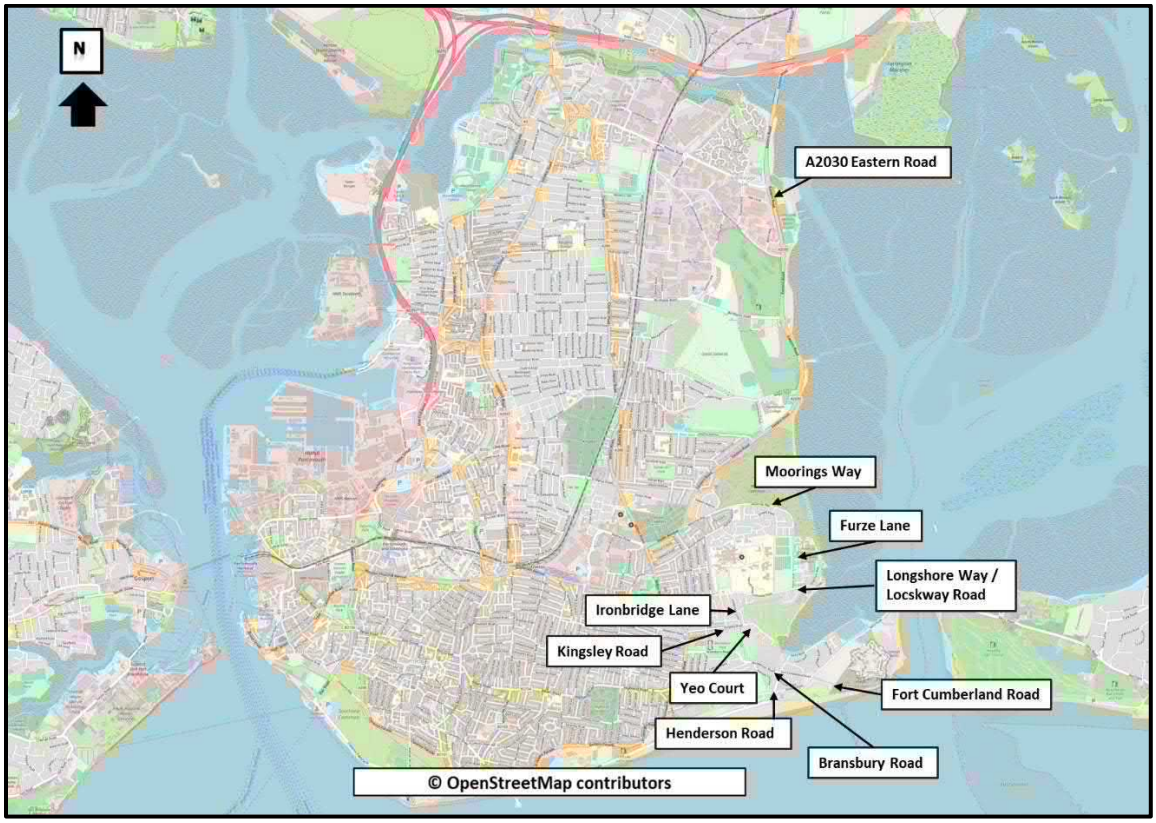


Plate 23 - Affected Links – Portsmouth

1.5.3. CONVERTER STATION

A3(M)

1.5.3.1. The A3(M) is a dual carriageway subject to national speed limit which routes to the east of the study area, it merges with the A27 at Havant and continues onto Guildford and London. Converter Station traffic will exit the A3(M) at Junction 2 (Horndean). There are no bus stops along this route.

B2149 Dell Piece West

1.5.3.2. Dell Piece West is a section of road between A3 (M) Junction 2 and Lakesmere Road. The route is subject to national speed limit and has narrow footway provision on its northern carriageway. After passing the Morrisons roundabout the speed limit reduces to 40 mph and a wide shared use footway/cycleway is provided on the northern carriageway.

1.5.3.3. An ATC survey was completed on Dell Piece West in June 2018 between the A3 (M) Junction 2 and the junction with Lakesmere Road, as summarised below.

Table 3 - Dell Piece West – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two Way**	**East**	**West**	**Two Way**
Total Vehicles	1036	649	1686	753	1071	1825
HGV%	7%	10%	17%	7%	10%	17%
Av. Speed (mph)	34	37	-	36	28	-

A3 Portsmouth Road

1.5.3.4. A3 Portsmouth Road routes for approximately 2.6km from A3 London Road to the junction with B2149 Dell Piece West. The road is subject to a 30mph speed limit and has footway provision on both sides of the carriageway. Residential properties are located on both sides of the carriageway but are separated from traffic by wide footways / shared-use paths.

1.5.3.5. There are bus stops located on either side of the road however only 4 bus stops are located along the construction traffic section of the road. Two bus stops are located on either side of the road approximately 100m from the junction with B2149 Dell Piece West and two bus stops are located either side of the road outside the junction with Keydell Avenue.

1.5.3.6. An ATC survey was completed on A3 Portsmouth Road in June 2018 between the junctions with Keydell Avenue Hazleton Way, as summarised below.

Table 4 - A3 Portsmouth Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	631	483	1114	587	846	1433
HGV%	8%	7%	15%	9%	10%	19%
Av. Speed (mph)	21	28	-	29	30	-

Lovedean Lane

1.5.3.7. Lovedean Lane routes from A3 (Cowplain) to Downhouse Road for approximately 4.3km, providing access mainly to residential properties. Footways are provided up until the route leaves Lovedean and Coldhill Lane. The speed limit along this route is 30mph until Lovedean Lane passes Day Lane, here the speed limit is extended to 60mph. No bus stops are located along this route.

1.5.3.8. An ATC survey was completed on Lovedean Lane in June 2018 at the following locations, as summarised below.

- **Lovedean Lane (1)** between the junctions with Woodbury Grove and Gypsy Lane;
- **Lovedean Lane (2)** between the junctions with Milton Road and Parklands Avenue; and
- **Lovedean Lane (3)** between the junctions with Hinton Manor Lane and Roads Hill.

Table 5 - Lovedean Lane (1) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total Vehicles	217	250	467	269	231	500
HGV%	9%	7%	16%	11%	12%	23%
Av. Speed (mph)	32	32	-	33	33	-

Table 6 - Lovedean Lane (2) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two Way**	**East**	**West**	**Two Way**
Total Vehicles	309	317	626	286	452	738
HGV%	7%	10%	17%	9%	12%	21%

Table 7 - Lovedean Lane (3) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two Way**	**East**	**West**	**Two Way**
Total Vehicles	309	317	626	286	452	738
HGV%	7%	10%	17%	9%	12%	21%

Day Lane

1.5.3.9. Day Lane is a rural lane with a length of approximately 630 metres and connects Lovedean Lane to Broadway Lane. The lane is subject to a 60mph speed limit and has no footway provision or bus stops. An ATC survey was completed in June 2018 between the junction with Broadway Lane and Day Lane, as summarised below.

Table 8 - Day Lane – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	138	100	239	101	93	195
HGV%	8%	9%	17%	19%	11%	30%
Av. Speed (mph)	28	27	-	29	28	-

1.5.4. ONSHORE CABLE CORRIDOR

Hampshire

Broadway Lane

1.5.4.1. Broadway Lane to the south of the Converter Station is a 60mph road with a length of approximately 1km. The lane has no road markings but is wide enough for opposing vehicles to pass, Anmore Lane merges with Broadway Lane approximately 1km south of the Converter Station. No bus stops are present on Broadway Lane.

1.5.4.2. An ATC survey was completed on Broadway Lane in July 2019 as summarised below.

Table 9 - Broadway Lane – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two-Way**	**North**	**South**	**Two-Way**
Total	92	130	222	97	105	202
HGV%	2%	1%	3%	1%	1%	2%
Av. Speed (mph)	35	33	-	35	33	-

Anmore Road

1.5.4.3. Anmore Road is a length of approximately 1km and routes from Anmore Lane to B2150, the road is subject to a 30mph speed limit with footways on its southern edge. It has an approximate carriageway width of 7 metres. There are no bus stops on this route.

1.5.4.4. An ATC survey was completed on Anmore Lane Road between the junctions with Soake Road and Edneys Lane in July 2019 as summarised below.

Table 10 - Anmore Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of movement	**East**	**West**	**Two Way**	**East**	**West**	**Two Way**
Total	86	125	212	88	92	180
HGV%	7%	4%	11%	10%	13%	23%
Av. Speed (mph)	25	25	-	26	26	-

B2150 Hambledon Road

1.5.4.5. B2150 Hambledon Road is a single carriageway road approximately 6.4km in length and runs from Waterlooville, through Denmead toward Hambledon.

1.5.4.6. The link is subject to a 30mph speed limit. Between Forest Road and Soake Road, a shared-use path is provided on the northern side of the carriageway.

1.5.4.7. Between Soake Road and Milton Road, a mix of footways/shared-use paths are provided on alternate sides of the carriageway, linked by signal-controlled crossings. Seven bus stops are present along this section of this link, four of which are provided with a layby. These stops serve routes 636, 654, D1 and D2.

1.5.4.8. Between Milton Road and the A3 London Road, the B2150 Hambledon Road is a dual-carriageway link with a 40mph speed limit, providing access into Wellington Park Retail Park. A shared-use path is provided adjacent to the southern side of the carriageway and a footway three bus stop are in place, each with a layby. These are served by routes 39, 636, 654, D1, D2 and The Star 7.

1.5.4.9. ATC surveys were completed on B2150 Hambledon Road at the following locations, as summarised below:

- **B2150 Hambledon Road (1)** between the junctions with Aston Road and Silverthorne Way;
- **B2150 Hambledon Road (2)** between the junctions with Charlesworth Drive and Sickle Way;
- **B2150 Hambledon Road (3)** between the junctions with Closewood Road and Soake Road;

Table 11 - Hambledon Road (1) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	419	455	874	455	451	907
HGV%	7%	7%	14%	9%	10%	19%
Av. Speed (mph)	26	27	-	25	28	-

Table 12 - Hambledon Road (2) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	541	716	1257	813	638	1451
HGV%	9%	8%	17%	4%	5%	9%
Av. Speed (mph)	30	31	-	34	34	-

Table 13 - Hambledon Road (3) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	667	731	1399	732	742	1474
HGV%	9%	9%	18%	5%	7%	12%
Av. Speed (mph)	32	33	-	36	37	-

A3 Maurepas Way

1.5.4.10. A3 Maurepas Way is approximately 325 metres in length between junctions with A3 London Road and B2150 Hambledon Road. A3 Maurepas Way is a dual-carriageway link with a 40mph speed limit, providing access to both an ASDA Supermarket and Waterlooville Fire Station.

1.5.4.11. A shared-use path is provided adjacent to the southern side of the carriageway and a footway is provided next to the northern side of the carriageway between the ASDA car park and the roundabout with the A3 London Road. No bus stops are in place on this link, but this link does form part of the routes for 39, 636, 654, D1, D2 and The Star 7.

1.5.4.12. Footpath 11 joins the A3 Maurepas Way approximately 105m north of the junction with London Road.

1.5.4.13. An ATC Survey was completed on Maurepas Way between the junctions with A3 London Road and B2150 Hambledon Road in June 2018 as summarised below.

Table 14 - Maurepas Way / Asda – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	557	1009	1566	627	1184	1812
HGV%	8%	9%	17%	6%	7%	13%

A3 London Road

1.5.4.14. A3 London Road is the main link road between Cosham and Waterlooville, it is approximately 4.5km in length and subject to a 30mph speed limit. There is a mixed provision of footways/shared use paths provided on both sides of the carriageway which are linked by pedestrian crossings.

1.5.4.15. Bus lanes are provided in both directions along the majority of the link. Cyclists are also permitted to use these. There are numerous bus stops, of which the majority are provided with a layby. All the stops are served by The Star 8 bus service. South of Ladybridge Road, stops are also served by National Express route 621.

1.5.4.16. Approximately 600m North of Ladybridge Roundabout the bus lanes end, and the road enters a more residential area with shops and on-street parking present.

1.5.4.17. Five Public Rights of Way (PRoW) join this link: Bridleway 15, 200 m south of the A3 Maurepas Way; Bridleway 17 at the junction with Milk Lane (part of this is now a shared-use path into the development at Yew Gardens); Footpath 18 at Poppy Fields; Footpath 19 opposite The Woodman Pub; and Footpath 20 circa 35m south of the junction with Park Road.

1.5.4.18. ATC Surveys were completed in June 2018 at the following locations, as summarised below:

- **A3 London Road (1)** between the junctions with Blossom Drive and Park Road; and
- **A3 London Road (2)** between the junctions with Milk Lane and Corbett Road;

Table 15 - A3 London Road (1) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	670	941	1611	950	822	1773
HGV%	7%	6%	13%	4%	4%	8%
Av. Speed (mph)	32	30	-	22	25	-

Table 16 - A3 London Road (2) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	741	778	1519	631	653	1285
HGV%	8%	8%	16%	6%	6%	12%
Av. Speed (mph)	29	30	-	17	25	-

Portsmouth

A3 London Road

1.5.4.19. London Road straddles both Portsmouth and Hampshire Local Authorities. At the junction with the B2177 Portsdown Hill Road and the A3 London Road, Boundary Way, the Western Slip Road and the Eastern Slip Road, are single carriageway roads, subject to a 30mph speed limit with continuous footways provided on both sides of the carriageway. On the latter a single bus stop is provided on the southern side of the carriageway for routes 7A, 20, SD4, SD5, The Star 7 and The Star 7C. Footpath 24 of the PCC network also joins the link, connecting to Drayton Lane.

1.5.4.20. ATC Surveys were completed in June 2018 between Boundary Way and Oakhurst Gardens, as summarised below:

Table 17 - London Road / Hillside Avenue – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (08:00-09:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	323	331	654	260	220	480
HGV%	7%	8%	15%	17%	14%	31%
Av. Speed (mph)	0	29	-	28	31	-

B2177 Portsdown Hill Road

1.5.4.21. B2177 Portsdown Hill Road is a single carriageway road approximately 4.6km in length and routes from Glebe Park Avenue in the east to James Callagher Drive in the west. The road is subject to a 40mph speed limit with very limited footway provision. Three bus stops are provided along the section of this link contained within the study area, serving routes 7A, 20, SD4, SD5, The Star 7 and The Star 7C.

1.5.4.22. ATC surveys were completed at the following locations in June 2018:

- **B2177 Portsdown Hill Road (1)** between the junctions with New Down Lane and Dellcrest Path;
- **B2177 Portsdown Hill Road (2)** between the junctions with Hilltop Crescent and A3 London Road;

Table 18 - Portsdown Hill (1) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	4	1	6	1	4	5
HGV%	30%	56%	86%	50%	35%	85%
Av. Speed (mph)	39	39	-	38	37	-

Table 19 - Portsdown Hill (2) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	632	466	1098	730	769	1499
HGV%	6%	6%	12%	5%	5%	10%
Av. Speed (mph)	33	33	-	25	24	-

Farlington Avenue

1.5.4.23. Farlington Avenue is approximately 1km in length and is subject to a 20mph speed limit. The route runs from Havant Road at its southern end to B2177 Portsdown Hill Road at the northern end. There is footpath provision on both sides of the road

1.5.4.24. A southbound intermittent cycle lane is also provided. Footpath 6 of the PCC network joins the link near to Birkdale Avenue. Additionally, north of the junction with Birkdale Avenue, there is a traffic chicane that narrows the road to one traffic lane. Priority is given to northbound traffic. Traffic calming measures, including speed cushions and speed humps, are also in place on the southern section of Farlington Avenue. There are also numerous residential driveways joining the link. There are no bus stops on Farlington Avenue.

1.5.4.25. An ATC survey was completed in June 2018 between the junctions with Solent Road and Sea View Road.

Table 20 - Farlington Avenue

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	160	187	347	264	124	388
HGV%	11%	8%	19%	5%	5%	10%
Av. Speed (mph)	19	19	-	15	17	-

Evelegh Road

1.5.4.26. Evelegh road is a residential unclassified single carriageway road, subject to a 20mph speed limit. It has an approximate carriageway width of 12m. Continuous footways are provided on both sides of the carriageway. It should be noted that Solent Infant

School is located on this link and as such there is corresponding on-street parking during school arrival and departure periods.

1.5.4.27. An ATC survey was completed in July 2019 between the junction with Farlington Avenue and Galt Road as summarised below.

Table 21 - Evelegh Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two-Way**	**West**	**East**	**Two-Way**
Total	33	18	51	27	30	57
HGV%	0%	0%	0%	0%	0%	0%
Av. Speed (mph)	17	17	-	19	20	-

A2030 Havant Road

1.5.4.28. The A2030 Havant Road is a dual carriageway with two signal-controlled junctions in close proximity between Farlington Avenue and the A2030 Eastern Road. The link is subject to a 30mph speed limit, with two lanes in each direction and continuous footways on both sides of the carriageway. Bus stops in place intermittently on this link, serving routes 21, 22 and 23. Footpath 7 of the PCC network joins this link, connecting with Copsey Close.

Fitzherbert Road

1.5.4.29. Fitzherbert Road is a two-lane dual carriageway between the signal controlled junctions with the A2030 Eastern Road and the access road into Sainsbury's car park. It is subject to a 30mph speed limit with footways on both sides of the carriageway. Within the Sainsbury's site the entry road also provides access to B&M Home Store and a Sainsbury's Petrol Filling Station.

1.5.4.30. An ATC survey was completed between the junctions A2030 Eastern Road and Sainsbury's access road as summarised below.

Table 22 - Fitzherbert Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two-Way**	**West**	**East**	**Two-Way**
Total	297	235	532	360	193	553
HGV%	7%	10%	17%	3%	3%	6%
Av. Speed (mph)	24	25	-	23	28	-

A2030 Eastern Road

1.5.4.31. A2030 Eastern Road is approximately 5.8km in length and routes from the junction with Havant Road in Farlington to Moorings Way in Portsmouth. The route varies between single and dual lane carriageway and is subject to a 40mph speed limit, footways are provided on both sides of the road until Milton Common where a shared use footway (which forms part of NCN Route 222) follows the eastern side of the carriageway.

1.5.4.32. Bus stops are in place intermittently on this link, serving routes 21 and 621. Footpaths 30 and 31 of the PCC network join this link, providing connections to Copsey Close / Nutbourne Road and Copsey Grove respectively.

1.5.4.33. From the junction with Havant Road in Farlington to the Havant Bypass Roundabout, the road is subject to a 40mph speed limit and consist of dual lanes on either side separated by a concrete reservation approximately 2 metres in width. Signalised junctions are present at Fitzherbert Road, Grove Road and Walton Road.

1.5.4.34. A2030 Eastern Road continues, with a 50mph speed limit south of the bridge onto Portsea Island. A shared-use path is provided on the eastern side of the carriageway which also forms a part of NCN Route 222.

1.5.4.35. A2030 Eastern Road continues as a dual carriageway until approximately 330m south of Tangier Road where it becomes a single carriageway with two lanes northbound and one lane southbound until the signal-controlled junction with Moorings Way. South of this location there are two lanes in both directions.

1.5.4.36. The speed limit is 40mph until just north of Stride Avenue where it reduces to 30 mph. A shared-use path is provided on the eastern side of the carriageway until the junction with Moorings Way, where it switches to the opposite side of the carriageway. This forms part of NCN Route 222. On the southern part of the A2030 Eastern Road, bus stops are in place intermittently, serving route 13.

1.5.4.37. ATC surveys were completed in June 2018 and July 2019 and the following locations:

- **A2030 Eastern Road (1)** between the junctions with Tangier Road and Burrfields Road;
- **A2030 Eastern Road (2)** between the junctions with Anchorage Road and A27 Havant Bypass;
- **A2030 Eastern Road (3)** between the junctions with A27 Havant Bypass and Grove Road;
- **A2030 Eastern Road (4)** between the junctions with Fitzherbert Road and A2030 Havant; and
- **A2030 Eastern Road (5)** between Airport Service Road and Burrfields Road.

Table 23 - A2030 Eastern Road (1) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	1047	1014	2061	734	491	1226
HGV%	10%	14%	24%	8%	18%	26%
Av. Speed (mph)	27	40	-	24	7	-

Table 24 - A2030 Eastern Road (2) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	1495	2045	3540	1614	2105	3720
HGV%	19%	14%	33%	10%	9%	19%
Av. Speed (mph)	20	38	-	25	35	-

Table 25 - A2030 Eastern Road (3) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	764	971	1735	752	884	1637
HGV%	14%	15%	29%	7%	7%	14%
Av. Speed (mph)	36	33	-	36	35	-

Table 26 - A2030 Eastern Road (4) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	354	470	824	698	425	1123
HGV%	16%	9%	25%	6%	6%	12%
Av. Speed (mph)	37	37	-	35	35	-

Table 27 - A2030 Eastern Road (5) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	1000	895	1895	845	1020	1865
HGV%	5%	11%	16%	4%	8%	12%
Av. Speed (mph)	26	25	-	27	25	-

Moorings Way

1.5.4.38. Moorings Way is a single carriageway residential road which is subject to a 20mph speed limit. This link has an approximate carriageway width of 7-8m. A footway is provided adjacent to the south side of the carriageway, and the link forms an on-road section of NCN Route 222. Six bus stops are provided, all of which serve route 13.

1.5.4.39. An ATC survey was completed in June 2018 between the junctions with Salterns Avenue and Mariners Walk as summarised below.

Table 28 - Moorings Way – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	209	164	374	130	203	334
HGV%	8%	10%	18%	6%	5%	11%
Av. Speed (mph)	22	22	-	27	26	-

Moorings Way – Furze Lane Bus Link

1.5.4.40. The Moorings Way to Furze Lane Bus Link is a bus only, single carriageway route with through access controlled by traffic signals and a rising bollard midway along the link. The bus link is subject to a 20mph speed limit and the carriageway is approximately 5-6 m wide. A footway is in place on the western side of the carriageway. The link serves bus route 13 and forms an on-road section of NCN Route 222.

Furze Lane

1.5.4.41. Furze Lane is a single carriageway residential link which is subject to a 20mph speed limit. This link is approximately 5-8m wide, and features footways adjacent to both sides of the carriageway. Two bus stops are in place on the section of this link

included within the study area, one on either side of the carriageway. The northern section of Furze Lane is a bus/cycle only link to the University of Portsmouth Campus.

Longshore Way

1.5.4.42. Longshore Way is a single carriageway residential road which is subject to a 20mph speed limit. The approximate carriageway width of this links varies between 6-8m. Footways are provided on either side of the carriageway. No public transport provisions are in place on this link.

Locksway Road

1.5.4.43. Locksway Road is a single carriageway residential road which is subject to 20mph speed limit. The approximate carriageway width of this links varies between 6-8m. Footways are provided on either side of the carriageway. Locksway Road forms part of NCN Route 222.

1.5.4.44. An ATC Survey was completed in July 2019 between the junctions with Ironbridge Road and Furze Lane as summarised below.

Table 29 - Locksway Road

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	69	73	142	89	85	174
HGV%	7%	8%	15%	0%	0%	0%
Av. Speed	20	22	-	21	22	-

Ironbridge Lane

1.5.4.45. Ironbridge Lane is a narrow single carriageway residential road which is subject to 20mph speed limit. The approximate carriageway width of this links varies between 4-6m. Footways are provided on either side of the carriageway, no bus stops are present. An ATC survey was completed on Ironbridge lane in July 2019 as summarised below.

Table 30 - Ironbridge Lane – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (08:00-09:00)		
Direction of Movement	**North**	**South**	**Two-Way**	**North**	**South**	**Two-Way**
Total	56	32	88	32	50	82
HGV%	3%	3%	6%	0%	2%	2%
Av. Speed (mph)	18	18	-	17	17	-

Kingsley Road

1.5.4.46. Kingsley Road is a single carriageway residential road which is subject to 20mph speed limit. This link is two-way with on-street parking where space permits, and includes footways on both sides of the carriageway, no bus stops are present on Kingsley Road.

1.5.4.47. An ATC Survey was completed in July 2019 between the junctions with Ironbridge Road and Tideway Gardens as summarised below.

Table 31 - Kingsley Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (08:00-09:00)		
Direction of Movement	**East**	**West**	**Two-Way**	**East**	**West**	**Two-Way**
Total	12	9	21	21	17	38
HGV%	0%	0%	0%	5%	6%	11%
Av. Speed (mph)	15	16	-	15	15	-

Yeo Court

1.5.4.48. Yeo Court is a residential cul-de-sac which is subject to a 20mph speed limit.

Bransbury Road

1.5.4.49. Bransbury Road is approximately 550 metres in length and routes from A288 Eastney Road to Henderson Road. The road is subject to a 30mph speed limit and has footway provision on both sides for the entire length, on-street parking is common place on Bransbury Road which can reduce the capability for vehicles to pass, particularly HGVs.

1.5.4.50. An ATC was completed in June 2018 on Bransbury Road between the junctions with Eastney Farm Road and Minstead Road as summarise below.

Table 32 - Bransbury Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	289	281	570	391	283	675
HGV%	10%	9%	19%	4%	6%	10%
Av. Speed (mph)	31	31	-	32	31	-

Henderson Road

1.5.4.51. Henderson Road is a single carriageway residential link which is subject to 30mph speed limit. This link has an approximate carriageway width of 7-8m, with adjoining footways on both sides of the carriageway. Bus stops are in place intermittently on this link, serving routes 15 and 16.

Fort Cumberland Road

1.5.4.52. Fort Cumberland Road is a single carriageway residential link which is subject to 30mph speed limits. This link has an approximate carriageway width of 7-8m with adjoining footways on both sides of the carriageway. Bus stops are in place intermittently on this link, serving routes 15 and 16. PRoW Footpath 101 gains access from Fort Cumberland Road, providing a connection with Halliday Crescent. At the junction with Fort Cumberland Road / Ferry Road, there is a Day Care Centre and two retail premises.

At ATC was completed in June 2018 between the junctions with Gibraltar Road and Henderson Road as summarised below.

Table 33 - Fort Cumberland Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	131	101	233	171	182	354
HGV%	8%	6%	14%	7%	4%	11%
Av. Speed (mph)	23	20	-	21	20	-

Milton Common

1.5.4.53. Milton Common is a 46ha area of grassland, located on the eastern edge of Portsea Island, adjacent to Langstone Harbour it is roughly triangular in shape. The Common is bordered by A2030 Eastern Road to the north, Moorings Way to the south and Langstone Harbour to the east. There are a number of formal and informal pedestrian / cycle routes that route through Milton Common. NCN 222 runs down its eastern side as part of a shared-use path.

1.5.5. ROUTES THAT MAY BE AFFECTED BY TRAFFIC REDISTRIBUTION

1.5.5.1. A number of adjoining, parallel and nearby roads / routes will also be affected by construction of the Onshore Cable Route as a result of traffic redistribution. These are summarised below.

Strategic Network

A3(M)

1.5.5.2. The A3(M) lies on the Strategic Road Network (SRN) and connects the A27 to the south with the A3 and runs north to Surrey and the M25. The A3(M) runs north-south through the study area to the east of Waterlooville and Purbrook, and west of Havant. Counts have been obtained for June 2018 from the Highways England WebTRIS Database for the A3(M) where it runs beneath the Purbrook Way.

Table 34 - A3(M) – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	2286	2253	4539	2153	2269	4422
HGV%	11%	7%	-	11%	7%	-

A27

1.5.5.3. The A27 runs along the south coast, connecting Eastbourne to the east with the M27 to the northwest of Portsmouth. The A27 runs across the Onshore Cable Corridor and the cable is proposed to run beneath the road adjacent to Farlington Playing Fields.

1.5.5.4. Traffic counts have been obtained for June 2018 from the Highways England WebTRIS Database for the A27 for a location directly south of Farlington Playing Fields.

Table 35 - A27– Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**West**	**East**	**Two Way**	**West**	**East**	**Two Way**
Total	4996	4916	9912	4304	5089	9392
HGV%	9%	9%	-	9%	9%	-

Hampshire

Soake Road

1.5.5.5. Soake Road is an unclassified single carriageway rural road to the west of Denmead. The road is predominately single lane with passing places and is subject to a 30mph speed limit. No footways or street lighting is provided. It should be noted that the southern end of Anmore Road provides access to a Jewson's builders merchant yard and a small industrial estate. Consequently, there are associated HGV movements. Towards the northern end, the road becomes predominately residential as it enters the village of Anmore.

1.5.5.6. An ATC was completed in July 2019 along Soake Road between the junctions with the B2150 Hambledon Road and Anmore Road. The results of this are summarised in Figure 5-34 below, demonstrating that the number of observed two-way movements amounted to less than one per minute across both conventional peak periods.

Table 36 - Soake Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two-Way**	**North**	**South**	**Two-Way**
Total	17	20	37	25	19	44
HGV%	6%	5%	11%	2%	3%	6%
Av. Speed (mph)	28	30	-	27	31	-

Closewood Road

1.5.5.7. Closewood Road is an unclassified rural single carriageway road to the south of Denmead linking Newlands Lane with the B2150 Hambledon Road. It is primarily single lane with passing places and resides within the area. For approximately 315m

the posted speed limit is 30mph, otherwise the road is subject to a 60mph speed limit. No footways or street lighting is provided.

Sunnymead Drive

1.5.5.8. Sunnymead Drive is an unclassified residential single carriageway two-lane road in the north-western areas of Waterlooville. It essentially cuts the corner between the B2150 Hambledon Road and Milton Road. Continuous footways are provided on either side of the carriageway and the posted speed limit is 30mph. Street lighting is provided at regular intervals and bus routes 654 and D2 use this road.

Milton Road

1.5.5.9. Milton Road is an unclassified residential single carriageway two-lane road linking the B2150 Hambledon Road in central Waterlooville with Lovedean Lane in the area of Waterlooville known as Cowplain. The road is subject to a 30mph speed limit and continuous footways are provided on either side of the carriageway. Street lighting is also provided at regular intervals. Bus services 7 The Star, 39 and D2 route along this road. Opposite the junction with Hart Plain Avenue, a signal controlled pedestrian crossing is provided. Sensitive receptors include Cowplain Community School, Hart Plain Infant School, Hart Plain Junior School, Vine Medical Group Health Centre Site and a collection of commercial premises on the parallel service road named Milton Parade (which runs parallel to Milton Road).

Table 37 - Milton Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two-Way**	**North**	**South**	**Two-Way**
Total	322	610	933	727	448	1175
HGV%	11%	6%	17%	8%	10%	18%
Av. Speed	29	29	-	28	31	-

Hart Plain Avenue

1.5.5.10. Hart Plain Avenue is an unclassified residential single carriageway two-lane road sited in the Cowplain area of Waterlooville. It spans between Milton Road and the A3 London Road. It is subject to a 20mph speed limit for the majority of its length except for a 170m section between First Avenue and the A3 London Road. Continuous footways are provided on both sides of the carriageway and street lighting is in place at regular intervals. The road itself provides vehicular access to three schools: Cowplain Community School; Hart Plain Infant School and Hart Plain Junior School. As such there are associated parking restrictions in place in certain sections (applying

during the typical school arrival and departure periods) and zig-zag keep clear yellow markings around the school entrances.

Silvester Road

1.5.5.11. Silvester Road is an unclassified residential single carriageway two-lane road situated just north of Hart Plain Avenue. is subject to a posted speed limit of 30mph. Continuous footways are provided on either side of the carriageway and street lighting is positioned at regular intervals. It provides exclusive access to three cul-de-sacs and at its eastern end there is an access point from a Lidl supermarket car park.

A3 London Road / A3 Portsmouth Road (between the junctions with the B2149 Havant Road and the B2150 Hulbert Road

1.5.5.12. The A3 London Road is a classified single carriageway 'A' Road. Principally it is two lanes wide however there are stretches where it widens to three lanes with sections of discontinuous bus lanes and white hatched central areas that become ghost island right turns. The posted speed limit is 30mph and street lighting is in place at regular intervals. The junctions with the B2149 Dell Piece West/ Catherington Lane, Durley Avenue and Padnell Road are signal controlled. On the southbound approach to the signal controlled junction with Padnell Road and the roundabout with the B2150 Hulbert Road, there is a bus priority measure. The A3 London Road served by bus routes 8 The Star and 37x.

1.5.5.13. In terms of provisions for non-motorised users, on the western side of the carriageway a continuous shared use path is provided. This forms part of NCN Route 222. On the eastern side of the carriageway there is a continuous footway with intermittent sections of shared-use path. Toucan crossings are provided on all arms of the junction with the B2149 Dell Piece West / Catherington Lane and sites close to the junctions with Hart Plain Avenue and London Road. A signal controlled pedestrian crossing is in place near Longwood Avenue.

1.5.5.14. Sensitive receptors include a range of food and beverage establishments, a Lidl supermarket, and Cowplain Family Practice.

1.5.5.15. An ATC Survey was completed in July 2019 between the junction with Maurepas Way and Hulbert Road as summarised below.

Table 38 - A3 between Maurepas Way and Hulbert Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two-Way**	**East**	**West**	**Two-Way**
Total	1136	1396	2533	1283	1510	2793
HGV%	3%	2%	5%	1%	0%	1%

Park Lane / Tempest Avenue

1.5.5.16. Park Lane / Tempest Avenue are unclassified single carriageway two-lane roads linking the A3 London Road with the B2150 Hulbert Road. They are subject to a posted speed limit of 30mph and street lighting is in place at regular intervals. Both roads are served by bus routes 28A and 37.

1.5.5.17. In terms of footways Park Lane is provided with a continuous footway on the northern side of the carriageway, whilst Tempest Avenue is provided with a continuous footway on the western side of the carriageway. Intermittent footways are provided on the other side of the carriageway for the two respective roads, however they are limited in length.

1.5.5.18. Tempest Avenue incorporates distributor road type characteristics. Namely, vehicular access is limited to the side roads – no direct access to private properties is provided. Conversely driveway access points are present on Park Lane.

Highfield Avenue / Ferndale / Stratford Road

1.5.5.19. These three roads are unclassified single carriageway two-lane residential roads subject to a speed limit of 30mph. Continuous footways are provided on both sides of the carriageway and streetlighting is in place at regular intervals. Both roads are served by bus routes 28A and 37.

B2150 Hulbert Road

1.5.5.20. The B2150 Hulbert Road is a classified 4-lane dual carriageway. It consists of two distinct sections.

1.5.5.21. Between the roundabout with the A3 and the roundabout with Tempest Avenue / Frendstaple Road. the posted speed limit is 40mph and there are four limited access priority controlled junctions where movements are restricted to left in and left out. The junction with Curzon Road is signal controlled incorporating a signal controlled pedestrian crossing and a signal controlled pedestrian crossing is also provided near to the roundabout with Tempest Avenue. Street lighting is provided at regular intervals and a continuous footway is in place of the southern side of the carriageway.

1.5.5.22. Between the roundabout with Tempest Avenue / Frendstaple Road and Junction 3 of the A3(M), a 50mph speed limit applies. No footways or street lighting is provided although a layby is provided along each carriageway. This section of road is also designated no stopping zone for HGVs exceeding five tonnes.

Stirling Avenue / Hurstville Drive

1.5.5.23. These two roads are unclassified single carriageway two-lane residential roads subject to a speed limit of 30mph. Continuous footways are provided on both sides of the carriageway and streetlighting is in place at regular intervals.

Rockville Drive

1.5.5.24. Rockville Drive is an unclassified two-lane single carriageway road with street lighting and a continuous footway on the southern side of the carriageway. A speed limit of 30mph applies and private access points are limited to a series of commercial

establishments. The junction with Stakes Hill Road is signal controlled and includes dedicated pedestrian crossing facilities.

Frendstaple Road

1.5.5.25. Frendstaple Road is an unclassified single carriageway two-lane road in the Stakes Lodge area of Waterlooville. It connects the B2150 Hulbert Road with Stakes Hill Road and is served by bus routes 28A and 37. A posted speed limit of 30mph applies and a continuous footway is provided on the western side of the carriageway with intermittent sections of footway on the eastern side of the carriageway. Street lighting is also provided at regular intervals. Grade separated pedestrian crossings are provided near to the junctions with Stirling Avenue, Holly Drive, Springwood Avenue, and Mole Hill. Like tempest Avenue, Frendstaple Road incorporates characteristics that are atypical of distributor roads. For instance, no private driveways access onto Frendstaple Road.

Stakes Hill Road

1.5.5.26. Stakes Hill Road is an unclassified single carriageway two-lane residential road in the Stakes area of Waterlooville. It is subject to a speed limit of 30mph, with continuous footways in place on both sides of the carriageway and streetlighting at regular intervals. South of the roundabout with Frendstaple Road Toucan crossings are provided and a shared-use path is present on the eastern side of the carriageway. Bus routes 7 The Star, 37 and 654 serve this road. Key sensitive receptors along this route include St Peter's Catholic Primary School, Oaklands Catholic School, Oaklands Care Home and Crookhorn College.

Mill Road

1.5.5.27. Mill Road is an unclassified single carriageway two-lane residential road to the south of Waterlooville town centre connecting the A3 London Road with Elizabeth Road. A 30mph speed limit applies, street lighting is in place and continuous footways are present on both sides of the carriageway. The road is served by bus route 39. Key sensitive receptor is Mill Hill Primary School. Near to the school, there are associated parking restrictions in place (applying during the school arrival and departure periods) and zig-zag keep clear yellow markings around the school entrances.

Elizabeth Road / Woodlands Grove / Westbrook Grove

1.5.5.28. Elizabeth Road / Woodlands Grove / Westbrook Grove are unclassified single carriageway two-lane residential roads to the south of Waterlooville town centre. They provide a link between Stakes Hill Road and Stakes Road. All three roads are provided with streetlighting and continuous footways on either side of the carriageway. A 30mph speed limit applies. Additionally, they are the route for bus service 9. Sensitive receptors include Purbrook Infant School and Purbrook Junior School.

Ladybridge Road / Stakes Road

1.5.5.29. Ladybridge Road / Stakes Road are unclassified single carriageway two-lane residential roads in the Purbrook area of Waterlooville. A speed limit of 30mph applies to both roads. Continuous footways are in place on either side of the carriageway and streetlighting is provided. Just east of the junction with Westbrook Grove, a signal controlled pedestrian crossing is provided. These roads form part of the route used by bus services 39 and 621.

1.5.5.30. An ATC Survey was undertaken in July 2019 along Ladybridge Road between the junction with the A3 London Road and Stakes Road. The results of this are summarised below in **Table 39** below. Overall for two-way traffic the figures equate to approximately 15 vehicles per minute during the AM peak and 17 vehicles per minute in the PM Peak.

Table 39 - Ladybridge Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two-Way**	**East**	**West**	**Two-Way**
Total	373	536	909	531	478	1008
HGV%	3%	3%	5%	1%	1%	2%
Av. Speed (mph)	29	28	-	31	31	-

Purbrook Way

1.5.5.31. Purbrook Way is an unclassified road subject to a 40mph speed limit. It provides access to the Junction 4 of the A3(M) which is limited access. Like Tempest Avenue and Frendstaple Road, it boasts distributor road like characteristics. Continuous footways are provided on both sides of the carriageway although the footway on the northern side of the carriageway has been allocated as shared use. Street lighting is provided throughout. Sensitive receptors include the proximity to Havant and South Downs College – South Downs Campus, a B&Q retail store and an Asda supermarket.

1.5.5.32. Between the roundabout with Stakes Hill Road / Crookhorn Lane, the road is two-lane single carriageway with a central hatched area. A ghost island right turn is provided on the approach to the priority controlled junction with College Road. A grade separated pedestrian crossing is also in place along this section of the road.

1.5.5.33. Between the junction with College Road and the roundabout with the B2150 Hulbert Road, Purbrook Way is a dual carriageway consisting of 4 lanes predominately. A

signal controlled Toucan crossing is in place just east of the roundabout with the B2150 Hulbert Road.

Park Avenue

1.5.5.34. Park Lane is an unclassified single carriageway two-lane residential road in the Widley area of Waterlooville, connecting Ladybridge Road with the A3 London Road. A 30mph speed limit applies. Continuous footways are in place on both side of the carriageway and streetlighting is provided. This road provides exclusive vehicular access to Purbrook Park School. Consequently, there are associated parking restrictions and keep clear yellow zig-zag road markings in the vicinity of the school entrance.

The Dale / Fir Copse Road

1.5.5.35. The Dale / Fir Copse Road are unclassified single carriageway two-lane residential roads in the Widley area of Waterlooville. They form a route between Stakes Road and the A3 London Road. Both roads are: subject to a 30mph speed limit; include continuous footways on both sides of the carriageway; and benefit from streetlighting. Sensitive receptor is Purbrook Park School.

Crookhorn Lane

1.5.5.36. Crookhorn Lane is a single carriageway two-lane road with streetlighting. It has two distinct sections.

1.5.5.37. Between the roundabout with Stakes Hill Road / Purbrook Way / Stakes Road and the priority controlled junction with College Road, a 30mph speed limit applies and the road is situated within a residential area. Continuous footways are in place on either side of the carriageway. To the north of the junction with Perseus Place, there is a signal controlled pedestrian crossing. Sensitive receptors include: Crookhorn Lane Surgery, Riverside School, Phoenix community centre, a collection of commercial premises, Moreland Primary School and The Portsmouth Golf Centre.

1.5.5.38. Between College Lane and the B2177 Portsdown Hill Road it is predominately rural in nature and is subject to a 40mph speed limit. Shared-use paths are provided on either side of the carriageway and there is an access point into Fort Purbrook.

College Road

1.5.5.39. College Road is an unclassified single carriageway two-lane road with ghost island right turns at the access into the Havant and South Downs College – South Downs Campus and the junction with Apollo Drive. Street lighting is provided along its entire length. Between the junction with Purbrook Way and Apollo Drive, a 30mph speed limit applies. A footway is in place on the western side of the carriageway whilst a shared use path is provided on the eastern side of the carriageway. Between Apollo Drive and Crookhorn Lane a 40mph speed limit applies and a footway is provided on the eastern side of the carriageway. Key sensitive receptor is the presence of the College.

Furzeley Road

1.5.5.40. Furzeley Roads lies to the west of Waterlooville, connecting Forest Road to the north with Newlands Lane and Sheepwash Lane to the south. The road is a single carriageway unclassified route approximately 5m in width and is a rural country lane. No footways are provided along this link and the link does not serve any bus routes.

Newlands Lane

1.5.5.41. Newlands Lane runs to the west of Waterlooville, connecting Purbrook Heath Road in the south with Furzeley Road in the north. The road is a single carriageway unclassified route approximately 5m in width and is a rural country lane. No footways are provided along this link and the link does not serve any bus routes. The route runs to the west of the West of Waterlooville MDA site.

Purbrook Heath Road

1.5.5.42. Purbrook Heath Road runs east west connecting London Road in Waterlooville to the east with Mill Lane and rural country lanes to the west. The road runs to the south of the West of Waterlooville MDA site.

1.5.5.43. The link has a speed limit of 40mph to the eastern end, increasing to National Speed Limit close to the junction with Newlands Lane. The route has a narrow footway on the southern side of the road. No buses currently serve this link.

Portsmouth

Routes Adjacent / Linking to Farlington Avenue

Lower Farlington Road

1.5.5.44. Lower Farlington Road lies to the north of Farlington Road in Farlington. It connects Havant Road to the north with Fitzherbert Road in the south. It is crossed by First and Second Avenues.

1.5.5.45. The link is a single carriageway, two-way residential road, approximately 6m wide. A 20mph speed limit applies. Parking is restricted along some sections of the route, with priority flow traffic calming in place. Footways are provided on both sides of the road. No buses currently serve this link.

Grove Road

1.5.5.46. Grove Road lies to the west of Farlington, connecting the A2030 Eastern Road with Court Lane and Lonsdale Avenue to the west. The link is a single carriageway, two-way residential street with footways provided on both sides of the carriageway.

1.5.5.47. The route is a bus route and is served by route 22.

Station Road

1.5.5.48. Station Road runs north to south between Havant Road, crossing Grove Road running south to become a cul-de-sac. The route is a single carriageway two-way residential route, approximately 5 metres in width. The Link provides footways on

both sides, with residential accesses and on-street parking along its length. The link is not served by bus routes.

Anchorage Road

1.5.5.49. Anchorage Road runs South-East to North-West between the A2030 Eastern Road and the Anchorage Road/Williams Road/Norway Road roundabout. The route is a single carriageway two-way route, with varying width. The Link provides footways on both sides, with residential and business accesses along its length.

1.5.5.50. An ATC was completed on Anchorage Road between the junction with Eastern Road and Robinson Way in July 2019 as summarised below.

Table 40 - Anchorage Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**East**	**West**	**Two-Way**	**East**	**West**	**Two-Way**
Total	708	826	1534	817	547	1364
HGV%	10%	6%	16%	2%	5%	6%

Airport Service Road

1.5.5.51. Anchorage Road runs South-East to North-West between the A2030 Eastern Road and the Anchorage Road/Williams Road/Norway Road roundabout. The route is a single carriageway two-way route, with varying width. The Link provides footways on both sides, with residential and business accesses along its length

1.5.5.52. An ATC was completed on in July 2019 between the junctions with Robinson Way and Dundas Lane as summarised below.

Table 41 - Airport Service Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two-Way**	**North**	**South**	**Two-Way**
Total	116	30	147	125	100	225
HGV%	5%	13%	18%	4%	3%	7%
Av. Speed (mph)	34	34	-	36	35	-

Burrfields Road

1.5.5.53. Burrfields Road runs East to West between the A2030 Eastern Road and the A288 Copnor Road The route is a single carriageway two-way route, with varying width. The Link provides a footway on the southern side of the carriageway only between the A2030 and the retail park, from the retail park to the A288 Copnor Road there is a footway on both sides of the carriageway. Burrfields Road serves as an access route to business' and residential streets with accesses along its length.

1.5.5.54. An ATC was completed on in July 2019 between the junctions with Dundas Lane and Eastern Road as summarised below.

Table 42 - Burrfields Road – Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	East	West	Two-Way	East	West	Two-Way
Total	246	434	679	368	346	715
HGV%	8%	7%	15%	2%	2%	4%
Av. Speed(mph)	34	33	-	35	32	-

Tangier Road

1.5.5.55. Tangier Road lies in Baffins and runs east-west between Dover Road to the west and Eastern Road in the east. The junction of Tangier Road lies north of Hayling Avenue and south of Burrfields Road.

1.5.5.56. The link is approximately 8 metres wide and is a single carriageway two-way link. The route provides an on-carriageway marked cycle link. Footways and verges are provided on the southern side of the carriageway along much of the length. The route is served by bus routes 2A and 14 and has a number of bus stops and shelters along its length.

Quartremaine Road

1.5.5.57. Quartremaine Road lies in the Copnor area of Portsmouth and runs north-south between Burrfields Road to the south and Airport Service Road to the north. The route is a single carriageway two-way link running through industrial and employments areas and is subject to a 30mph speed limit. The carriageway is approximately 7m in width and provides footway on both sides. Parking is restricted along much of the route through double-yellow lines. The link is not a bus route.

Dundas Lane

1.5.5.58. Dundas Lane connects Quartremaine Road with Airport Service Road to the east. The route is a single carriageway two-way link running through industrial and employments areas and is subject to a 30mph speed limit. The carriageway is approximately 7m in width and provides footway on both sides. Parking is restricted along much of the route through double-yellow lines. The link is not a bus route.

1.5.5.59. The ink provides an alternative route to Airport Service Road from the south.

Robinson Way

1.5.5.60. Robinson Way runs north from Airport Service Road to Anchorage Road. The link is a single carriageway two-way route through industrial and employment areas and is subject to a 30mph speed limit. The carriageway is approximately 7m in width and provides footway on both sides. Parking is restricted along much of the route through double-yellow lines. The link is not a bus route.

Hayling Avenue

1.5.5.61. Hayling Avenue lies in the Baffins area of Portsmouth and runs east-west between Eastern Road in the east and Baffins Road to the west. It is a single carriageway two-way link running through a residential area. The link is subject to a 20mph speed limit. On-street parking is permitted on both sides of the carriageway, limiting the capacity of the link and narrowing the carriageway. The carriageway is approximately 7 metres in width and provides footway on both sides of the carriageway. The link is not served by any bus routes.

Langstone Road

1.5.5.62. Langstone Road lies in the Milton area of Portsmouth, running east-west between Milton Road roundabout in the west to Eastern Road in the east. It is a single carriageway two-way link running through a residential area. The link is subject to a 20mph speed limit. On-street parking is permitted on both sides of the carriageway, limiting the capacity of the link and narrowing the carriageway. The carriageway is approximately 7 metres in width and provides footway on both sides of the carriageway. The link is not served by any bus routes.

A288 Copnor Road

1.5.5.63. Copnor Road lies in the Baffins area of Portsmouth, running north-south between Baffins Road in the south to Anchorage Road in the north. The link provides a key north-south link from Portsea Island through Hilsea towards the A27.

1.5.5.64. The link is a single carriageway two-way A-road providing a key link on Portsea Island. The link is subject to a 30mph speed limit. Parking restrictions exist along the length of the road to varying degrees. Copnor Road is a bus route and is served by routes 2, 1 and 21.

Stubbington Ave

1.5.5.65. Stubbington Avenue runs east-west between A2047 London Road and A288 Copnor Road. To the east it connects with Burrfields Road. It is a single carriageway two-way link running through a residential area. The link is subject to a 30mph speed

limit. On-street parking is permitted on both sides of the carriageway, limiting the capacity of the link and narrowing the carriageway. The carriageway is approximately 8 metres in width and provides footway on both sides of the carriageway. The link is not served by any bus routes.

A288 Eastney Road

1.5.5.66. The A288 Eastney Road is a classified A Road which is subject to a 30mph speed limit. This link has an approximate carriageway width of 10-11m with footways in place on both sides of the carriageway. Several bus stops are in place, serving routes 1, 2, 17 and SD7. PRoW Footpaths 99 and 46 gain access from this link, providing connections with Locksway Road and Perth Road respectively.

A288 Milton Road

1.5.5.67. A288 Milton Road is approximately 1.88km in length and routes from the A288/A2030 junction (Milton Park Primary School) to Copnor Road. This link has a speed limit of 30mph and an approximate carriageway width of 10-11m with footways in place on both sides of the carriageway. The A288 Milton Road has commercial properties adjacent to both sides of the carriageway between the A2030 Velder Avenue and Meon Road. On-street parking is provided adjacent to Milton Park. Several bus stops are in place, serving routes 1, 2, 17 and SD7.

Table 43 - Milton Road - Average Weekday Flows

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
Direction of Movement	**North**	**South**	**Two Way**	**North**	**South**	**Two Way**
Total	712	633	1346	640	761	1401
HGV%	7%	10%	17%	4%	6%	10%
Av. Speed (mph)	22	24	-	23	20	-

A2030 Velder Avenue

1.5.5.68. A2030 Velder Avenue is a single carriageway classified A road, which has two lanes in the westbound direction, and one in the eastbound direction. Designated on street parking is available on both side of the carriageway on this link. Footways are provided adjacent to both sides of the carriageway. There are no public transport provisions in place on this link, nor do any public buses route via it.

1.6. EXISTING CONDITIONS – SUSTAINABLE TRANSPORT NETWORK

1.6.1. OVERVIEW

1.6.1.1. This chapter provides a summary of the local sustainable transport networks in and around the study area. This considers the public transport network, the local cycle

network and the local pedestrian network. Sections of these networks could potentially be temporarily impacted during the construction programme. Further details of the likely impacts on these networks are provided in Chapter 14.

1.6.2. PUBLIC TRANSPORT

1.6.2.1. As shown in Table 6-1 below, there are 14 bus services operating within the study area. Full bus timetables can be found in **Appendix D.**

1.6.2.2. It should also be noted that National Express bus services frequently arrive in / leave Portsmouth. Services to London run as often as 10 times a day and make use of the A3(M). A student bus service also runs frequently through Portsmouth to and from the University, a summary of this service is shown below.

Table 44 - Bus Services

Service No.	Route	Peak Frequency	Operator
1	Gunwharf – City Centre – Eastney - Southsea	Every 10 minutes	First
2	Gunwharf – City Centre – Eastney - Cosham - Paulsgrove	Every 10 minutes	First
7 / 7C	City Centre – Cosham – Waterlooville – Wecock Farm	Every 12 minutes	First
8	Clarence Pier – City Centre – Cosham – Waterlooville - Clanfield	Every 15 minutes	First
13	Portsmouth – Milton – Baffins	Once per hour	First
15	Eastney – Fratton Bridge – Arundel Street - City Centre	Once per hour	First
17	Southsea – Eastney – Copnor - Ocean Park	Every 30 minutes	First
20	Havant – Cosham – Portsmouth City Centre – The Hard	Every 30 minutes	Stagecoach
21	Havant – Farlington – Hilsea – Portsmouth City Centre – The Hard	Every 10 minutes	Stagecoach
22	Highbury – Cosham – Drayton - Farlington	Every 70 minutes	First

Service No.	Route	Peak Frequency	Operator
23	Leigh Park – Havant – Hilsea – Portsmouth City Centre - Southsea	Every 10 minutes	Stagecoach
37	Havant – Waterlooville – Cowplain – Clanfield - Petersfield	Once per hour	Stagecoach
39	Havant – Purbrook – Waterlooville – Wecock Farm	Every 12 minutes	Stagecoach
D1 / D2	Waterlooville – Denmead - Hambledon	Once per hour	First

1.6.2.3. Bus routes around Portsmouth, Waterlooville and surrounding areas are shown below.

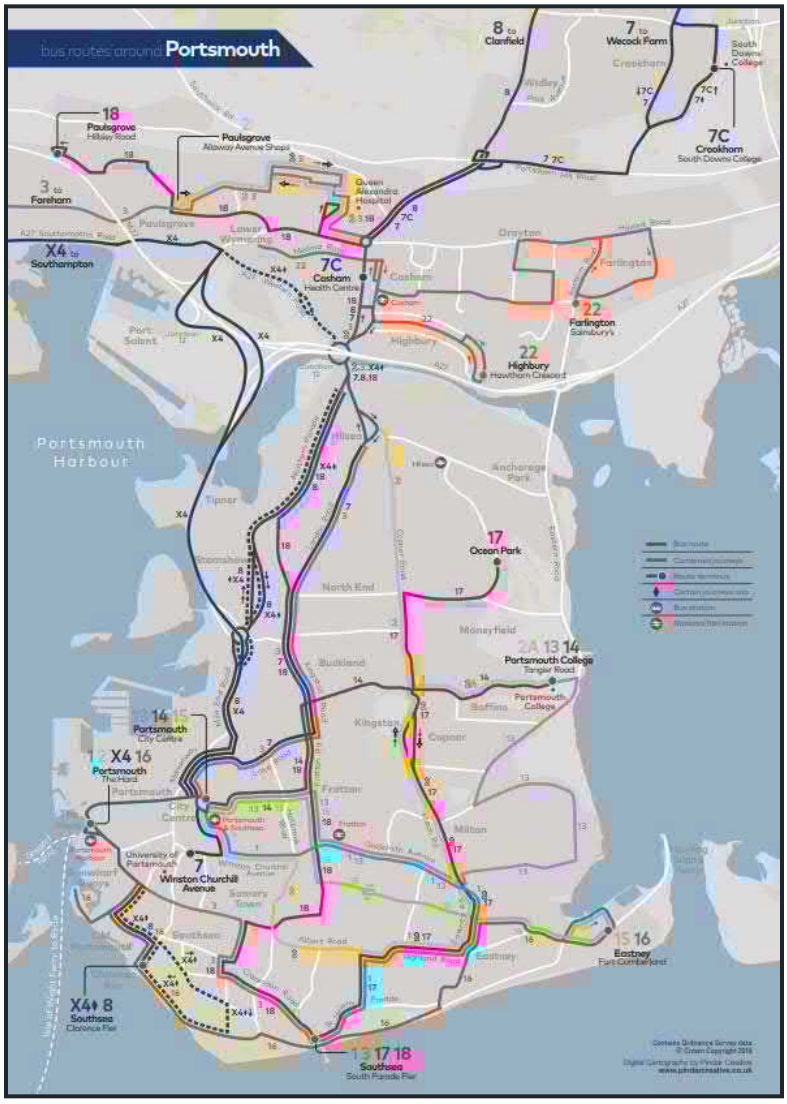


Plate 24 - First Group Portsmouth Bus Routes

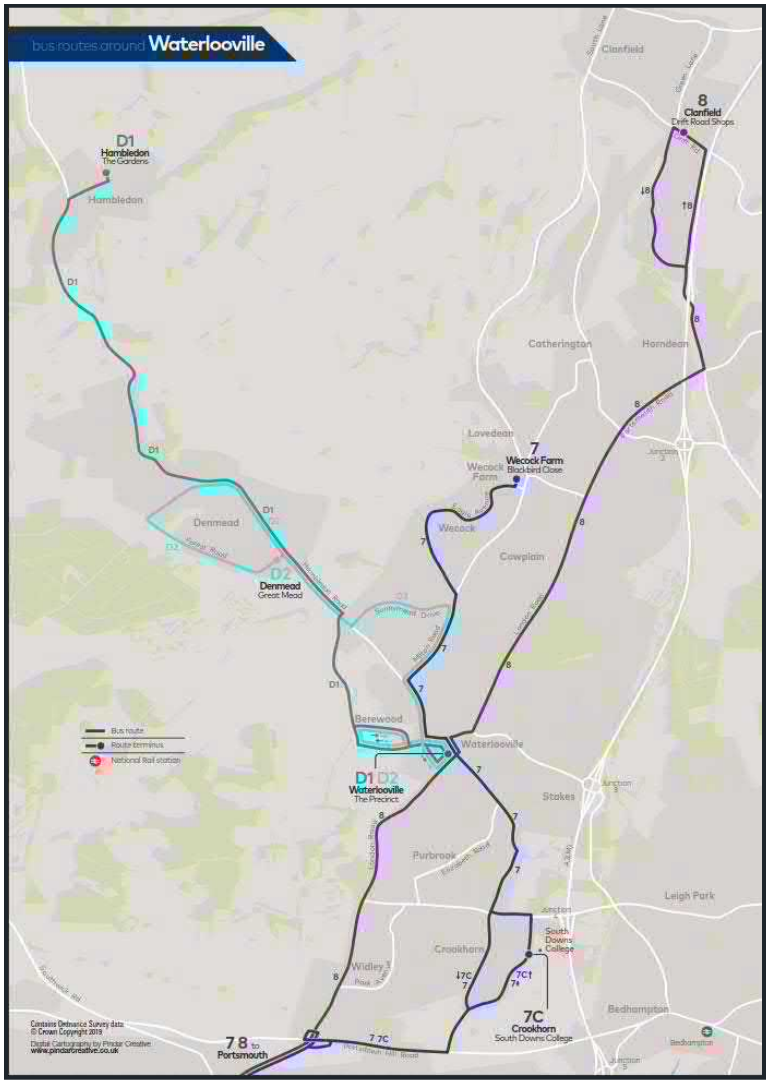


Plate 25 - First Group Waterlooville Bus Routes

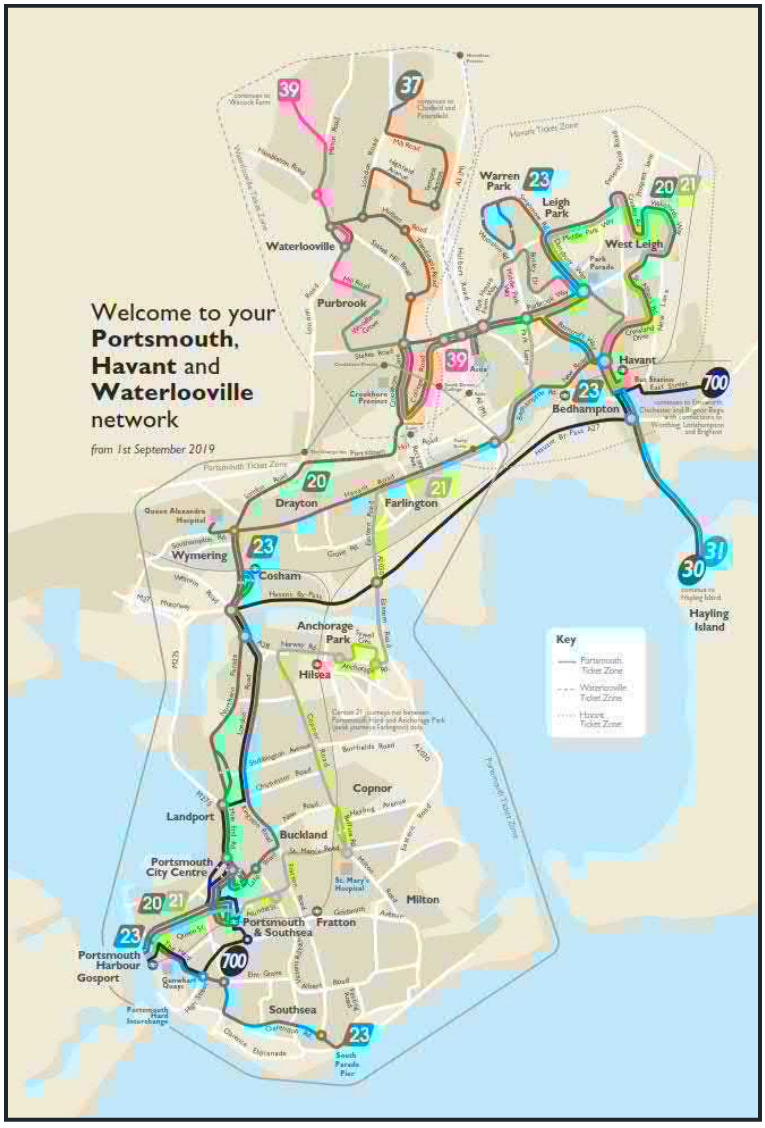


Plate 26 - Stagecoach Portsmouth, Havant and Waterlooville Bus Routes

20.1.1 **Table 45** below summarises the route these services take and where they conflict with the Onshore Cable Corridor.

Table 45 - Summary of Bus Routes along Onshore Cable Corridor

Service	Onshore Cable Corridor Conflict
7 – City Centre to Wecock Farm	Portsdown Hill Road, A3 Maurepas Way, Hambledon Road
8 – Clarence Pier to Clanfield	London Road
13 – Portsmouth City Centre to Baffins	A2030 Eastern Road, Moorings Way, Furze Lane, Locksway Road
15 – Portsmouth City Centre to Fort Cumberland	Fort Cumberland Road
16 – Portsmouth The Hard to Fort Cumberland	Fort Cumberland Road
20 – Havant to Portsmouth (The Hard)	Portsdown Hill Road
21 – Havant to Portsmouth (The Hard)	A2030 Eastern Road
22 – Highbury to Farlington	Fitzherbert Road, A2030 Eastern Road, A2030 Havant Road
23 – Leigh Park to Southsea	Havant Road
37 – Havant to Petersfield	A3 Maurepas Way
39 – Havant to Wecock Farm	A3 London Road, A3 Maurepas Way, Hambledon Road
D1 and D2 – Waterlooville to Hambledon	A3 Maurepas Way, Hambledon Road

1.6.2.4. The University Bus Service runs frequently throughout the week at 15-minute intervals. The service begins at 07:36 at Eastney Health Centre and terminates at 00:27. The bus takes a circular route through the city using A288, Kings Road, Elm Grove, B2154, A2030.

1.6.2.5. A summary of the University bus service is shown in Table 46 below.

Table 46 - University Bus Service

Service No.	Route	Peak Frequency	First / Last
U1	University – Elm Grove – Albert Road – Eastney Road – Goldsmith Avenue – Winston Churchill Ave. - University	Every 20 minutes approx.	07:36 / 00:27

1.6.3. WALKING AND CYCLING

1.6.3.1. As highlighted in Chapter 3, provision for walking and cycling varies in the study area, depending on the route. The majority of the highways along the Onshore Cable Corridor provide footways adjacent to the carriageway and as such the majority of the study area is accessible on foot. Likewise, the highway network is accessible for cyclists.

1.6.3.2. Over and above the highway network, a review of the local cycle infrastructure s set out below.

1.6.3.3. Sustrans is a UK sustainable charity who created the National Cycle Network (NCN). The NCN is made up of over 16,500 miles of cycle routes through the UK. Within the study area are NCN routes 2, 22 and 222.

1.6.3.4. Route 2 is 361 miles long and runs the entirety of the south coast, from St Austell to Dover. Within Portsmouth, this route runs through Southsea from Portsmouth's Historic Dockyard to Eastney.

1.6.3.5. Route 22 is a 92-mile-long route which connects Guildford and the Isle of Wight. Within the study area, the route runs along the western coast of Portsmouth before continuing into Cosham and Havant.

1.6.3.6. Route 222 is approximately 15 miles long and routes from Portsmouth to Petersfield. Within the study area, the route travels east of the city along Langstone Harbour and uses the following links in relation to the Onshore Cable Corridor:

- Fort Cumberland Road (on-road route);
- Henderson Road (on-road route);
- Bransbury Park (traffic-free route);

- Ironbridge Lane (on-road route);
- Locksway Road (on-road route);
- Furze Lane (on-road route);
- Moorings Way (on-road route);
- Eastern Avenue (on-road route);
- Milton Common (traffic-free route); and
- A2030 Eastern Road (traffic-free route).

1.6.3.7. The cycle network in the study area is shown in **Plate 27** below, which also shows the Order Limit so that it can be seen which routes are likely to be affected by the construction of the Onshore Cable Route.

Plate 27 - Sustrans Cycle Network

1.6.3.8. As seen in **Plate 27**, sections of Route 2 in Eastney and Milton are likely to be affected by construction of the Onshore Cable Route, as are the majority of the sections of Route 222 listed above.

1.7. HIGHWAY SAFETY

1.7.1. OVERVIEW

1.7.1.1. A review of Personal Injury Collision Data (PIC) for the local highway network within the study area has been conducted for the five-year period from January 2014 to December 2018. Data relating to recorded PICs were obtained from Hampshire Constabulary on 16 July 2019. The full collision data is included in **Appendix E**.

1.7.1.2. Collisions have been noted based upon 12 zones in the study area and the construction traffic route. These zones are shown in **Figure 28** below and summarised as follows:

1.7.1.3. Construction Traffic Zone

- Zone 1 – Lovedean Substation
- Zone 2 – Denmead / Anmore
- Zone 3 – Hambledon Road
- Zone 4 – Waterlooville
- Zone 5 – A3 Purbrook
- Zone 6 – Portsdown Hill Road
- Zone 7 – Drayton
- Zone 8 – A2030 / Havant Bypass
- Zone 9 – Eastern Road (Marshes)
- Zone 10 – Eastern Road (Milton Common)
- Zone 11 – Milton
- Zone 12 – Eastney

1.7.1.4. Where collisions occur in areas where zones are shown to overlap, they will be attributed to the previous zone. (e.g. any collisions in the Anmore area of Zone 3 will be attributed to Zone 2).

1.7.1.5. Only collisions occurring on roads along and near to the main route of the Onshore Cable Corridor have been analysed.

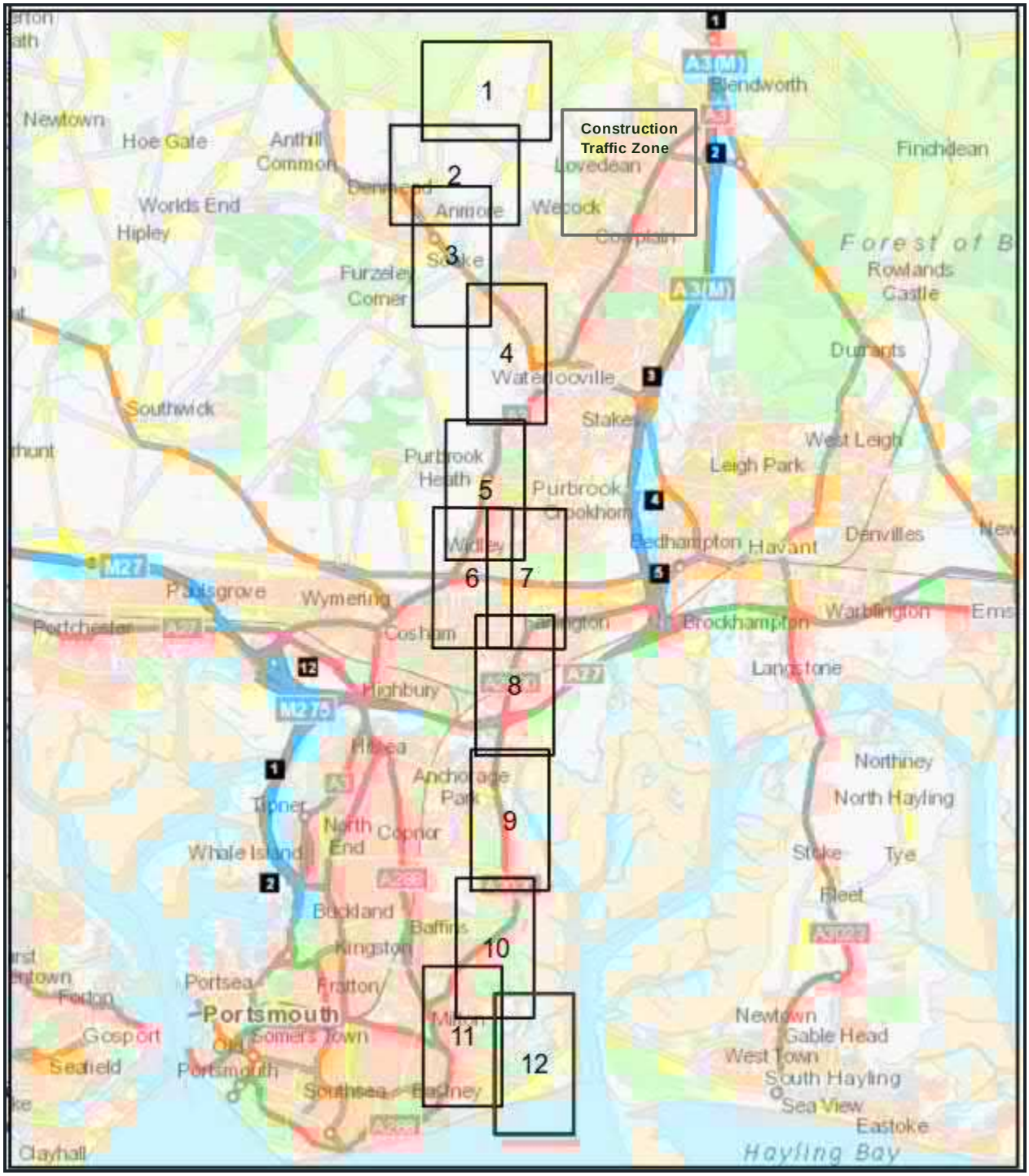


Plate 28 - Zones - Collisions

1.7.2. COLLISION SUMMARY

1.7.2.1. There was a total of 343 collisions recorded across the area of interest in the period investigated, which consisted of:

- Four fatal collisions;
- 58 serious collisions; and
- 281 slight collisions.

1.7.2.2. The four fatal collisions happened across the area of interest and across the years being investigated. The first fatal collision involved a motorcycle and a vehicle. The collision report stated that the motorcycle undertook a vehicle, clipped the nearside kerb and struck a second vehicle. The causation factor given was 'aggressive driving'.

1.7.2.3. The second fatal collision involved a single motorcycle. The collision report stated that the driver lost control when travelling around a bend and was thrown from the motorcycle. The causation fact given was 'loss of control'.

1.7.2.4. The third fatal collision involved an LGV and a motorcycle. The collision report stated that the LGV turned right out of a junction without giving way to the oncoming motorcycle, resulting in a collision. The causation factor given was 'disobeyed give way or stop sign markings.

1.7.2.5. The final fatal collision involved two cyclists. The collision report states that cyclist one rounded a corner on the pavement and collided with a cyclist travelling in the opposite direction. This resulted in one of the cyclists falling into the road and being struck by a vehicle. No causation factor was provided for this collision.

1.7.2.6. It can be seen that the fatal collisions occurred for a variety of reasons and there is no reason to consider that the temporary roadworks for the AQUIND project will increase such collisions.

1.7.2.7. The 58 serious crashes occurred for a variety of reasons, across the area of interest and across the time period being investigated. There were 21 different causation factors applied to the serious collisions, with none of those factors relating to roadworks, construction work or the nature of the infrastructure.

1.7.2.8. Seven of the 58 collisions involved pedestrians and 11 of the collisions involved cyclists. It should also be noted that none of the serious collisions involved HGVs or PSVs.

1.7.2.9. The most prevalent causation factors given for the serious collisions were:

- Failed to look properly; and
- Failed to judge other persons path or speed.

1.7.2.10. The slight collisions occurred across the study area and for a variety of reasons, and as with the serious collisions none of them had causation factors associated with the nature of the infrastructure. The majority of collisions were due to human error (the remainder were due to factors such as weather).

1.7.2.11. The most prevalent causes given were:

- Disobeyed automatic traffic signal (eight collisions);
- Following too close (19 collisions);
- Poor turn or manoeuvre (27 collisions);
- Failed to look properly (117 collisions); and
- Failed to judge other persons path or speed (24 collisions).

1.7.2.12. Based on the causation factors provided for the slight collisions, there appears to be no reason as to why the temporary works associated with the project would increase the frequency or severity of collisions across the area of interest.

1.7.3. CONSTRUCTION TRAFFIC ZONES

1.7.3.1. 40 slight and 7 serious collisions occurred along this route from January 2014 to December 2018. Most collisions occurred on and around the Dell Piece East and Dell Piece West slips.

1.7.3.2. None of the recorded collisions in this zone involved pedestrians and only two collisions involved cyclists. Both the collisions involving cyclists occurred on Lovedean Lane; one at the junction with A3 London Road and one at the junction with Frogmore Lane.

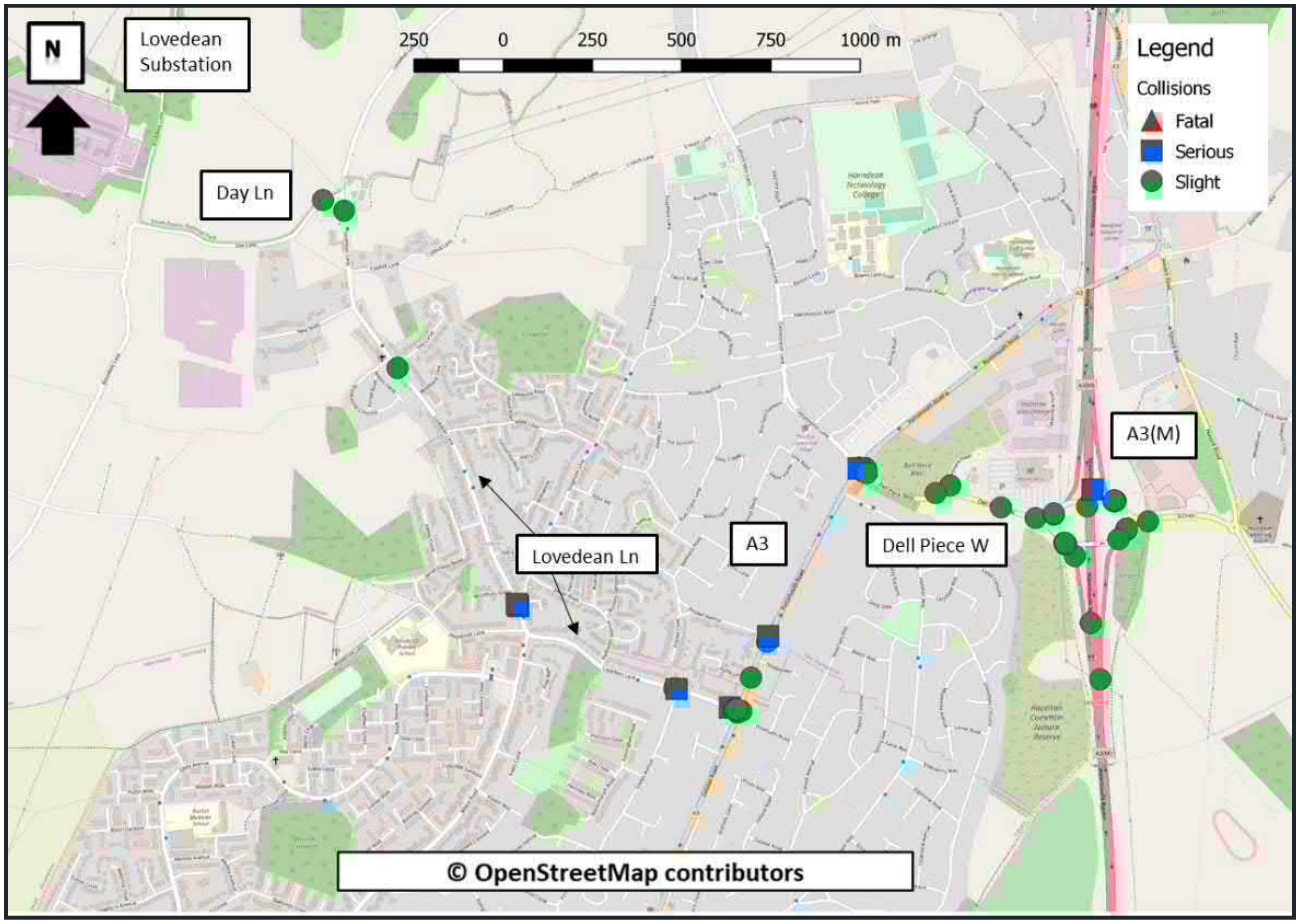


Plate 29 - Collisions – Construction Traffic Zone

Zones 1-3

Zone 1 – Lovedean Substation

1.7.3.3. No collisions were recorded in this area from Lovedean Substation to Anmore between January 2014 to December 2018.

Zone 2 – Denmead / Anmore

1.7.3.4. 3 slight collisions occurred in this zone between January 2014 to December 2018. No pedestrians were involved in these collisions however one cyclist was injured in a collision at the Anmore Road junction with Edneys Lane.

Zone 3 – Hambledon Road

1.7.3.5. Seven slight collisions and One serious collision occurred in this zone between January 2014 to December 2018. Two collisions involving pedestrians occurred within the vicinity of Denmead Infant School. Of the two pedestrian collisions which occurred within the vicinity of Denmead infant school, one involved a child. The collision description states that the pedestrian was crossing a side road when a vehicle turned off from the main road colliding with the pedestrian at slow speed. The

causation factor was given as 'failure to look properly'; it is not clear if the causation factor refers to the pedestrian or driver.

1.7.3.6. Two collisions involving cyclists occurred at the Forest Road Roundabout, one of which involved a child. The collision report states that the cyclist was travelling along the pavement when a vehicle collided with it. The vehicle had been travelling along the pavement and had an obscured view. The causation factor was given as 'vehicle travelling along pavement'.

1.7.3.7. The collisions within Zones 1-3 are shown in **Plate 30** below.

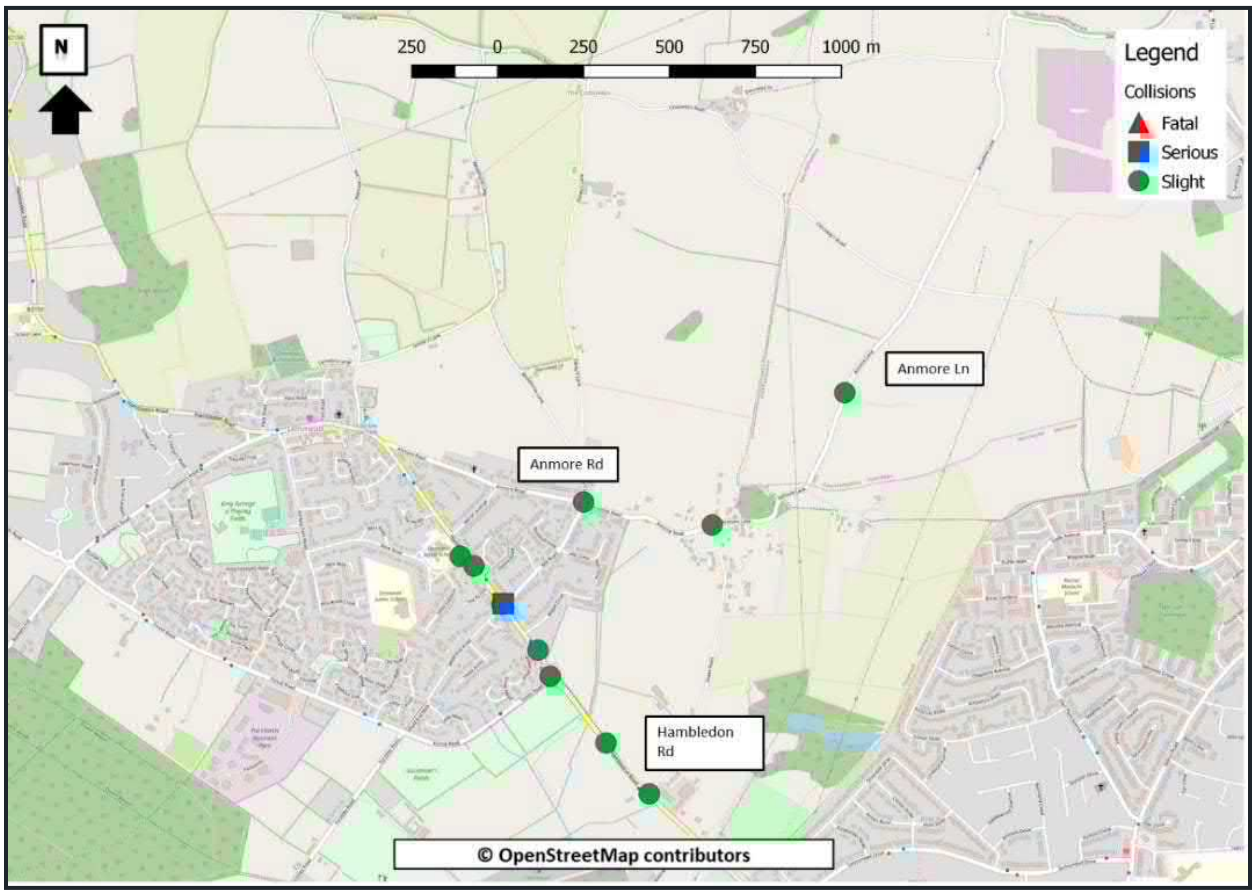


Plate 30 - Collisions - Zones 1-3

Zones 4-6

Zone 4 – Hambledon Road/ Maurepas Way

1.7.3.8. A total of 31 slight and 5 serious collisions occurred in this zone between January 2014 and December 2018, a cluster of collisions occurred in the vicinity of the Rockville Drive roundabout and pedestrian crossing on Maurepas Way.

1.7.3.9. 3 collisions here involved pedestrians at; Hambledon Road junction with Aston Road, Maurepas Way at the pedestrian crossing outside of ASDA and at the pedestrian

crossing outside Vine Medical Group. 10 collisions involving cyclists occurred in this zone.

Zone 5 – A3 London Road

1.7.3.10. A total of 30 slight and 10 serious collisions occurred in this zone. A cluster of collisions occurred at London Road/Bushy Mead junction. 1 collision involving a pedestrian occurred at the Campbell Crescent bus stop on A3 London Road and 13 collisions involved cyclists.

Zone 6 – Portsdown Hill Road

1.7.3.11. A total of 10 slight collisions, 3 serious collisions and 1 fatal collision occurred in this zone between January 2014 to December 2018. A cluster of collisions can be observed outside the George Inn along B2177. The fatal collision occurred on A3 London Road underneath the Portsdown Hill Road bridge.

1.7.3.12. A pedestrian was involved in a collision at The George bus stop, two cyclists were involved in collisions at the College Road junction and one at the junction with Farlington Avenue.

1.7.3.13. The collisions within Zones 4-6 are shown in **Plate 31.**

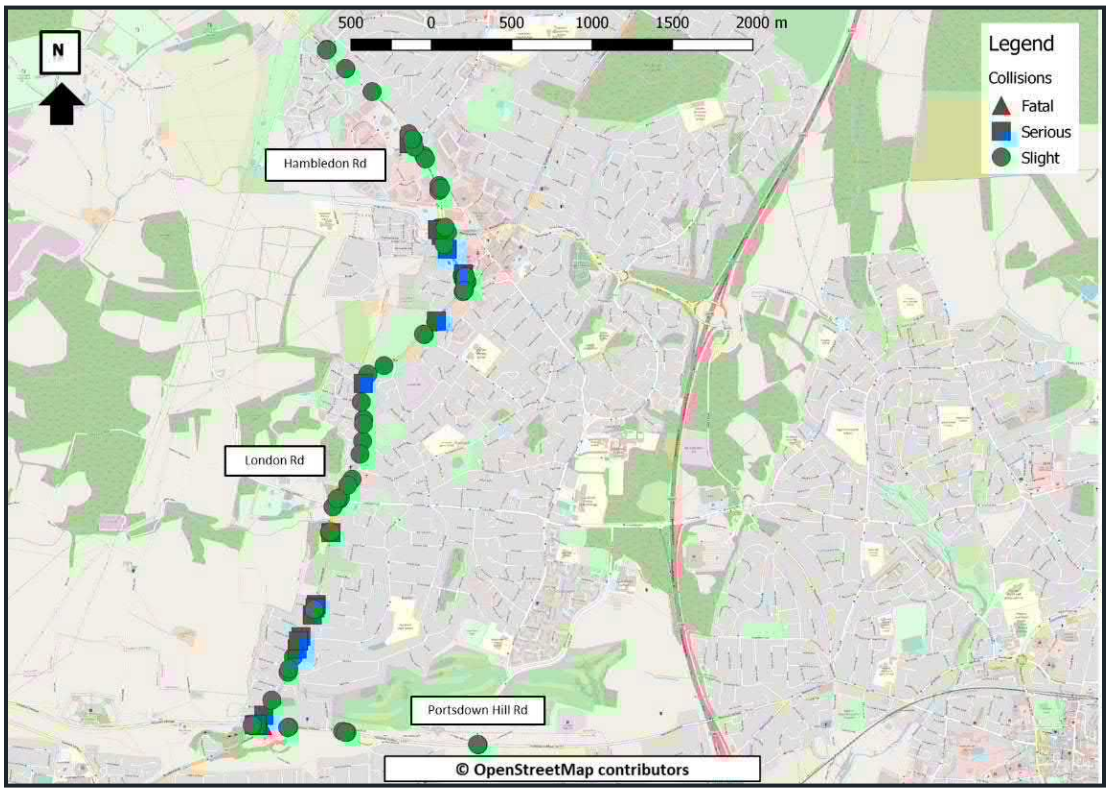


Plate 31 - Collisions - Zones 4-6

Zones 7-9

Zone 7 – Farlington to Sainsbury's

1.7.3.14. A total of 14 collisions occurred in this zone between January 2014 to December 2018. Of these collisions, 12 were slight and 2 were serious. No pedestrians were involved in any collisions but 2 cyclists were involved in collisions on Havant Road and 1 was involved in a collision on Eastern Road at the junction with Fitzherbert Road.

Zone 8 – Sainsburys to Farlington Roundabout (inclusive)

1.7.3.15. 43 collisions occurred in this zone between January 2014 to December 2018. Of these collisions, 32 were slight and 11 were serious. Collision clusters occurred on the Farlington roundabout, particularly on the Eastern Road southern approach.

1.7.3.16. A collision with a pedestrian occurred outside the Shell garage and 9 collisions involving cyclists occurred at the Farlington Roundabout.

Zone 9 – A2030 Eastern Road to Harbourside Car Park

1.7.3.17. 37 collisions occurred in this zone between January 2014 to December 2018. Of these collisions, 35 were slight and 2 were fatal. Accident clusters can be seen at all junctions in this zone, fatal collisions occurred at A2030/Airport Service Road junction and A2030/Burrfields Road junction. No collisions involved pedestrians but 8 involved cyclists.

1.7.3.18. The collisions within Zones 7-9 are shown in **Plate 32.**

Plate 32 - Collisions - Zones 7-9

Zones 10-12

Zone 10 – Eastern Road (Milton Common)

1.7.3.19. A total of 48 collisions occurred in this zone between January 2014 to December 2018. Of these collisions, 38 were slight, 9 were serious and 1 was fatal. The fatal collision occurred at the A2030/Kirpal Road junction. 5 collisions involved pedestrians and five collisions involved cyclists.

Zone 11 – Milton Road (Milton Locks)

1.7.3.20. A total of 53 collisions occurred in this zone between January 2014 to December 2018. Of these collisions 43 were slight and 10 were serious. A large proportion of collisions occurred along Milton Road, particularly at the junction with Priory Crescent. 8 collisions involved pedestrians with the majority occurring along Milton Road, 15 collisions involved cyclists of which 13 occurred along Milton Road.

Zone 12 – Eastney

1.7.3.21. No collisions occurred in this zone from Eastney Road to Eastney Beach between January 2014 to December 2018.

1.7.3.22. The collisions within Zones 10-12 are shown in **Plate 33** below.

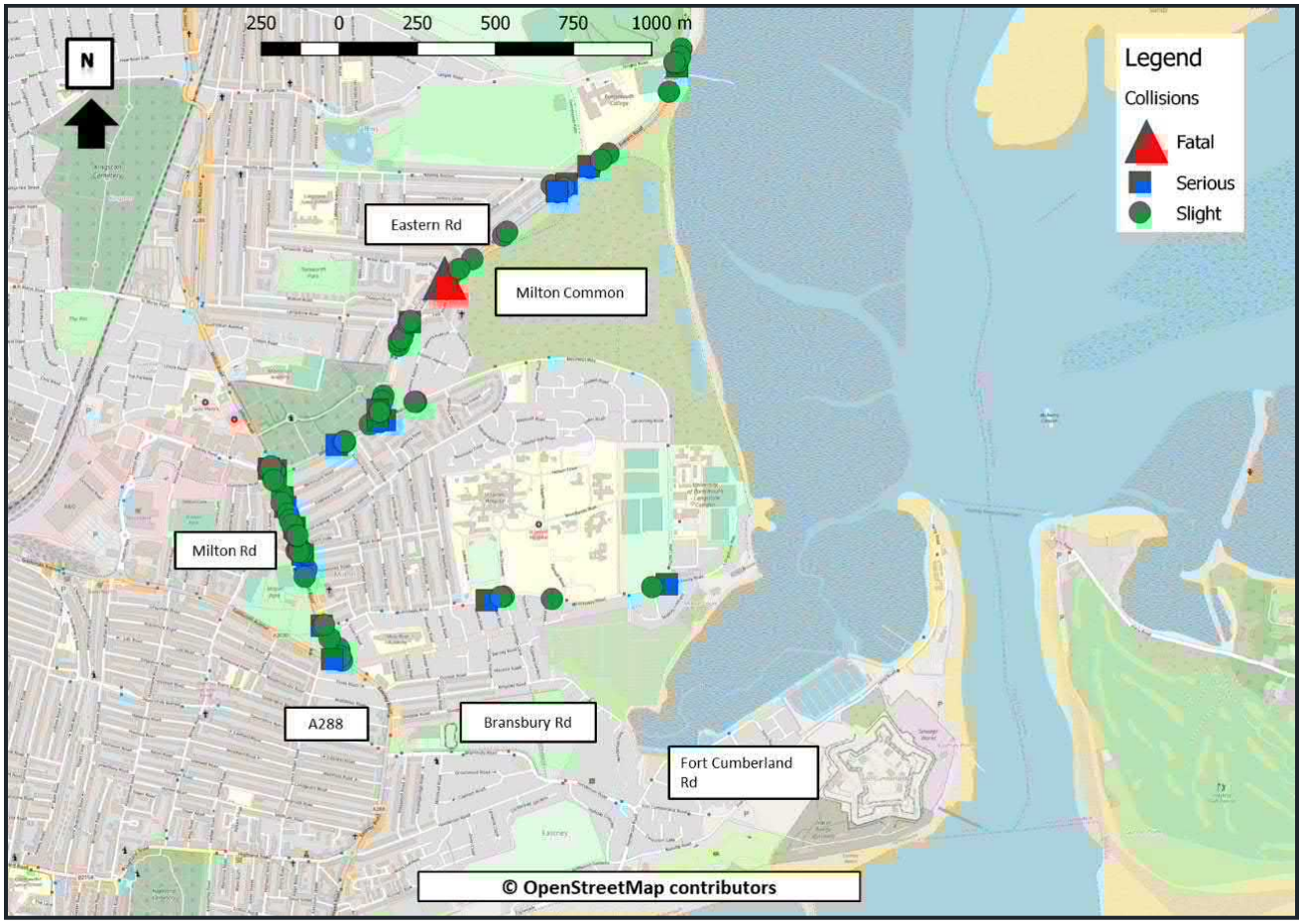


Plate 33 - Collisions - Zones 10-12

1.8. OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN SUMMARY

1.8.1. OVERVIEW

1.8.1.1. This chapter provides a summary of the Outline Construction Traffic Management Plan (CTMP). The Outline CTMP document is provided at **Appendix F**. The purpose of the Outline CTMP is to set out the framework for managing construction traffic associated with the Proposed Development. As this TA deals with the impacts of the temporary works associated with the construction, the Outline CTMP forms a central element of the strategy for mitigating impacts on the local transport networks.

1.8.2. SCOPE OF THE OUTLINE CTMP

1.8.2.1. This Outline CTMP provides an overarching plan as to how the construction traffic and site operations will be managed across the extent of the Proposed Development. Individual CTMP documents will be provided to each contractor with further detail relating to their relevant work site locations. These will be prepared and agreed with the relevant Local Highway Authority ahead of works commencing.

1.8.2.2. The Outline CTMP sets out the parameters within which contractors will be required to work, including hours of operation, traffic routing, safe vehicular access and manoeuvring and minimising traffic impacts.

1.8.3. VEHICULAR MOVEMENT MANAGEMENT

1.8.3.1. The vehicular movement strategy for construction is based on a number of core principles:

- Ensuring a safe and efficient use of road space to provide access to the construction site;
- Minimising the number of vehicle movements and reducing impact as far as practical by proposing mitigation measures as required;
- Use the shortest routes to the construction sites as practical; and
- Avoiding residential areas and those near sensitive receptors such as schools etc.

1.8.3.2. Vehicular access to the construction works will follow three levels of road hierarchy.

- Level 1 Strategic Road Network – Are roads managed by Highways England being motorways and trunk roads which provide access to the construction sites from a wide catchment area to be distributed by the lower levels of road.
- Level 2 Primary and Local Road Networks – These being roads under the authority of Hampshire County Council and Portsmouth City Council, which provide access to most of the cable corridor.

- Level 3 Access Road – These will be temporary haul roads created by the construction contractors linking back to the Level 2 road network. These also may be existing privately owned roads utilised for the construction purposes.

Working Hours

1.8.3.3. The typical working hours, unless otherwise stated will be as shown below.

Table 47 - Construction Working hours

Activity	Anticipated working hours per day	Anticipated working days per week
Converter Station Area Construction	10 hour shifts, 08:00 – 18:00	6 days*
Marine Cable Installation	24 hour shifts	7 days
Onshore Cable Installation ***(including HDD-2, HDD-5 and HDD-6)***	10 hour shifts, 07:00 – 17:00	6 days*
Landfall Installation ***(including HDD-1, TJB and ORS)***	12 hour shifts	7 days
HDD-3 and HDD-4 Installation	12 to 24 hour shifts	7 days

*Day 6 is Saturday working with hours defined for each individual location

** This includes start-up and shut down activities for an hour either side of the core working hours

Timing of Movements

1.8.3.4. HGV movements to the works sites will be as restricted as follows to reduce impact to the surrounding road network. The main compound for all construction works will be Lovedean Converter Station. All HGV trips, with the exception of HDD and Micro-Tunnelling aspects of the work due to their 24-hour nature, will originate from the Converter Station.

1.8.3.5. For all sections of the Onshore Cable Corridor and all construction methods, additional restrictions on HGV movements will be considered to suit local sensitive receptors, such as schools. For example, any construction work on Moorings Way or southern end of Milton Common should avoid HGV movements being generated between 15:00 and 16:00 to avoid the end of the school day at Mooring Way Infant School.

1.8.3.6. The Contractor shall arrange for Vehicle Marshalls to direct construction traffic / HGV movements at the site entrances through to site compound areas. Flash cards should be issued to all HGV drivers and visitors entering the site and vehicles / deliveries will be provided with escorts through the site where required.

Lovedean Converter Station

1.8.3.7. Between the hours of 09:00 and 17:00 for HGVs relating to construction of the Converter Station, therefore avoiding the AM and PM peaks. In addition, HGV trips will occur in relation to construction of the Onshore Cable Corridor to deliver equipment to each location, leaving the compound between 06:00 and 07:00 and arriving at the compound between 17:00 and 18:00.

Eastney (Landfall)

1.8.3.1. General HGV movements will take place between 09:00 and 17:00 for HGVs relating to construction of the ORS and Landfall, therefore avoiding the AM and PM peaks of 08:00-09:00 and 17:00-18:00.

1.8.3.2. Once drilling plant and cabins have been delivered (a 2-3 day process) the Landfall construction site will only generate HGV movements associated with water, bentonite, fuel and removal of spoil. These movements however will be restricted to outside of the 08:00-09:00 and 17:00-18:00 peak traffic hours and 19:00-07:00 to avoid disturbance to nearby residential properties.

Onshore Cable Route

1.8.3.3. HGVs carrying equipment and material will arrive on-site at 07:00 to coincide with the start of the working day. General HGV movements will take place between 09:00-17:00 to avoid the peak traffic hours, although equipment / material may also be transported away from each site at 17:00.

Horizontal Direction Drilling Works

1.8.3.4. These movements however will be restricted to outside of the 08:00-09:00 and 17:00-18:00 peak traffic hours of0 08:00-09:00 and 17:00-18:00 unless there is an emergency.

Issues and Constraints identified

1.8.3.5. There are a number of common issues that extend over the Onshore Cable route and construction routes access routes. Table 48 lists the common issues and constraints with the proposed mitigation, which have been mitigated as far as reasonably practicable through the planning and design process.

Table 48 - Common Issues and Constraints – Whole cable route

Issue / Constraint	Mitigation Stage	Proposed Mitigations
Narrow rural roads / no pedestrian footways / unrestricted speed limit	Route planning	Routing strategy and signage to be agreed with HCC and PCC
Narrow residential streets with on-street parking	Route planning	Parking suspension, HGV routing strategy

Issue / Constraint	Mitigation Stage	Proposed Mitigations
Congestion and impact on strategic roads	Route planning, Framework Traffic Management Strategy and Construction Traffic Management Plan	Traffic capacity assessments. Vehicle movements restricted.
Geometry of junctions and roads not suitable and visibility constrained for proposed construction vehicles	Route planning and design stage	Interventions proposed and agreed with highway authority
Long diversion routes for closed roads	Route planning and design stage	Construction techniques to avoid road closures if possible. Advanced signage/warning

HGV Routes

1.8.3.6. An assessment has been made of potential vehicular routes to access the cable route and is detailed in the following sections below. These routes will be communicated to all hauliers. Drivers will be required to adhere to all existing restrictions such as weight and height restrictions. Temporary signage will be utilised by the contractor to direct construction traffic to compounds and site accesses. These will be agreed with the highway authorities.

Section 1 – Lovedean

1.8.3.7. Construction traffic will use junction 2 of A3(M), B2149, A3 Portsmouth Road, Lovedean Lane and Day Lane.

1.8.3.8. No construction traffic (HGVs and constructions workers) will use the route from the south from Hambledon Road via Soake Road, Anmore Road and Anmore Lane.

1.8.3.9. There are no vehicular restrictions in this section other than geometric constraints along Day Lane and Broadway Lane. Day Lane and Broadway Lane are rural country lanes with a general width of 6.0 m or less. Each are bordered by hedgerow/grass verges without footways. Given its existing width, Day Lane will not be able to accommodate two-way HGV traffic and therefore vehicles exiting the Converter Station Area will be controlled to avoid meeting a vehicle travelling along Day Lane towards the site. This could be done using a combination of temporary traffic signals (near the access to the solar farm) and banksmen on either end. In some limited locations, the width of Day Lane may make it difficult for a car and HGV to pass. These locations are primarily where there is good forward visibility, while there is also an informal layby located within highway land adjacent to the Solar Farm access that will facilitate two-way flow of traffic.

Section 2 - Anmore

1.8.3.10. Construction traffic to/from Anmore Road will be routed either via the Converter Station compound and Broadway Lane/Anmore Lane or directly from junction 3 A3(M), Hulbert Road, A3 London Road, B2150 Hambledon Road and Mill Road.

1.8.3.11. No construction traffic will use routes along Soake Road. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.12. There are no vehicular restrictions in this section and no other geometric constraints have been identified beyond those discussed in Section 1.

Section 3 – Denmead / Kings Pond Meadows

1.8.3.13. Construction traffic to/from Anmore Road will be routed either via the Converter Station compound and Broadway Lane/Anmore Lane or directly from junction 3 A3(M), Hulbert Road, A3 London Road, B2150 Hambledon Road and Mill Road.

1.8.3.14. No construction traffic will use routes along Soake Road. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.15. There are no vehicular restrictions in this section and no other geometric constraints have been identified beyond those discussed in Section 1.

Section 4 – Hambledon Road to Burnham Road

1.8.3.16. Given the length of this section, construction traffic will use different routes depending upon the location of the Onshore Cable Corridor construction works unless it is travelling to /from the Converter Station Area/Works Compound. All HGVs using the Converter Station Area/Works Compound will use Day Lane, Lovedean Lane, Milton Road and B2150 Hambledon Road to reach the relevant construction location.

1.8.3.17. Construction traffic not travelling via the Converter Station Area/Works Compound will use the following routes:

- B2150 Hambledon Road: Junction 3 A3(M), Hulbert Road and A3 London Road;
- A3 Maurepas Way/London Road north of Ladybridge Roundabout: Hambledon Road: Junction 3 A3(M), Hulbert Road and A3 London Road;
- A3 London Road south of Ladybridge roundabout: Junction 3 A3(M) Hulbert Road (eastern), Purbrook Way, Stake Road, Ladybridge Road and A3 London Road; and
- Portsdown Hill Road/Farlington Avenue: Junction 5 A3(M), Bedhampton Hill, B2177 Portsdown Hill Road, Farlington Avenue.

1.8.3.18. No construction traffic will use Frendstaple Road, Stakes Hill Road and Crookhorn Lane. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.19. Restrictions in this section include the 'Access Only' 7.5 tonne weight restriction on Farlington Avenue which will be required to be rescinded for the duration of the works on Farlington Avenue. This weight restriction has been implemented in conjunction with the existing traffic calming measures to reduce use of Farlington Avenue as a through-route.

Section 5 – Farlington

1.8.3.20. Generally, construction traffic will use junction 5 A3(M), A2030 Havant Road, Farlington Road and A2030 Eastern Road or A27 junction with A2030 Eastern Road. Due to the carriageway width and central islands at the A2030 Havant Road / Farlington Avenue junction it may be necessary for low loader HGVs with cable drums to access Farlington Avenue from the northern end, using the A27 Portsbridge Roundabout, A397 Northern Road, A3 London Road and Portsdown Hill Road to gain access.

1.8.3.21. No construction traffic will use any surrounding residential roads. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.22. Restrictions in this section include the 'Access Only' 7.5 tonne weight restriction on Farlington Avenue which will be required to be rescinded for the duration of the works on Farlington Avenue.

Section 6 – Zetland Field & Sainsbury's Car Park

1.8.3.23. Construction traffic will use junction 5 A3(M), A2030 Havant Road, and A2030 Eastern Road or A27 junction with A2030 Eastern Road.

1.8.3.24. No construction traffic will use Lower Farlington Road or Fitzherbert Road. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.25. There are no vehicular restrictions in this section and no geometric constraints have been identified.

Section 7 – Farlington Junction to Airport Service Road

1.8.3.26. Construction traffic will use the A27 junction with the A2030 Eastern Road northbound for the Farlington playing fields works and southbound for Portsea Island works.

1.8.3.27. No construction traffic will use the London Road, Copnor Road and Norway Road. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.28. There are no vehicular restrictions in this section and no geometric constraints have been identified.

Section 8 – Great Salterns Golf Course to Moorings Way

1.8.3.29. Construction traffic will use the A27 junction with A2030 Eastern Road for access.

1.8.3.30. No construction traffic will use the section from Copnor Road to Milton Road. This will be managed by provision of route planning information by the contractor.

1.8.3.31. Restrictions in this section include the 5 tonne weight restriction on Eastern Avenue and Moorings Way which will be required to be rescinded for the duration of the works. This is an environmental weight restriction which restricts access between midnight and 07:00 and 19:00 to midnight Monday to Saturday and all day on Sunday. The impacts of lifting this restriction can therefore be mitigated by ensuring that access by construction vehicles follows these restrictions through the contractors CTMP.

.

Section 9 – Moorings Way to Bransbury Road

1.8.3.32. Construction traffic will use A27 junction with A2030 Eastern Road, A288 Eastney Road, Milton Avenue, Moorings Way, Locksway Road, Kingsley Road, and Bransbury Road

1.8.3.33. No construction traffic will enter the five-tonne restricted zone of Salterns Avenue residential area. Traffic will not use other residential side streets to travel north or south but will return to A88 Eastney Road or A2030 Milton Road. Construction traffic will leave Portsea Island via A2030 Eastern Road only.

1.8.3.34. There are no vehicular restrictions in this section other than geometric constraints associated with use of residential roads such as Locksway Road, Kingsley Road and Bransbury Road. These are generally 6.0-7.0 m in width with on-street parking on at least one-side of the carriageway. Taking this into account, the contractor will be required to use smaller construction vehicles and plant when accessing these roads.

Section 10 – (Eastney) Landfall

1.8.3.35. Construction traffic will use the A27 junction with A2030 Eastern Road, A288 Eastney Road and Bransbury Road, Henderson Road and Fort Cumberland Road

1.8.3.36. No construction traffic will use the section of Henderson Road to the roundabout with A288 Cromwell Road. This will be managed and enforced by provision of route planning information by the contractor.

1.8.3.37. There are no vehicular restrictions in this section, no geometric constraints have been identified other than removal of the existing height restriction gate at the existing public car park.

1.8.4. CONSTRUCTION WORKFORCE

1.8.4.1. The Proposed Development is expected to have a maximum of 150 construction workers for Converter Station at the peak of construction. Another 50-60 construction workers will be employed during this period in relation to the construction of the Onshore Cable Route.

1.8.4.2. It is anticipated that up to six construction gangs will be working concurrently along sections of the cable route. Mitigating the number of vehicular trips generated by construction staff travelling to and from their place of work and between work site locations is a key objective of the CTMPs.

Staff Travel Planning Strategy

1.8.4.3. The Outline CTMP provides a guide for measures to be applied and promoted by contractors as part of their individual CTMPs. Proposed mitigation measures include:

- Minibuses could be provided to ferry staff to sites as required from the main construction compound and collection from transport hubs (railways stations and bus terminals).
- Parking controlled to ensure construction workers do not park inappropriately on surrounding roads causing nuisance to residents;

- Information boards used at the construction compounds detailing public transport information to encourage travel and to hubs where collection by minibuses is possible;
- Provision for secure cycle parking at construction compounds;
- Welfare facilities at work sites such as canteens;
- Measures to encourage sustainable travel should be used including car sharing or a specific ride share app for staff to use on the project.

1.8.4.4. Over and above the measures listed above, a Staff Communication Strategy will be encouraged to provide all staff with the necessary information for them to make sustainable travel choices.

1.8.5. TEMPORARY SITE ACCESSES

1.8.5.1. Locations for site access to haul roads and compounds from the public highway are required. These will be designed to ensure they are safe and delay and impact to the public is minimised. All designs will also be agreed with the relevant highway authority prior to commencement of the works.

1.8.5.2. Full details of the site access points are identified in the AROW Plans for all sections of the Onshore Cable Route and are listed below.

1.8.6. MANAGEMENT OF ROAD SAFETY

1.8.6.1. A strategy for ensuring road safety is maintained during construction is set out within the Outline CTMP. This includes:

- Review of existing collisions – if collision rate is 25% higher than the national average, further analysis will be undertaken;
- Liaison, Monitoring and Mitigation – recording of near misses, appointment of a road safety and liaison officer
- Highway Condition – before and after surveys undertaken to assess road condition in and around construction sites. Weekly condition surveys to be produce during the work programme.

1.8.7. IMPLEMENTATION AND MONITORING

1.8.7.1. For a Construction Traffic Management Plan to be affective a robust monitoring process is required to ensure compliance. This requires the following:

- Detailed CTMPs for each contractor and section of the corridor;
- Compliance and Monitoring – the client will be responsible for monitoring and compliance. They will ensure that that the construction contractors produce final CTMPs that are compliant and ensure their obligation to monitor is understood.

1.9. FRAMEWORK TRAFFIC MANAGEMENT STRATEGY SUMMARY

1.9.1. OVERVIEW

1.9.1.1. A FTMS has been prepared for submission with this application. This is provided at **Appendix G**. This chapter provides an overview of the strategy with a summary of the measures to be implemented to manage and mitigate impacts on the local highway network.

1.9.1.2. The FTMS sets out the overarching principles and methodology to be used during the construction of the Proposed Development and will be developed in further detailed as required, by appointed contractors prior to commencement of each phase of the temporary works.

1.9.1.3. The TA and FTMS have been developed alongside one another in order that the anticipated impacts of the construction of the Proposed Development are suitably mitigated and addressed through appropriate traffic management measures. The aim of the FTMS is to minimise disruption to all roads users, including pedestrian, cyclists, public transport users and car drivers.

1.9.2. TRAFFIC MANAGEMENT METHODOLOGY

1.9.2.1. In all cases the traffic management requirements will be based upon guidance included within the following documents to ensure the safety of all road-users and construction workers:

- Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Roadworks and Temporary Situations (Department for Transport, 2009);
- Safety at Streetworks and Roadworks: A Code of Practice (Department for Transport, 2013); and
- New Roads and Street Works Act 1991: Code of Practice of Co-ordination of Street Works and Works for Road Purposes and Related Matters (Fourth Edition) (Department for Transport, 2012).

1.9.2.2. Using this Guidance, the following assumptions have been used to inform the traffic management requirements of the construction process:

- It is anticipated that the cable duct installation will take place in 100 m sections, taking approximately five working days to complete each section including reinstatement of the highway;
- The Onshore Cable Route will include two circuits (as described in Section **Error! Reference source not found.**), with trench excavation and cable duct installation taking place at separate times for all parallel sections or circuit except where road closures are required;

- The construction corridor will generally be 4.0-6.0 m and 100-150 m long, although can be reduced by use of smaller plant to 2.0-3.0 m at local pinch points if required to avoid road closures; and
- Construction on footway will require 2.0 m on footway / verge and 3.0 m on carriageway to allow for construction vehicle access if no other parallel routes are available.

1.9.2.3. Taking account of these assumptions the following overall principles have been applied to the traffic management requirements for the Onshore Cable Corridor:

- Two-way traffic flow should be maintained wherever possible, albeit this may need to be facilitated by shuttle working temporary traffic signals and lane closures;
- Full road closures should only be considered as a last resort and where required pedestrian access should be maintained at all times. Where a full road closure is required, the programming of works should aim to minimise disruption where possible and provide for non-car modes, ensuring that safe and convenient routes are provided for pedestrians, cyclists and public transport users;
- Traffic management measures should provide for non-car modes, ensuring that safe and convenient routes are provided for pedestrians, cyclists and public transport users. Removal of such provision should only be considered as a last resort and where required must accompanied by suitable diversion routes.

1.9.2.4. Where the carriageway width past the construction zone is 6.75 m or wider, two-way traffic flow will be maintained without traffic control.

Type of Traffic Management

1.9.2.5. Construction of the Onshore Cable Route will be facilitated through temporary lane closures, which will require different types of traffic management depending on the location of the trench within the highway and remaining carriageway width while the construction zone is in place. The following types of traffic management measures are listed below:

- Two-way shuttle working with temporary traffic signals – on single-carriageway two-way highway sections
- Lane closures without shuttle working traffic signals – on dual carriageway or wider single-carriageway sections

1.9.2.6. Over and above the traffic management on the main corridor routes, there will be a need in some locations to manage access to residential or business premises.

1.9.2.7. Residential and business access comes in two forms along the Cable Corridor:

- As direct access, through access junctions or driveways directly onto residential or business premises; and
- Via side-road junctions that adjoin the Cable Corridor.

1.9.2.8. Residential and business access will be maintained wherever possible, albeit with different traffic management approaches applied depending upon the circumstances.

- Residential driveways – residents will be informed of construction works and encouraged to make alternative arrangements where possible, such as parking on-street. Where Traffic Regulation Orders (TROs) are in place restricting parking, temporary suspension will be sought where necessary.
- Business Access – access to business premises will be maintained using either three-way traffic signals or, where possible, through the use of road plates. This will be considered on an individual basis.
- Side Road Access – access will be considered on an individual basis with the traffic management used dependent on the characteristics of the road and junction.

1.9.2.9. The type of traffic management is dependent on the location of the construction zone within the carriageway, which cannot yet be defined as detailed design of the traffic management will only be completed once a contractor is appointed. For example, side-roads on the northern side of the carriageway may not require temporary closure or traffic signal control when the construction zone is on the southern side of the carriageway.

1.9.3. TRAFFIC MANAGEMENT PROGRAMME

1.9.3.1. An indicative onshore construction programme has been developed for construction works associated with the Proposed Development, taking account of factors such as environmental constraints, public events, school terms and public holidays.

1.9.3.2. Public activities and events that are planned in proximity to the Converter Station Area and Onshore Cable Corridor, including but not limited to the following are also taken into consideration:

- School term time;
- Football season;
- Coastal Waterside Marathon;
- Great South Run;
- South Central Festival; and
- Victorious Festival.

1.9.3.3. Further to this indicative programme, consideration has been given with the FTMS to

the construction programme for each individual section of the Onshore Cable . This has considered the constraints listed above and links between nearby sections of the Onshore Cable Corridor, where for example multiple construction zones in the same area should be avoided.

1.9.3.4. This programme will help mitigate the impacts of the construction works on the highway network.

1.9.4. SUMMARY OF TRAFFIC MANAGEMENT ARRANGEMENTS

1.9.4.1. Below is set out a summary of the site-specific traffic management proposals for each section of the Onshore Cable Corridor.

Table 49 - Section 1 - Converter Station

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
1	Converter Station Access	TBC	Shuttle Working	8-12 weeks

Table 50 - Section 2 - Anmore

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
2	Broadway Lane	6	Road Closure	1 Day

Table 51 - Section 3 - Denmead

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.1	Anmore Road	160	Road Closure	1 Day to 2 Weeks
3.2	B2150 Hambledon Road to Soake Road	180	Shuttle working TS	2 weeks

Table 52 - Section 4 B2150 Hambledon Road to Farlington Avenue

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.1	B2150 Hambledon Road between Soake Road and Milton Road	1300	Shuttle working TS	8-13 weeks
4.2	B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road	1000	Lane Closure	10 weeks
4.31	A3 London Road between Forest End Roundabout and south of the junction with Forest End	100	Shuttle Working	1 week

4.32	**A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields)**	**1000**	**Lane Closure**	**10 weeks**
4.33	A3 London Road between Poppy Fields and just south of Post Office Road	250	Shuttle Working	3 weeks
4.34	A3 London Road between Post Office Road and Rocking Horse Nursery	90	Road Closure	2 weekends
4.35	A3 London Road between Rocking Horse Nursery and Ladybridge roundabout	170	Shuttle Working	2 weeks
4.41	A3 London Road between Ladybridge roundabout and start of bus lane	80	Shuttle Working	1 week

4.42	A3 London Road between start of bus lane and Lansdowne Avenue	850	Lane Closure	9 weeks
4.43	A3 London Road between Lansdown Avenue and start of bus lane (south of The Brow)	250	Shuttle Working	3 Weeks
4.44	A3 London Road start of bus lane (south of The Brow) and Portsdown Hill Road	400	Lane Closure	4 Weeks
4.5	Portsdown Hill Road between A3 London Road and Farlington Avenue	600	Shuttle Working	6 Weeks

Table 53 - Section 5 Farlington

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.1	Farlington Avenue between Portsdown Hill Road and Sea View Road	650	Shuttle Working	7 Weeks
5.2	Farlington Avenue between Sea View Road and Havant Road	350	Road Closure	4 Weeks
5.3	Evelegh Road	150	Road Closure	2 Weeks
5.4	Havant Road	N/A	Road Closure	1-2 Weekends

Table 54 - Section 6 – Sainsburys Car Park

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
6	Fitzherbert Road	60	Lane Closure	1 Week

Table 55 - Section 8 – A2030 Eastern Road to Moorings Way

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.1	A2030 Eastern Road between Airport Service Road and Tangier Road	1200	Lane Closures	4 Weeks (24hr, 7-Day construction) 10 Weeks (10hr, 7-Day construction)
8.2	A2030 Eastern Road between Tangier Road and Eastern Avenue	1300	Lane Closures	1 Week (24-hr, 7-Day working and use of Milton Common) 11 Weeks (Eastern Road only, 7-Day working)
8.3	Eastern Avenue	220	Road Closure	3 Weeks

Table 56 - Section 9 – Moorings Way to Bransbury Road

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.11	Moorings Way between Eastern Avenue and Godwit Road (passes Mooring Way Infant School)	250	Shuttle Working	3 Weeks
9.12	Moorings Way between Goodwit Road and Moorings Way to Furze Lane Bus Link	500	Shuttle Working	5 Weeks
9.21	Moorings Way to Furze Lane bus link	370	Road Closure	3 Weeks
9.22	Furze Lane	150	Shuttle Working	2 Weeks
9.31	Locksway Road between access rod to Milton Piece Allotments and	90	Shuttle Working	1 Week

9.32	**Longshore Way**	**150**	**Shuttle Working**	**2 Weeks**
9.41	Kingsley Road between Ironbridge Lane and Yeo Court	150	Shuttle Working	1 Day to 2 Weeks
9.42	Yeo Court	40	Road Closure	1 Week

Table 57 - Section 10 – Eastney (Landfall)

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
10.1	Henderson Road	300	Shuttle Working	3 Weeks
10.2	Fort Cumberland Road	350	Shuttle Working	4 Weeks

1.10. TRAFFIC ASSESSMENT METHODOLOGY

1.10.1. INTRODUCTION

1.10.1.1. The traffic assessment sections provided within this TA focus on the impacts of the temporary cable installation and construction process and will be directly related to the FTMS produced for each section of the route. Therefore, the main assessment is based upon the Construction phase of the Proposed Development. Operational and Decommissioning aspects are summarised in **Chapter 3**.

1.10.1.2. This assessment takes into consideration the primary impacts along the Onshore Cable Corridor itself, as well as secondary impacts resulting from traffic distribution during construction works. In response to consultation feedback received from HCC and PCC, key locations along the cable route have been assessed using the Solent Transport Sub-Regional-Transport-Model (SRTM). The use of the SRTM responds to consultation feedback from HCC and PCC on the PEIR, where a requirement for a wider scale assessment was identified.

1.10.1.3. The assumptions used within the SRTM have been agreed with HCC and PCC as part of the TA scoping exercise, as detailed in **Chapter 2** and **Appendix A**.

1.10.2. OVERVIEW

1.10.2.1. The impacts of the traffic management proposals associated with construction of the Onshore Cable Route have been modelled using the SRTM. The SRTM is a multi-modal strategic transport model for Hampshire, the Isle of Wight and Portsmouth that includes public transport networks and the strategic and local highway networks. It is operated by SYSTRA consultancy under contract to Solent Transport.

1.10.2.2. The purpose of the model is to test the impact of transport interventions and changes in land use. It includes calibrated 2015 baseline flows and covers the period up to 2041. The forecasts include predicted background travel growth and that associated with committed development in the region. Furthermore, the model also considers the effect of committed transport schemes.

1.10.2.3. Geographically, the model has been subdivided into four regions, each of which have been modelled at different levels of detail according to the type of settlements and land-use patterns within that locale. The four are as follows and are illustrated in **Plate 34** below.

- Core fully modelled area (detailed zoning);
- Marginal fully modelled area (normally based on MSOAs);
- Buffer area (zones based on Districts); and
- External (zones based on Districts and Counties).

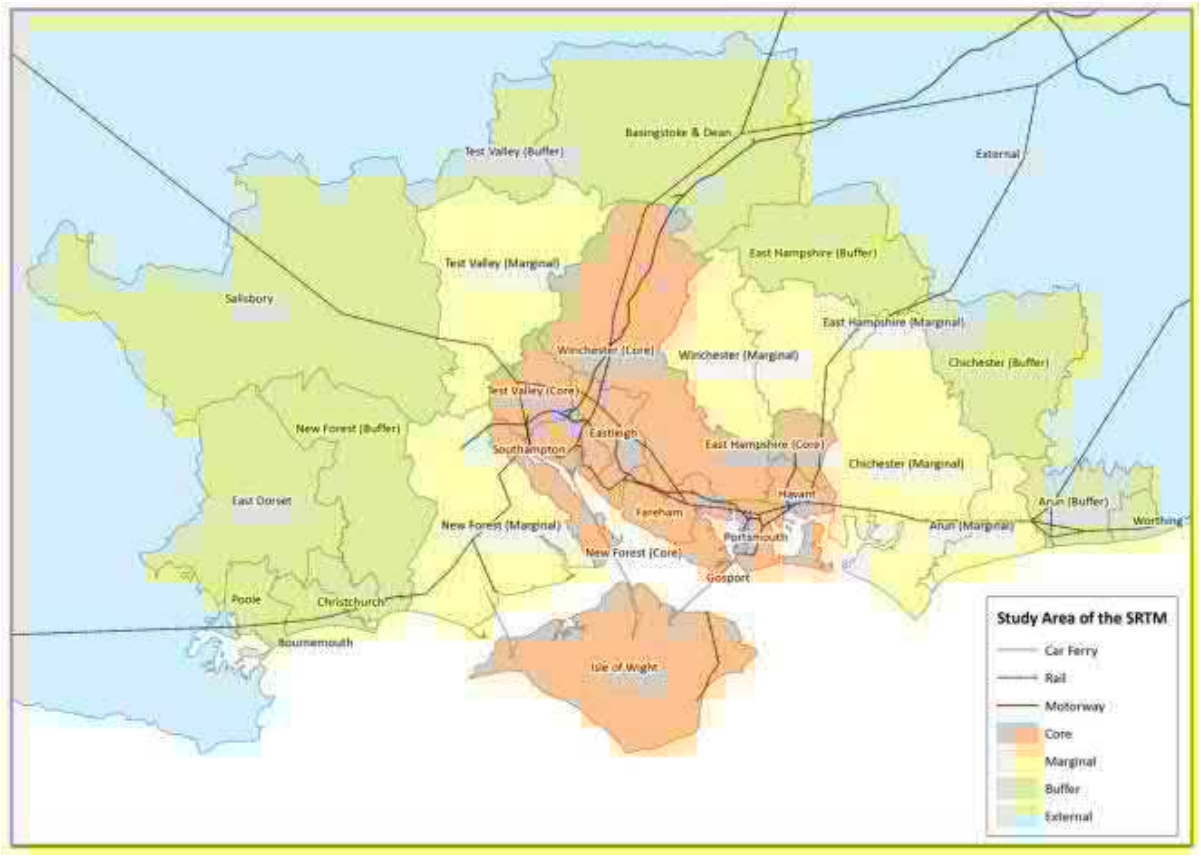


Plate 34 - SRTM Study Area

1.10.2.4. The study area predominately lies within the core fully modelled area. Therefore, the assessment that has been undertaken can be considered the most robust given the available data.

1.10.3. MODELLED SCENARIOS

1.10.3.1. In the context of the Proposed Development, the SRTM has modelled the impact of the works associated with the installation of the Onshore Cable Route given that this element of the Proposed Development involves the use of the public highway. By contrast the Converter Station involves work that is predominately off-highway situated on private land. The main issues for this relate to access for construction traffic. These matters are discussed in detail in the Framework CTMP (**Chapter 8** and **Appendix F**.

1.10.3.2. Due to the length of the route for the Onshore Cable Route, it is possible that several sections will be constructed simultaneously. Construction of the cable ducts will typically be completed in 100m sections between the Landfall point and the Converter Station. Therefore, in the modelling, it has been assumed that a maximum of six

100m sections will be under construction at any one time along the Onshore Cable Corridor.

1.10.3.3. For the purposes of providing a very robust assessment, the six cable sections tested have been assumed to be those that involve the most disruptive Traffic Management requirements in line with what was outlined in the SRTM Scoping Note (**Appendix B**). These temporary works are very unlikely to all be undertaken concurrently due to their scale and proximity to each other. As demonstrated within **Chapter 8** where the programme and construction methodology are set out, careful attention is being paid to the way in which the scheme could be implemented to minimise the impact both locally in terms of sensitive receptors, and more widely across the network in terms of reassigned trips. The scenarios tested within this TA are therefore a robust worst-case scenario.

1.10.3.4. The six areas of Traffic Management tested together are as follows:

- Shuttle working traffic signals on the B2150 Hambledon Road between Soake Road and Closewood Road;
- Temporary traffic signal operation of the B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue roundabout in Waterlooville;
- Shuttle working traffic signals on the A3 London Road between Poppy Fields and the roundabout with Ladybridge Road;
- Single lane closure on Havant Road between Farlington Avenue and the A2030 Eastern Road;
- Single lane closure on the A2030 Eastern Road between Airport Service Road and Burrfields Road; and
- Shuttle working traffic signals on Henderson Road between Bransbury Road and Fort Cumberland Road.

1.10.3.5. The SRTM modelled the impacts of the proposed traffic management across six scenarios. The assessed scenarios are as follows:

- 2026 Do Minimum Scenario AM Peak Period;
- 2026 Do Minimum Scenario Inter-Peak Period;
- 2026 Do Minimum Scenario PM Peak Period;
- 2026 Do Something Scenario 1 AM Peak Period;
- 2026 Do Something Scenario 1 Inter-Peak Period;
- 2026 Do Something Scenario 1 PM Peak Period;
- 2026 Do Something Scenario 2 AM Peak Period;
- 2026 Do Something Scenario 2 Inter-Peak Period; and

- 2026 Do Something Scenario 2 PM Peak Period.

1.10.3.6. Two Do Something Scenarios have been tested for completeness; to allow flexibility in the approach to traffic management and reflect the fact that lane closures on dual-carriageway links along the A2030 Eastern Road will be taking place independently for each direction.

1.10.3.7. The 2026 Do Something Scenario 1 (DS1) refers to a situation whereby traffic management to facilitate the construction of the Onshore Cable Route is in place on the six specified locations but on the A2030 Eastern Road lane closures apply to the southbound carriageway only. Conversely, the 2026 DS Scenario 2 (DS2) involves circumstances whereby traffic management is in place on the six specified locations but with lanes closures on the northbound carriageway along the A2030 Eastern Road.

1.10.3.8. The 2026 Do Minimum scenario outlines what conditions would be like without the Proposed Development. In this sense its sole purpose is to provide the basis for comparison.

1.10.3.9. For the Do Something Scenarios, 2026 was selected as the forecast mode most aligned to the anticipated timescales of the Proposed Development. The SRTM produces future year outputs for 2026, 2031, 2036 and 2041. As highlighted, peak construction for the Proposed Development is scheduled to transpire in 2022. The assessment approach will provide a robust analysis of the impacts as it involves using traffic flows which are higher than those that would be anticipated during the construction period of 2022

1.10.3.10. In terms of time frames, the AM Peak refers to the period 08:00-09:00. Conversely, the Inter-Peak refers to the hour 12:00-13:00 whilst the PM Peak considers the period 17:00–18:00.

1.10.3.11. Inter-peak analysis has been undertaken alongside the conventional AM and PM peaks to provide a scope for comparison. Essentially, the inter-peak captures the worst-case journey time impact for the off-peak period. Therefore, it can be considered to provide a base level impact on journey times. when demand for road space is not as intensive.

1.10.3.12. Ultimately, SRTM modelling has been used to support the TA helping to: verify baseline traffic conditions; provide a robust indication of future growth in traffic flows; and identify where traffic redistribution is most likely to take place during the temporary works.

1.10.3.13. Further information regarding the use of the SRTM is available in **Appendix B** (SRTM Coding Note) which was agreed with Local Highway Authorities. A summary of the results of the strategic traffic modelling is provided in **Chapter 11.**

1.10.4. OUTPUTS

1.10.4.1. Outputs of the SRTM provide information regarding traffic flow and vehicular delay, alongside a volume/capacity (V/C) assessment for each link that pertains to the study area. The SRTM provides data for the AM Peak, Inter-peak and PM peak periods and also 18-hour Average Annual Weekday Traffic (AAWT) and 24-hour Average Annual Daily Traffic (AADT).

1.10.4.2. Additionally, Journey Time data has been provided for eight strategic transport corridors that reside within the study area as agreed with HCC and PCC. The purpose of collecting such information is to quantify the impact on travel times for longer distance journeys along what are considered the major traffic routes in the area. It takes into account the potential for traffic redistribution and the cumulative impact of the traffic management proposals.

1.10.4.3. The collection of this data has allowed for a detailed assessment to be completed at locations along the route and along parallel / adjoining roads where the greatest impacts are anticipated. Below are details of junction capacity assessment locations agreed to be undertaken as part of the TA Scoping Note (**Appendix A**).

1. Hambledon Road / Milton Road roundabout;
2. Hambledon Road / Ashton Road traffic signal junction (Wellington Retail Park);
3. Hambledon Road / A3 / Maurepas Way roundabout;
4. Maurepas Way / A3 London Road roundabout;
5. Rocksville Drive / Stakes Hill Road traffic signal junction;
6. A3 London Road / Ladybridge road roundabout;
7. Stakes Road / Stake Hill Road / Purbrook Way roundabout;
8. Stakes Hill Road / Frendstaple Road roundabout;
9. Hulbert Road / Frendstaple Road roundabout;
10. A3 / Hulbert Road roundabout;
11. Purbrook Way / College Road;
12. A2030 /Farlington Avenue / A2030 Eastern Road / Havant Road traffic signal junction;
13. A2030 Eastern Road / Grove Road and A2030 Eastern Road / Fitzherbert Road traffic signal junction;
14. A2030 Eastern Road / Anchorage Road traffic signal junction;
15. A2030 Eastern Road / Airport Service Road traffic signal junction;
16. A2030 Eastern Road / Burrfields Road;

17. A2030 Velder Avenue / Milton Road traffic signal junction;
18. Burrfields Road Copnor Road traffic signal junction;
19. Norway Road / Copnor Road traffic signal junction;
20. Milton Road / St Marys Road roundabout;
21. A27 / A3 Portsbridge roundabout; and
22. A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout.

1.10.4.4. In addition to those junctions included within the TA Scoping, initial analysis of the SRTM results identified a further 9 junctions to be taken forward for detailed assessment, based upon the predicted impact of the traffic management arrangements. These additional junctions were identified on the basis that at least one approach experienced an increase of 10% or more and that the junction had a V/C of over 100% in the one or both of the DS scenarios.

1. A3(M) Junction 2;
2. A3(M) Junction 3;
3. Dell Piece West / A3 Portsmouth Road / Catherington Lane traffic signal junction
4. B2177 Portsdown Hill Road / Marylands Road / B2177 Bedhampton Road / B2177 Bedhampton Hill roundabout
5. A3 Southampton Road / A3 London Road / Spur Road / Havant Road roundabout; and
6. Stubbington Avenue / A2047 / Gladys Avenue / Angerstein Road mini-roundabout;
7. Burrfields Road / Moneyfield Avenue / Dundas Lane roundabout;
8. A2030 Eastern Road / Tangier Road traffic signal junction; and
9. A2030 Eastern Road / Hayling Avenue priority junction.

1.10.4.5. The junctions in context of the study area are shown in **Plate 35** below.

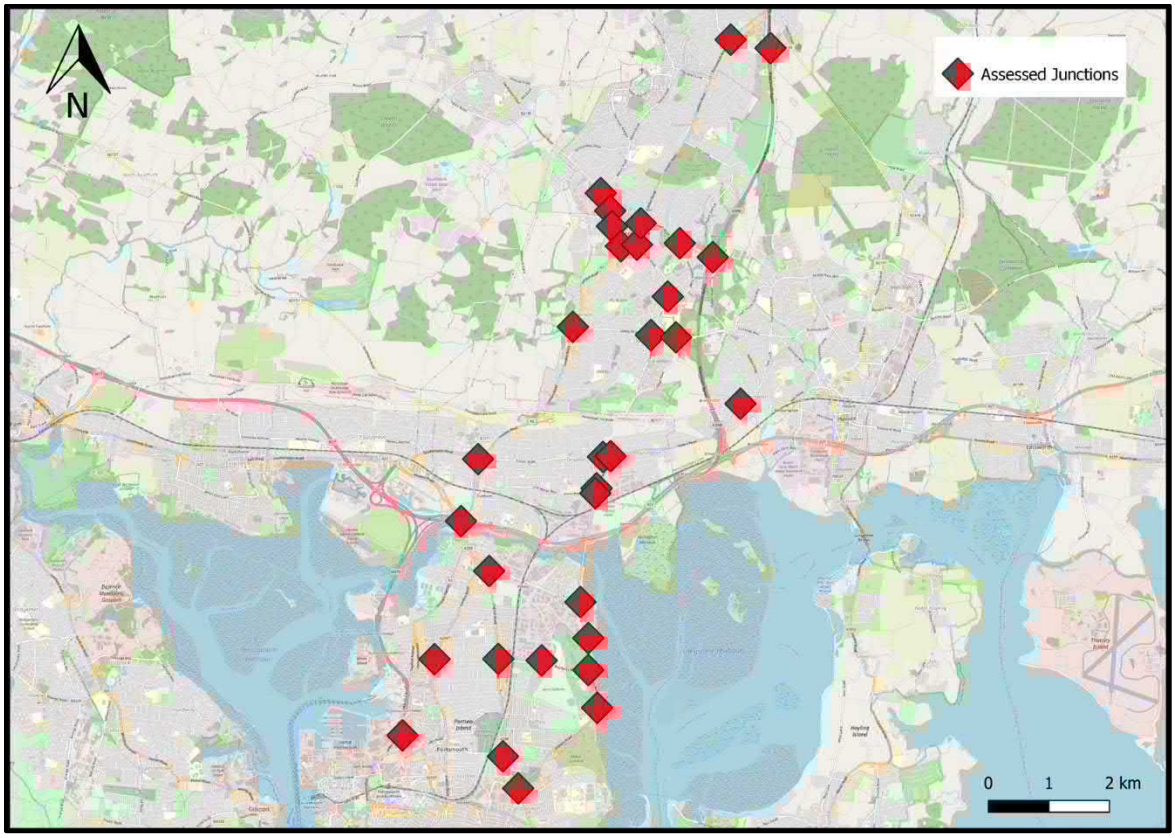


Plate 35 - Assessed Junctions

1.10.4.6. Journey Time assessments have been provided for routes between the A27 / M27 and Portsmouth City Centre via:

- A2030 Eastern Road;
- Copnor Road;
- A3 Northern Parade; and
- M275.

1.10.4.7. Journey Time assessments have also been provided for routes between Cosham / Purbrook and Waterlooville / Denmead via:

- The A3 London Road;
- Stakes Road and Stakes Hill Road;
- Portsdown Hill Road, Crookhorn Lane and Stakes Hill Road; and
- A27 and A3(M).

1.10.4.8. All outputs are presented within the TA with and without installation of the Onshore Cable Route for comparison purposes.

1.10.5. LIMITATIONS OF SRTM

1.10.5.1. The use of the SRTM to model the impacts of the installation of the Onshore Cable Route was agreed with LHAs as the most appropriate and robust way to model the transient impacts on the local highway network as the construction programme is implemented. A more traditional approach to modelling the impacts, limited to local junction models and local traffic data only would not be able to consider the wider impacts over time and the highway network effectively. Therefore, the approach adopted is a robust means of assessing the impact on the highway network.

1.10.5.2. Nevertheless, the SRTM modelling is caveated in the sense that it is only a representation of what could happen in the future and no model can be 100% accurate as they are dealing with future predictions that are subject to change by a wide range of background factors. The nature of the Proposed Development and the primary impacts being related to temporary construction works is such that no modelling approach can be wholly accurate. Therefore, the approach taken, where a combined level of traffic management arrangements has been assessed, is considered robust and a worst-case scenario.

1.10.5.3. The SRTM is considered the best available data source and uses industry standard practice for the estimates of future year scenarios. The Systra Model Development and Validation Report states that the model calibration process did not reveal any significant shortcoming in the base year model and noted that the quality of validation of the model is generally good. It can therefore be assumed that the modelling undertaken is as accurate as can be achieved.

1.10.5.4. Further information regarding the SRTM model is detailed in the SRTM Coding Technical Note contained within **Appendix B**.

1.10.6. SHUTTLE WORKING TRAFFIC SIGNAL ASSESSMENTS

1.10.6.1. Further to use of the SRTM, an assessment has been completed to assess the impacts where shuttle working temporary traffic signals will be required to control opposing traffic flow where there are lane closures, as detailed earlier in **Chapter 9**. This identifies the following locations where this type of traffic management is proposed to be implemented:

- Hambledon Road in Waterlooville;
- Sections of the A3 London Road in Purbrook and Widley;
- Portsdown Hill Road and the link between A3 London Road and Portsdown Hill Road;
- Farlington Avenue in Farlington;
- Moorings Way, Furze Lane, Locksway Road and Kingsley Road in Milton; and
- Bransbury Road and Fort Cumberland Road in Eastney.

1.10.6.2. The operation of these traffic signals during the AM, PM and Inter-peak hour has been assessed using traffic flows derived from the SRTM (where available) and Linsig traffic signal software to calculate the estimated queue lengths and delay at each location. This analysis will also feed into journey time and traffic reassignment estimates discussed below. Results of this analysis is provided in **Chapter 12**.

1.10.7. LINK CAPACITY ASSESSMENTS

1.10.7.1. Where traffic management measures are proposing lane closures of dual-carriageway links, an assessment of link capacity has been completed using DMRB Volume 5 Section 1 Part 3 – TA79/99. This has been completed for the AM, PM and Interpeak hour using traffic flows derived from the SRTM where available. At present, it is estimated that lane closure will be required on the following links:

- Hambledon Road between Milton Road and A3 Maurepas Way;
- A3 Maurepas Way between Hambledon Road and A3 London Road;
- Havant Road between Farlington Avenue between Farlington Avenue and A2030 Eastern Road;
- A2030 Eastern Road between Havant Road and Fitzherbert Road; and
- A2030 Eastern Road between Airport Service Road and Milton Common.

1.10.7.2. These assessments highlight where links are anticipated to be approaching or operating over capacity during each of the assessed peak hours.

1.10.7.3. The results of the local Link Capacity Assessments are provided in **Chapter 11**.

1.10.8. TEMPRO GROWTH FACTORS

1.10.8.1. TEMPRO Version 7.2 has been used to calculate growth factors to be applied to baseline traffic flows in order to estimate 2022 future year traffic flows. These growth factors were agreed with the LHAs.

1.10.8.2. Growth factors have been calculated for the AM peak (07:00 – 10:00), interpeak (10:00 – 16:00) and PM peak (16:00 – 19:00) periods, as well as for the average weekday. The growth factors were calculated for car trips only, from NTM AF15 Dataset, and taken as an average from the geographic regions of Havant and Portsmouth. The resultant growth factors for the 2018 and 2019 survey data are set below.

Table 58 - TEMPRO growth factors

	Tempro Growth Factor (2018 - 2022)		
	Havant	Portsmouth	Average
AM Peak (07:00 - 10:00)	1.062	1.070	1.066
Interpeak (10:00 – 16:00)	1.062	1.066	1.064
PM Peak (16:00 – 19:00)	1.058	1.065	1.061
Average Weekday	1.059	1.065	1.062
	Tempro Growth Factor (2019 - 2022)		
	Havant	Portsmouth	Average
AM Peak (07:00 - 10:00)	1.047	1.057	1.052
Interpeak (10:00 – 16:00)	1.047	1.054	1.051
PM Peak (16:00 – 19:00)	1.044	1.054	1.049
Average Weekday	1.045	1.054	1.049

1.10.9. COMMITTED DEVELOPMENT TRAFFIC FLOWS

1.10.9.1. In the addition to the application of TEMPRO growth factors, estimated trip generation related to major committed developments within the vicinity of the study area have also been accounted for within future year traffic flows. These include:

- St. James Hospital, Milton: 107 units;
- West of Waterlooville MDA: 1,617 units out of a total of 2,550 units are due to be completed by 2022, which accounts for phases 1-7 and part of phase 8.

1.10.9.2. For the West of Waterlooville MDA, the trip generation will be based upon the net increase in dwellings between the completion of traffic surveys and 2022.

1.11. STRATEGIC TRAFFIC ASSESSMENT RESULTS

1.11.1. OVERVIEW

1.11.1.1. This chapter provides an overview of the results of the strategic traffic assessment based on the outputs from the SRTM scenarios, as described in Chapter 10. The results provide a forecast of the routes and links where traffic will redistribute away from areas of traffic management and an assessment of the relative impacts of the redistributed traffic during the temporary works. This chapter then goes on to review the links identified within this redistribution as to their appropriateness to operate as diversionary routes.

1.11.1.2. This chapter then goes on to outline the modelling results from the SRTM with respect to journey times along the eight strategic corridors that were modelled.

1.11.1.3. Also included in this chapter is a Local Link Assessment considering the impact of traffic management on dual carriageway links reduced for short periods to single-lane operation.

1.11.2. TRAFFIC REDISTRIBUTION ANALYSIS

1.11.2.1. For the purposes of this analysis, the study area has been subdivided into five smaller areas (still based on the overall Onshore Cable Corridor sections detailed in **Chapter 3**) to help identify key roads where traffic could re-route and help quantify the changes in flow to determine the extent of the impact.

1.11.2.2. Each zone contains a core list of roads that through traffic could use. The five zones are as follows:

- Sections 1-4 of Onshore Cable Corridor:
  - **West of Waterlooville:** this covers the predominately rural area to the west of the Waterlooville and includes Denmead, Anmore and Furzeley Corner.
  - **Waterlooville:** this encapsulates the urban area stretching across Horndean, Lovedean, Cowplain, Wecock Farm, the town centre, Stakes, Purbrook, Crookhorn and Widley.
  - **East of Waterlooville:** this includes the A3(M) and some key roads / junctions that link the motorway with Havant and wider strategic network.
- Section 5-6 of Onshore Cable Corridor:
  - **Cosham, Drayton and Farlington:** situated south of the administrative boundary with Hampshire County Council and north of the A27 Havant Bypass / M27.
- Sections 7-10 of Onshore Cable Corridor:
  - **Portsea Island:** all links on the island of Portsea, which included the vast majority of the city of Portsmouth and its associated road network.

1.11.2.3. Detailed below is a description of the key traffic routes that the SRTM modelling has highlighted as being the main redistribution routes for each of the five sections within the Study Area. Following this, a quantitative assessment of the links most affected by the temporary works is provided.

1.11.2.4. The identified routes in relation to the anticipated Traffic Management sites are shown in **Figures 11.1 to 11.3** below.

1.11.3. SECTIONS 1 TO 4 OF ONSHORE CABLE CORRIDOR

1.11.3.1. As modelled within the SRTM Sections 1-4 cover traffic redistribution away from the traffic management in the following locations:

- Shuttle working traffic signals on the B2150 Hambledon Road between Soake Road and Closewood Road;
- Temporary traffic signal operation of the B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue roundabout in Waterlooville; and
- Shuttle working traffic signals on the A3 London Road between Poppy Fields and the roundabout with Ladybridge Road.

1.11.3.2. **Plate 36 and 37** below shows the identified redistribution routes and the related traffic management locations.

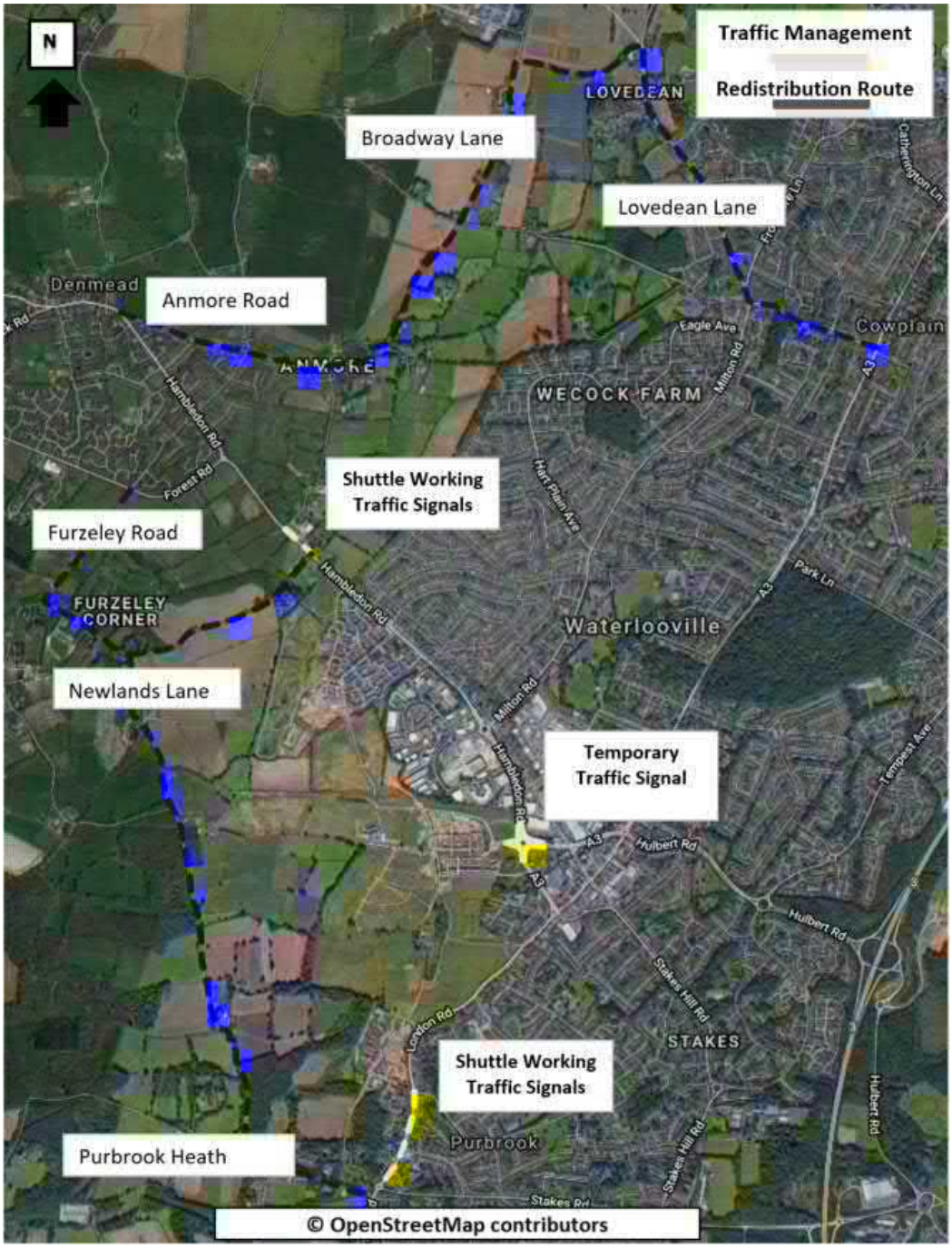


Plate 36 - Sections 1 to 4 Traffic Redistribution Routes Plan 1

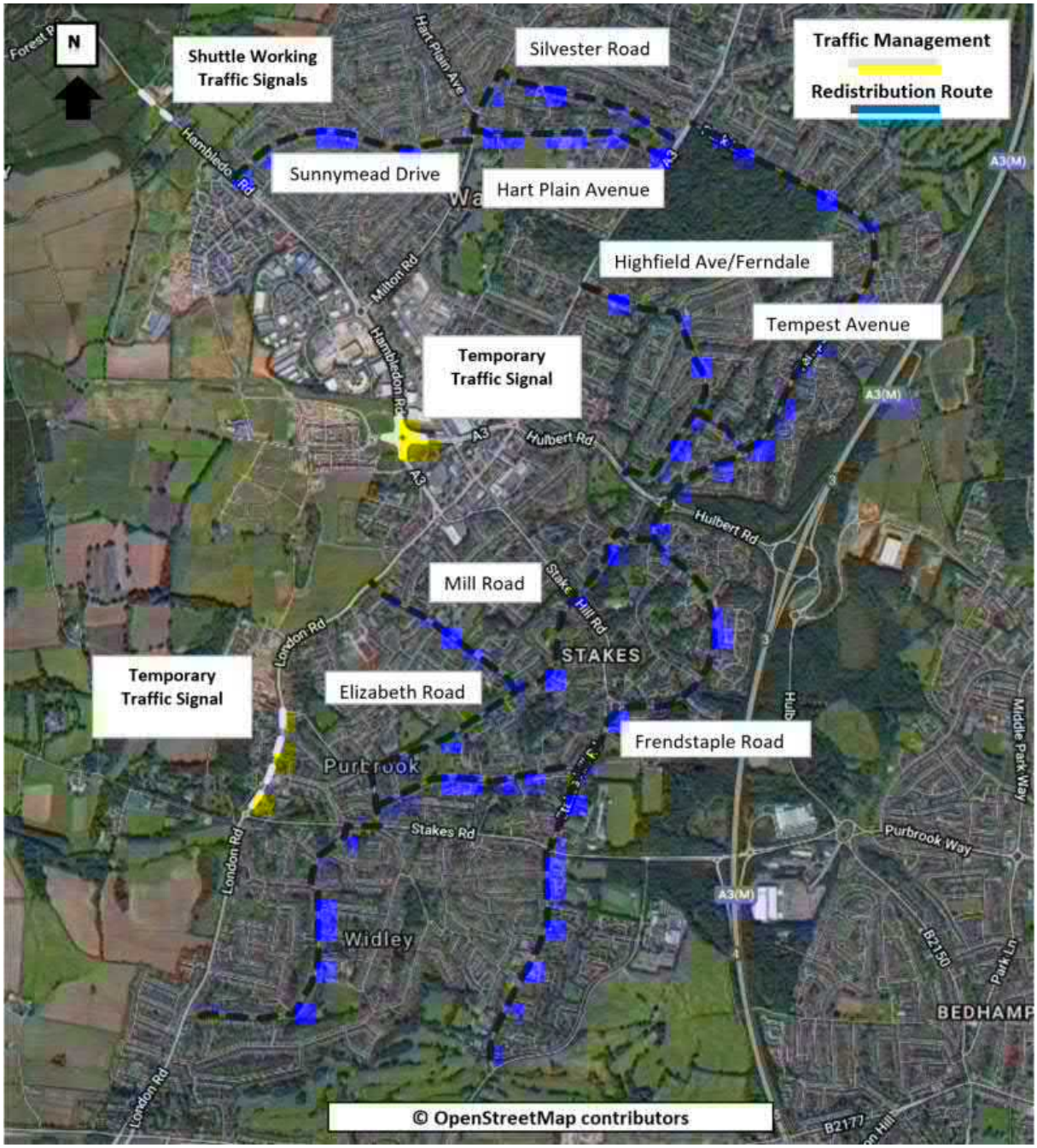


Plate 37 - Sections 1-4 Traffic Redistribution Routes Plan 2

West of Waterlooville

1.11.3.3. In the rural areas, the forecasted redistribution of traffic reflects the limited availability of roads for traffic to divert onto without involving a circuitous diversion. The vast majority of roads are unclassified, rural lanes. Their limited carriageway width makes them unsuitable for high volumes of two-way traffic as this would involve drivers regularly having to give and take. This stop-start nature hinders journey times and

acts as a deterrent for redistributing traffic. As such, the SRTM forecast suggests that diverting traffic is likely to be concentrated across a core set of routes. These are as follows:

- Furzeley Road – Newlands Lane – Purbrook Heath Road;
- Closewood Road – Newlands Lane – Purbrook Heath Road; and
- Anmore Road – Broadway Lane – Day Lane – Lovedean Lane.

1.11.3.4. The first two of these routes are known 'rat-runs' currently used by local traffic travelling between Denmead and Cosham. Newlands Lane is generally wide enough to support two-way traffic. Essentially, it cuts the corner offering a shorter route for traffic to access the A3 London Road corridor without travelling through central Waterlooville (thus avoiding three roundabout junctions and two signal-controlled junctions). The use of Furzeley Road or Closewood Road as part of this diversion will largely depend upon the location of the traffic management. It is anticipated that when traffic management is in place along the section of the B2150 Hambledon Road, traffic will be diverting via Furzeley Road. Closewood Road is likely to be used when traffic management is in place along the sections of the B2150 Hambledon Road close to Waterlooville Town Centre.

1.11.3.5. Anmore Road provides access onto Broadway Lane, Day Lane and ultimately Lovedean Lane. Subsequently, it offers an alternative for vehicles travelling between Denmead and Horndean. It is likely that this route will be used when traffic management is in place on the section of the B2150 Hambledon Road.

Waterlooville

1.11.3.6. Within Waterlooville, the forecasted diversion routes are slightly more complex owing to the larger proportion of nodes and traffic generators within the model, reflecting the more dense, urban highway network. Primarily the following redistribution routes have been identified:

1.11.3.7. Roads linking B2150 Hambledon Road and A3 London Road:

- Sunnymead Drive – Milton Road – Hart Plain Avenue; and
- Sunnymead Drive – Milton Road – Silvester Road;

1.11.3.8. Roads linking A3 London Road to B2150 Hulbert Road:

- Highfield Avenue – Ferndale;
- Highfield Avenue – Stratford Road; and
- Park Lane – Tempest Avenue.

1.11.3.9. Roads offering an alternative to the A3 London Road Corridor:

- Frendstaple Road – Stakes Hill Road – Crookhorn Lane;

- Rockville Drive – Stakes Hill Road – Crookhorn Lane;
- Stirling Avenue – Hurstville Drive – Elizabeth Road – Westbrook Grove – Park Avenue;
- Mill Road; and
- Shaftesbury Avenue.

1.11.3.10. The corridors identified above have been disaggregated according to roads they link between to reflect the routes they are likely to be redistributing away from. However, it should be noted that in reality there is likely to be an element of fluidity and routes may be less defined. For example, these routes are likely to overlap with one another as drivers use different sections of each depending upon their particular trip. Additionally, it is possible that some of these diversion routes could amalgamate to form larger routes. Nevertheless, they are reflective of the major diversion routes that are anticipated to be used by vehicles when traffic management is in place along the B2150 Hambledon Road and A3 London Road corridors.

East of Waterlooville

1.11.3.11. The SRTM forecasts indicate a broad increase in traffic of between 0-10% across all assessed scenarios for both carriageways between Junction 2 and Junction 5 of the A3 (M). Notably there are increases at Junctions 2 and 3. This suggests that traffic is travelling further along the A3(M) and redistributing onto the next junction along to access parts of the local network. In the PM peak this is predicted to be most pronounced with northbound traffic turning left onto the B2149 Dell Piece West. Furthermore, it's likely that some local traffic from Waterlooville is redistributing onto the A3(M).

1.11.4. SECTIONS 5 AND 6 OF ONSHORE CABLE CORRIDOR

1.11.4.1. As modelled within the SRTM Sections 5 and 6 cover traffic redistribution away from the traffic management locations on the following:

- Single lane closure on Havant Road between Farlington Avenue and the A2030 Eastern Road.

1.11.4.2. **Plate 38** below shows the identified redistribution routes in relation to the traffic management detailed above.

Plate 38 - Sections 5 and 6 Traffic Redistribution Routes

Cosham, Farlington and Drayton

1.11.4.3. In the Cosham area, traffic is primarily forecast to diverting onto the following routes:

- B2177 Portsdown Hill Road – between the roundabout near to Southwick and the B2177 Bedhampton Road
- Evelegh Road;
- A2030 Havant Road;
- Grove Road – South Road;
- Grove Road – Station Road;
- Grove Road – Lower Drayton Lane;
- Fitzherbert Road; and
- Evelegh Road.

1.11.4.4. The routes via Grove Road and Fitzherbert Road are likely to experience an increase in traffic from the A2030 Eastern Road, the A2030 Havant Road and Havant Road avoiding traffic management at the intersection of these roads. Conversely, the increases in traffic along the A2030 Havant Road, Evelegh Road and the B2177 Portsdown Hill Road are anticipated to be the impact of traffic management on Farlington Avenue.

1.11.5. SECTIONS 7 TO 10 OF ONSHORE CABLE CORRIDOR

1.11.5.1. As modelled within the SRTM Sections 7-10 cover traffic redistribution away from the traffic management locations on the following:

- Single lane closure on the A2030 Eastern Road between Airport Service Road and Burrfields Road; and
- Shuttle working traffic signals on Henderson Road between Bransbury Road and Fort Cumberland Road.

1.11.5.2. **Plate 39** below shows the forecast affected diversionary routes in relation to the traffic management measures detailed above.

Plate 39 - Sections 7 to 10 Traffic Redistribution Routes

Portsea Island

1.11.5.3. On Portsea Island, traffic redistribution is forecast to be most pronounced in the Anchorage Park / Copnor area along:

- Airport Service Road;
- Dundas Lane;
- Quartremaine Road;
- Burrfields Road / Stubbington Avenue; and
- The A288 Copnor Road Corridor between Norway Road and the A2030 Velder Avenue.

1.11.5.4. This is explained by the fact that the only set of traffic management along key radial roads into and out of Portsmouth will be along the A2030 Eastern Road between the junctions with Burrfields Road and Tangier Road. The diversion route highlighted above offers the only real alternative to drivers seeking to access areas on the eastern side of Portsmouth. By contrast, the M275 despite its motorway status, is not a feasible alternative as it primarily serves Portsmouth City Centre and the ports. The extra distance, coupled with the requirement to undertake a city journey means it does not offer any journey time savings and therefore is not attractive to drivers wanting an alternative route.

1.11.6. WIDER HIGHWAY NETWORK LINK ASSESSMENT

1.11.6.1. This section provides a detailed link assessment based upon the redistribution of traffic defined above, across both the AM and PM peak periods. This analysis provides an additional overview of the wider road network, identifying links within 5km of the Cable Corridor which are likely to face a temporary increase in traffic flow as a result of construction of the Onshore Cable Corridor.

Methodology

1.11.6.2. To ascertain the impact of the proposed traffic management, a series of links that could be subject to traffic redistribution were identified and assessed.

1.11.6.3. Initially, for the baseline conditions a list of 2481 links across the entire 5km study area were identified as potential sites that could be subject to traffic redistribution as a result of the proposed traffic management. These links were selected based on local knowledge, site visits, desktop studies, an analysis of surveyed traffic flow and base year outputs from the SRTM.

1.11.6.4. This list was then refined using a three-stage sifting process based on traffic flow outputs from the SRTM for the two Do Something Scenarios. A sifting process was applied to highlight those links that would be subject to the greatest impact from traffic distribution, so mitigation strategies could be directed accordingly. This approach was agreed with HCC and PCC as Local Highway Authorities.

1.11.6.5. Links that warranted further assessment were identified if they satisfied the following criteria:

- **Stage 1** – The percentage change in traffic flow on a link increased by 10% or more;
- **Stage 2** – The increase in hourly vehicle numbers was greater than 60 (one per minute); and
- **Stage 3** – The Volume-to-Capacity (V/C) Ratio increased by over 10%.

1.11.6.6. The three stages specified above, were applied sequentially to the sifting process. If a link failed to satisfy the criteria for a stage, it was immediately discounted from further analysis. Where links met all three stages, they have been included for further analysis of potential impacts.

1.11.6.7. It should be noted that the sifting process was undertaken with consideration for the worst-case scenario. Namely, if a link satisfied the criteria for a stage in any of the Do Something Scenarios across either the AM or PM peak periods, that link was taken forwards for further assessment. For example, a link may only satisfy the criteria for the stages in the DS2 scenario for the PM peak. This would still be subject to further assessment. This approach was undertaken to ensure a robust assessment.

1.11.6.8. A 10% increase in traffic flow (as specified in Stage 1) was considered significant as such a measure aligns with the criteria used in the EIA. Guidance outlined within the IEMA document entitled "Guidelines for the Environmental Assessment of Road Traffic" ('GEART'), stipulates that two broad "rules-of-thumb" should be applied when assessing the environmental impacts of traffic. The rules are as follows:

- "Rule 1: Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
- Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more."

1.11.6.9. The 10% increase in traffic flow that has been used in this assessment accords to GEART Rule 2 to ensure a robust analysis.

1.11.6.10. An hourly increase of 60 vehicles or more (Stage 2) was deemed significant as this amounts to an increase in traffic flow of one per minute. This rule was devised to take account of lower utilised roads where traffic volumes are typically lower and where spare capacity resides. By applying this rule, links were discounted whereby the proportional change in traffic was high but the absolute change was relatively small. For instance, a low trafficked rural route may normally have 30 vehicles travelling along it during the AM peak. In the Do Something Scenarios this could increase by 20%. However, this only amounts to an extra six vehicles which can be considered negligible.

1.11.6.11. Consideration of the volume-to-capacity ratio (Stage 3) was given to quantify how the forecast traffic flow increases would impact upon the operation of a link and its

capacity utilisation. Again a 10% change was considered significant in line with GEART Rule 2 and the principles applied for Stage 1.

1.11.6.12. Stage 1 of the sifting process reduced the number of assessed links to 471. Stage 2 condensed the number of links to 221. Finally Stage 3 reduced the number of links down to 68 (42 roads, some with multiple links).

Manual for Streets 2 Street Classifications

1.11.6.13. The analysis has applied principles set out in Manual for Streets 2 (MfS2)[1] to consider the appropriateness of these diversionary links for handling the additional traffic. MfS2 was published in 2010 by the Chartered Institute of Highways and Transportation (CIHT) as a companion guide to Manual for Streets. Its purpose was to provide guidance on how the principles of street design can be applied to busier streets and non-trunk roads.

1.11.6.14. In particular, MfS2 sets out a series of street classifications and defines them by their relative 'place' and 'movement' function. For example, a Motorway link has a very high 'movement' status, but a low 'place' status due to its primary function being to enable traffic to move quickly and efficiently. By contrast, a High Street has both a high 'movement' function, enabling traffic to move efficiently to and through a location, and a high 'place' function as it provides access to a place, often a local centre.

1.11.6.15. **Table 59** summarises the characteristics of the ten street types identified within MfS2.

Table 59 - MfS2 (2010) Street Classifications

Street Type	Typical Location	Description
Arterial Routes /High Streets	Urban / suburban areas	Key routes linking towns, cities and local centres that are often used by HGVs. Often it can be difficult to remove or redirect traffic. These streets are very much context dependent. Some have a greater place function, whereas others place a larger emphasis on movement.
Boulevards	Urban / suburban	Boulevards typically carry large volumes of traffic but encompass a strong sense of place. Adjacent land uses tend to be mixed but will include civic and commercial facilities, whilst medians may act as leisure spaces. Three types are recognised:

[1] CIHT (Jones, Young) 2010, *Manual for Streets 2*

Street Type	Typical Location	Description
		• **Standard Boulevard** – Streets with a wide landscaped median flanked by carriageways and footways on either side; • **Avenues** – Streets with wider than conventional layouts where a central carriageway is bounded by broad tree lined footways; and • **Multiway-Boulevards** – Streets consisting of a central carriageway for through traffic bordered by: tree lined medians on each side; one-way access carriageways adjacent to the medians and footways on the outside.
Interchanges	Various but predominately urban	These can be interchange facilities between different transport modes (such as a major railway station with adjacent bus and cycle facilities) or a high street / crossroads where two transport routes meet.
Motorways	Urban and Rural	A dual-carriageway segregated right of way reserved for the exclusive use of motor vehicles. Non-motorised users and certain vehicle types are prohibited. Often, they are grade separated with relatively few junctions and multiple lanes in either direction.
Multifunctional Streets and Spaces	Town and city areas	Central areas within a settlement that consist of a network of connected streets and spaces. These are multifunctional and encompass a wide variety of movement and place functions. For example, a shopping centre with associated public realm and leisure facilities.
Relief Road / Ring Road	Urban / suburban	Major roads that have been designed for traffic capacity whose primary function is movement. Typically, they carry traffic around an urban centre and there is a segregation of roads users. Ring Roads imply the existence of a loop but partial loops can exist too. Relief roads tend to be more linear in form.
Residential Streets	Urban /suburban /	These includes cul-de-sacs and a series of connected streets and urban blocks. Emphasis is on place rather

Street Type	Typical Location	Description
	urban extensions	than movement with walkable neighbourhood principles embedded into the design.
Rural Roads and Lanes	Rural	These streets form part of the countryside landscape often reflecting ancient routes and field boundaries. Key features include banks, fingerposts, hedges and verges. Characteristics can vary significantly depending upon the classification of the road and its role. Their predominant function is movement although in many places an aspect of this movement is leisure based particularly with regards to non-motorised users.
Shared Space	Urban and rural settlements	The minimal use of traffic signs, road markings and other traffic management features with no clear indication of priority. The space is deigned to be recognised as distinct from a typical road and is designed to enable pedestrians to use a wide portion of the highway. Three broad types exist: • **Conventional Shared Space** – a street accessible to all road users but is designed to enable pedestrians to move more freely by reducing traffic management features and vehicle priority; • **Level Surface** – a type of shared space where the carriageway is not segregated by kerbs. Surfaces are flush although street furniture may act as physical barriers to curb vehicles occupation from certain areas. • **Comfort Space** – space designed to prevent or discourage vehicular access.
Village Streets	Villages	Streets with narrow carriageways in a low speed environment. The layout is unlikely to conform to standards reflecting the historic and piecemeal way in which these areas have developed. Footways can be non-existent, discontinuous or limited in width. On-street parking can prevail due to a lack of off-street parking. Conflict between movement and place functions is also common.

1.11.6.16. To further refine the number of links and avoid duplication of analysis, the worst-case impact was assumed in instances where links met the criteria for further assessment for both directions of travel. This worst-case was presumed to affect both directions of travel to provide a robust analysis. For many links the impact will only pertain to one direction of travel, details of the scale and nature of impact are included in the analysis presented below.

1.11.6.17. Alongside the MfS2 street classification, the identified diversionary routes were also reviewed on a site-specific basis in relation to contextual factors characterising individual links.

1.11.6.18. The roads identified were then clustered according to the sections of the Onshore Cable Corridor that they relate to as detailed above. Crucially, it is recognised that several of the identified roads will be used in combination with one another (rather than in isolation) as part of a wider route for redistributing traffic to avoid the proposed traffic management.

1.11.6.19. Throughout the link analysis, it should be noted that the impacts of traffic redistribution will only be of a temporary nature. The programme for scheduled works and required traffic management will seek to reduce the reported impacts. For example, the rural lanes west of the B2150 Hambledon Road and the A3 London Road are according to the SRTM outputs, forecast to be subject to a significant amount of redistributing traffic. However, this may be because the SRTM has been modelled to include three traffic management locations between Denmead and Purbrook to provide an indication of a realistic worst-case scenario. A key aspect of the FTMS is scheduling the most disruptive works separately to avoid this situation for the vast majority of the programme.

1.11.6.20. In addition, traffic redistribution to the east of the A3 London Road is anticipated to be of a short duration. This is because the majority of works along the A3 London Road can be completed whilst maintaining unimpeded two-way flow due to the wide carriageway widths. Therefore, it is anticipated that the impact of traffic redistribution will be lesser than both of the assessed DS scenarios for the majority of the construction period.

Results

1.11.6.21. This section summarises the results of the link capacity assessment as detailed above. For ease of understanding, a RAG assessment has been included as a guide to appropriateness of the link as an alternative route for traffic diverted away from the Onshore Cable Corridor. The RAG analysis can be interpreted as follows:

- **Green** – Identified link is considered appropriate as a diversionary route for the temporary period of traffic management, being of an appropriate street typology and with sufficient available capacity;

- **Amber** – Identified link can accommodate the forecast additional temporary diversionary traffic, although is not wholly appropriate as a diversion route due to more limited capacity or being a lower order street type;
- **Red** – Identified link is not considered appropriate for accommodating additional temporary diversionary traffic. This is due to limited available capacity and/or being a low order street type.

Onshore Cable Corridor Sections 1, 2, 3 and 4

1.11.6.22. This section sets out the link capacity assessment results for Sections 1-4. The links which met the assessment criteria in these sections are predominantly rural and residential in nature. The results are set out in Table 60 below.

Table 60 - Link capacity assessment for Onshore Cable Corridor Sections 1,2,3 and 4

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Belney Lane / Pigeon House Lane	DS1 AM, DS2 AM	AM 217	DS1 AM 104 DS2 AM 100	DS1 AM 38% DS2 AM 37%	DS1 AM 12% DS2 AM 12%	Rural Lane with passing places - <5m. Narrow.	
Closewood Road	ALL	AM 107 PM 105	DS1 AM 208 DS1 PM 80 DS2 AM 197 DS2 PM 73	DS1 AM 16% DS1 PM 9% DS2 AM 79% DS2 PM 35%	DS1 AM - 14% DS1 PM - 26% DS2 AM 22% DS2 PM 2%	Rural Lane - <5m. Narrow.	
Elizabeth Road	DS1 AM, DS2 AM	AM 98	DS1 AM 153 DS2 AM 152	DS1 AM 58% DS2 AM 36%	DS1 AM 35% DS2 AM 35%	Avenue – 7m wide carriageway. Residential connector road. Bus route.	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Frendstaple Road	ALL	AM 250 PM 397	DS1 AM 198 DS1 PM 105 DS2 AM 197 DS2 PM 104	DS1 AM 86% DS1 PM 103% DS2 AM 85% DS2 PM 103%	DS1 AM 40% DS1 PM 20% DS2 AM 39% DS2 PM 20%	Avenue – 7.5m wide carriageway with limited vehicular access points. Residential connector road.	
Furzley Road	DS1 PM, DS2 PM	PM 166	DS1 PM 164 DS2 PM 168	DS1 PM 48% DS2 PM 48%	DS1 PM 14% DS2 PM 14%	Rural Lane – 5m	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Mill Road	ALL	AM 98 PM 85	DS1 AM 213 DS1 PM 144 DS2 AM 211 DS2 PM 147	DS1 AM 72% DS1 PM 53% DS2 AM 72% DS2 PM 54%	DS1 AM 49% DS1 PM 34% DS2 AM 49% DS2 PM 34%	Residential Street – 5m wide. Some on-street parking. Sensitive receptor of Mill Hill Primary School.	
Milton Road	ALL	AM 493 PM 789	DS1 AM 79 DS1 PM 213 DS2 AM 78 DS2 PM 215	DS1 AM 39% DS1 PM 73% DS2 AM 39% DS2 PM 73%	DS1 AM 8% DS1 PM 17% DS2 AM 8% DS2 PM 17%	Avenue – 7m wide. Residential connector road with limited on-street parking.	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Newlands Lane	ALL	AM 125 PM 194	DS1 AM 156 DS1 PM 96 DS2 AM 150 DS2 PM 96	DS1 AM 29% DS1 PM 28% DS2 AM 29% DS2 PM 29%	DS1 AM 16% DS1 PM 9% DS2 AM 15% DS2 PM 9%	Rural Lane <5m. Narrow.	
Park Avenue	ALL	AM 361 PM 88	DS1 AM 138 DS1 PM 210 DS2 AM 143 DS2 PM 220	DS1 AM 77% DS1 PM 44% DS2 AM 77% DS2 PM 45%	DS1 AM 11% DS1 PM 28% DS2 AM 12% DS2 PM 29%	Residential Street – 6m wide with some on-street parking. Bus route. Sensitive Receptor of Purbrook Park School. Residential connector road	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Purbrook Heath Road	DS1 AM, DS2 AM	AM 109	DS1 AM156 DS2 AM 108	DS1 AM 40% DS2 AM 39%	DS1 AM 21% DS2 AM 20%	Rural Lane - 5.5m.	
Silvester Road	ALL	AM 150 PM 320	DS1 AM 79 DS1 PM 160 DS2 AM 78 DS2 PM 162	DS1 AM 29% DS1 PM 62% DS2 AM 29% DS2 PM 62%	DS1 AM 11% DS1 PM 24% DS2 AM 11% DS2 PM 24%	Residential Street – 7m wide carriageway with some on-street parking. Residential connector road.	
Stakes Hill Road	DS1 PM, DS2 PM	PM 653	DS1 PM 230 DS2 PM 228	DS1 PM 54% DS2 PM 53%	DS1 PM 14% DS2 PM 14%	Avenue – 7m wide carriageway. Wider than links nearer Waterlooville Town Centre. Sensitive	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
						receptor of Crookhorn College.	
Stirling Avenue / Hurstville Drive	ALL	AM 102 PM 191	DS1 AM 203 DS1 PM 165 DS2 AM 201 DS2 PM 166	DS1 AM 71% DS1 PM 83% DS2 AM 71% DS2 PM 83%	DS1 AM 47% DS1 PM 38% DS2 AM 47% DS2 PM 38%	Residential Street – 5.5m wide. On-street parking and residential driveways.	
Sunnymead Drive	DS1 PM, DS2 PM	PM 372	DS1 PM 133 DS2 PM 135	DS1 PM 49% DS2 PM 50%	DS1 PM 15% DS2 PM 16%	Avenue - >7m wide carriageway. Connector route. Bus route.	

Road Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C (%)	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	Appropriateness of Link as Diversion Route
Westbrook Grove	ALL	AM 111 PM 63	DS1 AM 191 DS1 PM 134 DS2 AM 186 DS2 PM 135	DS1 AM 70% DS1 PM 46% DS2 AM 69% DS2 PM 46%	DS1 AM 44% DS1 PM 31% DS2 AM 43% DS2 PM 31%	Residential Street – 5.5m wide with on-street parking. Bus route.	

Rural **Lanes**

1.11.6.23. Closewood Road, Furzley Corner, Newland Lane, Purbrook Heath Road and Belney Lane / Pigeon House Lane have all been classified as rural lanes.

1.11.6.24. Of these rural roads, Closewood Road is anticipated to experience the highest increase in traffic flow. This increase is shown in the AM peak, where the southbound carriageway saw an increase in traffic flow of 208 vehicles.

1.11.6.25. When considering the ratio of Volume over Capacity, only Closewood Road is forecast to experience V/C above 75% - during the DS2 PM peak period. The impact on Closewood Road will however be very temporary and only occur for the period that the traffic management is in place on B2150 Hambledon Road north of the junction with Closewood Road.

1.11.6.26. It should also be noted that the predicted level of increased traffic is only likely to occur when shuttle working traffic signals are in place on B2150 Hambledon Road north of the junction with Closewood Road, which would be approximately 2-3 weeks per circuit.

1.11.6.27. When considering the appropriateness of these links for handling redistributed traffic, those under 5m are considered less appropriate due to the narrow carriageway. This will slow passing traffic and cause particular difficulties with larger vehicles. Furzley Road and Purbrook Heath Road are both considered appropriate redistribution routes. The remaining Rural Lanes all exhibit low baseline flows and so can accommodate an increase in flows for short periods of time.

Avenues

1.11.6.28. Friendstaple Road, Elizabeth Road, Milton Road, Stakes Hill Road and Sunnymead Road all fall into the 'Avenue' street type classification. As detailed above, Avenues are urban/suburban links typically carrying large volumes of traffic. In this context, all fulfil a connector route function – i.e. movement focused rather than place, with limited frontage. Carriageways are wide and on-street parking is limited.

1.11.6.29. The highest increase in flow is forecast to be on Stakes Hill Road during the PM peaks with a forecast increase of 23 in DS1 and 228 in DS2. Increases of over 200 PCUs are also forecast on Milton Road. Neither of these links show corresponding high levels of V/C and therefore are considered to have sufficient spare capacity to accommodate this temporary increase in flows. Given the nature of the links as Avenues, with wide carriageways, limited residential frontage and access junctions, they are considered appropriate diversionary routes.

Residential Roads

1.11.6.30. Mill Road, Silvester Road, Stirling Avenue / Hurstville Drive, Westbrook Grove and Park Avenue all fall into the 'Residential Roads' street classification type from MfS2.

1.11.6.31. When considering all residential roads identified, all are forecast to experience an increase of between 150 and 230 PCUs during one of the peak periods tested. Of these links, the highest increase in traffic flow was seen on Stakes Hill Road. Stakes Hill Road saw an increase in traffic flow of 230 PCUs in the DS1 PM scenario when compared to the DM PM, this increase represents a 35% increase in traffic flow on this link.

1.11.6.32. The highest increase in V/C seen for this street classification was seen on Mill Road, which saw a 49% increase in V/C during both AM peak periods. This increase saw the actual V/C on this link increase to 72%, suggesting that this link would still be within its theoretical capacity. It should be noted however that this link is in close proximity to Mill Hill Primary School, and thus may be more sensitive than a typical Residential road to increases in traffic flow.

1.11.6.33. In order to avoid this temporary increase in traffic flow impacting upon Mill Hill Primary School, construction in this area will be scheduled, as far as possible, to avoid term times.

1.11.6.34. When considering whether these residential roads are appropriate as diversionary routes, Park Avenue and Sylvester Road are considered more appropriate due to their wider carriageway design.

High Street

1.11.6.35. Aston Road was the only road to meet the High Street classification type in Section 1-4 which was to be taken forward for further assessment. Aston Road connects Hambledon Road with Jubilee Road via an area of industrial units and employment space.

1.11.6.36. Based on the data received from the SRTM, this link met the assessment criteria in the PM scenarios only, and only on the westbound carriageway. This link saw a maximum increase in traffic flow of 305 PCUs. However, it should be noted that the DM flow for this link was 10 PCU and thus this dramatic increase is reflective of the very low flow in the baseline. The very low baseline flows appear to be incorrect based on the likely level of peak hour employment traffic using the network.

1.11.6.37. The link is a circuitous link between Hambledon Road and Jubilee Road and is therefore not considered to be a likely alternative route for high levels of traffic in realistic conditions.

Onshore Cable Corridor Sections 5 and 6

1.11.6.38. For Sections 5 and 6, a total of six links were identified as warranting further assessment due to the forecast impact of traffic redistribution. These six links are detailed in Error! Reference source not found. below. Importantly it should be noted that the links highlighted primarily involve traffic redistribution away from Havant Road to avoid the proposed temporary traffic management of a single lane closure on Havant Road between Farlington Avenue and the A2030 Eastern Road. This closure would be in place for 1 to 2 weeks per circuit.

Table 61 - Link capacity assessment Onshore Cable Corridor Sections 5 and 6

Link Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
B2177 Portsdown Hill Road	DS1 AM DS2 AM	AM 313	DS1 AM 121 DS2 AM 130	DS1 AM 66% DS2 AM 67%	DS1 AM 16% DS2 AM 18%	Arterial. 7m wide. Limited access points and junction	
Evelegh Road	DS1 AM DS2 AM	AM 15	DS1 AM 185 DS2 AM 186	DS1 AM 12% DS2 PM 12%	DS1 AM 11% DS2 AM 11%	Residential Street – 5.5m wide. Tree-lined footways and verge medians. On-street parking and numerous driveway access points. Sensitive receptor of Solent Infant School	

Link Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
Gillman Road	ALL	AM 250 PM 227	DS1 AM 174 DS1 PM 66 DS2 AM 174 DS2 PM 84	DS1 AM 88% DS1 PM 71% DS2 AM 88% DS2 PM 76%	DS1 AM 32% DS1 PM 18% DS2 AM 32% DS2 PM 24%	Residential Street – 5.5m wide. No on-street parking. Northern section narrows to 4.5m.	
Grove Road	DS1 PM DS2 PM	PM 468	DS1 PM 200 DS2 PM 196	DS1 PM 49% DS2 PM 49%	DS1 PM 18% DS2 PM 18%	Residential Street – 7.5m+ wide. On-street parking. Vehicular access to Mountbatten Business	

Link Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
						Park. Sensitive receptor of Springfield School nearby	
Lower Drayton Lane	DS1 PM DS2 PM	PM 403	DS1 PM 71 DS2 PM 43	DS1 PM 75% DS2 PM 72%	DS1 PM 15 DS2 PM 12	Residential Street – 7m wide carriageway. On-street parking. Sensitive receptor of Springfield School nearby.	
Station Road	ALL	AM 98 PM 99	DS1 AM 80 DS1 PM 188 DS2 AM 75 DS2 PM 181	DS1 AM 37% DS1 PM 65% DS2 AM 37% DS2 PM 63%	DS1 AM 17% DS1 PM 43% DS2 AM 16% DS2 PM 41%	Residential Street – 6m wide Some avenue features and	

Link Name	Impacted Scenario	Base Flow	Rise in Flow (PCU)	Max V/C	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
						on-street parking on one side.	

Residential Roads

1.11.6.39. As shown in Table 61, most of the links for Sections 5 and 6 that warranted further assessment are residential streets.

1.11.6.40. Evelegh Road and Gillman Road are located north of the A2030 Havant Road and east of Farlington Avenue. Traffic redistribution onto these roads is a function of the temporary banned turns into and out of Farlington Avenue that would form part of the Proposed Traffic Management to facilitate construction. For up to a week, traffic could be prohibited from turning right from Havant Road westbound onto Farlington Avenue northbound and left out of Farlington Avenue southbound onto Havant Road eastbound. Evelegh Road and Gillman Road would form part of a route to avoid this with anticipated traffic flow increases of 186 PCUs and 185 PCUs respectively corresponding to a rise in V/C of 12% and 33%. In terms of capacity, Evelegh Road is forecast to operate at around 12% V/C in the worst-case situation whereas Gillman Road would function at approximately 88% of capacity.

1.11.6.41. Evelegh Road has extensive on-street parking, particularly on the southern side of the carriageway, restricting available road width for passing traffic. The northern section of Gillman Road between Evelegh Road and Grant Road is less than 5m in width and therefore is not considered appropriate as a diversionary route.

1.11.6.42. Grove Road, Lower Drayton Avenue and Station Road are all situated south of Havant Road and west of the A2030 Eastern Road in the area known as Drayton. All of these routes are residential in nature, providing connector routes between Eastern Road and Havant Road.

1.11.6.43. Essentially traffic that would normally travel between the A2030 Eastern Road and Havant Road is cutting the corner, redistributing along Grove Road and then using one of either Lower Drayton Avenue or Station Road. Station Road experienced the largest increase in traffic flow of 217 PCUs which transpired in the northbound direction during the DS1 PM scenario. This was followed by Grove Road at 200 PCUs for the westbound direction in the DS1 PM Scenario. These amounted to a % rise in V/C of 44% and 19% respectively for the roads. However, despite these increases, both roads are forecast to continue operating within capacity, with Station Road at 65% V/C and Grove Road at approximately 50% in the worst-case scenarios.

1.11.6.44. By contrast, the rise in traffic flow along Lower Drayton Lane was more modest at 72 PCUs suggesting that this was less attractive to redistributing traffic. Station Road appears more attractive to traffic due to it being a slightly more direct link between Havant Road and Eastern Road. This rise amounted to a 15% increase in V/C and the road is forecast to continue to operate within capacity in the worst-case scenario at circa 75% V/C.

1.11.6.45. Based on the forecast change in flow, Grove Road, Lower Drayton Avenue and Station Road are all considered acceptable alternative routes for traffic during the short periods of traffic management on Havant Road.

Arterial Roads

1.11.6.46. The sixth link (The B2177 Portsdown Hill Road) is classified as an Arterial route. The link connects A3(M) in the east with James Callaghan Drive in the west and provides an alternative route around the north of Cosham. Given the features of these and its primary movement role, this road is considered acceptable for accommodating traffic redistribution. The anticipated rise in PCUs translates into an 18% increase in V/C. In the worst-case scenario this will mean that the road will operate at around 90% V/C. Given the nature of the link, the use of Portsdown Hill Road as a redistribution route is considered appropriate.

1.11.6.47. In terms of mitigation, the FTMS will include measures to sign the residential streets as access only and scheduling to avoid school holidays. Overall though, it must be reiterated that the impact of the traffic redistribution will only be temporary and not for a prolonged period, reflecting the short section of disruptive traffic management that is required in this area.

Onshore Cable Corridor Sections 7, 8, 9 and 10

1.11.6.48. This section details the link capacity assessments for redistributing traffic that pertains to Sections 7,8,9 and 10 of the Onshore Cable Corridor. The links which meet the assessment criteria for these sections total 20 and are of a mixed street type primarily consisting of Residential Streets and Arterial Streets. The results are summarised in Table 62 below.

Table 62 - Link capacity assessment Onshore Cable Corridor Sections 7,8,9 and 10

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
A2030 Winston Churchill Avenue	DS1 PM	PM 585	DS1 PM 75	DS1 PM 91%	DS1 PM 10%	Ring Road. Dual carriageway with bus lane running north of Portsmouth city centre. 16m wide with central median.	
A288 Copnor Road	DS1 PM	PM 1264	DS1 PM 200	DS1 PM 93%	DS1 PM 27%	High Street. 9m+ wide. North-south route with on-street parking, bus infrastructure, wide verges.	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
A288 Southsea Terrace	DS1 PM	PM 238	DS1 PM 96	DS1 PM 29%	DS1 PM 11%	Avenue – 10m+ wide carriageway with dedicated on-street parking bays.	
Airport Service Road	ALL	AM 36 PM 153	DS1 AM 20 DS2 AM 133 DS1 PM 57 DS2 PM 156	DS1 AM 10% DS1 PM 50% DS2 AM 20 DS2 PM 62%	DS1 AM 4% DS1 PM 23% DS2 AM 13% DS2 PM 35%	Arterial – access to and through industrial estate. 7.5m+ wide. No parking.	
Anchorage Road	DS2 AM	AM 513	DS2 AM 177	DS2 AM 82%	DS2 AM 21	Arterial – access to industrial estate and supermarket. 7.5m+ wide. No parking.	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
Aylesbury Road	DS1 PM	PM 343	DS1 PM 145	DS1 PM 62%	DS1 PM 18	Residential Street. 7m wide. On-street parking on both sides so limited available width.	
B2154 Elm Grove	DS1 PM	PM 506	DS1 PM 77	DS1 PM 87%	DS1 PM 12	High Street with retail frontage. 9m wide with on-street parking and loading zones. Bus route	
Burrfields Road	DS2 AM	AM 467	DS2 AM 176	DS2 AM 79%	DS2 AM 22%	Arterial – 8m+ wide access to Ocean retail park and	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
						linking Copnor Road with Eastern Road.	
Derby Road	DS1 PM	PM 314	DS1 PM 82	DS1 PM 92%	DS1 PM 12%	Residential Street with some retail frontage at eastern end. 8m+ wide with on-street parking. One-way westbound from Grange Road	
Dundas Lane	ALL	AM 439 PM 531	DS1 AM 93 DS1 PM 263 DS2 AM 338 DS2 PM 246	DS1 AM 26% DS1 PM 50% DS2 AM 39% DS2 PM 50%	DS1 AM 5% DS1 PM 19% DS2 AM 18% DS2 PM 19%	Arterial– access to industrial estate and Ocean Retail Park.	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
						Sensitive receptor of Admiral Lord Nelson School.	
Gladys Avenue	DS1 PM	PM 563	DS1 PM 63	DS1 PM 102%	DS1 PM 11%	Residential Street. 8m wide with on-street parking. North-south connector route	
Lyndhurst Road	DS1 PM	PM 99	DS1 PM 69	DS1 PM 28%	DS1 PM 13%	Residential Street. 7m+ wide with on-street parking. North-south connector route.	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
M275	DS2 PM	PM 194	DS2 PM 221	DS2 PM 22%	DS2 PM 12%	Motorway connecting Portsmouth city centre with M27 J12. 20m wide dual carriageway	
New Road East	DS1 PM	PM 155	DS1 PM 94	DS1 PM 67%	DS1 PM 24	Residential Street. 7.5m+ wide. On-street parking on both sides restricting available carriageway.	
Paulsgrove Road	DS1 PM	PM 401	DS1 PM 165	DS1 PM 58%	DS1 PM 17	Residential Street. 7m wide. On-street parking on both sides	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
						restricting available carriageway	
Pink Road / Langley Road	DS1 PM	PM 217	DS1 PM 71	DS1 PM 44%	DS1 PM 12%	Residential Street. 7m connector streets. On-street parking on both sides restricting available carriageway.	
Quartremaine Road	DS2 AM	AM 427	DS2 AM 285	DS2 AM 32%	DS2 AM 13%	Arterial – 7.5m wide access to industrial estate with no on-street parking.	

Link Name	Impacted Scenario	Base Flow	Highest Rise in Flow (PCU)	Max V/C%	Highest Rise in V/C (%)	Street Type Classification and Contextual Comments	
Shearer Road	DS1 PM	PM 292	DS1 PM 117	DS1 PM 63%	DS1 PM 14%	Residential Street	
Torrington Road	DS1 PM	PM 228	DS1 PM 78	DS1 PM 64%	DS1 PM 15%	Residential Street. 7m connector streets. On-street parking on both sides restricting available carriageway.	
Williams Road	DS1 PM, DS2 AM, DS2 PM	AM 482 PM 388	DS1 PM 130 DS2 AM 234 DS2 PM 89	DS1 PM 73% DS2 AM 90% DS2 PM 65%	DS1 PM 19% DS2 AM 29% DS2 PM 11%	Arterial – 7m wide access to industrial estate no on-street parking.	

Arterial Streets

1.11.6.49. Airport Service Road, Anchorage Road, Burrfields Road, Dundas Lane, Quartremaine Road and Williams Road, have all been classified as arterial streets because they act as principal links connecting several local centres to the north-east of Portsea Island. Additionally, they provide access routes for the industrial estates in this area and hence accommodate HGV movements.

1.11.6.50. Together these arterial streets are forecast to act as a route for redistributing traffic to avoid the proposed temporary traffic management on the A2030 Eastern Road. Dundas Lane is expected to experience the largest increase in traffic flow with a rise of 338 PCUs in the worst-case scenario. However, it should be noted that all of these arterial streets are indicated to see a temporary rise in traffic flow within the region of 200-300 PCUs in the worst-case scenario. Issues are particularly pronounced during the PM peak.

1.11.6.51. The proportional changes in V/C for these arterial streets are within the range of 20-35%. Generally, the results suggest that these arterial streets have spare capacity to accommodate this temporary traffic redistribution.

1.11.6.52. However, the exception is Anchorage Road eastbound in the PM peak for both Do Something Scenarios where the traffic redistribution is forecast to cause the link to operate at or slightly over capacity. Largely this can be attributed to the existing bottleneck on the A2030 Eastern Road northbound approach towards the grade separated junction with the A27 Havant Bypass. Site visit observations by the project team have noted that the two-lane approach acts as a capacity constraint, causing queues to form southwards beyond the junction with Anchorage Road. Moreover, journey time analysis has shown that the impact of traffic redistribution appears to be most pronounced in the PM peak.

1.11.6.53. Nevertheless, the scheduling of traffic management arrangements, as detailed within the FTMS, will seek to minimise the impact by programming temporary works during quieter periods such as school holidays and avoiding important events being staged in Portsmouth and the surrounding area. Timing during school holidays is particularly relevant for Dundas Lane due to the location of the Admiral Lord Nelson School. Finally, it should be reiterated that the proposed traffic management along the A2030 Eastern Road that is forecast to give rise to these impacts will be temporary in nature and of a short duration, approximately two to three weeks in length.

1.11.6.54. All of these streets are considered appropriate for temporary redistribution of traffic.

Residential Streets

1.11.6.55. A288 Southsea Terrace, Aylesbury Road, Derby Road, Gladys Avenue, Lyndhurst Road, New Road East, Paulsgrove Road, Pink Road / Langley Road, Shearer Road and Torrington Road all fall under the residential street classification prescribed by MfS2. These routes all lie within the dense Victorian residential areas in the centre

of Portsea island. As such, all have similar street characteristics, with on-street parking limiting the available carriageway for circulatory traffic.

1.11.6.56. Except for Derby Road and Gladys Avenue, all these residential streets lie within the section of Portsmouth bounded by the A2047 in the east, the A288 in the west and St Mary's Road in the south. Primarily this encompasses areas of North End, Buckland and Fratton.

1.11.6.57. Traffic redistribution along these residential streets reflects the dense patchwork of streets and grid layout in this area. The consequence of this is that traffic redistribution on Portsea Island appears to be more dispersed. Principally the traffic redistribution on these streets concerns trips that are heading across Portsea Island in an east-west direction and vice versa. These streets act as feeders into the A288 Copnor Road corridor and beyond. It should be noted that all these residential streets are only anticipated to be significantly affected by redistributing traffic in the DS1 PM peak.

1.11.6.58. The greatest rise in traffic flow is expected on Paulsgrove Road, with an additional 165 PCUs. In terms of the proportional change in V/C, the rises on these residential streets all fall within the range of 15-25%. With the exception of two, all of these residential streets will continue to operate with spare capacity after taking into account the additional redistributing traffic.

1.11.6.59. Derby Road however is predicted to operate above capacity during the PM peaks for the two Do Something Scenarios, whilst Gladys Avenue is forecast to operate at or slightly over capacity for all Do Something Scenarios and Peak Periods.

1.11.6.60. These results reflect site specific contextual factors. Both roads provide direct links between 'A' Road Corridors and benefit from slighter wider carriageways in places compared to other residential streets in Portsmouth. Derby Road, connects the A2047 London Road with the A3 Stamshaw Road; whilst Gladys Avenue joins the A3 Northern Parade and the A2047 London Road. Derby Road is the access point for a Lidl supermarket whilst on Gladys Avenue a bus route runs along it and the posted speed limit is 30mph compared to the 20mph speed limit that applies to most other residential streets in Portsmouth.

1.11.6.61. Therefore, it can be considered that both Derby Road and Gladys Avenue are a higher degree of movement function than the other residential streets considered, accommodating higher volumes of traffic accordingly. In terms of mitigation, the FTMS will include measures to sign the residential streets as access only. Temporary stopping up orders could also be considered as a means of physically preventing redistributing traffic from using a certain road. Again, it must be reiterated that the impact of the traffic redistribution will only be temporary, reflecting the short section of disruptive traffic management along the A2030 Eastern Road.

1.11.6.62. Due to the extensive dispersal of the traffic across these residential streets, although the links are not wholly appropriate for significant additional diversionary traffic, the

levels forecast as part of this analysis can be accommodated during the temporary construction periods.

A2030 Winston Churchill Avenue, A288 Copnor Road, B2154 Elm Grove and M275

1.11.6.63. These four links have been considered collectively as despite their varying characteristics they all form part of the Classified Road Network on Portsea Island. Consequently, they can be considered as major routes for traffic and thus suitable for accommodating redistributing traffic.

1.11.6.64. Of these, The M275 is expected to experience the largest increase in traffic flow (221 PCUs), although proportionally the rise in V/C is anticipated to be most pronounced on the A288 Copnor Road. Again, the impact is most acute in the PM peak reflecting findings in the corresponding journey time analysis.

1.11.6.65. Both the M275 and the B2154 Elm Grove are forecast to operate within capacity after accounting for redistributing traffic. However, the A2030 Winston Churchill Avenue is forecast to operate at capacity westbound during the DS1 PM scenario. Similarly, the A288 Copnor Road southbound is predicted to operate at or slightly above capacity during the PM peaks for both Do Something Scenarios. Largely, these findings reflect the strategic nature of these routes. Nonetheless, it should be noted that scheduling of works to avoid the busiest periods will help minimise the impact. The outputs from the SRTM illustrate a worst-case scenario.

1.11.6.66. All of these links are considered appropriate alternative diversionary routes for redistributing traffic away from the Onshore Cable Corridor.

1.11.7. JOURNEY TIME ANALYSIS

1.11.7.1. This section outlines the modelling results from the SRTM with respect to journey times along the eight strategic corridors that were modelled in the SRTM. The eight corridors that were modelled are as follows:

- **CORRIDOR 1:** A3 Portsmouth Road / A3 London Road / A3 Maurepas Way / A3 London Road / A3 Southampton Road - between the B2149 Havant Road in Horndean and the A27 Western Road in Cosham;
- **CORRIDOR 2:** Ladybridge Road / Stakes Road (Purbrook) – between the A3 London Road and Crookhorn Lane;
- **CORRIDOR 3:** Rockville Drive / Stakes Hill Road / Crookhorn Lane / B2177 Portsdown Hill Road – Between the A3 London Road in Waterlooville and James Callaghan Drive on Portsdown Hill;
- **CORRIDOR 4:** A3(M) / A27 Havant Bypass – between Junction 2 of the A3(M) and Junction 12 of the M27;
- **CORRIDOR 5:** M275 / A3 Mile End Road (Portsea Island) – between Junction 12 of the M27 and Church Street Roundabout;
- **CORRIDOR 6:** A3 Northern Parade / A3 Twyford Avenue / A3 Stamshaw Road (Portsea Island) – between the A3 London Road south of Portsbridge Roundabout and Junction 2 of the M275;
- **CORRIDOR 7:** A3 London Road / A2047 Copnor Road / A288 Copnor Road / New Road / A2047 Kingston Road / B2152 Lake Road / A2030 Lake Road / Cornmill Street (Portsea Island) – between Portsbridge Roundabout and Marketway Roundabout.
- **CORRIDOR 8:** A2030 Havant Road / A2030 Eastern Road / A2030 Velder Avenue / A288 Milton Road / A2030 Goldsmith Avenue / A2030 Victoria Road N / A2030 Winston Churchill Avenue (Portsea Island) – between the A27 Havant Bypass and A3 Anglesea Road.

AM Peak Period

Table 63 - SRTM Journey Time Data AM Peak (08:00 – 09:00)

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	DM	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 1 NB (A3 London Rd)	1317	1481	1478	164	160	12	12

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	DM	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 1 SB (A3 London Rd)	1639	1745	1743	106	104	6	6
Corridor 2 EB (Ladybridge Rd)	391	388	388	-3	-3	-1	-1
Corridor 2 WB (Ladybridge Rd)	419	538	538	119	119	29	28
Corridor 3 NB (Stakes Hill Rd / Crookhorn Lane)	778	812	812	34	34	4	4
Corridor 3 SB (Stakes Hill Rd / Crookhorn Lane)	685	708	705	23	20	3	3
Corridor 4 NB (A3(M) / A27 Havant Bypass)	569	581	574	12	5	2	1
Corridor 4 SB (A3(M) / A27 Havant Bypass)	620	618	618	-2	-2	-0.3	-0.4
Corridor 5 NB (M275)	260	263	257	3	-3	1	-1
Corridor 5 SB (M275)	203	204	205	0	1	0.1	1
Corridor 6 NB (A3 Portsea Island)	395	395	395	0	0	0.003	-0.01

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	DM	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 6 SB (A3 Portsea Island)	362	362	362	0	0	0.03	0.04
Corridor 7 NB (A288 Copnor Rd)	950	949	954	-1	4	-0.1	0.4
Corridor 7 SB (A288 Copnor Rd)	774	776	786	2	12	0.3	2
Corridor 8 NB (A2030)	1526	1586	1521	60	-6	4	-0.4
Corridor 8 SB (A2030)	1261	1268	1296	7	35	1	3

1.11.7.2. The results displayed in **Table 11-5** illustrate the changes in journey times across the eight assessed corridors for the DS1 and DS2 scenarios for the AM Peak Period. Overall, only four corridors experience an increase in journey time above 30 seconds, of which three of these see journey time rises of one minute or greater. These four corridors are discussed in turn.

1.11.7.3. Corridor 1 (the A3) is forecast to experience an increase in journey times of approximately 2 minutes and 44 seconds in the northbound direction and 1 minute 46 seconds in the southbound direction. These forecast increases are the highest across the AM Peak when collectively considering bi-directional traffic. The figures reflect the proposed traffic management that is required along this corridor to facilitate the installation of the Onshore Cable Route. Shuttle working will essentially reduce throughput by approximately 50% with some periods where no flow will proceed due to the requirements for inter-green periods between traffic signal phases.

1.11.7.4. Corridor 2 (Ladybridge Road / Stakes Hill Road) is predicted to experience a rise in journey times of almost 2 minutes for the westbound direction. This is likely to primarily emanate from delays at the roundabouts with the A3 London Road, where there is traffic management within the SRTM DS scenario, and Purbrook Way. Considering that the rise in journey times is only transpiring in the westbound direction, it would appear that Corridor 2 is being used by drivers who would normally head southbound along the A3 London Road to avoid the proposed traffic

management. This traffic redistribution would be part of a wider route involving Stakes Hill Road.

1.11.7.5. Corridor 3 appears is expected to see a rise in journey times of 34 seconds in the northbound direction and around 20 seconds in the southbound direction. Again, this would suggest that this corridor is being subject to traffic redistribution away from the A3 London Road. The increase in journey times is a function of traffic redistribution away from the A3 London Road. The lack of any increase in journey times for the northbound direction suggests that northbound traffic redistribution is happening elsewhere away from Stakes Hill Road.

1.11.7.6. Corridor 8 (the A2030) is expected to be subject to an increase in journey times for the northbound direction of 60 seconds in the DS1 scenario and 35 seconds in the DS2 scenario for the southbound direction. This reflects which direction the lane closures apply for the associated traffic management along the A2030 Eastern Road. As discussed previously, DS1 involves northbound lane closures, whereas DS2 concerns southbound lane closures. Consequently, one carriageway will remain unaffected by the works with no increases in journey times for each of the Do Something scenarios. These findings are in-line with what would be expected for the proposed traffic management on this dual carriageway link.

1.11.7.7. For the other corridors that form key links onto Portsea Island (Corridor 5 (M275), Corridor 6 (A3), and Corridor 7 (A288)) the impact on journey times are negligible. This suggests that the scale of traffic redistribution away from the A2030 Eastern Road onto these other corridors is relatively minor as a proportion of traffic flows that would normally use these routes. If there was a significant traffic redistribution onto these alternate routes, journey times would show a large increase. This is because greater traffic volumes would exacerbate existing bottlenecks / routine congestion. Therefore, it can be considered that the impact on Corridors 5, 6 and 7 is minimal. Importantly, this infers that traffic redistribution across Portsea Island is more dispersed and not concentrated to a single corridor.

1.11.7.8. With regards to the strategic road network (SRN), the impact on journey times is again negligible. For the worst-case scenario journey times are expected to rise by around 10 seconds in the northbound direction for Corridor 4. For the southbound direction, decreases in journey times are predicted. Corridor 5 is expected to see little if any change. This suggests that some traffic is redistributing away from the areas subject to Traffic Management. For example, drivers could choose to drive further along the A3(M) than they normally would or on the A27 they may choose to avoid using the A2030 junction. However, the proportion of traffic redistribution would appear to be relatively small compared to the total traffic using the SRN. If the traffic redistribution was significant we would expect journey times to rise.

Inter-Peak Period

Table 64 - SRTM Journey Time Data inter-peak (12:00–13:00)

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	DM	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 1 NB (A3 London Rd)	1210	1333	1334	123	123	10	10
Corridor 1 SB (A3 London Rd)	1288	1393	1401	105	113	8	9
Corridor 2 EB (Ladybridge Rd)	384	382	382	-2	-2	-1	-1
Corridor 2 WB (Ladybridge Rd)	383	460	455	77	72	20	19
Corridor 3 NB (Stakes Hill Rd / Crookhorn Lane)	632	632	632	0	0	-0.01	0.02
Corridor 3 SB (Stakes Hill Rd / Crookhorn Lane)	683	684	762	1	79	0.1	12
Corridor 4 NB (A3(M) / A27 Havant Bypass)	442	443	438	1	-4	0.3	-1
Corridor 4 SB (A3(M) / A27 Havant Bypass)	487	487	491	0	4	-0.02	1
Corridor 5 NB (M275)	199	199	199	1	0	0.4	0.1

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	DM	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 5 SB (M275)	189	189	191	0	2	0.1	1
Corridor 6 NB (A3 Portsea Island)	383	384	384	0	0	0.1	0.1
Corridor 6 SB (A3 Portsea Island)	353	354	354	0	0	0.1	0.1
Corridor 7 NB (A288 Copnor Rd)	697	710	709	12	12	2	2
Corridor 7 SB (A288 Copnor Rd)	670	671	689	1	19	0.2	3
Corridor 8 NB (A2030)	1214	1246	1228	32	14	3	1
Corridor 8 SB (A2030)	1161	1160	1209	-1	48	-0.1	4

1.11.7.9. As shown in Table 64, the impact on journey times for the inter-peak is most acute for Corridor 1 (A3), Corridor 2 westbound (Ladybridge Road / Stakes Road), Corridor 3 southbound and Corridor 8 (A2030) when considering the absolute change. For Corridors 1 and 8, the impact on journey times is reflective of the fact that they will be subject to the proposed traffic management. For corridors 2 and 3, the impact on journey times is a function of traffic redistribution as discussed in 1.11.7.4 and 1.11.7.5 .

1.11.7.10. The change in journey times for Corridor 1 Northbound is less than the AM Peak but greater than the PM peak across the two Do Something Scenarios. For Corridor 2 southbound, journey times changes are similar to the AM Peak but greater than the PM Peak. Overall the change in journey times for Corridor 1 are still in the region of 2 minutes.

1.11.7.11. Along Corridor 8, the change in journey times for the carriageways affected by the relevant lane closures is less than both the AM and PM peak periods at 32 and 48 seconds respectively.

1.11.7.12. Conversely the change in journey times for Corridor 2 westbound and Corridor 3 southbound is higher than both the AM and PM peak periods, amounting to around 1 minute and 15 seconds.

PM Peak Period

Table 65 - SRTM Journey Time Data PM Peak (17:00-18:00)

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	Base	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 1 NB (A3 London Rd)	1474	1590	1585	116	110	8	7
Corridor 1 SB (A3 London Rd)	1522	1610	1619	89	97	6	6
Corridor 2 EB (Ladybridge Rd)	391	390	390	-1	-1	-0.3	-0.4
Corridor 2 WB (Ladybridge Rd)	404	533	542	129	138	32	34
Corridor 3 NB (Stakes Hill Rd / Crookhorn Lane)	687	715	716	28	29	4	4
Corridor 3 SB (Stakes Hill Rd / Crookhorn Lane)	680	690	689	10	9	1	1
Corridor 4 NB (A3(M) / A27 Havant Bypass)	570	582	577	12	7	2	1
Corridor 4 SB (A3(M) / A27 Havant Bypass)	606	613	618	7	12	1	2

Journey Route	Journey Time (seconds)			Change (seconds)		Change (%)	
	Base	DS1	DS2	DS1	DS2	DS1	DS2
Corridor 5 NB (M275)	351	365	358	13	6	4	2
Corridor 5 SB (M275)	219	220	239	1	21	1	9
Corridor 6 NB (A3 Portsea Island)	394	394	395	0	0	-0.02	0.1
Corridor 6 SB (A3 Portsea Island)	365	365	373	0	8	0	2
Corridor 7 NB (A288 Copnor Rd)	950	954	989	4	39	0.4	4
Corridor 7 SB (A288 Copnor Rd)	745	745	813	0	68	0.1	9
Corridor 8 NB (A2030)	1378	1421	1398	43	20	3	1
Corridor 8 SB (A2030)	1311	1301	1463	-10	153	-1	12

1.11.7.13. **Table 65** outlines the impact on journey times of the proposed traffic management for the PM Peak across the two Do Something Scenarios. Broadly the impact is similar to that of the AM Peak (taking into account directional changes in flow)

1.11.7.14. Along Corridor 1 (A3) the change in journey time is significantly less for both directions of travel and scenarios when compared to the AM Peak. For the northbound direction the change in journey time is around the two-minute mark, whereas in the southbound direction the change in journey time is around 1 minute and 30 seconds.

1.11.7.15. For Corridor 2 westbound (Ladybridge Road / Stakes Road), the change in journey time is around 10 and 20 seconds higher compared to the AM peak across the two Do Something Scenarios.

1.11.7.16. However, there is one notable difference. Corridor 7 (Copnor Road) in DS2, is forecast to experience a 39 second increase in journey times for the northbound direction and a 68 second increase for the southbound direction. This contrasts to

the AM peak when the rise in journey times was around 5 and 10 seconds for these respective directions of travel. Likewise, Corridor 8 southbound (A2030) in DS2 is anticipated to experience an almost 2-minute increase in journey times when compared to the AM Peak. This suggests that the southbound lane closures on the A2030 are going to be the most disruptive, particularly during the PM peak, with traffic redistributing onto the A288.

1.11.8. LOCAL LINK ASSESSMENT

1.11.8.1. Where traffic management measures are proposing lane closures of dual carriageway links, an assessment of link capacity has been undertaken using DMRB Volume 5 Section 1 Part 3 – TA79/99. This analysis has been undertaken for the AM and PM peak periods using traffic flows derived from the SRTM. The link flows for each scenario and the DMRB capacity for each link are shown below.

Table 66 - DM Scenario Link Flows

Link	Direction	AM Link Flow	IP Link Flow	PM Link Flow
Hambledon Road (between Milton Road and A3 Maurepas Way)	NB	1332	1059	1270
	SB	974	969	1314
A3 Maurepas Way (between Hambledon Road and A3 London Road)	NB	756	640	774
	SB	868	680	1070
Havant Road (between Farlington Avenue and A2030 Eastern Road)	EB	987	655	977
	WB	712	506	803
A2030 Eastern Road (between Havant Road and Fitzherbert Road)	NB	255	361	435
	SB	331	311	284
	NB	1651	1367	1463

Link	Direction	AM Link Flow	IP Link Flow	PM Link Flow
A2030 Eastern Road (between Airport Service Road and Milton Common)	SB	1655	1829	2247

Table 67 - DS1 Link Flows

Link	DMRB Capacity (busiest direction flow)	Direction	AM Link Flow	AM % change from DM	IP Link Flow	IP % change from DM	PM Link Flow	PM % change from DM
Hambledon Road (between Milton Road and A3 Maurepas Way)	1470	NB	1067	-20%	908	-14%	1078	-15%
		SB	735	-25%	679	-30%	868	-34%
A3 Maurepas Way (between Hambledon Road and A3 London Road)	1260	NB	474	-37%	388	-39%	534	-31%
		SB	546	-37%	438	-36%	688	-36%
Havant Road (between Farlington Avenue and A2030 Eastern Road)	1110	EB	724	-27%	401	-39%	828	-15%
		WB	580	-19%	301	-41%	622	-23%

Link	DMRB Capacity (busiest direction flow)	Direction	AM Link Flow	AM % change from DM	IP Link Flow	IP % change from DM	PM Link Flow	PM % change from DM
A2030 Eastern Road (between Havant Road and Fitzherbert Road)	1260	NB	115	-55%	158	-56%	197	-55%
		SB	238	-28%	200	-36%	193	-32%
A2030 Eastern Road (between Airport Service Road and Milton Common)	1470	NB	1572	-5%	1323	-3%	1189	-19%
		SB	1360	-18%	1430	-22%	1548	-31%

Table 68 - DS2 Link Flows

Link	DMRB Capacity (busiest direction flow)	Direction	AM Link Flow	AM % change from DM	IP Link Flow	IP % change from DM	PM Link Flow	PM % change from DM
Hambledon Road (between Milton Road and A3 Maurepas Way)	1470	NB	1062	-20%	908	-14%	1072	-16%
		SB	741	-24%	679	-30%	868	-34%

Link	DMRB Capacity (busiest direction flow)	Direction	AM Link Flow	AM % change from DM	IP Link Flow	IP % change from DM	PM Link Flow	PM % change from DM
A3 Maurepas Way (between Hambledon Road and A3 London Road)	1260	NB	470	-38%	381	-40%	530	-32%
		SB	550	-37%	440	-35%	690	-36%
Havant Road (between Farlington Avenue and A2030 Eastern Road)	1110	EB	722	-27%	409	-38%	828	-15%
		WB	590	-17%	301	-41%	618	-23%
A2030 Eastern Road (between Havant Road and Fitzherbert Road)	1260	NB	118	-54%	158	-56%	197	-55%
		SB	238	-28%	208	-33%	212	-25%
A2030 Eastern Road (between Airport Service Road and	1470	NB	1234	-25%	1067	-22%	1164	-20%
		SB	1620	-2%	1787	-2%	2200	-2%

Link	DMRB Capacity (busiest direction flow)	Direction	AM Link Flow	AM % change from DM	IP Link Flow	IP % change from DM	PM Link Flow	PM % change from DM
Milton Common)								

1.11.8.2. The tables above demonstrate that the flows on the assessed links are lower than the DMRB capacities for each link apart from the section of A2030 Eastern Road between Airport Service Road and Milton Common. However, it is considered that an element of self-management is likely to take place during the period when lane closures are in place on this section of road, with drivers using alternative routes during busy periods.

1.11.8.3. It is also evident that all of the link flows in the DS scenarios decrease when compared to the flows in the DM scenario, as a result of the traffic redistribution.

1.11.8.4. It is therefore anticipated that the only link of those analysed above that may operate over capacity during the assessed peak hours as a result of any potential lane closures is the section of A2030 Eastern Road between Airport Service Road and Milton Common.

1.12. LOCAL JUNCTION MODELLING RESULTS

1.12.1. OVERVIEW

1.12.1.1. The Strategic Modelling outputs have been used to undertake more detailed local modelling of the highway network along the route of the Onshore Cable Corridor, along with areas of the network likely to be affected by diverted traffic. This chapter provides an overview of this modelling covering the local junction modelling, and a capacity assessment of the proposed shuttle working locations. The chapter provides a more detailed review of the impacts of the Onshore Cable Route construction programme, and the forecast redistribution of traffic, on the location highway network.

1.12.1.2. Junction capacity assessments have been undertaken on 31 existing junctions as defined in Section 10 (Paragraphs 10.4.3 and 10.4.4).. To provide a robust assessment, traffic surveys at the majority of these junctions were completed during neutral months in 2019. Where available, these turning counts were used to build calibrated junction capacity models, which then formed the basis for the 2026 DM and DS assessments.

1.12.1.3. Junction assessments have been carried out using the program Junctions 8 developed by Transport Research Laboratory. Junctions 8 includes the ARCADY and PICADY computer modelling software modules which assesses the traffic capacity, queues and delays at roundabouts and priority junctions. Signalised junctions have been assessed using the program LinSig 3 by JCT Consultancy. Linsig provides an assessment of the impact of traffic signals on traffic capacity, queues and delays at a junction.

1.12.1.4. For ease of understanding, the junctions have been ordered from north to south and are split according to whether they lie on the Onshore Cable Corridor or are away from the Onshore Cable Corridor but are affected by redistributed traffic.

1.12.2. INTERPRETATION OF RESULTS

1.12.2.1. The results of the roundabout and priority junction assessments are expressed in terms of the predicted Ratio of Flow to Capacity (RFC) for each arm of the junction. The RFC provides a numerical indication of the likely performance of a junction. Volume 6 Section 2 of Design Manual for Roads and Bridges (Highways England) contains the document TA23/81 Junctions and Access: Determination of Size of Roundabouts and Major/Minor Priority Junctions, which provides advice on the interpretation of RFC values. The document states that if any arm has an RFC ratio of 85% (0.85) queuing will theoretically be avoided in five out of six cases. Therefore, an RFC below 0.85 is regarded as demonstrating that the junction would work satisfactorily with minimal delay to vehicular traffic. RFC values over 1.0 indicate that the junction is over design capacity and significant delays are likely to result on at least one arm of the junction.

1.12.2.2. The junction assessments for roundabouts and priority junctions also produce an estimate of the maximum queue lengths for each arm. Queue lengths are expressed in the number of vehicles or PCUs. Total Delay experienced by a vehicle at the junction is reported in seconds.

1.12.2.3. LinSig models provide an indication of the Degree of Saturation (DoS) as a percentage and the Mean Maximum Queue (MMQ) in PCUs for each junction approach, the average delay per vehicle on each approach recorded in seconds and the Practical Reserve Capacity (PRC). This then provides a measure of the junction's total capacity (as a percentage). When reviewing the PRC of a signalised junction the following should be considered:

- A positive figure indicates the junction operates with reserve capacity;
- A negative figure less than -10%, suggests that the junction would be broadly at capacity; and
- A negative figure more than -10% indicates that the junction cannot accommodate the demand.

1.12.2.4. For DoS the thresholds can be categorised as follows:

- Less than 90%: Any queues that have built up will be able to disperse during the relevant stage in each cycle;
- 90-100%: Indicates that an arm is close to its theoretical capacity and any queue that has built up does not fully clear within each cycle; and
- More than 100%: Indicates an arm is over its theoretical capacity and significant queues are likely as a result.

1.12.2.5. Junction geometries have been measured against Ordnance Survey data and aerial photography. The theoretical queue lengths contained within the base model junction assessments have been validated against the observed queue length data that was recorded as part of the MCCs. The observed queue lengths have been averaged over the observation period. This ensures that the assessments are producing an accurate representation of the existing operation of the junction.

1.12.2.6. The detailed Junctions 9 and LinSig outputs for each assessment can be found in **Appendix H.**

1.12.2.7. For ease of understanding, the results have been colour coded (Red, Amber, Green) according to the Level of Service grading in Junctions 9 software. For LINSIG analysis results, DoS has been graded in a similar way.

1.12.3. LOCAL JUNCTION MODELLING RESULTS ALONG ONSHORE CABLE CORRIDOR

B2150 Hambledon Road / Milton Road / Elettra Avenue Roundabout

1.12.3.1. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC, queue lengths (PCUs) and delay (seconds).

Table 69 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2150 Hambledon Road N	4.0	25.39	0.80	7.7	59.94	0.90
Milton Road	1.5	3.72	0.58	1.3	3.35	0.54
B2150 Hambledon Road S	0.5	3.51	0.32	1.6	6.91	0.60
Elettra Avenue	0.5	3.39	0.31	1.1	5.70	0.50

Table 70 - Summary of results – 2026 DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC

B2150 Hambledon Road N	1.2	10.63	0.52	0.8	9.07	0.44
Milton Road	1.0	3.01	0.47	0.9	2.82	0.45
B2150 Hambledon Road S	0.4	3.06	0.28	1.3	5.39	0.54
Elettra Avenue	0.4	3.06	0.29	0.3	3.30	0.21

Table 71 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2150 Hambledon Road N	1.2	10.91	0.53	0.9	9.14	0.44
Milton Road	1.0	2.99	0.46	0.9	2.80	0.45
B2150 Hambledon Road S	0.4	3.05	0.28	1.2	5.34	0.53
Elettra Avenue	0.4	3.07	0.29	0.3	3.30	0.21

1.12.3.2. The modelling results show that the roundabout operates slightly over theoretical capacity in the PM peak period on the B2150 Hambledon Road north arm in the DM scenario. However, the junction is shown to operate within theoretical capacity in both DS, resulting in an improvement from the 2026 DM scenario due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

B2150 Hambledon Road / Aston Road Traffic Signal Junction

1.12.3.3. Signal timing details were requested from Hampshire County Council for this signalised junction. At the time of the planning submission, this timing data had not been received and therefore this junction has not been assessed using LinSig software.

1.12.3.4. In the interim, a review of the forecast delay and V/C outputs from the SRTM has been set out below as a guide to the impact of the construction phase on this junction.

Table 72 - Summary of results - 2026 DM Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2150 Hambledon Road N	41.41	11.24	50.91	11.79
Aston Road	0.57	39.75	0.30	39.66
B2150 Hambledon Road S	58.56	6.82	56.23	6.70

Table 73 - Summary of results - DS1 Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2150 Hambledon Road N	32.87	9.98	34.78	8.94
Aston Road	5.33	40.71	10.33	41.70
B2150 Hambledon Road S	39.91	5.08	35.19	4.88

Table 74 - Summary of results - DS2 Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2150 Hambledon Road N	33.14	10.01	34.81	8.95
Aston Road	5.32	40.71	10.27	41.7
B2150 Hambledon Road S	39.68	5.07	34.98	4.87

1.12.3.5. The modelling results show that the junction will operate better in the DS scenarios compared to the DM scenario, apart from a slight increase in delay on the Aston Road arm. The V/C percentages for each arm indicate that there is sufficient capacity to accommodate the traffic flow volumes in each of the scenarios assessed. The improvements to the operation of the junction in the DS scenarios are most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue Roundabout

1.12.3.6. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC, queue lengths (PCUs) and delay (seconds).

Table 75 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A3 Maurepas Way E	1.0	2.56	0.48	1.5	3.14	0.58
A3 Maurepas Way S	0.8	3.33	0.41	0.8	3.52	0.43
Houghton Avenue	0.0	0.00	0.00	0.0	0.00	0.00
Hambledon Road	0.5	1.70	0.31	0.8	2.07	0.42

1.12.3.7. This roundabout will be operating with temporary signals as part of the FTMS for the scheme. Therefore, the junction has been modelled with the temporary signals arrangement for the DS using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 76 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
B2150 Hambledon Road (left/ahead)	86.0%	100.8	17.4	81.7%	89.5	18.9
B2150 Hambledon Road (U-turn/ahead/right)	64.5%	94.9	11.2	65.5%	88.0	13.5
A3 Maurepas Way E (left)	19.1%	42.5	5.3	32.7%	53.8	8.9
A3 Maurepas Way E (right/U-turn/left/ahead)	87.1%	73.6	36.1	83.1%	77.6	29.0
A3 Maurepas Way S (ahead/left)	85.7%	123.7	15.4	82.4%	109.5	16.4
A3 Maurepas Way S (ahead/right/U-turn)	86.0%	124.5	15.5	82.7%	109.9	16.5
Houghton Avenue	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 3.3%			PRC = 8.3%		

Table 77 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
B2150 Hambledon Road (left/ahead)	86.7%	101.7	17.7	81.7%	89.5	18.9
B2150 Hambledon Road (U-turn/ahead/right)	65.1%	95.3	11.3	65.5%	88.0	13.5
A3 Maurepas Way E (left)	19.0%	42.5	5.3	33.0%	53.9	9.0
A3 Maurepas Way E (right/U-turn/left/ahead)	86.7%	73.0	35.8	82.6%	77.0	28.6
A3 Maurepas Way S (ahead/left)	85.3%	122.9	15.3	82.0%	109.0	16.3
A3 Maurepas Way S (ahead/right/U-turn)	85.3%	122.9	15.3	82.0%	109.0	16.3
Houghton Avenue	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 3.8%			PRC = 8.9%		

1.12.3.8. The modelling results show the junction to be operating within theoretical capacity in the DM scenario in its current roundabout arrangement. The junction is shown to remain operating within theoretical capacity in the DS scenarios with the temporary signals in place as part of the FTMS.

1.12.3.9. It is evident that the queuing and delay at the junction will increase with this temporary arrangement in place, with the potential for queues to extend back to the Hambledon Road/A3 Maurepas Way signalised junction to the east. Significant increases in delay

would be inevitable with the introduction of signals due to the inherent delay during red phases. Based on the LINSIG results showing operation within capacity, it can be assumed that the queue would clear completely in each phase and therefore be operating effectively.

A3 Maurepas Way / A3 London Road / Rockville Drive (Forest End Roundabout)

1.12.3.10. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC, queue lengths (PCUs) and delay (seconds). The modelling was undertaken using only outputs from the SRTM.

Table 78 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Shopping Centre	0.0	0.00	0.00	0.0	0.00	0.00
Rockville Drive	450.3	1552.58	1.60	431.3	1604.01	1.65
A3 London Road	1.6	2.33	0.59	9.7	25.86	0.91
A3 Maurepas Way	1.2	4.79	0.53	1.8	7.70	0.63

Table 79 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Shopping Centre	0.0	0.00	0.00	0.0	0.00	0.00
Rockville Drive	442.8	1486.32	1.57	328.8	1126.50	1.48
A3 London Road	0.5	3.33	0.33	0.9	4.73	0.45
A3 Maurepas Way	0.9	3.57	0.46	0.8	3.60	0.44

Table 80 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Shopping Centre	0.0	0.00	0.00	0.0	0.00	0.00
Rockville Drive	435.6	1463.49	1.56	326.8	1119.74	1.48
A3 London Road	0.5	3.34	0.33	0.9	4.72	0.45
A3 Maurepas Way	0.9	3.58	0.46	0.8	3.61	0.44

1.12.3.11. The modelling results show the Rockville Drive arm to be operating over theoretical capacity in all assessed scenarios, with the A3 London Road arm also shown to operate over theoretical capacity in the 2026 DM scenario. The modelling is based on outputs from the SRTM. The results show that the model is directing high levels of traffic via the Rockville Drive arm of this junction. The arm provides access to a significant area of residential properties, as well as to Waterlooville town centre.

1.12.3.12. The results do however show significant improvements to the operation of the A3 London Road arm in both DS scenarios, as well as a slight improvement to the operation of the Rockville Drive arm. This is most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

A3 London Road / Ladybridge Road Roundabout

1.12.3.13. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC, queue lengths (PCUs) and delay (seconds).

Table 81 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Ladybridge Road	0.8	4.59	0.43	0.6	3.93	0.35
A3 London Road S	1.9	8.10	0.64	13.3	39.93	0.94

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Marrels Wood Gardens	0.0	0.00	0.00	0.0	0.00	0.00
A3 London Road N	11.3	47.48	0.93	35.5	129.79	1.05

1.12.3.14. This roundabout will be operating with temporary signals as part of the FTMS for the scheme. Therefore, the junction has been modelled with the temporary signals arrangement for the DS using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 82 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road N	83.6%	54.6	23.9	81.6%	58.7	20.4
Ladybridge Road	55.2%	81.1	2.7	78.6%	92.2	4.3
A3 London Road S	83.3%	58.9	21.7	81.0%	50.7	23.1
Marrels Wood Gardens	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 7.7%			PRC = 10.3%		

Table 83 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road N	83.8%	54.0	24.4	81.6%	58.7	20.4

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Ladybridge Road	55.2%	81.1	2.7	77.3%	93.8	4.8
A3 London Road S	84.3%	60.9	21.8	81.3%	51.8	22.8
Marrels Wood Gardens	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 6.7%			PRC = 10.3%		

1.12.3.15. The modelling results show that the roundabout operates slightly over theoretical capacity on the A3 London Road northern and southern arms in the DM scenario. However, the junction is shown to operate within theoretical capacity in the DS with temporary signals in place. The improvements to the operation of the junction in the DS scenarios are most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

1.12.3.16. It should be noted that there are committed improvement works at this junction comprising various upgrades that will increase capacity on a number of arms in relation to West of Waterlooville MDA, although this is unlikely to have a significant impact on the operation of the junction during the period when the temporary traffic signals are in place.

A2030 / Farlington Avenue / A2030 Eastern Road / Havant Road Traffic Signal Junction

1.12.3.17. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 84 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 Farlington Avenue / Havant Road						

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Havant Road WB (internal) (ahead)	43.2%	9.5	5.3	40.9%	4.3	2.5
Havant Road WB (internal) (right)	34.5%	41.1	4.8	63.5%	67.8	8.1
Havant Road W (left/ahead)	61.7%	16.3	13.8	64.2%	12.2	14.7
Farlington Avenue (left)	60.9%	46.2	9.1	50.0%	52.4	5.5
J2 A2030 Eastern Road / Havant Road						
Havant Road (ahead/left)	58.2%	18.1	12.1	62.6%	21.2	13.6
Eastern Road (left)	25.0%	31.8	3.7	35.3%	29.9	5.8
Eastern Road (right)	57.5%	73.5	4.0	64.1%	61.2	7.0
Havant Road EB (internal) (ahead)	51.2%	3.8	9.6	58.7%	8.0	7.7
Havant Road EB (internal) (right)	53.4%	53.8	5.6	49.3%	58.2	4.9
	PRC = 45.9%			PRC = 40.1%		

1.12.3.18. As part of the traffic management that will be put in place during the cable works, movements at the A2030 / Farlington Avenue / A2030 Eastern Road / Havant Road junction will be restricted. The restricted movements will be the right turns between Havant Road and Farlington Avenue and between Havant Road and Eastern Road.

Table 85 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 Farlington Avenue / Havant Road						
Havant Road WB (internal) (ahead)	34.3%	1.6	0.3	36.8%	1.7	0.3
Havant Road WB (internal) (right)	0.0%	0.0	0.0	0.0%	0.0	0.0
Havant Road W (left/ahead)	55.4%	5.2	8.8	70.2%	7.3	14.3
Farlington Avenue (left)	41.1%	81.4	1.8	33.8%	78.2	1.4
J2 A2030 Eastern Road / Havant Road						
Havant Road (ahead/left)	53.9%	9.9	9.2	58.7%	12.8	11.5
Eastern Road (left)	0.8%	40.2	0.1	0.6%	35.8	0.1
Eastern Road (right)	52.6%	66.9	4.0	68.4%	66.6	7.1
Havant Road EB (internal) (ahead)	47.3%	5.0	5.0	57.0%	7.3	7.7
Havant Road EB (internal) (right)	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC 62.5%			PRC 28.1%		

Table 86 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 Farlington Avenue / Havant Road						
Havant Road WB (internal) (ahead)	34.9%	1.7	0.3	36.5%	1.7	0.3
Havant Road WB (internal) (right)	0.0%	0.0	0.0	0.0%	0.0	0.0
Havant Road W (left/ahead)	55.2%	5.1	8.8	69.6%	7.2	14.2
Farlington Avenue (left)	41.1%	81.4	1.8	34.7%	78.5	1.5
J2 A2030 Eastern Road / Havant Road						
Havant Road (ahead/left)	54.7%	10.0	9.4	59.1%	12.6	11.5
Eastern Road (left)	0.8%	40.2	0.1	0.6%	35.8	0.1
Eastern Road (right)	54.1%	67.5	4.2	68.4%	66.6	7.1
Havant Road EB (internal) (ahead)	47.2%	5.0	5.0	57.0%	7.3	7.7
Havant Road EB (internal) (right)	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC 63.1%			PRC 29.2%		

1.12.3.19. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios. It can be seen that in the DS scenarios the operation of the junction improves in the AM peak, which is due to the two right turns being temporarily banned during the temporary works. not only does the banning of the right turns free up more green time for other movements at the junction, but it is also likely to reduce

the traffic flow through the junction as people will likely use different routes to reach destinations that required them to undertake the banned right turns.

1.12.3.20. Both DS scenarios include shuttle working on Eastern Road. This is shown to affect the operation of the junction during the PM peak with a slight reduction in the PRC compared with the DM scenario. However, the junction continues to operate well within acceptable capacity in both DS scenarios.

A2030 Eastern Road / Grove Road and A2030 Eastern Road / Fitzherbert Road Traffic Signal Junction

1.12.3.21. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 87 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 A2030 Eastern Road / Fitzherbert Road						
Fitzherbert Road Entry (left)	17.6%	7.8	2.7	18.7%	6.6	2.7
Fitzherbert Road Entry (right)	1.3%	29.4	0.2	1.4%	34.9	0.2
A2030 Eastern Road NB (internal) (ahead)	24.7%	9.5	0.7	24.8%	7.1	0.6
A2030 Eastern Road NB (internal) (ahead/right)	69.7%	17.2	12.0	73.9%	15.1	16.4
A2030 Eastern Road N entry (left/ahead)	79.4%	64.7	12.2	80.7%	72.1	11.0
A2030 Eastern Road N entry (ahead)	0.2%	41.6	0.0	0.3%	45.6	0.0
J2 A2030 Eastern Road / Grove Road						
A2030 Eastern Road SB (internal) (ahead)	45.5%	12.1	6.4	40.2%	10.7	6.5

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road SB (internal) (right)	0.6%	34.5	0.0	0.7%	36.2	0.0
A2030 Eastern Road S entry (ahead/left)	78.5%	47.0	16.9	80.5%	39.5	20.8
A2030 Eastern Road S entry (ahead)	54.2%	36.4	10.4	61.5%	30.5	14.2
Grove Road (left/right)	77.3%	54.5	13.6	80.1%	65.7	11.9
	PRC = 13.4%			PRC = 11.5%		

Table 88 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 A2030 Eastern Road / Fitzherbert Road						
Fitzherbert Road Entry (left)	16.7%	6.5	2.4	17.5%	4.8	2.2
Fitzherbert Road Entry (right)	0.5%	27.9	0.1	0.6%	34.8	0.1
A2030 Eastern Road NB (internal) (ahead)	3.7%	13.3	0.2	0.6%	28.1	0.2
A2030 Eastern Road NB (internal) (ahead/right)	63.1%	14.4	11.0	58.5%	10.2	12.5

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N entry (left/ahead)	67.5%	61.2	8.3	75.2%	77.3	7.6
A2030 Eastern Road N entry (ahead)	0.3%	45.6	0.0	0.4%	52.6	0.0
J2 A2030 Eastern Road / Grove Road						
A2030 Eastern Road SB (internal) (ahead)	39.3%	12.5	5.8	33.7%	11.7	6.1
A2030 Eastern Road SB (internal) (right)	0.7%	36.3	0.0	0.9%	40.0	0.0
A2030 Eastern Road S entry (ahead/left)	69.8%	40.6	14.2	75.3%	32.2	19.3
A2030 Eastern Road S entry (ahead)	50.4%	33.9	9.8	49.8%	23.7	11.0
Grove Road (left/right)	70.0%	48.1	12.1	73.3%	59.3	10.4
	PRC = 28.6%			PRC = 19.5%		

Table 89 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
J1 A2030 Eastern Road / Fitzherbert Road						
Fitzherbert Road Entry (left)	16.5%	6.1	2.3	17.7%	5.0	2.3

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Fitzherbert Road Entry (right)	0.5%	26.5	0.1	0.6%	34.0	0.1
A2030 Eastern Road NB (internal) (ahead)	4.1%	13.2	0.2	0.1%	28.1	0.0
A2030 Eastern Road NB (internal) (ahead/right)	65.1%	15.2	11.4	61.3%	10.8	13.1
A2030 Eastern Road N entry (left/ahead)	70.7%	64.5	8.6	77.8%	78.0	8.4
A2030 Eastern Road N entry (ahead)	0.3%	46.6	0.0	0.4%	51.3	0.0
J2 A2030 Eastern Road / Grove Road						
A2030 Eastern Road SB (internal) (ahead)	40.4%	13.6	6.0	35.5%	12.3	6.4
A2030 Eastern Road SB (internal) (right)	0.7%	36.7	0.0	0.9%	39.1	0.0
A2030 Eastern Road S entry (ahead/left)	71.5%	42.2	14.4	77.6%	34.9	19.9
A2030 Eastern Road S entry (ahead)	51.8%	35.0	9.9	52.2%	25.5	11.5
Grove Road (left/right)	72.7%	47.7	13.4	78.7%	62.8	11.9
	PRC = 23.8%			PRC = 14.3%		

1.12.3.22. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios, with the DS resulting in an improvement to its operation. The improvements to the operation of the junction in the DS scenarios are most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

A2030 Eastern Road / Anchorage Road Traffic Signal Junction

1.12.3.23. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 90 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Kendalls Quay (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (left/ahead)	84.2%	48.3	36.6	89.0%	3.8	40.1
A2030 Eastern Road S (ahead)	80.5%	47.5	34.8	87.4%	3.3	38.9
Anchorage Road (left)	83.7%	68.9	28.4	89.7%	3.9	34.9
Anchorage Road (right/left/ahead)	79.2%	122.8	8.7	88.2%	3.2	15.8
A2030 Eastern Road N (ahead/left)	56.3%	16.4	19.8	79.4%	1.9	38.2
A2030 Eastern Road N (ahead)	56.4%	16.4	19.8	79.4%	1.9	38.2
A2030 Eastern Road N (right)	63.7%	65.5	13.6	21.9%	0.1	3.8
	PRC = 6.8%			PRC = 0.4%		

Table 91 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Kendalls Quay (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (left/ahead)	74.2%	35.4	29.6	75.4%	42.3	30.3
A2030 Eastern Road S (ahead)	70.0%	35.8	28.6	73.3%	42.3	29.8
Anchorage Road (left)	57.7%	60.0	14.7	65.2%	57.0	19.1
Anchorage Road (right/left/ahead)	73.6%	71.9	16.2	75.1%	64.5	20.8
A2030 Eastern Road N (ahead/left)	52.3%	14.7	17.2	67.9%	26.3	28.1
A2030 Eastern Road N (ahead)	52.3%	14.7	17.2	68.0%	26.3	28.1
A2030 Eastern Road N (right)	74.2%	75.4	14.8	40.7%	71.1	6.0
	PRC = 21.2%			PRC = 19.4%		

Table 92 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Kendalls Quay (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (left/ahead)	72.4%	46.5	27.3	84.3%	56.5	35.1
A2030 Eastern Road S (ahead)	71.4%	46.5	27.0	83.2%	56.0	34.3

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Anchorage Road (left)	55.7%	47.7	16.8	83.5%	61.7	31.2
Anchorage Road (right/left/ahead)	72.4%	58.5	17.6	83.6%	87.9	15.1
A2030 Eastern Road N (ahead/left)	62.4%	23.8	24.3	81.2%	34.2	39.8
A2030 Eastern Road N (ahead)	62.4%	23.8	24.3	81.2%	34.2	39.8
A2030 Eastern Road N (right)	71.3%	72.3	14.6	22.1%	60.9	3.8
	PRC = 24.3%			PRC = 6.7%		

1.12.3.24. The modelling results show that the junction operates close to theoretical capacity in the PM peak period in the DM scenario, although the DS result in improvements to the operation of the junction. The improvements to the operation of the junction in the DS scenarios are most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

A2030 Eastern Road / Airport Service Road Traffic Signal Junction

1.12.3.25. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 93 - Summary of results - 206 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	51.0%	4.6	7.7	68.9%	6.8	14.5
A2030 Eastern Road N (ahead/right)	52.2%	7.2	7.6	69.1%	7.0	14.5

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road S (left/ahead)	57.3%	8.6	11.5	50.3%	8.2	9.8
A2030 Eastern Road S (ahead)	55.6%	8.8	11.8	50.3%	8.2	9.8
Airport Service Road (right/left)	11.4%	50.1	1.0	54.6%	59.9	5.3
	PRC = 57.2%			PRC = 30.3%		

Table 94 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	83.3%	11.1	25.4	49.6%	4.5	7.4
A2030 Eastern Road N (ahead/right)	74.0%	70.8	8.1	56.7%	14.0	8.4
A2030 Eastern Road S (left/ahead)	62.8%	14.9	15.4	56.5%	21.5	13.5
A2030 Eastern Road S (ahead)	60.8%	15.3	15.2	56.4%	21.5	13.5
Airport Service Road (right/left)	11.6%	38.9	1.4	45.4%	33.5	7.6
	PRC = 8.0%			PRC = 58.8%		

Table 95 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	50.1%	4.6	7.5	67.6%	6.6	13.9
A2030 Eastern Road N (ahead/right)	52.1%	8.7	7.2	67.6%	6.6	13.9
A2030 Eastern Road S (left/ahead)	43.4%	8.1	8.1	46.8%	13.3	10.1
A2030 Eastern Road S (ahead)	43.4%	8.1	8.1	46.8%	13.3	10.1
Airport Service Road (right/left)	28.9%	50.6	2.7	67.1%	50.4	10.1
	PRC = 72.7%			PRC = 33.2%		

1.12.3.26. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios. The results of the DS2 scenario show improvements to the operation of the junction in both peak periods, which is most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

1.12.3.27. The results of the DS1 scenario show improvements to the operation of the junction in the PM peak period, although its operation is worse than the DM scenario in the AM peak period. The main impact is on the A2030 Eastern Road north arm, which is due to more traffic turning right into Airport Service Road in this scenario, as a result of the traffic being redistributed away from the Onshore Cable Corridor.

A2030 Eastern Road / Burrfields Road Traffic Signal Junction

1.12.3.28. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 96 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Great Salterns (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (ahead)	75.7%	4.5	2.5	66.8%	3.4	1.8
A2030 Eastern Road S (ahead)	5.2%	1.1	0.0	63.1%	3.1	1.6
A2030 Eastern Road S (left/ahead)	77.8%	44.2	37.2	56.5%	32.1	22.5
A2030 Eastern Road S (ahead/right)	78.1%	44.2	38.4	56.7%	32.1	22.8
Burrfields Road (right/left/ahead)	85.0%	106.6	7.7	90.2%	98.3	22.6
A2030 Eastern Road N (ahead/left)	92.1%	35.9	64.4	88.6%	41.5	53.8
A2030 Eastern Road N (ahead/right)	87.5%	105.7	21.8	91.7%	54.0	57.4
	PRC = -2.3%			PRC = -1.9%		

Table 97 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Great Salterns (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (ahead)	35.1%	1.9	0.7	50.3%	3.3	1.8

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road S (ahead)	36.6%	1.9	0.7	50.1%	1.4	0.2
A2030 Eastern Road S (left/ahead)	79.0%	44.4	38.3	52.7%	54.0	37.2
A2030 Eastern Road S (ahead/right)	79.1%	44.3	39.3	52.8%	54.0	40.0
Burrfields Road (right/left/ahead)	79.4%	131.4	6.7	62.9%	162.8	5.5
A2030 Eastern Road N (ahead/left)	42.1%	12.4	12.9	63.8%	21.7	40.4
A2030 Eastern Road N (ahead/right)	79.6%	35.4	13.2	63.6%	63.1	21.7
	PRC = 13.1%			PRC = 9.1%		

Table 98 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Great Salterns (left/ahead/right)	0.0%	0.0	0.0	0.0%	0.0	0.0
A2030 Eastern Road S (ahead)	65.4%	3.3	1.8	65.2%	3.2	1.7
A2030 Eastern Road S (ahead)	13.1%	1.4	0.2	62.7%	3.0	1.6
A2030 Eastern Road S (left/ahead)	81.8%	54.0	37.2	52.0%	28.1	20.0

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road S (ahead/right)	82.5%	54.0	40.0	52.2%	28.1	20.4
Burrfields Road (right/left/ahead)	76.3%	162.8	5.5	84.3%	118.6	12.6
A2030 Eastern Road N (ahead/left)	79.0%	21.7	40.4	83.0%	32.0	46.2
A2030 Eastern Road N (ahead/right)	81.4%	63.1	21.7	86.0%	42.5	48.0
	PRC = 9.1%			PRC = 4.7%		

1.12.3.29. The modelling results show that the junction operates slightly over theoretical capacity in both peak periods in the DM scenario, although the DS result in improvements to the operation of the junction, with it being shown to operate within theoretical capacity in these scenarios. The improvements to the operation of the junction in the DS scenarios are most likely due to a reduction in traffic flow at the junction as a result of some traffic being redistributed away from the Onshore Cable Corridor.

A2030 Eastern Road / Tangier Road Traffic Signal Junction

1.12.3.30. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 99 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	51.3%	12.5	11.7	80.0%	20.5	26.7

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead/right)	52.9%	15.0	11.6	83.7%	26.8	26.5
A2030 Eastern Road S (ahead/left)	69.1%	24.3	19.2	56.8%	27.1	13.3
A2030 Eastern Road S (ahead)	69.1%	24.3	19.2	56.9%	27.1	13.3
Tangier Road (left/right)	40.9%	52.0	4.2	40.9%	42.2	5.4
Tangier Road (cycles ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0
Westbound cycles to Tangier Road (ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 30.2%			PRC = 7.6%		

Table 100 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	45.4%	11.6	9.8	57.9%	13.6	14.3
A2030 Eastern Road N (ahead/right)	46.8%	14.1	9.7	61.5%	16.9	14.6
A2030 Eastern Road S (ahead/left)	70.1%	24.7	19.7	52.0%	19.9	12.2

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road S (ahead)	70.2%	24.7	19.8	52.0%	19.9	12.3
Tangier Road (left/right)	44.9%	53.0	4.6	30.4%	49.8	3.0
Tangier Road (cycles ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0
Westbound cycles to Tangier Road (ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 28.2%			PRC = 46.2%		

Table 101 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Eastern Road N (ahead)	49.6%	12.2	11.1	78.9%	19.9	26.0
A2030 Eastern Road N (ahead/right)	51.3%	14.8	11.0	82.5%	26.0	25.5
A2030 Eastern Road S (ahead/left)	67.6%	23.8	18.5	55.8%	26.2	13.0
A2030 Eastern Road S (ahead)	67.5%	23.8	18.5	55.8%	26.2	13.0
Tangier Road (left/right)	20.2%	48.1	1.9	30.9%	41.2	3.9
Tangier Road (cycles ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Westbound cycles to Tangier Road (ahead)	0.0%	0.0	0.0	0.0%	0.0	0.0
	PRC = 33.2%			PRC = 9.0%		

1.12.3.31. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios, with the DS resulting in an improvement to its operation.

A2030 Eastern Road / Hayling Avenue Priority T-Junction

1.12.3.32. The junction was assessed using PICADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 102 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hayling Avenue (left/right)	118.4	6018.44	12.85	78.8	1568.04	9999999999.00
A2030 Eastern Road N (ahead/right)	0.9	18.60	0.45	2.1	17.26	0.61

Table 103 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hayling Avenue (left/right)	87.0	3039.90	3.09	47.8	713.81	1.65
A2030 Eastern Road N (ahead/right)	0.6	16.81	0.37	0.6	13.41	0.37

Table 104 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hayling Avenue (left/right)	97.0	4760.80	4.30	90.8	1615.35	9999999999.00
A2030 Eastern Road N (ahead/right)	0.9	17.93	0.44	2.6	17.62	0.65

1.12.3.33. The modelling results show in all scenarios very high levels of delay on the minor arm of the junction – Hayling Avenue. This is a result of the dominant flow on eastern road being at a level (2700 PCU two-way flow) that the software does not consider there to be sufficient gaps for traffic to exit. The particularly high levels of RFC results are unrealistic and caused by the results increasing exponentially once the RFC is above 1.0.

1.12.3.34. In reality, due to the traffic signal junctions to the north and south of this priority junction, gaps in the traffic flow will be created to allow the junction to operate more efficiently. In addition, there are a number of alternative locations to the south where traffic from Hayling Avenue can access Eastern Road.

1.12.3.35. When considering the impacts of the DS1 and DS2 scenarios, DS1 improves the overall performance of the junction, with traffic being diverted away from the Onshore Cable Corridor, providing significant relief on the minor arm of the junction. The DS2 scenario shows a slight worsening in comparison to the DM scenario, but only very marginally.

1.12.4. LOCAL JUNCTION MODELLING RESULTS FOR LOCATIONS NOT ON THE ONSHORE CABLE CORRIDOR

A3(M) Junction 2

1.12.4.1. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 105 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Dell Piece East	0.6	3.03	0.36	0.7	3.94	0.40
A3 (M) S	4.8	15.36	0.82	7.6	23.08	0.89

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2149 Dell Piece West	4.2	7.63	0.80	1.7	3.55	0.61
A3 (M) N	8.5	30.17	0.90	11.5	27.32	0.93

Table 106 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Dell Piece East	0.6	2.99	0.37	0.8	4.12	0.43
A3 (M) S	9.1	27.32	0.91	19.5	54.14	0.98
B2149 Dell Piece West	4.1	7.58	0.79	1.4	3.25	0.56
A3 (M) N	5.8	20.77	0.85	10.7	25.70	0.92

Table 107 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Dell Piece East	0.6	3.00	0.37	0.8	4.09	0.43
A3 (M) S	8.9	26.77	0.90	19.1	53.00	0.97
B2149 Dell Piece West	4.2	7.63	0.79	1.4	3.26	0.56
A3 (M) N	5.9	20.88	0.85	10.9	26.02	0.92

1.12.4.2. The modelling results show that the junction operates over theoretical capacity on the A3(M) south arm in the PM peak and on the A3(M) north arm in both peak periods in the DM scenario. The DS show the A3(M) south arm to operate slightly worse, resulting in it operating over theoretical capacity in the AM peak as well as the PM peak. However, the A3(M) north arm is shown to operate slightly better than in the DM scenario.

1.12.4.3. It should be noted that the maximum queue from the A3(M) occurs in the PM peak of the DS 1 scenario on the A3(M) S arm, with a queue of 19.5 PCUs (an increase of 11.9 PCUs compared to the DM scenario). This equates to an approximate queue length of 117m, which can be adequately accommodated on the slip road (which has an approximate length of 225m) and therefore there is no assessed scenario at this junction which will cause any blocking back on the main carriageway of the A3(M).

Dell Piece West / A3 Portsmouth Road / Catherington Lane Traffic Signal Junction

1.12.4.4. Signal timing details were requested from Hampshire County Council for this signalised junction. At the time of the planning submission, this timing data had not been received and therefore this junction has not been assessed using LinSig software.

1.12.4.5. In the interim, a review of the forecast delay and V/C outputs from the SRTM has been set out below as a guide to the impact of the construction phase on this junction.

Table 108 - Summary of results - 2026 DM Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2149 Dell Piece West	70.97	43.86	62.02	35.46
A3 Portsmouth Road	71.05	124.75	85.57	146.33
Catherington Lane	106.25	217.92	99.9	93.93
Hazleton Way	35.78	30.25	47.54	43.67
A3 London Road	68.69	109.45	64.35	76.75

Table 109 - Summary of results - DS1 Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2149 Dell Piece West	72.38	44.88	68.22	41.82
A3 Portsmouth Road	71.17	125.61	84.70	140.77
Catherington Lane	106.48	222.04	98.05	78.08
Hazleton Way	36.48	30.38	45.75	43.24
A3 London Road	69.58	113.24	62.75	73.34

Table 110 - Summary of results - DS2 Scenario

Arm	AM Peak		PM Peak	
	V/C (%)	Delay (s)	V/C (%)	Delay (s)
B2149 Dell Piece West	72.33	44.84	68.23	41.89
A3 Portsmouth Road	71.02	125.50	84.74	140.77
Catherington Lane	106.45	221.46	98.18	79.09
Hazleton Way	36.49	30.38	45.34	43.15
A3 London Road	69.49	112.84	62.74	73.07

1.12.4.6. The modelling results show that the junction will operate largely the same in the DS scenarios as it will in the DM scenario, with some minor increases/decreases in delay and V/C percentages on each arm of the junction. It appears that the traffic flows on the Catherington Lane arm slightly exceed its capacity in the AM peak of the DM scenario, although the results show that its operation will not change significantly in the DS scenarios due to the traffic flow changes being marginal.

A3(M) Junction 3

1.12.4.7. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 111 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	0.6	2.99	0.35	0.7	3.65	0.38
A3(M) S	3.0	9.28	0.73	3.9	11.58	0.79
Hulbert Road W	2.6	4.72	0.71	1.3	2.70	0.54
A3(M) N	7.7	27.22	0.89	29.3	65.28	1.00

Table 112 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	0.6	2.97	0.37	0.8	3.84	0.42
A3(M) S	4.5	12.97	0.81	6.8	19.00	0.87
Hulbert Road W	2.6	4.72	0.70	1.1	2.53	0.50
A3(M) N	5.6	19.99	0.85	25.5	58.61	0.99

Table 113 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	0.6	2.97	0.37	0.8	3.80	0.41
A3(M) S	4.4	12.74	0.80	6.8	18.83	0.87
Hulbert Road W	2.6	4.73	0.70	1.1	2.54	0.50
A3(M) N	5.6	19.99	0.85	26.4	60.21	0.99

1.12.4.8. The modelling results show that the junction operates over theoretical capacity in both peak periods on the A3(M) north arm in the DM scenario. The DS result in slight improvements to the operation of the junction apart from the A3(M) north arm which gets slightly worse, resulting in this arm operating at theoretical capacity.

1.12.4.9. It should be noted that the maximum queue from the A3(M) occurs in the PM peak of the DM scenario on the A3(M) N arm, with a queue of 29.3 PCUs. This equates to an approximate queue length of 176m, which can be adequately accommodated on the slip road (which has an approximate length of 230m) and therefore there is no assessed scenario at this junction which will cause any blocking back on the main carriageway of the A3(M).

A3 Maurepas Way / A3 London Road / B2150 Hulbert Road (Hulbert Road Roundabout)

1.12.4.10. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 114 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road	4.6	10.87	0.81	4.6	11.96	0.81
A3 Maurepas Way	0.7	2.42	0.40	2.1	5.34	0.66
A3 London Road	1.7	6.71	0.61	3.3	13.91	0.76

Table 115 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road	4.4	10.15	0.80	3.3	8.30	0.75
A3 Maurepas Way	0.3	1.94	0.22	0.5	2.71	0.32
A3 London Road	1.2	4.58	0.52	1.1	4.62	0.50

Table 116 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road	4.3	9.99	0.80	3.2	8.27	0.75
A3 Maurepas Way	0.3	1.95	0.22	0.5	2.71	0.32
A3 London Road	1.2	4.59	0.52	1.1	4.63	0.50

1.12.4.11. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios, with its operation shown to improve in the DS. This shows traffic is being directed away from this junction in the DS, in particular there is a significantly lower flow on the Maurepas Way arm.

Hulbert Road / Frendstaple Road / Tempest Avenue Roundabout

1.12.4.12. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 117 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	2.8	5.85	0.72	12.5	22.63	0.93
Frendstaple Road	0.5	6.40	0.31	1.7	14.31	0.61
Hulbert Road W	2.2	5.18	0.67	4.4	10.42	0.80
Tempest Avenue	3.2	18.24	0.75	2.1	13.48	0.66

Table 118 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	3.5	6.93	0.76	14.3	25.33	0.94
Frendstaple Road	1.5	10.80	0.57	3.4	23.30	0.77
Hulbert Road W	1.6	4.57	0.59	1.3	4.71	0.55
Tempest Avenue	3.2	18.12	0.75	1.6	9.85	0.59

Table 119 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Hulbert Road E	3.4	6.90	0.76	14.1	25.05	0.94
Frendstaple Road	1.4	10.65	0.57	3.4	23.17	0.77
Hulbert Road W	1.6	4.59	0.59	1.3	4.72	0.55
Tempest Avenue	3.2	18.08	0.75	1.6	10.01	0.60

1.12.4.13. The modelling results show that the Hulbert Road east arm operates over theoretical capacity in the PM peak period in the DM scenario. The operation of this arm is shown to get marginally worse in both of the DS, although there are shown to be improvements to the operation of the Hulbert Road west and Tempest Avenue arms, which is likely due to the re-distribution of traffic due to the areas of construction

across Portsmouth. The results in the DS scenarios show that drivers will wait marginally longer at the junction during construction work than they currently do.

1.12.4.14. However, it should be noted that there are committed improvement works at this junction comprising various upgrades that will increase capacity on a number of arms (as part of the West of Waterlooville MDA development). Therefore, the modelling results for the existing junction layout in the DS represent a sensitivity test in the event that the improvement works do not come forward prior to the construction of the cable route.

Rockville Drive / Stakes Hill Road Traffic Signal Junction

1.12.4.15. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 120 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Waitrose Access	0.0%	0.0	0.0	0.0%	0.0	0.0
Stakes Hill Road S	45.1%	62.4	3.2	52.5%	47.3	7.3
Rockville Drive	46.6%	23.2	9.8	52.2%	34.5	9.9
Stakes Hill Road N	19.4%	71.0	0.9	18.5%	70.8	0.8
	PRC = 93.3%			PRC = 71.6%		

Table 121 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Waitrose Access	0.0%	0.0	0.0	0.0%	0.0	0.0
Stakes Hill Road S	45.9%	52.5	5.0	51.4%	43.4	7.9

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Rockville Drive	47.5%	28.5	9.5	50.8%	37.2	9.0
Stakes Hill Road N	19.4%	71.0	0.9	18.5%	70.8	0.8
	PRC = 89.4%			PRC = 75.0%		

Table 122 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Waitrose Access	0.0%	0.0	0.0	0.0%	0.0	0.0
Stakes Hill Road S	47.3%	52.9	5.1	50.7%	42.3	7.9
Rockville Drive	47.3%	28.5	9.4	51.6%	38.2	9.1
Stakes Hill Road N	19.4%	71.0	0.9	18.5%	70.8	0.8
	PRC = 90.3%			PRC = 74.4%		

1.12.4.16. The modelling results show the junction to be operating well within theoretical capacity in all assessed scenarios. This shows that the introduction of the Traffic Management and the redistribution of traffic due to the temporary works has no noticeable impact on the junction operation.

Stakes Hill Road / Frendstaple Road Roundabout

1.12.4.17. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 123 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Frendstaple Road	0.1	2.50	0.10	0.1	2.41	0.09
Stakes Hill Road S	0.2	2.25	0.18	0.4	2.58	0.29
Stakes Hill Road N	0.6	3.24	0.34	0.5	3.10	0.33

Table 124 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Frendstaple Road	0.1	2.61	0.10	0.2	2.67	0.13
Stakes Hill Road S	0.3	2.38	0.23	0.4	2.52	0.26
Stakes Hill Road N	0.7	3.53	0.40	0.7	3.49	0.40

Table 125 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Frendstaple Road	0.1	2.61	0.10	0.2	2.67	0.13
Stakes Hill Road S	0.3	2.38	0.23	0.4	2.51	0.25
Stakes Hill Road N	0.7	3.51	0.39	0.7	3.49	0.40

1.12.4.18. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios. This shows that the introduction of the traffic Management and the redistribution of traffic due to the temporary works has very little impact on the junction.

Stakes Road / Stake Hill Road / Purbrook Way / Crookhorn Lane Roundabout

1.12.4.19. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 126 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Purbrook Way	0.5	3.83	0.31	2.3	8.29	0.68
Crookhorn Lane	0.2	6.07	0.18	0.3	9.15	0.21
Stakes Road	25.5	109.48	1.02	1.8	15.83	0.63
Stakes Hill Road	3.8	18.59	0.78	1.2	6.93	0.52

Table 127 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Purbrook Way	0.6	4.05	0.35	1.6	6.59	0.60
Crookhorn Lane	0.3	6.77	0.24	0.3	8.12	0.20
Stakes Road	62.3	247.07	1.13	2.0	15.66	0.65
Stakes Hill Road	2.9	14.82	0.73	1.7	8.48	0.60

Table 128 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Purbrook Way	0.6	4.04	0.34	1.6	6.61	0.60
Crookhorn Lane	0.3	6.67	0.23	0.3	8.12	0.20
Stakes Road	61.1	240.17	1.13	2.1	16.19	0.66
Stakes Hill Road	2.8	14.56	0.72	1.7	8.61	0.61

1.12.4.20. The modelling results show that the junction operates over theoretical capacity in the AM peak on the Stakes Road arm in the DM scenario. The operation of this arm is shown to get worse in both of the DS. However, it should be noted that there are committed improvement works at this junction comprising it being converted to a signalised junction, as part of the West of Waterlooville MDA. Therefore, the modelling results for the existing junction layout in the DS represent a sensitivity test

in the event that the improvement works do not come forward prior to the construction of the cable route.

Purbrook Way / College Road Priority T-Junction

1.12.4.21. The junction was assessed using PICADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 129 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
College Road (left)	0.0	0.00	0.00	0.0	0.00	0.00
College Road (right)	3.2	73.55	0.77	1.2	48.42	0.54
Purbrook Way W (ahead/right)	0.0	0.00	0.00	0.0	0.00	0.00

Table 130 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
College Road (left)	0.0	0.00	0.00	0.0	0.00	0.00
College Road (right)	5.5	114.52	0.88	1.7	52.27	0.62
Purbrook Way W (ahead/right)	0.0	0.00	0.00	0.0	0.00	0.00

Table 131 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
College Road (left)	0.0	0.00	0.00	0.0	0.00	0.00
College Road (right)	5.1	106.72	0.87	1.7	53.51	0.62
Purbrook Way W (ahead/right)	0.0	0.00	0.00	0.0	0.00	0.00

1.12.4.22. The modelling results show that the College Road arm will operate slightly over theoretical capacity in both DS, although the level of queuing and delay is not significant, therefore it is considered that the proposed temporary works will not have a significant impact at the junction.

1.12.4.23. However, it should be noted that there are committed improvement works at this junction comprising additional approach lanes and flares on all arms. Therefore, the modelling results for the existing junction layout in the DS represent a sensitivity test in the event that the improvement works do not come forward prior to the construction of the cable route.

B2177 Portsdown Hill Road / Maylands Road / B2177 Bedhampton Road / B2177 Bedhampton Hill Roundabout

1.12.4.24. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 132 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2177 Bedhampton Road	1.9	5.27	0.63	1.4	4.46	0.56
B2177 Bedhampton Hill	3.7	19.90	0.78	5.6	27.38	0.85
B2177 Portsdown Hill Road	1.3	14.11	0.55	11.8	79.97	0.96
Maylands Road	0.0	0.00	0.00	0.0	0.00	0.00

Table 133 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2177 Bedhampton Road	1.9	5.33	0.63	1.4	4.55	0.57
B2177 Bedhampton Hill	2.8	15.65	0.72	5.6	27.66	0.85
B2177 Portsdown Hill Road	2.9	22.67	0.73	22.2	128.97	1.03
Maylands Road	0.0	0.00	0.00	0.0	0.00	0.00

Table 134 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
B2177 Bedhampton Road	1.9	5.35	0.63	1.4	4.54	0.57
B2177 Bedhampton Hill	2.6	14.93	0.71	5.6	27.77	0.85
B2177 Portsdown Hill Road	3.1	23.49	0.75	22.5	130.52	1.03
Maylands Road	0.0	0.00	0.00	0.0	0.00	0.00

1.12.4.25. The modelling results show that the B2177 Bedhampton Hill arm operates at theoretical capacity in the PM peak period in the DM scenario, although its operation in this peak period does not change in the DS and actually improves in the AM peak period. The B2177 Portsdown Hill Road arm is shown to currently operate over theoretical capacity in the PM peak period, with its operation getting slightly worse in the DS. This is likely due to the re-distribution of traffic across the network due to the areas of temporary works. Although queuing and delay does increase on the B2177 Portsdown Hill Road it should be remembered that the increase is only for a temporary period.

A3 Southampton Road / A3 London Road / Spur Road / Havant Road Roundabout

1.12.4.26. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 135 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Spur Road	1.9	6.96	0.63	0.8	4.23	0.43
A397	2.4	7.19	0.69	2.2	5.70	0.67
A3 Southampton Road	1.3	3.85	0.55	3.5	9.29	0.76
A3 Northern Road	2.7	7.41	0.71	2.9	9.07	0.73

Table 136 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Spur Road	2.0	7.50	0.65	1.1	4.80	0.50
A397	2.3	6.98	0.68	2.2	5.66	0.67
A3 Southampton Road	1.3	3.81	0.55	3.5	9.31	0.77
A3 Northern Road	2.9	7.88	0.73	2.9	8.96	0.73

Table 137 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Spur Road	2.0	7.45	0.65	1.0	4.52	0.47
A397	2.4	7.06	0.68	2.2	5.68	0.67
A3 Southampton Road	1.4	3.90	0.56	3.5	9.31	0.76
A3 Northern Road	3.0	8.12	0.74	2.8	8.70	0.72

1.12.4.27. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios. The DS show that the operation of the junction will not significantly change as the differences between the results are negligible, despite the implementation of traffic management and redistribution of traffic due to the temporary works.

A27 Western Road / A3 London Road / A397 Northern Road / M27 (Portsbridge Roundabout)

1.12.4.28. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 138 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
M27 off-slip	10.0	47.51	0.93	9.4	48.32	0.92
A3 London Road	16.4	28.45	0.95	6.6	11.30	0.86
A27 Western Road	5.9	22.46	0.85	5.5	20.26	0.84
A397 Northern Road	2.7	5.99	0.71	2.7	5.74	0.71

Table 139 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
M27 off-slip	11.3	53.96	0.94	16.3	79.88	0.98
A3 London Road	15.3	26.54	0.95	5.7	9.96	0.84
A27 Western Road	5.8	22.29	0.85	5.8	20.72	0.85
A397 Northern Road	3.0	6.53	0.74	3.1	6.50	0.74

Table 140 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
M27 off-slip	11.3	52.78	0.94	11.4	58.62	0.94
A3 London Road	16.7	28.94	0.95	6.7	11.51	0.87
A27 Western Road	5.5	21.22	0.84	5.7	20.60	0.85
A397 Northern Road	2.7	6.07	0.72	3.0	6.16	0.73

1.12.4.29. The modelling results show that the M27 off-slip and A3 London Road arms operate slightly over theoretical capacity in the DM scenario. The DS show that the operation of the junction will not significantly change as the differences between the results are negligible. It should be noted that although the queue on the M27 off slip does increase there is plenty of space to accommodate the queue of traffic (the off slip has two lanes and is approximately 400m long) and therefore there will be no impacts on the M27.

Norway Road / Copnor Road Traffic Signal Junction

1.12.4.30. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 141 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Norway Road (left/right)	65.6%	51.5	7.7	72.9%	33.5	12.4
Norway Road (right)	58.6%	55.3	6.8	64.8%	38.3	12.1
A288 Copnor Road (ahead/right)	68.3%	23.8	17.8	47.5%	33.7	9.3
A288 Copnor Road (ahead/left)	67.7%	16.3	12.2	71.3%	22.6	16.0
	PRC = 31.7%			PRC = 23.5%		

Table 142 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Norway Road (left/right)	65.6%	51.6	7.7	73.2%	30.1	11.3
Norway Road (right)	59.2%	55.6	6.8	60.9%	36.2	11.2
A288 Copnor Road (ahead/right)	67.3%	23.6	17.3	40.9%	34.5	7.0

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A288 Copnor Road (ahead/left)	68.0%	16.4	12.2	73.3%	24.1	16.5
	PRC = 32.3%			PRC = 22.7%		

Table 143 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Norway Road (left/right)	60.1%	49.1	6.9	72.2%	33.4	12.2
Norway Road (right)	52.5%	53.1	5.9	64.3%	38.2	12.0
A288 Copnor Road (ahead/right)	71.6%	24.9	19.2	46.8%	33.9	8.9
A288 Copnor Road (ahead/left)	67.3%	16.2	12.0	71.4%	22.4	16.0
	PRC = 25.7%			PRC = 24.6%		

1.12.4.31. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios with negligible differences between the DM and DS scenarios; even with the addition of traffic management and the redistribution of traffic across the highway network.

Stubbington Avenue / A2047 / Gladys Avenue / Angerstein Road Roundabout

1.12.4.32. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 144 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Stubbington Avenue	0.1	7.86	0.05	0.1	6.92	0.05
A2047 S	2.0	9.45	0.64	4.9	18.90	0.82
Angerstein Road	0.6	8.69	0.34	0.0	0.00	0.00
Gladys Avenue	1.7	10.71	0.60	1.9	11.32	0.64
A2047 N	2.1	12.63	0.66	2.0	11.84	0.65

Table 145 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Stubbington Avenue	0.1	7.88	0.05	0.1	7.20	0.05
A2047 S	2.0	9.55	0.65	4.8	18.67	0.82
Angerstein Road	0.6	8.73	0.34	0.0	0.00	0.00
Gladys Avenue	1.7	10.82	0.61	2.7	14.31	0.71
A2047 N	2.1	12.56	0.66	1.9	12.15	0.64

Table 146 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Stubbington Avenue	0.1	7.86	0.06	0.1	6.96	0.05
A2047 S	2.1	9.88	0.66	4.9	19.05	0.83
Angerstein Road	0.6	8.75	0.34	0.0	0.00	0.00
Gladys Avenue	1.6	10.63	0.60	2.0	11.51	0.65
A2047 N	2.1	12.61	0.66	1.9	11.74	0.64

1.12.4.33. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios. The DS show that the operation of the junction will not significantly change as the differences between the results across the scenarios is negligible.

Copnor Road / Burrfields Road Traffic Signal Junction

1.12.4.34. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 147 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Burrfields Road (left/ahead/right)	24.5%	21.0	4.2	77.8%	53.1	19.0
A288 Copnor Road S (left/right/ahead)	116.9%	335.2	181.0	65.5%	24.7	21.8
Stubbington Avenue (right/left/ahead)	95.2%	246.6	7.6	73.2%	129.2	6.0
A288 Copnor Road N (ahead/left)	115.5%	378.8	69.3	77.8%	51.9	29.6
	PRC = -29.9%			PRC = 15.6%		

Table 148 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Burrfields Road (left/ahead/right)	30.9%	20.5	5.8	87.4%	63.4	26.6
A288 Copnor Road S (left/right/ahead)	115.4%	313.1	169.3	68.4%	28.5	24.4
Stubbington Avenue (right/left/ahead)	94.3%	241.4	7.3	83.4%	163.3	6.7
A288 Copnor Road N (ahead/left)	114.2%	357.2	67.5	87.5%	60.7	37.4
	PRC = -28.2%			PRC = 2.8%		

Table 149 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Burrfields Road (left/ahead/right)	24.1%	20.7	4.1	79.4%	53.0	20.6
A288 Copnor Road S (left/right/ahead)	117.7%	346.1	192.0	65.9%	22.9	21.7
Stubbington Avenue (right/left/ahead)	99.4%	276.7	8.6	78.7%	144.2	6.4
A288 Copnor Road N (ahead/left)	117.6%	410.7	73.6	79.7%	54.6	30.3
	PRC = -30.7%			PRC = 12.9%		

1.12.4.35. The modelling results show that the junction operates over theoretical capacity in the AM peak period in the DM scenario. The DS1 development scenario results in a slight

improvement to the operation of the junction in the AM peak period, with the junction still operating within theoretical capacity in the PM peak period (albeit with reduced capacity). The DS2 scenario results in the operation of the junction getting marginally worse compared to its current operation. The results show that in the DS scenarios traffic will redistribute across the network, and the routes vehicles take are likely to be different in the AM and PM peak periods based on linked trips that are undertaken (ie dropping children at school/stopping at shops on the way home etc). Although there are changes to the operation of the junction in the DS scenarios the changes are not considered to be significant when looking at queue and delay across the junction and therefore the temporary works have a minimal affect at the junction.

Burrfields Road / Moneyfield Avenue / Dundas Lane Roundabout

1.12.4.36. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 150 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Burrfields Road E	0.7	4.62	0.38	0.3	4.28	0.22
Moneyfield Avenue	0.0	0.00	0.00	0.0	0.00	0.00
Burrfields Road W	2.6	9.88	0.71	0.2	3.07	0.17
Retail Park	0.0	0.00	0.00	0.0	0.00	0.00
Dundas Lane	0.3	3.96	0.24	2.5	9.85	0.70

Table 151 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Burrfields Road E	0.4	4.10	0.28	0.0	3.99	0.04
Moneyfield Avenue	0.0	0.00	0.00	0.0	0.00	0.00
Burrfields Road W	1.8	7.20	0.63	0.2	2.88	0.16
Retail Park	0.0	0.00	0.00	0.0	0.00	0.00
Dundas Lane	0.3	3.83	0.24	2.6	9.59	0.70

Table 152 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Burrfields Road E	1.2	5.95	0.52	0.3	4.46	0.23
Moneyfield Avenue	0.0	0.00	0.00	0.0	0.00	0.00
Burrfields Road W	3.5	13.51	0.77	0.2	3.09	0.17
Retail Park	0.0	0.00	0.00	0.0	0.00	0.00
Dundas Lane	0.3	3.59	0.21	1.4	6.66	0.56

1.12.4.37. The modelling results show the junction to be operating within theoretical capacity in all assessed scenarios, with the operation of some arms improving in the DS. It can be seen that the introduction of traffic management and the redistribution of traffic has little impact on the junction.

Milton Road / St Mary's Road Roundabout

1.12.4.38. The junction was assessed using ARCADY (Junctions 9) software. The results of the modelling assessment are expressed in RFC (Ratio of Flow to Capacity), queue lengths (PCUs) and delay (seconds).

Table 153 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Langstone Road	93.1	713.62	1.43	90.0	775.88	1.51
Milton Road S	2.3	8.93	0.68	1.8	7.38	0.62
St Marys Road	0.7	4.19	0.37	1.0	5.27	0.47
Baffins Road	2.7	9.80	0.72	6.8	20.91	0.87

Table 154 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Langstone Road	78.6	609.87	1.38	60.8	531.22	1.37
Milton Road S	2.2	8.73	0.67	1.7	7.12	0.60
St Marys Road	0.7	4.17	0.38	1.1	5.69	0.51
Baffins Road	3.4	11.72	0.76	12.5	37.84	0.94

Table 155 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Langstone Road	93.7	719.14	1.43	89.6	784.74	1.52
Milton Road S	2.3	8.94	0.68	1.8	7.66	0.63
St Marys Road	0.6	4.05	0.35	1.0	5.38	0.48
Baffins Road	2.9	10.08	0.73	8.6	26.28	0.90

1.12.4.39. The modelling results show that the junction operates above actual capacity in both peak periods in the DM scenario on the Langstone Road arm and slightly over theoretical capacity in the PM peak on the Baffins Road arm. The DS1 scenario results in improvements to the operation of the Langstone Road arm, although the operation of the Baffins Road arm gets slightly worse.

1.12.4.40. The DS2 development scenario results in the junction operating similarly to the 2019 DM scenario, although the Baffins Road arm operates marginally worse in the PM peak period.

1.12.4.41. Based on the results set out above it is considered that the changes in operation at the junction due to the introduction of traffic management and the resulting redistribution of traffic have a negligible effect on the operation of the junction. The minor changes in operation are unlikely to be noticed by drivers due to the level that the junction is operating at in the DM scenario.

A2030 Velder Avenue / Milton Road Traffic Signal Junction

1.12.4.42. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 156 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Velder Avenue (left)	44.4%	11.5	8.8	70.9%	21.4	27.3
A2030 Velder Avenue (left/ahead)	48.8%	80.3	14.6	70.6%	88.2	24.1

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Milton Road S (left/left2/ahead)	95.7%	121.3	47.0	93.6%	125.2	37.6
Milton Road S (right)	111.0%	315.7	80.3	108.1%	282.0	59.2
Alverstone Road (left)	0.0%	0.0	0.0	0.0%	0.0	0.0
Rodney Road (left/ahead)	112.2%	333.4	90.0	109.5%	281.5	84.5
Milton Road N (ahead/left)	109.1%	347.6	36.5	109.1%	330.1	47.8
Milton Road N (ahead/right/right2)	109.3%	354.5	34.6	108.9%	329.0	45.5
	PRC = -24.7%			PRC =-21.7%		

Table 157 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Velder Avenue (left)	39.6%	11.0	7.0	63.2%	19.4	21.2
A2030 Velder Avenue (left/ahead)	47.7%	79.1	14.4	50.9%	78.0	16.1
Milton Road S (left/left2/ahead)	96.8%	128.0	48.3	95.0%	133.4	38.0
Milton Road S (right)	112.8%	346.7	85.7	109.0%	297.3	59.8
Alverstone Road (left)	0.0%	0.0	0.0	0.0%	0.0	0.0
Rodney Road (left/ahead)	112.4%	338.0	91.2	109.0%	273.4	83.0

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Milton Road N (ahead/left)	112.2%	395.0	40.9	108.6%	320.7	47.8
Milton Road N (ahead/right/right2)	111.8%	391.9	38.0	108.4%	319.0	45.8
	PRC = -25.3%			PRC = -21.1%		

Table 158 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A2030 Velder Avenue (left)	43.6%	11.4	8.6	70.8%	21.9	27.3
A2030 Velder Avenue (left/ahead)	47.7%	79.1	14.4	70.5%	88.9	23.7
Milton Road S (left/left2/ahead)	98.0%	136.4	50.4	94.2%	127.6	38.1
Milton Road S (right)	110.4%	306.1	77.3	105.5%	243.5	52.8
Alverstone Road (left)	0.0%	0.0	0.0	0.0%	0.0	0.0
Rodney Road (left/ahead)	111.1%	316.1	86.8	107.1%	241.2	74.7
Milton Road N (ahead/left)	109.1%	347.6	36.5	106.6%	289.8	44.1
Milton Road N (ahead/right/right2)	108.8%	346.3	34.0	106.3%	287.1	41.8
	PRC = -23.5%			PRC = -19.0%		

1.12.4.43. The modelling results show that the junction operates above actual capacity in both peak periods in the DM scenario. The DS result in improvements to the operation of the junction, apart from in the AM peak period of the DS1 scenario, which results in the PRC reducing marginally.

1.12.4.44. Based on the results set out above it is considered that the changes in operation at the junction due to the introduction of traffic management and the resulting redistribution of traffic have a negligible effect on the operation of the junction. The minor changes in operation are unlikely to be noticed by drivers due to the level that the junction is operating at in the DM scenario.

A3 Mile End Road / Church Street / Hope Street / Commercial Road Signalised Roundabout

1.12.4.45. The junction has been modelled using LINSIG (V3) software. The results of the modelling assessment are expressed in Practical Reserve Capacity (PRC), degree of saturation (%), average delay per PCU (s/PCU) and mean max queue (PCU).

Table 159 - Summary of results - 2026 DM Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Church Street	155.6%	848.0	427.6	120.8%	462.8	179.9
Church Street circulatory (ahead1)	89.2%	28.5	6.8	90.0%	24.9	7.0
Church Street circulatory (ahead2)	89.1%	28.1	6.7	90.0%	24.9	7.0
Church Street exit (before crossing)	36.3%	1.5	0.3	42.8%	1.7	0.4
Commercial Road circulatory (ahead)	32.3%	14.9	11.0	51.4%	36.1	21.1
Commercial Road circulatory (ahead)	59.3%	9.5	14.9	79.9%	35.9	39.2
Commercial Road circulatory (ahead/right)	61.5%	9.3	15.7	79.5%	34.8	36.5
Commercial Road (ahead)	71.5%	28.1	25.0	84.8%	34.6	43.6

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Commercial Road (ahead/right)	49.3%	49.6	15.7	60.4%	45.0	22.0
Hope Street (left)	61.5%	92.6	17.3	83.0%	80.7	39.5
Hope Street (left/ahead/right)	62.2%	92.7	17.6	84.3%	81.9	40.6
A3 Mile End Road circulatory (ahead)	0.7%	54.4	0.4	1.5%	26.3	0.6
A3 Mile End Road circulatory (right)	0.3%	44.0	0.2	0.0%	0.0	0.0
A3 Mile End Road (left)	149.1%	847.4	280.4	120.5%	444.8	159.5
A3 Mile End Road (ahead)	148.2%	837.7	281.0	109.3%	271.8	106.8
A3 Mile End Road (ahead/right)	154.3%	888.8	307.3	113.1%	332.8	127.8
	PRC = -72.9%			PRC = -34.2%		

Table 160 - Summary of results - DS1 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Church Street	155.6%	847.3	428.0	125.2%	527.4	202.5
Church Street circulatory (ahead1)	89.1%	28.1	6.7	90.1%	24.7	7.0
Church Street circulatory (ahead2)	89.1%	28.1	6.7	90.1%	24.7	7.0
Church Street exit (before crossing)	36.3%	1.5	0.3	43.3%	1.7	0.4

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Commercial Road circulatory (ahead)	31.5%	13.5	10.4	51.7%	37.3	21.4
Commercial Road circulatory (ahead)	58.0%	8.5	13.4	80.6%	36.9	39.2
Commercial Road circulatory (ahead/right)	60.5%	8.4	14.1	80.0%	36.0	36.5
Commercial Road (ahead)	71.0%	27.8	24.9	83.0%	32.3	41.2
Commercial Road (ahead/right)	48.8%	49.4	15.5	59.2%	43.9	21.3
Hope Street (left)	64.8%	96.8	17.7	80.4%	75.9	38.3
Hope Street (left/ahead/right)	65.5%	97.1	18.0	81.6%	76.8	39.3
A3 Mile End Road circulatory (ahead)	0.7%	56.0	0.3	1.5%	31.9	0.6
A3 Mile End Road circulatory (right)	0.2%	44.3	0.1	0.0%	0.0	0.0
A3 Mile End Road (left)	152.7%	882.0	296.2	124.8%	503.6	182.6
A3 Mile End Road (ahead)	148.8%	842.7	282.9	107.7%	246.0	100.5
A3 Mile End Road (ahead/right)	155.0%	897.7	310.8	111.4%	305.0	120.6
	PRC = -72.9%			PRC = -39.1%		

Table 161 - Summary of results - DS2 Scenario

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Church Street	155.0%	847.2	435.4	120.6%	459.6	178.6
Church Street circulatory (ahead1)	89.0%	29.0	6.7	90.0%	24.9	7.0
Church Street circulatory (ahead2)	88.9%	28.6	6.6	90.0%	24.9	7.0
Church Street exit (before crossing)	35.5%	1.5	0.3	43.0%	1.7	0.4
Commercial Road circulatory (ahead)	79.6%	26.3	48.6	51.4%	35.7	20.8
Commercial Road circulatory (ahead)	41.9%	2.2	0.4	80.1%	36.1	40.3
Commercial Road circulatory (ahead/right)	28.2%	1.9	0.3	79.6%	35.0	37.6
Commercial Road (ahead)	58.7%	2.3	0.7	84.9%	34.7	43.9
Commercial Road (ahead/right)	0.8%	38.2	0.2	60.5%	45.1	22.0
Hope Street (left)	68.1%	100.5	18.2	83.0%	80.7	39.5
Hope Street (left/ahead/right)	68.7%	100.6	18.5	84.7%	82.4	40.9
A3 Mile End Road circulatory (ahead)	0.6%	27.9	0.2	1.7%	28.2	0.6
A3 Mile End Road circulatory (right)	0.3%	42.3	0.2	0.0%	0.0	0.0
A3 Mile End Road (left)	153.4%	876.4	281.8	120.9%	450.3	161.4
A3 Mile End Road (ahead)	155.7%	898.1	297.5	109.4%	273.8	107.4
A3 Mile End Road (ahead/right)	155.5%	896.7	296.9	113.2%	334.8	128.4

Arm	AM Peak			PM Peak		
	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Deg Sat (%)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
	PRC = -73.0%			PRC = -34.3%		

1.12.4.46. The modelling results show that the junction is operating above actual capacity in all scenarios modelled. Church Road and Mile End Road are the arms operating significantly above capacity. The Do Something scenarios show that the junction operating slightly worse than in the Do Minimum Scenario which shows that the works associated with the temporary works will have a minimal impact at this junction.

1.12.5. SUMMARY OF LOCAL JUNCTION MODELLING RESULTS

1.12.5.1. **Table 12-94** below sets out a summary of the local junctions assessed as part of the work to assess the impact the Onshore Cable Corridor temporary works will have across the Portsmouth area. The Table compares the Do Something Scenarios against the Do Minimum scenario to summarise the effects of the temporary works and subsequent redistribution of traffic.

1.12.5.2. **Table 12-94** has been colour coded to make it clear, visually, which junctions are affected by the works/redistribution. Junctions that see an improvement in operation (likely due to traffic avoiding the junctions and taking alternative routes) are coloured green. Junctions that see little change in operation are colour coded orange and those junctions that operate worse in the do something scenarios are colour coded in red.

Table 162 - Summary of Changes in Operation at Assessed Junctions

Junction	DS1 AM	DS1 PM	DS2 AM	DS2 PM
Junctions Along Onshore Cable Corridor				
B2150 Hambledon Road/Milton Road/Elettra Avenue	Improved	Improved	Improved	Improved
B2150 Hambledon Road/Aston Road*	Improved	Improved	Improved	Improved
B2150 Hambledon Road/A3 Maurepas Way/Houghton Avenue**	Worsened	Worsened	Worsened	Worsened

Junction	DS1 AM	DS1 PM	DS2 AM	DS2 PM
A3 Maurepas Way/A3 London Road/Rockville Drive	Improved	Improved	Improved	Improved
A3 London Road/Ladybridge Road**	Worsened	Worsened	Worsened	Worsened
A2030/Farlington Avenue/A2030 Eastern Road/Havant Road	Improved	Worsened	Improved	Worsened
A2030 eastern Road/Grove Road/A2030 Eastern Road/Fitzherbert Road	Improved	Improved	Improved	Improved
A2030 Eastern Road/Anchorage Road	Improved	Improved	Improved	Improved
A2030 Eastern Road/Airport Service Road	Worsened	Improved	Improved	Improved
A2030 Eastern Road/Burrfields Road	Improved	Improved	Improved	Improved
A2030 Eastern Road/Tangier Road	Worsened	Improved	Improved	Improved
A2030 Eastern Road/Hayling Avenue	Improved	Improved	Improved	No Change
Junctions Away From Onshore Cable Corridor				
A3(M) Junction 2	No change	No change	No change	No change
Dell Piece West/A3 Portsmouth Road/Catherington Lane*	Worsened	No change	Worsened	Improved
A3(M) Junction 3	No change	No change	No change	No change
A3 Maurepas Way/A3 London Road/B2150 Hulbert Road	Improved	Improved	Improved	Improved
Hulbert Road/Frendstaple Road/Tempest Avenue	No change	No change	No change	No change
Rockville Drive/Stakes Hill Road	Worsened	Improved	Worsened	Improved

Junction	DS1 AM	DS1 PM	DS2 AM	DS2 PM
Stakes Hill Road/Frendstaple Road	Worsened	Worsened	Worsened	Worsened
Stakes Road/Stake Hill Road/Purbrook Way/Crookhorn Lane	Worsened	No Change	Worsened	No change
Purbrook Way/College Road	Worsened	Worsened	Worsened	Worsened
B2177 Portsdown Hill Road/Maylands Road/B2177 Bedhampton Road/B2177 Bedhampton Hill	Worsened	Worsened	Worsened	Worsened
A3 Southampton Road/A3 London Road/Spur Road/Havant Road	No change	No change	No change	No change
A27 Western Road/A3 London Road/A397 Northern Road/M27	No change	No change	No change	No change
Norway Road/Copnor Road	No change	No change	Worsened	Improved
Stubbington Avenue/A2047/Gladys Avenue/Angerstein Road	No change	No change	No change	No change
Copnor Road/Burrfields Road	Improved	Worsened	Worsened	Worsened
Burrfields Road/Moneyfield Avenue/Dundas Lane	Improved	Improved	Worsened	No change
Milton Road/St Marys Road	No change	No change	No change	No change
A2030 Velder Avenue/Milton road	No change	No change	Improved	Improved
A3 Mile End Road/Church Street/Hope Street/Commercial Road	No change	Worsened	No change	No change

*signal timing data not provided by Hampshire County Council prior to submission. Forecast delay and V/C outputs from the SRTM have been compared.

**junction changes from a roundabout to temporary signals in the DS scenarios . Forecast delay and V/C outputs from the SRTM have been compared.

1.12.5.3. **Table 12-94** shows that the majority of junctions across the study area experience either an improvement (through redistribution of traffic) or little/no change during the Onshore Cable Corridor temporary works. Those junctions that are operationally worse are the junctions that are likely taking the bulk of redistributed traffic or have significant traffic management in place which alters the junction considerably. Junctions where Traffic Management is proposed altering roundabouts to temporary signal arrangements show a worsening in operation in the DS1 and DS2 scenarios. This is primarily due to the introduction of inherent delay through the signal arrangements.

1.12.5.4. It should be noted that the changes to the operation of the junctions (both positive and negative) are only temporary with all junctions returning to their normal levels of operation following the completion of the Onshore Cable Corridor temporary works. It should also be noted that the programme of the FTMS will also aim to mitigate negative impacts by avoiding works being completed in close proximity to each other or at the most sensitive times of year to traffic.

1.12.6. SHUTTLE WORKING TRAFFIC SIGNAL MODELLING

1.12.6.1. An assessment has been carried out of links where it is anticipated that shuttle working temporary traffic signals will be required to control opposing traffic flow due to lane closures. This is a test to show how the shuttle working signals would operate in conjunction with the TM locations included within the SRTM.

1.12.6.2. It is currently anticipated that this type of traffic management will be required on the following links:

- B2150 Hambledon Road – at the location assessed within the SRTM;
- A3 London Road – south of Forest End Roundabout;
- A3 London Road – north of Ladybridge Roundabout;
- A3 London Road – south of Ladybridge roundabout;
- Portsdown Hill Road;
- Farlington Avenue – north of Sea View Road;
- Moorings Way;
- Locksway Road; and
- Bransbury Road – at the location assessed within the SRTM.

1.12.6.3. The operation of these traffic signals during the AM and PM peak periods have been assessed using traffic flows derived from the SRTM.

1.12.6.4. LINSIG (V3) software has been used to analyse the shuttle working arrangements for each link for both DS scenarios, in order to calculate the estimated queue lengths

and delay at each location. The summary results of this analysis for each link are provided below. Full LINSIG outputs are provided at **Appendix I**.

1.12.6.5. It should be noted that all signalised junctions incur an inherent delay by virtue of having red signal phases within a cycle, causing traffic to stop. What should be considered when assessing the relative delay at a junction is the proportion of delay when compared with the overall cycle time.

B2150 Hambledon Road (150 second cycle time)

Table 163 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
B2150 Hambledon Road northbound	48.3	28.6	61.4	29.0
B2150 Hambledon Road southbound	63.4	23.0	64.0	30.1

Table 164 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
B2150 Hambledon Road northbound	48.3	28.6	64.7	29.6
B2150 Hambledon Road southbound	63.6	23.2	61.2	29.6

1.12.6.6. The modelling results show that the Hambledon Road link is likely to experience maximum queues of approximately 30 PCUs and delays of just over one minute with the temporary signals in place as part of the traffic management that will be required. However, it should be noted that the junction is operating on a 150 second cycle time, therefore all vehicles can be expected to be released during each cycle.

A3 London Road – south of Forest End Roundabout (120 second cycle time)

Table 165 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	37.3	17.9	49.5	17.6
A3 London Road southbound	48.3	14.1	44.4	19.6

Table 166 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	38.5	18.1	48.5	17.2
A3 London Road southbound	47.3	14.3	44.8	19.8

1.12.6.7. The modelling results show that the London Road link (south of Forest End Roundabout) is likely to experience maximum queues of approximately 20 PCUs and delays of up to 50 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.8. The junction is set up based on a 120-second cycle time. With an average delay of 50 seconds, all traffic can be expected to be released within each cycle.

A3 London Road – north of Ladybridge Roundabout (120 second cycle time)

Table 167 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	48.5	14.9	43.0	18.0

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road southbound	39.6	18.8	46.4	16.8

Table 168 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	50.3	15.0	42.8	17.8
A3 London Road southbound	38.9	19.2	46.4	16.8

1.12.6.9. The modelling results show that the London Road link (north of Ladybridge Roundabout) is likely to experience maximum queues of approximately 19 PCUs and delays of up to 50 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.10. The junction is set up based on a 120-second cycle time. With delay of up to 50 seconds, all traffic can be expected to be released within each cycle.

A3 London Road – south of Ladybridge Roundabout (120 second cycle time)

Table 169 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	46.6	17.8	47.4	20.5
A3 London Road southbound	45.2	18.5	50.6	18.9

Table 170 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
A3 London Road northbound	48.5	18.0	49.0	20.5
A3 London Road southbound	44.4	18.9	49.1	19.1

1.12.6.11. The modelling results show that the London Road link (south of Ladybridge Roundabout) is likely to experience maximum queues of approximately 21 PCUs and delays of up to 51 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.12. The junction is set up based on a 120-second cycle time. With delay of up to 51 seconds, all traffic can be expected to be released within each cycle.

Portsdown Hill Road (140 second cycle time)

Table 171 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Portsdown Hill Road westbound	44.5	20.6	60.4	22.6
Portsdown Hill Road eastbound	49.1	19.1	51.0	27.4

Table 172 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Portsdown Hill Road westbound	45.7	20.7	60.8	22.9

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Portsdown Hill Road eastbound	48.3	19.3	51.0	27.4

1.12.6.13. The modelling results show that the Portsdown Hill Road link is likely to experience maximum queues of approximately 27 PCUs and delays of one minute with the temporary signals in place as part of the traffic management that will be required.

1.12.6.14. The junction is set up based on a 140-second cycle time. With delay of up to 60 seconds, all traffic can be expected to be released within each cycle.

Farlington Avenue – north of Sea View Road (120 second cycle time)

Table 173 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Farlington Avenue northbound	16.9	3.7	20.7	5.3
Farlington Avenue southbound	45.9	2.2	42.5	3.7

Table 174 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Farlington Avenue northbound	16.9	3.6	22.3	5.0
Farlington Avenue southbound	45.9	2.2	39.6	3.7

1.12.6.15. The modelling results show that the Farlington Avenue (north of Sea View Road) link is likely to experience maximum queues of approximately 5 PCUs and delays of 46 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.16. The junction is set up based on a 120-second cycle time. With delay of up to 46 seconds, all traffic can be expected to be released within each cycle

Moorings Way (120 second cycle time)

Table 175 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Moorings Way westbound	24.3	4.2	31.8	3.6
Moorings Way eastbound	35.7	3.4	27.5	3.9

Table 176 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Moorings Way westbound	24.3	4.2	32.6	3.7
Moorings Way eastbound	35.7	3.4	26.9	4.0

1.12.6.17. The modelling results show that the Moorings Way link is likely to experience maximum queues of approximately 4 PCUs and delays of 36 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.18. The junction is set up based on a 120-second cycle time. With delay of up to 36 seconds, all traffic can be expected to be released within each cycle.

Locksway Road (120 second cycle time)

Table 177 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Locksway Road westbound	23.0	0.3	31.4	0.3
Locksway Road eastbound	31.4	0.3	23.0	0.3

Table 178 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Locksway Road westbound	23.0	0.3	31.4	0.3
Locksway Road eastbound	31.4	0.3	23.0	0.3

1.12.6.19. The modelling results show that the Locksway Road link is likely to experience maximum queues of less than 1 PCU and delays of 31 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.20. The junction is set up based on a 120-second cycle time. With delay of up to 31 seconds, all traffic can be expected to be released within each cycle.

Bransbury Road (120 second cycle time)

Table 179 - Shuttle working results – DS1 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Bransbury Road westbound	21.4	5.5	42.8	3.1
Bransbury Road eastbound	41.7	3.9	19.6	4.6

Table 180 - Shuttle working results – DS2 Scenario

Arm	AM Peak		PM Peak	
	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)	Av. Delay per PCU (s/pcu)	Mean Max Queue (PCU)
Bransbury Road westbound	21.3	5.4	43.8	3.1
Bransbury Road eastbound	41.7	3.9	19.1	4.6

1.12.6.21. The modelling results show that the Bransbury Road link is likely to experience maximum queues of 6 PCUs and delays of 43 seconds with the temporary signals in place as part of the traffic management that will be required.

1.12.6.22. The junction is set up based on a 120-cycle time. With delay of up to 43 seconds, all traffic can be expected to be released within each cycle.

1.12.7. SUMMARY OF SHUTTLE WORKING ASSESSMENTS

1.12.7.1. In summary, the assessment of the likely operation of the shuttle working traffic signals has indicated that the queuing and delay expected on each of the links is unlikely to be severe and can be accommodated within the length of each link.

1.12.7.2. It should also be noted that the cycle times used in the assessment provide a basis for the signal timings that could be used, although it is likely that the signals will be manually operated during peak periods in order to optimise the operation of the shuttle working.

1.13. IMPACTS ON SUSTAINABLE TRANSPORT NETWORKS

1.13.1. OVERVIEW

1.13.1.1. This chapter provides a review of the forecast impacts on the local sustainable transport networks in the vicinity of the Onshore Cable Corridor Corridor. This sets out the forecast worst case

Public Transport

1.13.1.2. During construction of the Onshore Cable Route some existing bus stops may need to be closed depending upon the exact location within the carriageway or footway. Where this is required, a temporary bus stop will be provided as close as possible to the original location, taking into account highway safety of all road users.

1.13.1.3. Construction of the Onshore Cable Route within the A3 London Road will require works within the existing bus lane or suspension of the bus lane to mitigate the impact on general traffic flow. As with the rest of the Onshore Cable Route this will be completed in 100m sections and therefore bus priority will be maintained where the bus lane is suspended through provision of temporary bus priority traffic signals.

1.13.1.4. As set out in Chapter 6 of this report a number of bus services will be affected (temporarily) by the Onshore Cable Corridor temporary works. Table 13-1 below (repeated from Chapter 6 of this report) identifies which bus services will be affected by the Onshore Cable Corridor temporary works.

Table 181 - Bus Services Affected by the Onshore Cable Route Construction

Service	Onshore Cable Corridor Conflict
7 – City Centre to Wecock Farm	Portsdown Hill Road, A3 Maurepas Way, Hambledon Road
8 – Clarence Pier to Clanfield	London Road
13 – Portsmouth City Centre to Baffins	A2030 Eastern Road, Moorings Way, Furze Lane, Locksway Road
15 – Portsmouth City Centre to Fort Cumberland	Fort Cumberland Road
16 – Portsmouth The Hard to Fort Cumberland	Fort Cumberland Road
20 – Havant to Portsmouth (The Hard)	Portsdown Hill Road
21 – Havant to Portsmouth (The Hard)	A2030 Eastern Road

Service	Onshore Cable Corridor Conflict
22 – Highbury to Farlington	Fitzherbert Road, A2030 Eastern Road, A2030 Havant Road
23 – Leigh Park to Southsea	Havant Road
37 – Havant to Petersfield	A3 Maurepas Way
39 – Havant to Wecock Farm	A3 London Road, A3 Maurepas Way, Hambledon Road
D1 and D2 – Waterlooville to Hambledon	A3 Maurepas Way, Hambledon Road

1.13.1.5. The effects of the Onshore Cable Corridor temporary works have been carefully considered, and the route taken by the cable, along with the FTMS, has resulted in a route that causes as little disruption as possible to public transport links. There are only three planned road closures as part of the temporary works that will temporarily affect bus routes and require short-term diversions. These are:

- A3 London Road – closure for two weekends only – affecting Route 39
- Havant Road – closure for two weekends only – affecting Routes 22 and 23
- Furze Lane Bus Link – closure for two to three weeks – affecting Route 13.

1.13.1.6. It is inevitable that the temporary works may cause some delay to bus services, but potential delays will be communicated to passengers and the contractors will have continuous contact with bus providers to inform them of any works on their routes (along with timescale for works etc).

1.13.1.7. In terms of bus stops, it is likely that some may require temporary closure (although this should be for a maximum of a week) or repositioning for the duration of the works in that area. Should bus stops require repositioning or closure all efforts will be made to communicate this to the general public beforehand as well as notifying them of the nearest bus stop. Bus providers will also be notified of any bus stop changes when being contacted regarding specific delays/work schedules.

1.13.1.8. It should be noted that with any type of street works there is delay to public transport and although temporary in nature, all efforts to be made to minimise the disruption to the services which use the onshore cable route.

Walking and Cycling

1.13.1.9. Below is a summary of the footpaths, Public Rights of Way, bridleways and other pedestrian and cycle infrastructure lying within the Onshore Cable Corridor and therefore likely to be temporarily impacted by the construction works of the Onshore Cable Route. Plans of the Onshore Cable Corridor sections are provided in **Chapter 3**.

1.13.1.10. Where impacts are identified along the Onshore Cable Corridor, temporary suitable alternative or diversionary routes will be put in place. The FTMS sets out the arrangements for footway and cycle route diversions and closures including relevant mitigation and parameters within which contractors can operate close to footways and cycleways.

Section 1 – Lovedean (Converter Station Area)

1.13.1.11. As the Converter Station location is situated in a more rural area there are no footway/cycleway or pedestrian crossing point closures expected in this section.

1.13.1.12. The local highway network has limited pedestrian and cycle infrastructure provision with no footways on roads affected. The Onshore Cable Corridor runs mainly off-road through fields until Anmore Lane which reduces the impact on the local highway, and should therefore also have a minimal impact on any cyclists utilising this part of the network.

Section 2 – Anmore

1.13.1.13. This section of the Onshore Cable Corridor will also run mainly through fields, therefore there are no planned highway closures. Impacts on walking and cycling routes are therefore unlikely to occur.

Section 3 – Denmead/Kings Pond

1.13.1.14. This section runs through fields between Anmore Road and Hambledon Road, the only impacts to walking and cycling here would be at Hambledon Road where there is a shared use footway/cycleway on the northern side of the carriageway. As stated previously in the report, 100m of cable will be laid at a time, therefore the disruption to pedestrians and cyclists will be minimal due to the short distance of footway/cycleway that may need to be closed each time. A safe alternative pedestrian/cyclist diversion/route will be provided during the works.

Section 4 – Hambledon Road to Burnham Road

1.13.1.15. Hambledon Road has shared use footway/cycleway along its length (on alternating sides of the carriageway) which may be impacted by the cable works. Hambledon Road has a wide carriageway and it is expected that the majority of works will be able to be carried out without affecting the off-road cycleway. Should construction work take place on off-carriageway, the preferred strategy is to keep the footway / shared-use path open where practicable albeit at reduced width. If a full closure of the

footway / cycleway is required this will only be completed for a short period of time and it will be possible to provide a safe alternative for pedestrians and cyclists.

Section 5 – Farlington

1.13.1.16. Section 5 of the cable route has no formal cycling infrastructure or many formal crossings, and therefore the effects of the temporary works in this section are likely to be minimal.

1.13.1.17. The two areas within section 5 that may be affected are a signalised crossing at the southern end of Farlington Avenue/Havant Road and routes to Solent Infant School (accessed from Evelegh Road) and Solent Junior School (accessed from Solent Road) which lie on either side of Farlington Avenue. As detailed in **Chapter 9**, where possible all works in the vicinity of the schools will be undertaken during the school holidays in order to avoid disruption to the school day and retain safe routes to the schools for pedestrians and cyclists; should it not be possible to undertake all works during school holidays, temporary live traffic management is likely to be put in place to maintain safe routes and crossings to the school.

Section 6 – Zetland Field / Sainsburys Car Park

1.13.1.18. The main infrastructure in section 6 of the route to be affected by the temporary works is the shared use footway/cycleway along the A2030 and the pedestrian crossing in front of the Sainsbury's petrol filling station.

1.13.1.19. As far as possible the shared footway/cycleway will be kept open during the works, if this is not possible safe alternative access/routes will be provided for pedestrians and cyclists. Should the existing crossing need to be temporarily closed during construction in this location, and alternative temporary facility will be provided to enable crossing movements to the petrol station and supermarket to continue safely.

Section 7 – Farlington Junction to Airport Service Road

1.13.1.20. This section of the Onshore Cable Corridor is largely off road and runs through Farlington Playing Fields, before routing under the A27 and Langstone Harbour and emerging at Kendall's Wharf car park. It is possible that the temporary works may have a limited impact on a short section of shared footway/cycleway on Eastern Road. The impacts are likely to be minimal due to the existing width of Eastern Road being sufficient to allow space for safe, alternative footways and facilities to be provided to pedestrians and cyclists for a short period of time if required.

Section 8 – Milton Common

1.13.1.21. The cable route may affect the shared use cycleway/footway on the eastern side of the A2030, along with two crossing points (located outside the BMW garage and Great Salterns Harvester), however the preferred strategy is to keep the footway / cycleway open wherever practicable. If the Onshore Cable Corridor construction works cause the temporary closure of sections of the footway/cycleway or the pedestrian crossings, safe alternatives will be put into place immediately adjacent to

the construction works. This is likely to include temporary diversions for the footway/cycleway and temporary crossing facilities. It is likely that the temporary crossing points would only be needed for 1 to 2 weeks for each occurrence, based on the construction programme.

Section 9 – Langstone Campus

1.13.1.22. This section of the cable route will have limited impact on pedestrian or cycle infrastructure and will not pass through any major crossing points due to it running primarily through the University of Portsmouth Langstone Campus site. One of the route options in the Section runs along Furze Lane.to Locksway Road. Currently footways and a cycle link are provided on Furze Lane up to the main Campus buildings. During construction, due to the importance of this link between Furze Lane and Moorings Way, it is the intention that adequate width will be retained on the existing footway to maintain pedestrian and cycle use past the construction works. This will avoid the requirement for diverting this route, which also forms part of the NCN..

1.13.1.23. To the south, the Onshore Cable Corridor runs through Milton Locks Nature Reserve where public footways may need to be closed or diverted temporarily during construction.

Section 10 – Eastney (Landfall)

1.13.1.24. In this section the Onshore Cable Corridor runs along Henderson Road which has an on-road cycle lane. The cycle lane may be affected by the Onshore Cable Corridor temporary works (the exact location of the cable along this road is not yet defined) and therefore it is likely that cyclists will have to travel with the traffic rather than in a separate lane. All road users will be given advance warning of any proposed closures of the cycle lane.

1.13.1.25. Footways along Henderson Road may also be subject to diversions and/or closures for short periods. However, footways will be retained on one side of the road throughout construction.

1.14. SUMMARY AND CONCLUSIONS

1.14.1.1. This TA has assessed the impacts of the Proposed Development on the transport network. The assessment has primarily focussed upon the construction phases of the Proposed Development due to this phase being forecast to have the most significant impact on the local transport networks, albeit temporarily. This chapter provides a summary of the main assessment findings and the key conclusions.

1.14.2. PROGRAMME

1.14.2.1. The indicative construction programme is proposed to extend over three years between 2021 and 2024. The installation of the Onshore Cable Route is anticipated to start in the third quarter of 2021 and continue for 27 months to Q3 2023.

1.14.2.2. The majority of the Onshore Cable Route will be constructed utilising an open cut trench method. The cable ducts will be installed and the trenches reinstated before the cables are pulled through the ducts and connected at jointing bays. The installation of ducts minimises the duration of trenching operations, and allows highways to be reinstated more quickly. The installation rate for cable ducts is approximately 18 metres to 30 metres per 10-hour day shift, on average, within urban areas and approximately 50 metres per day in open country.

1.14.2.3. The FTMS has considered the construction programme for each individual section of the Onshore Cable Corridor in order to ensure that disruption is minimised close to sensitive receptors and during busy periods. This is the key mitigation to the impacts reported within this TA.

1.14.2.4. The Outline CTMP sets out the construction methodology and framework for managing construction traffic associated with the Proposed Development.

1.14.3. STRATEGIC TRAFFIC ASSESSMENT

1.14.3.1. The SRTM has been used to forecast the impacts of the of the traffic management proposals associated with the Onshore Cable Corridor. As a worst-case scenario, six individual areas of traffic management have been modelled simultaneously along the length of the Onshore Cable Corridor (as agreed with Local Highway Authorities).

1.14.3.2. The SRTM outputs have been used to assess the impacts on the wider network of the redistribution of traffic caused by the six sections of traffic management. In addition, the outputs have been used to undertake extensive local junction modelling to further assess the temporary impacts of the Onshore Cable Corridor construction on the highway network in the study area.

Wider Link Assessment

1.14.3.3. Impacts on links within the wider highway network have been assessed through a combined qualitative and quantitative approach. Links for further assessment were identified based on the relative change in traffic flow and volume to capacity ratio on the link compared with the Do Minimum forecast. This assessment has considered both the temporary change in forecast traffic flows, and the street typology to assess the relative appropriateness of links for traffic redistribution.

Sections 1 to 4

1.14.3.4. Sixteen links were identified as requiring further review within these sections of the Onshore Cable Corridor.

1.14.3.5. In the rural areas at the northern end of the Onshore Cable Corridor, the forecasted redistribution of traffic reflects the limited availability of roads for traffic to divert onto without involving a circuitous diversion. Therefore, impacts on links outside of the Onshore Cable Corridor are relatively limited.

1.14.3.6. No links have been assessed as being inappropriate for the redistribution of traffic. Where sensitive receptors have been identified, including Mill Hill Primary School, provision will be made to avoid terms times for construction wherever possible.

Sections 5 to 6

1.14.3.7. Six links were identified as requiring further review within these sections of the Onshore Cable Corridor.

1.14.3.8. The majority of diversionary links within these sections are classified as residential streets. Most of these are of sufficient width and offer sufficient spare capacity as to be able to accommodate the additional forecast traffic on a temporary basis. One link is identified as being inappropriate for redistributed traffic.

1.14.3.9. Where links are considered inappropriate, measures will be taken to direct traffic away from particularly sensitive parts of the network to reduce the likely impacts during the construction programme.

Sections 7 to 10

1.14.3.10. Up to 20 links were identified within these sections of the Onshore Cable Corridor as requiring further review.

1.14.3.11. These sections of the Onshore Cable Corridor are located within the denser areas of highway network on Portsea Island. As such there are numerous potential redistribution routes for traffic to divert away from the Onshore Cable Corridor itself. Of those identified, all are considered appropriate for temporary redistribution purposes.

1.14.3.12. A number of residential links have been identified with restricted capacity due to on-street parking and relatively limited carriageway width. Whilst these are not ideal as diversionary routes, the high numbers of links available are such that traffic is likely to be broadly dispersed and so the additional traffic can be accommodated during these temporary periods of construction.

Local Link Assessment

1.14.3.13. A local link assessment has been undertaken on areas where traffic management proposed the reduction of dual carriageway links to single lane operation for short periods and distances.

1.14.3.14. The assessment demonstrated that the flows on the assessed links are lower than DMRB standard capacities in the majority of cases. In addition, forecast link flows decrease in the 'Do Something' scenarios when compared to the Do Minimum as a result of traffic redistribution. Therefore impacts are considered to be minimal and temporary.

1.14.4. LOCAL JUNCTION MODELLING

1.14.4.1. The Strategic Modelling outputs have been used to undertake more detailed local modelling of the highway network along the Onshore Cable Corridor, along with areas of the network likely to be affected by diverted traffic.

1.14.4.2. The majority of junctions across the study area experience either an improvement (through redistribution of traffic) or little/no change during the onshore cable route works. Those junctions that are operationally worse are the junctions that are likely

taking the bulk of redistributed traffic or have significant traffic management in place which alters the junction considerably. It should be noted that the changes to the operation of the junctions (both positive and negative) are only temporary with all junctions returning to their normal levels of operation following the completion of the works.

Junctions Along Onshore Cable Corridor

1.14.4.3. Of the junctions modelled that lie on the Onshore Cable Corridor, the vast majority are shown to exhibit an improvement in operation during the temporary works.

1.14.4.4. Only four of the junctions are exhibiting a worsening of operation during the construction works. All four of these junctions continue to operate within capacity during all scenarios, albeit with a temporary reduction in Practical Reserve Capacity during certain peak periods.

Junctions Not on Onshore Cable Corridor

1.14.4.5. A higher proportion of junctions tested that lie away from the Onshore Cable Corridor are shown to exhibit worsening operating conditions during the temporary works. This is primarily due to these junctions accommodating the redistributed traffic away from the Onshore Cable Corridor due to traffic management works.

1.14.4.6. Of those where the operating conditions are shown to temporarily worsen during the temporary works, only two are shown to be operating over capacity as a direct result of the additional traffic movements through the junctions. As these assessments are based on the worst case scenario and a temporary situation, the overall impacts are considered minimal.

Shuttle Working Traffic Signal Modelling

1.14.4.7. An assessment has been carried out on links where it is anticipated that shuttle working temporary traffic signals will be required to control opposing traffic flow due to lane closures.

1.14.4.8. The assessment of the likely operation of the shuttle working traffic signals has indicated that the queuing and delay expected on each of the links is unlikely to be severe and can be accommodated within the length of each link.

1.14.4.9. It should also be noted that the cycle times used in the assessment provide a basis for the signal timings that could be used, although it is likely that the signals will be manually operated during peak periods in order to optimise the operation of the shuttle working

1.14.5. SUSTAINABLE TRANSPORT NETWORKS

Public Transport Network

1.14.5.1. During construction of the Onshore Cable Route some existing bus stops may need to be closed depending upon the exact location within the carriageway or footway.

Where this is required, a temporary bus stop will be provided as close as possible to the original location, taking into account highway safety of all road users.

Walking and Cycling Networks

1.14.5.2. Where impacts are identified along the Onshore Cable Corridor, temporary suitable alternative or diversionary routes will be put in place. The FTMS sets out the arrangements for footway and cycle route diversions and closures including relevant mitigation and parameters within which contractors can operate close to footways and cycleways.

1.14.6. CONCLUSIONS

1.14.6.1. This Transport Assessment has assessed the forecast impacts of the Proposed Development and its associated construction works on the local highway network. The primary aim of the assessment is to consider the temporary works associated with the construction of the Onshore Cable Route for the Proposed Development.

1.14.6.2. A robust and detailed approach has been adopted, through consultation and agreement with Local Highway Authorities, to ensure the impacts of the Proposed Development, in particular during the Construction phase have been as accurately assessed as possible.

1.14.6.3. The TA has focussed upon the Construction works for the Onshore Cable Route due to this temporary phase having the greatest impact upon the local transport networks. The approach taken has considered the Construction Programme and has tested a robust worst-case scenario where six areas of Traffic Management measures are in place concurrently. This worst case has been tested using the SRTM.

1.14.6.4. The assessment has shown that, whilst there are localised areas on the highway network that show increased traffic levels and associated congestion, the redistribution of traffic does not generate severe impacts in any location. Any impacts are temporary and traffic management is shown to operate effectively by maintaining traffic flow whilst enabling construction works to be undertaken. Identified impacts will be managed effectively through the combined implementation of the programme set out in the FTMS and measures contained within the Construction Traffic Management Plan.

Appendix A – Transport Assessment Scoping Note

AQUIND Limited

AQUIND INTERCONNECTOR UK

Draft Transport Assessment Scoping Note

AQUIND Limited

AQUIND INTERCONNECTOR UK

Draft Transport Assessment Scoping Note

TYPE OF DOCUMENT (VERSION) CONFIDENTIAL

PROJECT NO. 62100616

62100616-TAS

DATE: JUNE 2019

WSP

Regus House
Southampton International Business Park, George Curl Way
Southampton, Hampshire
SO18 2RZ

+44 238 030 2529

+44 238 030 2001

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft for comment	Draft for comment	First Issue	
Date	30/05/19	05/06/19	12/06/19	
Prepared by	Stacey Gander	Stacey Gander	Stacey Gander	
Signature				
Checked by	Chris Williams	Chris Williams	Chris Williams	
Signature				
Authorised by	Darren Pacey	Darren Pacey	Darren Pacey	
Signature				
Project number	62100616	62100616	62100616	
Report number	TAS01	TAS01	TAS01	
File reference	\\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Scoping\Transport Assessement Scoping Note 300519.docx	\\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Scoping\Transport Assessement Scoping Note 070619.docx	\\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Scoping\Transport Assessement Scoping Note 120619.docx	

CONTENTS

TABLES

FIGURES

1 INTRODUCTION

1.1.1. This report details the scope of the Transport Assessment to be undertaken in support of an application to be made to the Secretary of State for a Development Consent Order (DCO) for the AQUIND Interconnector project. This report sets out the tasks necessary to ensure the Transport Assessment adheres to all relevant guidance, and that any analysis undertaken is sufficiently robust to allow for informed decision making in respect to the future DCO submission.

1.1.2. Following the first round of consultation in January 2018, a statutory consultation was held between Wednesday 27th February 2019 and Monday 29th April 2019 where the Preliminary Environmental Information Report (PEIR) and other consultation documentation was consulted on.

1.1.3. The scope of the assessment was refined taking into account discussions with both Hampshire County Council (HCC) and Portsmouth City Council (PCC) and feedback received following the statutory consultation.

1.1.4. In summary, the following feedback was received from HCC and PCC on the scope and methodology of assessment.

HAMPSHIRE COUNTY COUNCIL

- Details are required of the Converter Station site access for agreement in principle. Designs should be accompanied by relevant vehicle speeds, vehicles tracking, visibility splays and a Road Safety Audit;
- Construction worker trip distribution requires reworking from PEIR assumptions to ensure these are robust;
- Confirmation of construction traffic number is required and how this is used for assessment purposes;
- Confirmation of operational stage trip generation is required;
- Forecasts of future year traffic should include vehicle trips from the West of Waterlooville MDA;
- The study area should be expanded from the PEIR to include assessment of the impact on the adjoining road network as a result of traffic re-routing;
- Further analysis is required of impacts associated with installation of the Cable Route;
- Clarification is required from the HCC NRSWA team regarding traffic sensitivity along the route and how the assessment of links will be completed within the TA;
- Detailed Traffic Management plans are required for the Onshore Cable Route;
- Proposed junction improvements at Ladybridge Roundabout should be taken into account;
- The Personal Injury Accident Data should be updated, and analysis completed to review whether there are patterns of accidents that would be exacerbated by the construction process;
- An assessment is required on the impact to public transport services along the route; and
- A detailed Construction Traffic Management Plan should be provided for each specific aspect of the works.

PORTSMOUTH CITY COUNCIL

- Traffic modelling should assess wider and cumulative impacts associated with installation of the Onshore Cable Route;
- An assessment of abnormal loads is required, accounting for the proposed route between Ferryport and joint bay location;

- A detailed Construction Traffic Management Plan (CTMP) will be required, with a tailored CTMP for each phase detailing the Traffic Management requirements; and
- A full set of Traffic Management drawings will be required.

1.1.5. This scoping report has been prepared in accordance with the Planning Practice Guidance (PPG) (DCLG, March 2014) entitled 'Travel Plans, Transport Assessments and Statements in Decision Taking'.

1.2 DEVELOPMENT PROPOSALS

1.2.1. AQUIND Interconnector is a proposed High Voltage subsea and underground electric power transmission link between the South Coast of England and Normandy in France being promoted by AQUIND Limited (AQUIND). It will have a nominal power capacity of 2,000 MW. To enhance the security of supply the scheme will be implemented as two separate symmetrical monopoles ("poles") each of 1,000 MW.

1.2.2. By linking the British and French electric power grids, the Project will help make energy markets more efficient, improve security of supply and enable greater flexibility. The Project supports the European Commission's aim to create an integrated European energy market and for meeting the EU's energy policy objectives for affordable, secure and sustainable energy.

1.2.3. AQUIND Interconnector would include three parts: onshore elements in the UK; marine elements between the British and French coastlines; and onshore elements in France.

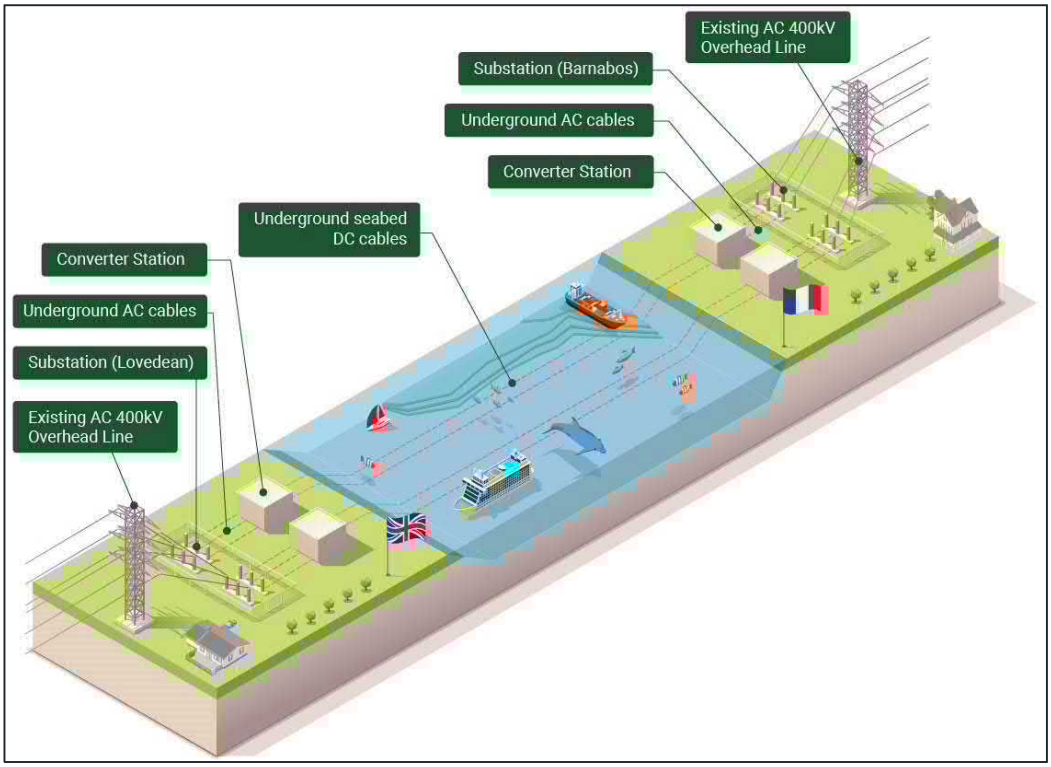
1.2.4. The elements located onshore in England and within the UK marine area are referred to as the Proposed Development. These have been recognised by the Secretary of State for Business Energy and Industrial Strategy as a Nationally Significant Infrastructure Project (NSIP) for which development consent is required under the Planning Act 2008. AQUIND propose to make an application for a Development Consent Order (DCO) to the Secretary of State to seek the necessary authorisation for the construction and operation of the Proposed Development.

1.2.5. The basic components of the Proposed Development are:

- four HVDC marine cables required to connect the UK elements of the overall project with the elements in France;
- Landfall in Eastney (works to connect the onshore HVDC underground cables to the marine HVDC cables, comprising two underground chambers to house the cable joints, known as transmission joints);
- four underground HVDC onshore cables to be installed in pairs from a landfall in Eastney to a proposed new converter station in Lovedean, Hampshire (Converter Station). Each pair is referred to as a circuit (Circuit) and will also include one fibre optic cable in each;
- A proposed Converter Station in Lovedean, Hampshire (required to convert electricity between HVDC and HVAC, consisting of a mix of buildings and outdoor electrical equipment, internal roads and car parking); and
- Underground high voltage Alternating Current (AC) cables to be installed in two circuits, each consisting of three HVAC cables and one fibre optic cable to be installed between National Grid's Lovedean substation and the converter station for onward transmission to the national electricity network.

1.2.6. The main elements of the Proposed Development can be seen in Figure 1-1.

Figure 1-1 - Main project elements



2 TRANSPORT ASSESSMENT SCOPE

2.1 INTRODUCTION

2.1.1. A comprehensive Transport Assessment (TA) will be prepared in support of the DCO submission, inclusive of the elements detailed within this section. This section outlines the parameters and methodology to be used in assessing the development proposals.

2.2 PLANNING POLICY

2.2.1. Planning policy documents, at both a national and local level, will be reviewed and summarised as appropriate.

2.2.2. The review of the relevant planning policy and guidance will seek to demonstrate the Proposed Development's compliance with local, regional and national transport and planning development objectives.

NATIONAL PLANNING POLICY

2.2.3. The following national planning policy documents will be reviewed within the TA:

- Overarching National Policy Statement for Energy (EN-1), Department of Energy and Climate Change, July 2011; and
- National Planning Policy Framework, 2018.

LOCAL PLANNING POLICY

2.2.4. Furthermore, the following local policy documents will be reviewed:

- The Portsmouth Plan, Portsmouth's Core Strategy, PCC, 2012;
- Portsmouth Local Transport Plan 3, PCC, 2011;
- Hampshire Local Transport Plan, HCC, 2011;
- Havant Borough Council Core Strategy, 2011;
- Draft Havant Borough Council Local Plan 2036, published for consultation from 08/01/2018 – 16/02/2018;
- Winchester District Local Plan Part 1, Joint Core Strategy, 2013;
- Submission Local Plan, Winchester District Local Plan Part 2: Development Management and Site Allocations, 2016; and
- East Hampshire District Local Plan: Joint Core Strategy, Adopted June 2014.

2.3 STUDY AREA

2.3.1. The study area for this assessment is proposed to be inclusive of the Converter Station, the Onshore Cable Corridor, and the proposed routing options for construction traffic to each component of the project, as well as any adjoining / parallel roads likely to be impacted by construction, for example, diversionary traffic routes. The final Onshore Cable Corridor and study area will be decided upon following the review and full consideration of consultation responses received.

2.3.2. For the purpose of assessment, the route will be split into two sections: the Onshore Cable Corridor (including proposed routing options for construction traffic to each component of the project, as well as any adjoining / parallel roads likely to be impacted); and the proposed construction and operational access route for the Converter station. All roads contained within the study area fall

under the control of Hampshire County Council (HCC), Portsmouth City Council (PCC) or Highways England (HE).

2.4 EXISTING CONDITIONS

STUDY AREA DESCRIPTION

2.4.1. The TA will contain a comprehensive review of the existing conditions in the study area, including a description of all links included. The description will include highway provisions, as well as descriptions of public transport, pedestrian and cyclists, and where appropriate, equestrian provision for all links that form part of the cable route or access route to the Converter Station, plus other major links impacted by the development proposals.

2.4.2. Within the review of the existing conditions of the study area, a review of any Public Rights of Way (PRoW) which are likely to be impacted by the Proposed Development will also be undertaken.

EXISTING TRAFFIC FLOW

Traffic Count Surveys

2.4.3. A series of 34 Automated Traffic Count (ATC) surveys were undertaken in June 2018 at various locations across the study area. The locations of these traffic surveys are set out as follows:

- **Fort Cumberland Road** between the junctions with Gibralter Road and Henderson Road;
- **Bransbury Road** between the junctions with Eastney Farm Road and Minstead Road;
- **A288 Milton Road** between the junctions with Milton Park Avenue and Postbrooke Road;
- **A2030 Velder Avenue** between the junctions with Euston Road and Moorings Way;
- **A2030 Eastern Road** between the junctions with Tangier Road and Burfields Road;
- **A2030 Eastern Road** between the junctions with Anchorage Road and A27 Havant Bypass;
- **A2030 Eastern Road** between the junctions with A27 Havant Bypass and Grove Road;
- **A2030 Eastern Road** between the junctions with Fitzherbert Road and A2030 Havant;
- **Farlington Avenue** between the junctions with Solent Road and Sea View Road;
- **B2177 Portsdown Hill Road** between the junctions with Hilltop Crescent and A3 London Road;
- **Boundary Way** between the junctions with B2177 Portsdown Hill Road and A3 London Road;
- **A3 London Road** between junctions with Boundary Way and Oakhurst Gardens;
- **A3 London Road** between the junctions with Blossom Drive and Park Road;
- **A3 London Road** between the junctions with Milk Lane and Corbett Road;
- **A3 Maurepas Way** between the junctions with A3 London Road and B2150 Hambledon Road;
- **B2150 Hambledon Road** between the junctions with Aston Road and Silverthorne Way;
- **B2150 Hambledon Road** between the junctions with Charlesworth Drive and Sickle Way;
- **B2150 Hambledon Road** between the junctions with Close wood Road and Soake Road;
- **Moorings Way** between the junctions with Salterns Avenue and Mariners Walk;
- **B2177 Portsdown Hill Road** between the junctions with New Down Lane and Dellcrest Path;
- **Birkdale Avenue** between the junctions with Farlington Avenue and Troon Crescent;
- **Mill Road** between the junctions with Hambledon Road and Anmore Road;
- **London Road** between the junctions with A3 London Road and B2177 Portsdown Hill Road;
- **B2150 Hambledon Road** between the junctions with Mill Road and Maple Drive;
- **Anmore Road** between the junctions with Soake Road and Edney's Lane;
- **Milton Road** between the junctions with Jubilee Road and Tennyson Crescent;
- **Lovedean Lane** between the junctions with Woodbury Grove and Gypsy Lane;
- **Day Lane** between junctions with Broadway Lane and Lovedean Lane;

- **Martin Avenue** between the junctions with B2150 Hambledon Road and Anmore Road;
- **B2149 Dell Piece West** between the A3 (M) Junction 2 and the junction with Lakesmere Road;
- **A3 Portsmouth Road** between the junctions with Keydell Avenue and Hazleton Way;
- **Lovedean Lane** between the junctions with Milton Road and Parklands Avenue;
- **Lovedean Lane** between the junctions with Hinton Manor Lane and Roads Hill; and
- **Chalton Lane** between the junctions with Green Lane and A3.

2.4.4. Additional traffic surveys will be commissioned to be undertaken in June 2019. The additional surveys will be undertaken in order to gain a more comprehensive overview of the baseline traffic environment both along the Onshore Cable Corridor, constructions routes, and adjoining / parallel roads.

- **Additional Automated Traffic Counts**:
  - **Broadway Lane** between the junction with Day Lane and Lovedean substation;
  - **Soake Road** between the junction with B2150 Hambledon Road and the junction with Anmore Road;
  - **A3** between Maurepas Way and Hulbert Road;
  - **Ladybridge Road** between the junction with A3 London Road and the junction with Stakes Road;
  - **Fitzherbert Road** between A2030 Eastern Road and access road into Sainsbury's and B&M retail park;
  - **Evelegh Road** between the junction with Farlington Avenue and the junction with Galt Road;
  - **Anchorage Road** between Eastern Road and the junction with Robinson Way;
  - **Airport Service Road** between Robinson Way and Dundas Lane;
  - **A2030 Eastern Road** between Airport Service Road and Burfield Road;
  - **Burfields Road** between Dundas Lane and A2030 Eastern Road;
  - **Locksway Road** between Ironbridge Road and Furze Lane;
  - **Ironbridge Lane** between Locksway Road and Tideway Gardens; and
  - **Kingsley Road** between Ironbridge Road and Tideway Gardens.
- **Additional Manual Classified Turning Counts:**
  - Hambledon Road / Milton Road roundabout;
  - Hambledon Road / Aston Road (Wellington Retail Park) traffic signal junction;
  - Hambledon Road / A3 / A3 Maurepas Way roundabout;
  - A3 London Road / Ladybridge Road roundabout;
  - A2030 /Farlington Avenue / A2030 Eastern Road / Havant Road traffic signal junction;
  - A2030 Eastern Road / Grove Road and A2030 Eastern Road / Fitzherbert Road traffic signal junction;
  - A2030 Eastern Road / Anchorage Road traffic signal junction;
  - A2030 Eastern Road / Burfields Road traffic signal junction; and
  - A2030 Eastern Road / Airport Service Road traffic signal junction.

PERSONAL INJURY ACCIDENT DATA

2.4.5. Personal Injury Accidents (PIA) data will be collected for the most recent five-year period for all links and junctions that form part of the study area**.** A review of this PIA data will be undertaken, and analysis will identity the location of any clusters of accidents which may be sensitive to increases in

traffic or HGV flow, or any other existing highways safety issues which may be impacted by development traffic.

2.5 CONVERTER STATION CONSTRUCTION TRAFFIC ASSUMPTIONS

2.5.1. For the Convertor Station, the peak in construction is anticipated to occur in 2022 during enabling works and building of the foundations and structure of the main convertor buildings. During this time it is anticipated that there will be the following construction traffic movements to / from the convertor station:

- 45 HGV two-way construction traffic movements per day (90 in total);
- 55 non-HGV two-way construction traffic movements per day (110 in total); and
- 150 staff working on-site at the convertor station.

2.5.2. A classification of HGV types will be provided within the TA.

2.5.3. At this stage, it is assumed that all construction traffic movements will take place between 07:00 and 19:00 Monday to Friday, spread evenly throughout the day but with HGVs avoiding the peak hours of 08:00 - 09:00 and 17:00-18:00 as would be prescribed by the Construction Traffic Management Plan (CTMP). It is anticipated that all construction traffic movements will travel to and from the site via the following route:

- B2149 Dell Piece West between Junction 2, A3 (M) and A3 Portsmouth Road;
- A3 Portsmouth Road between the junction with B2149 Dell Piece West / Catherington Lane and the junction with Lovedean Lane;
- Lovedean Lane between the junction with A3 Portsmouth Road and the junction with Day Lane;
- Day Lane; and
- Broadway Lane between the junction with Day Lane and Lovedean Substation.

2.5.4. Where analysis is undertaken of construction traffic, it will be assumed that arrivals and departures are spread equally though the day, excluding the peak hours where traffic movements will be prohibited. This means that construction vehicle movements will take place over 10-hours, and with all decimals rounded up to the next whole number. This is shown on **Table 2-1** below

Table 2-1 – Construction Traffic Movements

	Arrivals per Hour	Departures per Hour	Total
HGV Construction Traffic	5	5	100 (rounded from 90)
Non-HGV Construction Traffic	6	6	120 (rounded from 110)
TOTAL	11	11	220 (rounded from 200)

2.5.5. This method of assessment is considered robust as it overestimates the number of construction vehicles associated with the Proposed Development.

SWEPT PATH ANALYSIS

2.5.6. The TA will include swept path analysis of construction traffic using the route described above, including Abnormal Indivisible Loads (AILs) associated with the development proposals. This will

identify locations which may require temporary alteration to cater for construction traffic and additional traffic management measures that may be required to accommodate AIL trips.

CONSTRUCTION WORKERS

2.5.7. Construction workers are proposed to arrive on-site at 07:00 and 11:00 and depart at 15:00 and 19:00. Construction worker shift start / finish times will be spread throughout this period and will avoid the peak hours on the surrounding highway network (e.g. shifts of 07:00 – 15:00 and 11:00 – 19:00).

2.5.8. In the pre-application discussions with HCC, concerns were raised regarding the application of general traffic pattern data to forecast trip generation, distribution or parking requirements. At HCC's request, a revised assessment has been undertaken into the travel patterns which are likely to occur at the Converter Station in respect to the specific and specialist nature of the works being undertaken. For the purposes of conducting a robust assessment of the likely impact of travel of construction staff to and from the proposed converter station, the revised assessment includes an assumed vehicle occupancy rate of 1.0 for staff, and an assumption that all staff will travel to the site via private car.

2.5.9. At peak construction it is estimated that a maximum of 150 employees will be working on the converter station on a single day, thus resulting in 150 trips both to and from the site. The total 300 daily trips have been distributed across the local and strategic road network using data from the 2011 Census dataset *"WU03EW – Location of usual residence and place of work by method of travel to work (MSOA level)"*. This dataset was used to determine the likely home location of construction staff working on the proposed converter station. Construction staff trips were then assigned to the road network using the most appropriate route from their home location to the converter station site. The resultant trip assignment on the local highway network is set out in **Table 2-2**.

Table 2-2 – Converter station construction staff trips (local road network only)

Route to Proposed Converter Station	Percentage of trips (%)	Total trips (two way)
A3(M) Junction 2 - B2149 Dell Piece West - A3 Portsmouth Road - Lovedean Lane - Day Lane - Broadway Lane	34.82%	104
B2150 Hambledon Road - Soake Road - Anmore Lane - Broadway Lane	11.28%	34
East Meon Road - South Lane - Downhouse Road - Lovedean Lane - Day Lane - Broadway Lane	5.76%	17
A3 Junction with Chalton Lane - Chalton Lane - South Lane - Downhouse Road - Lovedean Lane - Day Lane - Broadway Lane	14.89%	45
Hyden Farm Lane - Old Mill Lane - Unnamed Road towards Broadway Lane - Broadway Lane	5.36%	16
Southwick Road - B2150 Hambledon Road - Anmore Road - Anmore Lane - Broadway Lane	3.04%	9
Shoot Hill - Unnamed Road between Shoot Hill and Forest Road - Forest Road - Southwick Road - B2150 Hambledon Road - Anmore Road - Anmore Lane - Broadway Lane	4.75%	14
Milton Road - Lovedean Lane - Day lane - Broadway Lane	11.85%	36

A3 London Road - Lovedean Lane - Day Lane - Broadway Lane	5.68%	17
Corhampton Lane - A32 warnford Road - B2150 - B2150 Hambledon Road - Anmore Road - Anmore Lane - Broadway Lane	2.56%	8
Total	**100%**	**300**

2.5.10. The TA will contain an assessment of the impact of these trips on the local road network through the methodology outlined in Section 2.9.

2.6 CONVERTER STATION ACCESS JUNCTION

2.6.1. A feasibility level design will be completed for the converter station access for submission to HCC. The access junction will be within the vicinity of the Day Lane / Broadway junction, although the exact location is still to be determined. The feasibility design will be subject to the relevant swept path and visibility splay assessments. Once the feasibility design has been submitted to HCC for comment, it will also be subject to an independent Stage 1 Road Safety Audit.

2.6.2. Once operational, it is anticipated that the converter station access will be gated with access required only a few times per month for maintenance purposes.

2.7 CABLE ROUTE CONSTRUCTION TRAFFIC ASSUMPTIONS

2.7.1. The installation of the onshore underground cables will also generate construction traffic movements which will impact upon the study area and may interact with construction traffic movements associated with the convertor station. It is assumed that the HVDC cables will be installed along the Onshore Cable Corridor in 100m sections between Landfall and Convertor Station with it being possible, due to the length of the route, that a number of sections are constructed at the same time.

2.7.2. From a construction traffic point of view it is anticipated that each 100m installation section will generate the following construction traffic movements:

- 4 two-way HGV movements (8 in total) per day outside of peak hours of 08:00-09:00 and 17:00-18:00;
- 2 two-way LGV movements carrying personnel / equipment to site (4 in total) per day; and
- There will be 6-8 construction workers per gang, who will travel to site via LGVs listed above from the nearest site compound.

2.7.3. While construction site compound locations are yet to be confirmed, at this stage it is assumed that there will be two sites located along the cable route as follows:

- At the Lovedean convertor station; and
- West of Eastern Road on the Anchorage Park industrial estate.

2.7.4. It is assumed that all construction traffic movements originate from the nearest construction compound and that construction workers are routed to these locations using the fastest route from the strategic road network.

2.7.5. For trip generation purposes and to provide a robust assessment it will be assumed that there are six coinciding cable installation sections taking place at peak construction (three per construction compound). It will also be assumed for trip generation purposes that the location is each gang is the same as that within the SRTM modelling scenarios discussed in Section 2.9 and for non-through routes not included within the SRTM an estimate of construction traffic will be estimated assuming a gang is located at the furthest point from adjoining access routes.

2.8 TRAFFIC MANAGEMENT STRATEGY

2.8.1. The TA will contain a draft Traffic Management Strategy (TMS) for the HVDC onshore cable installation process. The draft TMS will be completed for each section of the Onshore Cable Corridor and expand upon the traffic management proposals set out in **Table 1-6** of Chapter 21 of the submitted PEIR.

2.8.2. The traffic management proposals for the cable route will be derived in accordance with the construction methodology, a preliminary version of which is located at Chapter 3 of the PEIR and is to be refined prior to submission of the application for the DCO, and guidelines contained with the Traffic Signs Manual Chapter 8 – Traffic Safety Measures and Signs for Road Works and Temporary Solutions – Part 1: Design (DfT, 2009).

2.8.3. In summary, it is assumed that for each cable trench:

- the cable installation will take place in 100m sections and at a rate of 18-30m per day, therefore taking approximately five working days to complete each section and requiring a maximum 150m working length;
- the construction corridor width will generally be 4-6m wide on carriageway, although this can be reduced to 3m at local pinch points if required;
- construction on footway will require 2m on footway / verge and 3m on carriageway to allow for access by construction vehicles; and
- Entirely off-carriageway works, including vehicle access, can only be accommodated where a minimum of 16m is available to provide for a haul road and storage of materials.

2.8.4. Where one cable trench is installed at a time at any given point of the cable route, traffic management requirements can be summarised as follows in order of impact on traffic:

- Footway works with no impact on the carriageway;
- Footway works requiring single-lane closure of carriageway which maintains two-way traffic flow or maintains at least one lane in each direction;
- On-carriageway works requiring single-lane closure of carriageway which maintains two-way traffic flow or maintains at least one lane in each direction;
- On-carriageway works requiring single-lane closure and temporary shuttle working traffic signals; and
- On-carriageway works requiring full closure for vehicle access.

2.8.5. The Traffic Management Strategy will also provide details of the following:

- The type of traffic management required for the for each stage of construction along the entirety of the Onshore Cable Corridor;
- Management of deliveries;
- Proposed timing of works in terms of start / finish times (day or night) and specific restrictions are required on sensitive links;
- Duration of works;
- How access to private properties will be managed on a link by link basis;
- Proposed diversion routes where road closures are required;
- Identification of affected PRoW, footways and cycle routes and proposed diversions where appropriate; and
- Identification of affected pedestrian crossings and bus stops.

2.8.6. This list is not exhaustive and further information will be required within the TMS as appropriate.

2.9 ASSESSMENT METHODOLOGY

2.9.1. The Transport Assessment will assess the impacts of the Proposed Development on users of the transport network defined by the study area. The impact assessment will focus on the construction phases of the project, split into converter station and cable route aspects.

TRAFFIC ASSESSMENT

2.9.2. The traffic assessment section will focus on the impacts of the cable installation process and will be directly related to the Traffic Management Strategy produced for each section of the route. This will include a consideration of primary impacts along the Onshore Cable Corridor itself and secondary impacts resulting from traffic distribution during construction works. In response to consultation feedback received from HCC and PCC key locations along the cable route will be assessed using the Solent Transport Sub-Regional-Transport-Model (SRTM).

Scope of SRTM Transport Modelling

2.9.3. The SRTM will be used to asses a realistic worst-case scenario based upon the anticipated construction methodology for the onshore cable route, which will use up to six construction gangs for the Onshore Cable Route. This means that six locations along the Onshore Cable Route could have traffic management employed on them at the same time and therefore this will be assessed using the SRTM. To assess the impacts along the entirety of the route the following locations will include cable installation construction and Traffic Management within the SRTM:

- Shuttle working traffic signals on B2150 Hambledon Road between Soake Road and Closewood Road;
- Single lane closure on B2150 Hambledon Road between Ashton Road (Wellington Retail Park) and Silverthorne Way;
- Shuttle working traffic signals on the A3 London Road between Poppy Fields and Ladybridge roundabout;
- Single lane closure on Havant Road between Farlington Avenue and Eastern Road;
- Single lane closure on A2030 Eastern Road between Airport Service Road and Burfields Road; and
- Shuttle working traffic signals on Bransbury Road between Bransbury Park and Fort Cumberland Road.

2.9.4. Due to lane closure of dual-carriageway links taking place independently for each direction, a full assessment of these locations requires the following scenarios to be run:

1. All locations with Northbound lane closure on Eastern Road between Airport Service Road and Burfields Road and Northbound lane closure on Hambledon Road between Ashton Road and Silverthorne Way; and
2. All locations with Southbound lane closure on Eastern Road between Airport Service Road Burfields Road and Southbound closure on Hambledon Road between Ashton Road and Silverthorne Way.

2.9.5. Each of these scenarios will be assessed for the AM, Inter-peak and PM peak hours using the SRTM forecast year of 2026. This will provide a robust assessment of impacts, using traffic flows which are higher than those that would be anticipated during the construction period of 2022.

2.9.6. The following outputs will be extracted from the SRTM for each of the assessed scenarios:

- Traffic flow changes along the cable route and on adjacent corridors / junctions;
- V/C (capacity) assessments at key junctions as defined below; and
- Journey times changes for key routes as defined below.

2.9.7. This will allow a detailed assessment to be completed at locations along the route and along parallel / adjoining road where the greatest impacts are anticipated. Below are details of V/C and journey time assessments that will be completed for each location.

- Hambledon Road / Milton Road roundabout;
- Hambledon Road / Ashton Road traffic signal junction (Wellington Retail Park);
- Hambledon Road / A3 / Maurepas Way roundabout;
- Maurepas Way / A3 London Road roundabout;
- Rocksville Drive / Stakes Hill Road traffic signal junction;
- A3 London Road / Ladybridge road roundabout;
- Stakes Road / Stake Hill Road / Purbrook Way roundabout;
- Stakes Hill Road / Friendstaple Road roundabout;
- Hulbert Road / Friendstaple Road roundabout;
- A3 / Hulbert Road roundabout;
- Purbrook Way / College Road;
- A2030 /Farlington Avenue / A2030 Eastern Road / Havant Road traffic signal junction;
- A2030 Eastern Road / Grove Road and A2030 Eastern Road / Fitzherbert Road traffic signal junction;
- A2030 Eastern Road / Anchorage Road traffic signal junction;
- A2030 Eastern Road / Airport Service Road traffic signal junction;
- A2030 Eastern Road / Burfields Road;
- A2030 Velder Avenue / Milton Road traffic signal junction;
- Burfields Road Copnor Road traffic signal junction;
- Norway Road / Copnor Road traffic signal junction;
- Milton Road / St Mary;s Road roundabout;
- A27 / A3 Portsbridge roundabout; and
- A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout.

2.9.8. Journey time assessments will be provided for routes between the A27 / M27 and Portsmouth City Centre via:

- A2030 Eastern Road;
- Copnor Road;
- A3 Northern Parade; and
- M275.

2.9.9. Journey time assessments will also be provided for routes between Cosham / Purbrook and Waterlooville / Denmead via:

- The A3 London Road;
- Stakes Road and Stakes Hill Road;
- Portsdown Hill Road, Crookhorn Lane and Stakes Hill Road; and
- A27 and A3(M).

2.9.10. All outputs will be presented within the TA with and without installation of the Onshore Cable Route for comparison purposes.

Shuttle Working Traffic Signal Assessments

2.9.11. Further to use of the SRTM, an assessment will be completed of links where it is anticipated that shuttle working temporary traffic signals will be required to control opposing traffic flow due to lane closures. At present, it is estimated that this type of traffic management will be required on the following links:

- Hambledon Road in Waterlooville;
- Sections of the A3 London Road in Purbrook and Widley;
- Portsdown Hill Road and the link between A3 London Road and Portsdown Hill Road;
- Farlington Avenue in Farlington;
- Moorings Way, Furze Lane, Locksway Road and Kingsley Road in Milton; and
- Bransbury Road and Fort Cumberland Road in Eastney.

2.9.12. The operation of these traffic signals during the AM, PM and Interpeak hour will be assessed using traffic flows derived from the SRTM (where available) and Linsig traffic signal software to calculate the estimated queue lengths and delay at each location. This analysis will also feed into journey time and traffic reassignment estimates discussed below.

Link Capacity Assessments

2.9.13. Where traffic management measures are proposing lane closures of dual-carriageway links, an assessment of link capacity will be completed using DMRB Volume 5 Section 1 Part 3 – TA79/99. This will be completed for the AM, PM and Interpeak hour using traffic flows derived from the SRTM where available. At present, it is estimated that lane closures will be required on the following links:

- Hambledon Road between Milton Road and A3 Maurepas Way;
- A3 Maurepas Way between Hambledon Road and A3 London Road;
- Havant Road between Farlington Avenue between Farlington Avenue and A2030 Eastern Road;
- A2030 Eastern Road between Havant Road and Fitzherbert Road; and
- A2030 Eastern Road between Airport Service Road and Milton Common.

2.9.14. These assessments will highlight where links are anticipated to be approaching or operating over capacity during each of the assessed peak hours.

WALKING AND CYCLING ASSESSMENT

2.9.15. The walking and cycling assessment will mainly focus on installation of the Onshore Cable Corridor but will also consider access to and from the Converter Station. This will include the following topics:

- Details of footways and pedestrian crossing point closures and identification of suitable diversions and alternative provision;
- Details of impacted cycle routes and identification of suitable diversions and alternative provision; and
- Impacts to Public Rights of Way, including temporary / permanent closures and diversions where these may be required.

2.9.16. These aspects will be assessed on the basis of the most probable construction method, noting that these may change once detailed design stages have been completed.

PUBLIC TRANSPORT ASSESSMENT

2.9.17. A number of bus routes and services will be impacted by the cable installation process. The TA will assess the impacts to bus services and bus stops along the route, provide estimated delays and identify diversion routes where these may be required. At this stage, it is estimated that the most significant impacts will be on the Star bus service that operates between Waterlooville and Portsmouth and the route 13 that runs through Moorings Way, Furze Lane and Locksway Road in Milton.

FUTURE YEAR TRAFFIC SCENARIOS

2.9.18. Future year traffic flows will be derived from the SRTM where links are assessed using this model. However, where links are not included in the SRTM a combination of TEMPRO and committed developments will be used to estimate base traffic flows in 2022.

Tempro Growth Factors

2.9.19. TEMPRO Version 7.2 has been used calculate growth factors to be applied to baseline traffic flows in order to estimate 2022 future year flows. Growth factors have been calculated for the AM peak (07:00 – 10:00), interpeak (10:00 – 16:00) and PM peak (16:00 – 19:00) periods, as well as for the average weekday. The growth factors were calculated for car trips only, from NTM AF15 Dataset, and taken as an average from the geographic regions of Havant and Portsmouth. The resultant growth factors for the 2018 and 2019 survey data are set out in **Table 2-3**.

Table 2-3 – TEMPRO Growth Factors

	TEMPRO Growth Factor (2018 – 2022)		
	Havant	Portsmouth	Average
AM Peak (07:00 – 10:00)	1.062	1.070	1.066
Interpeak (10:00 – 16:00)	1.062	1.066	1.064
PM Peak (16:00 – 19:00)	1.058	1.065	1.061
Average Weekday	1.059	1.065	1.062
	TEMPRO Growth Factor (2019 – 2022)		
	Havant	Portsmouth	Average
AM Peak (07:00 – 10:00)	1.047	1.057	1.052
Interpeak (10:00 – 16:00)	1.047	1.054	1.051
PM Peak (16:00 – 19:00)	1.044	1.054	1.049
Average Weekday	1.045	1.054	1.049

Committed Development Traffic Flows

2.9.20. In addition to the application of TEMPRO growth factors, estimated trip generation related to major committed developments within the vicinity of the study area will also be included in future year traffic flows. These include:

- St James Hospital, Milton (Plot 1): 107 units; and
- West of Waterlooville MDA: 1,617 units out of 2,550 units due to be completed by 2022, which accounts for phases 1-7 and part of phase 8.

2.9.21. For the West of Waterlooville MDA, the trip generation will be based upon the anticipated net increase in dwellings between the completion of the traffic surveys and 2022.

2.10 DRAFT CONSTRUCTION TRAFFIC MANAGEMENT PLAN

2.10.1. The TA will contain a draft Construction Traffic Management Plan (CTMP), which will detail the management proposals put forward to mitigate the impact of construction traffic for both the converter station and the onshore underground cable installation. Whilst the CTMPs required will be tailored to specific aspects of the construction of the proposed Development, the draft CTMP contained within the TA will contain the principles to be taken forward for each site specific CTMP. The draft CTMP will contain details of the following aspects of construction traffic management:

- Construction traffic routing;
- Construction site operational hours;
- The parking of construction vehicles and site operatives;
- The loading and unloading of plant, materials and waste management
- Public highway and traffic management signage;
- Embargoed routes for construction traffic;
- Vehicle access and egress arrangements for construction site(s);
- The provision of wheel washing facilities and other works required to mitigate the impact of construction vehicles on the highway network;
- Management of abnormal loads;
- Management of hazardous loads; and
- Emergency routes.

2.11 OPERATIONAL TRAFFIC

2.11.1. Given the nature of the proposed scheme as HVDC underground cables and convertor station, it is not anticipated that the proposed scheme will impact upon the current function of highway network once operational. Some minor traffic increases may be experienced in the vicinity of the convertor station; however, this is unlikely to extend beyond occasional servicing and thus the TA will not offer further analysis of the impact of the operational phase of the proposed developing.

2.12 MITIGATION MEASURES

2.12.1. The TA will outline the mitigation which is proposed to offset the impacts of both construction traffic and onshore underground cable installation. It is proposed that the impacts of construction traffic on the road network primarily be mitigated through the use of Construction Traffic Management Plans (CTMP) and that the impacts of onshore underground cable installation be mitigated using Traffic Management Strategy (TMS). Due to the temporal impact of impacts associated with the construction process, it is not anticipated that mitigations will include highway improvement / capacity schemes.

Regus House
Southampton International Business Park, George Curl Way
Southampton, Hampshire
SO18 2RZ

wsp.com

Appendix B – SRTM Scoping Note

Aquind Limited

AQUIND INTERCONNECTOR UK

SRTM Coding Note

62100616-SRTM-CN
JULY 2019

PUBLIC

Aquind Limited

AQUIND INTERCONNECTOR UK

SRTM Coding Note

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 62100616

OUR REF. NO. 62100616-SRTM-CN

DATE: JULY 2019

Aquind Limited

AQUIND INTERCONNECTOR UK

SRTM Coding Note

WSP

Regus House
Southampton International Business Park, George Curl Way
Southampton, Hampshire
SO18 2RZ

Phone: +44 238 030 2529

Fax: +44 238 030 2001

WSP.com

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	DRAFT	FINAL		
Date				
Prepared by	Stacey Gander	Stacey Gander		
Signature				
Checked by	Chris Williams	Chris Williams		
Signature				
Authorised by	Darren Pacey	Darren Pacey		
Signature				
Project number	62100616	62100616		
Report number	62100616-SRTM-CN	62100616-SRTM-CN		
File reference	\\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Scoping\SRTM Scoping Note\SRTM Coding Tech Note Final.docx			

CONTENTS

FIGURES

1. INTRODUCTION

1.1.1. This Technical Note has been prepared at the request of Hampshire County Council (HCC) following submission of the Aquind Interconnector UK Draft Transport Assessment Scoping Note (62100616-TAS) dated 12/06/19 and follow up meeting held with HCC on 20/06/19. It also takes account of comments received on the Draft Coding Note during meetings with PCC on 03/07/19 and HCC on 10/07/19. The aim of this note is to confirm the scope and inputs for use within the SRTM modelling required to support the Transport Assessment for Aquind Interconnector UK.

2. SRTM GENERAL MODELLING ASSUMPTIONS

2.1. INTRODUCTION

2.1.1. This section provides details of the assumptions to be used in the SRTM, including forecast scenarios and committed development schemes.

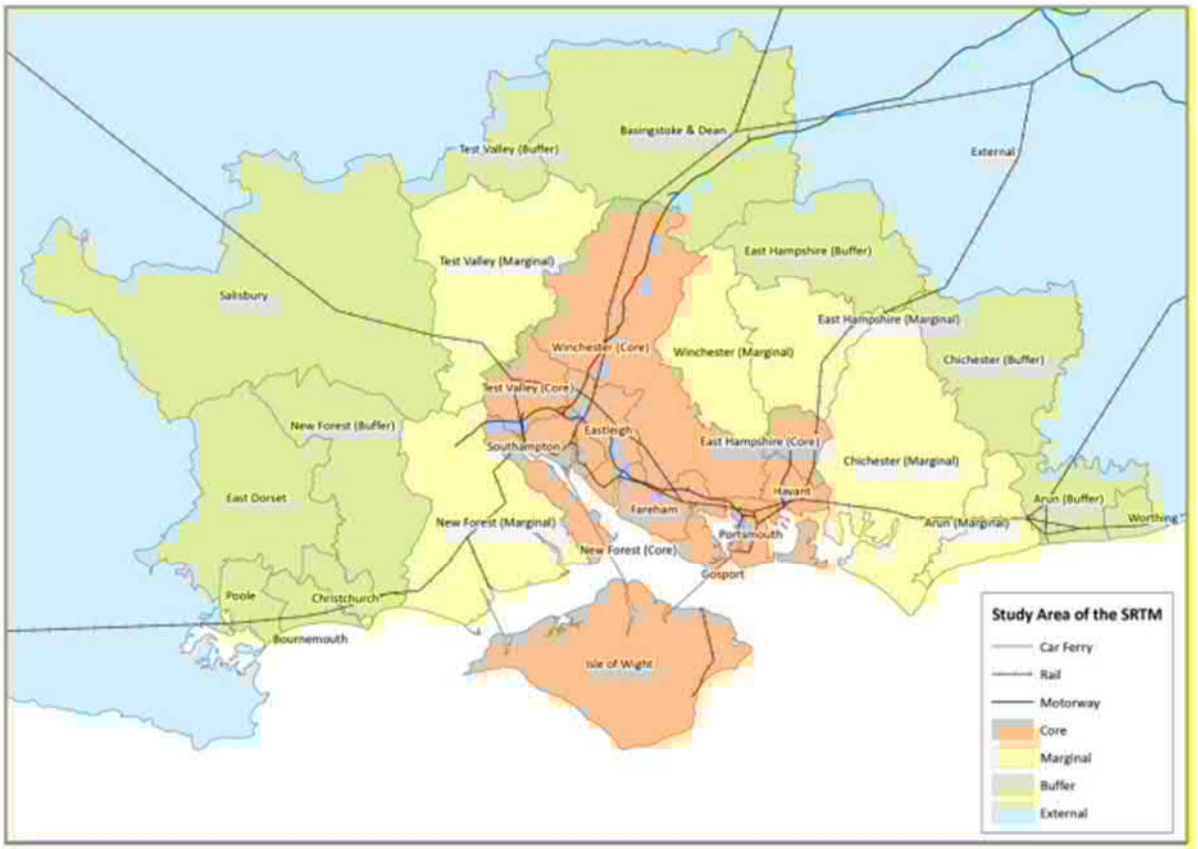
2.2. SRTM BASE MODEL

2.2.1. The SRTM 2015 model will be used as basis for the assessment of the Aquind Interconnector UK proposals. The model has been developed according to WebTAG recommendations and validated against DMRB guidelines. The SRTM is sub-divided into four regions which different zone detail, as follows:

- Core fully modelled area (detailed zoning);
- Marginal fully modelled area (normally based on MSOAs);
- Buffer area (zones based on Districts); and
- External (zones based on Districts and Counties).

2.2.2. This is shown in Figure 2-1 below, which has been extracted from the Systra *Model Development and Validation Report* (12/12/17).

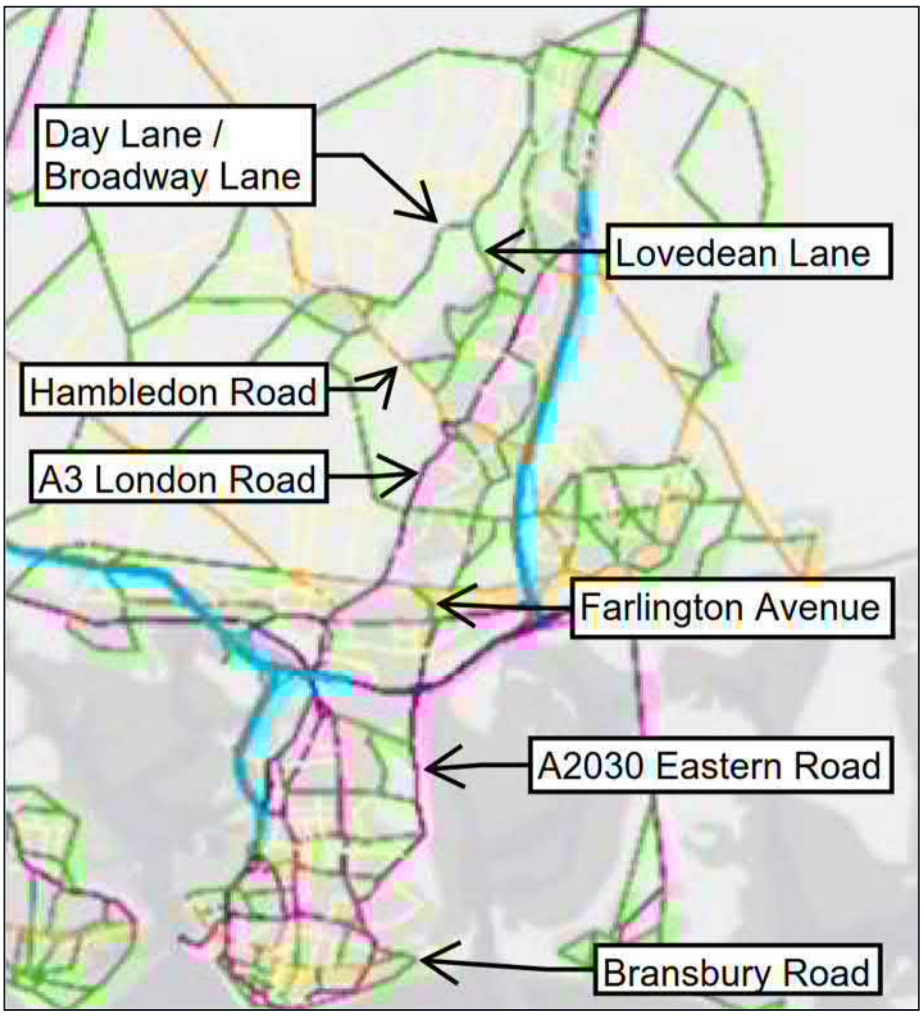
Figure 2-1 - SRTM Study Area



2.2.3. This shows that the Aquind Interconnector project falls within the core modelled area and therefore the highway network will be included in detail.

2.2.4. The broad study area for Aquind Interconnector is shown in more detail in Figure 2-2. This shows that the cable route and converter station location is included within the SRTM,

Figure 2-2 - SRTM Links



MODEL VALIDATION

The Systra *Model Development and Validation Report* states that the model calibration process did not reveal any significant shortcoming in the base year model. It is also noted that the quality of validation of the model is generally good with the screenline validation performing particularly well. This is considered critical for ensuring that the model is correct for assessing multi-modal interventions and future changes, such as Aquind Interconnector. Critically, the *Model Development and Validation Report* states that "the calibration and validation suggest that the model is fit for purpose of representing highway patterns in the base year". In any case, we will need to check the model validation screenlines along and around the Aquind Interconnector route.

2.3. FUTURE YEAR SRTM SCENARIOS

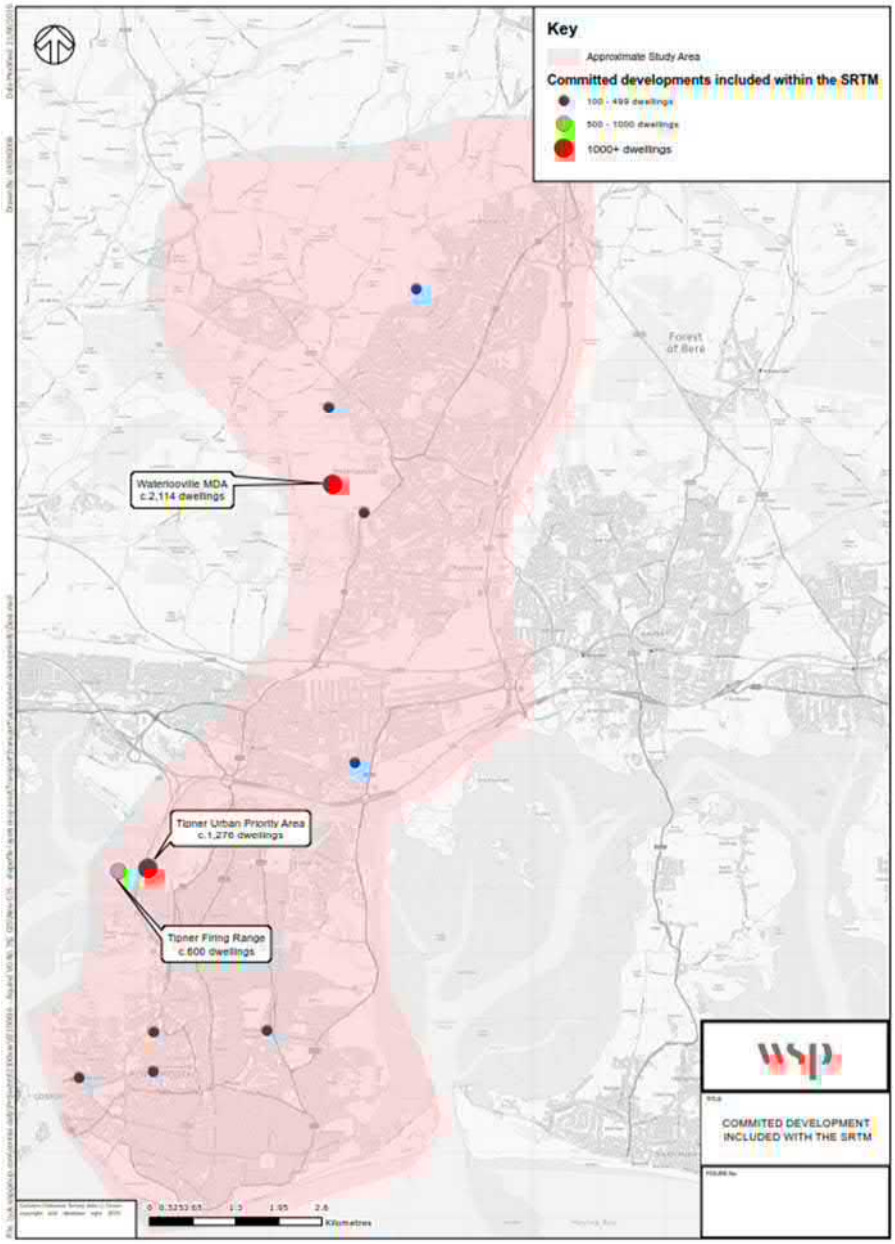
2.3.1. The SRTM includes forecast years from the 2015 base year of 2019, 2026, 2036 and 2041. For the purposes of Aquind Interconnector the 2026 forecast model will be used as a robust assessment of the anticipated 2022 peak construction year.

COMMITTED DEVELOPMENT

2.3.2. The SRTM covers the period of 2015-2041 with land-use assumptions being consistent with these timeframes. For major developments this combines specific data for sites with existing planning permission or for sites with allocations within currently adopted planning documents as of 2018.

2.3.3. As a summary **Figure 2-3**, includes shows major residential developments (above 100 units) in the 2026 forecast year models. These will be included as committed development for the purpose of assessing of Aquind Interconnector.

Figure 2-3 - Major Residential Development Sites Included within SRTM



2.3.4. Further to this, Table 2-1 provides a detailed breakdown of all sites shown in Figure 2-3, which includes the anticipated build-out for each site.

Table 2-1 – Major Committed Development Sites

Location	Description	Total Available (Dwellings)	Build-out in number of dwellings									Cumulative number of dwellings completed by 2027	% of Total
			Pre-2019	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27		
Tipner Firing Range, Tipner, Portsmouth	Residential development - estimated 600 dwellings	600	0	0	0	0	0	30	40	50	50	170	27%
Grainger Development Site, London Road, Waterlooville	Residential development - 436 dwellings	227	17	0	0	0	0	0	0	0	50	67	30%
Woodcroft Farm, Woodcroft Lane, Wecock, Waterlooville	Residential development - 288 dwellings	288	20	100	100	68	0	0	0	0	0	288	100 %
Old Park Farm, London Road, Waterlooville	Residential development - 408 dwellings	21	21	8	0	0	0	0	0	0	0	21	100 %
Urban Priority Area, City Centre North, Market Way/ Charlotte Street, Landport, Portsmouth	Redevelopment for mixed uses including estimated 70 dwellings	70	0	70	0	0	0	0	0	0	0	70	100 %

Waterlooville MDA	Residential development - 2114 dwellings	1836	189	206	186	197	172	200	200	150	150	1650	90%
Tipner Urban Priority Area, Tipner, Portsmouth	Residential development - estimated 1276 dwellings	1276	0	15	33	60	70	80	100	110	120	588	46%
Brunel House, The Hard, Portsmouth	Residential development of 163 dwellings	153	0	153	0	0	0	0	0	0	0	153	100 %
Enterprise House, Isambard Brunel Road, Portsmoth	Residential development of 124 flats	51	51	0	0	0	0	0	0	0	0	51	100 %
Former Kingston Prison, Milton Road, Portsmouth	Mixed development including 230 dwellings	230	0	0	0	35	66	93	36	0	0	230	100 %
Former Dairy Site, Station Road, Portsmouth	Resident development of 108 dwellings	108	0	0	0	20	50	38	0	0	0	108	100 %
Land East of Village Centre, Denmead	Residential development of 91 dwellings	91	0	0	21	40	30	0	0	0	0	91	100 %
TOTAL NUMBER OF DWELLINGS		5096	298	544	340	420	388	441	376	310	370	3487	

COMMITTED TRANSPORT SCHEMES

2.3.5. In addition to future land-use assumptions, the 2026 future year will also include committed transport schemes within future year reference case models, with those relevant to the study area listed below:

- Hulbert Road / Purbrook Way Junction (Dunsbury Hill): major redevelopment of roundabout, now complete and operational – included from 2019 onwards;
- Havant Road / Eastern Road: BRT improvements and addition to pedestrian crossing at junction – included from 2019 onwards;
- Fratton Way: New roundabout and access to retail store. Eastern footway widened to accommodate combined cycleway – included from 2019 onwards;
- A3(M) Junction 3:Signalisation of northbound off-slip onto roundabout – included from 2026 onwards;
- Purbrook Way / College Road: signalisation of priority junction – included from 2026 onwards;
- Purbrook Way / Stakes Hill Road: replacement of roundabout with traffic signals – included from 2026 onwards;
- Purbrook Way from Stakes Hill Road to College Road: dual-carriageway to replace single carriageway – included from 2026 onwards;
- Hulbert Road / Frendstaple Road / Tempest Avenue: modification of the existing roundabout – included from 2026 onwards; and
- A3 London Rad / Ladybridge road roundabout: enlarged roundabout to provide western access into West of Waterlooville MDA.

2.3.6. The committed improvements to the A3 London Road / Ladybridge roundabout are developer funded S278 works and will form the southern access junction to the West of Waterlooville MDA site. It is understood that the developer is working towards gaining technical approval of design of this junction in late 2019 with the aim of constructing the new roundabout in Summer 2020. For clarity, the improvement works are modelled within the SRTM only by increasing the saturation flow on the northern and southern approaches, with no alterations made to either Ladybridge Road or the development access. As the West of Waterlooville MDA site will grow by 1161 dwellings between 2019 and 2026 (as shown in Table 2-1) and the proposed testing of traffic management measures will reduce the capacity at this junction, it is considered appropriate to include these works within future year assessments of the Aquind Interconnector.

3. AQUIND INTERCONNECTOR MODELLING ASSUMPTIONS

3.1. INTRODUCTION

3.1.1. This section provides describes how the Aquind Interconnector project will be modelled within the SRTM. The 2026 future year model will be used for all assessments.

3.2. SCOPE OF SRTM TRANSPORT MODELLING

3.2.1. The SRTM will be used to asses a realistic worst-case scenario based upon the anticipated construction methodology for the onshore cable route, which will use up to six construction gangs for the Onshore Cable Route. This means that six locations along the Onshore Cable Route could have traffic management employed on them at the same time and therefore this will be assessed using the SRTM. To assess the impacts along the entirety of the route the following locations will include cable installation construction and Traffic Management within the SRTM:

- Shuttle working traffic signals on B2150 Hambledon Road between Soake Road and Closewood Road;
- Temporary traffic signal operation of the B2150 Hambledon Road / Maurepas Way roundabout in Waterlooville, including closure of the Houghton Avenue access;
- Shuttle working traffic signals on the A3 London Road through the Ladybridge roundabout, requiring temporary traffic signals with Ladybridge Road;
- Single lane closure on Havant Road between Farlington Avenue and Eastern Road;
- Single lane closure on A2030 Eastern Road between Airport Service Road and Burfields Road; and
- Shuttle working traffic signals on Bransbury Road between Bransbury Park and Fort Cumberland Road.

3.2.2. Taking account of seasonal / programme constraints and mix of on/off-road sections of the cable route, these locations are considered to present a robust assessment of installation of the Onshore Cable Route.

3.3. PROPOSED DO-SOMETHING MODEL SCENARIOS

3.3.1. Due to lane closure of dual-carriageway links taking place independently for each direction, a full assessment of these locations requires the following scenarios to be run:

1. All locations with Northbound lane closure on Eastern Road between Airport Service Road and Burfields Road; and
2. All locations with Southbound lane closure on Eastern Road between Airport Service Road Burfields Road.

3.3.2. Each of these scenarios will be assessed for the AM, Inter-peak and PM peak hours using the SRTM forecast year of 2026. This will provide a robust assessment of impacts, using traffic flows which are higher than those that would be anticipated during the construction period of 2022.

3.4. TRAFFIC MANAGEMENT NETWORK CODING

3.4.1. The SRTM will be used to assess the impacts of the cable installation process and will be directly related to the Traffic Management Strategy produced for each section of the route. As such, an

important aspect of the modelling inputs is how these Traffic Management measures are coded in the model. Each of the assessed locations described in Section 3.2 is detailed separately below.

SHUTTLE WORKING TRAFFIC SIGNALS ON B2150 HAMBLEDON ROAD BETWEEN SOAKE ROAD AND CLOSEWOOD ROAD

3.4.2. The location of the proposed shuttle working traffic signals is shown below on Figure 3-1.

Figure 3-1 - Hambledon Road Shuttle Working Traffic Signal Location

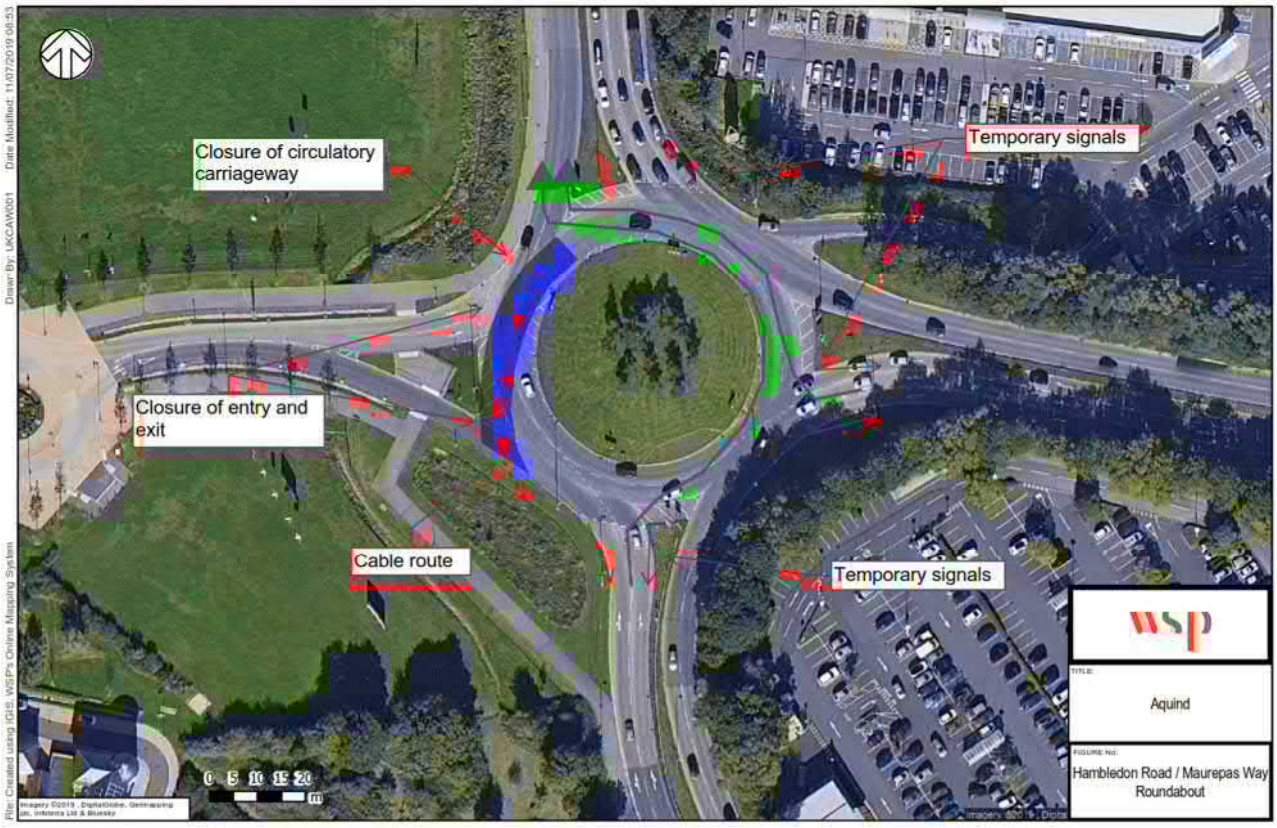
3.4.3. Within the SRTM, the shuttle working traffic signals will be coded as a traffic signal node. Traffic signal timings will be provided by WSP and estimated via a Linsig model using the 2026 Do-Minimum traffic flows on this link.

3.4.4. The traffic signal cycle time will be 180 seconds. Intergreen times will be 17 seconds, based upon the time taken for a vehicle to travel 150m past the construction zone (100m plus setback distance for traffic signals) at 20mph.

TEMPORARY TRAFFIC SIGNALS AND CLOSURE OF HOUGHTON AVENUE APPROACH OF THE B2150 HAMBLEDON ROAD / A3 MAUREPAS WAY ROUNDABOUT

3.4.5. The location of the proposed Traffic Management at the Hambledon Road / Maurepas Way roundabout is shown below on **Figure 3-2.**

Figure 3-2 - B2150 Hambeldon Road / Maurepas Way Traffic Management



3.4.6. Within the SRTM, this will be assessed as a three-arm traffic signal junction. Traffic signal timings will be provided by WSP and estimated via a Linsig model using the 2026 Do-Minimum traffic flows on this link. Intergreens will take account of the alternative route taken by traffic around the roundabout, as shown in Figure 3-2.

3.4.7. Vehicles routing to / from Houghton Avenue will be reassigned within the SRTM to the development access junctions to the north and south.

SHUTTLE WORKING TRAFFIC SIGNALS ON THE A3 LONDON ROAD AT LADYBRIDGE ROUNDABOUT;

3.4.8. The location of the proposed shuttle working traffic signals on A3 London Road is shown below in Figure 3-3.

Figure 3-3 - A3 London Road / Ladybridge Roundabout Shuttle Working Traffic Signals Location

3.4.9. Within the SRTM, the shuttle working traffic signals will be coded as a three-arm traffic signal junction. Traffic signal timings will be provided by WSP and estimated via a Linsig model using the 2026 Do-Minimum traffic flows on this link.

3.4.10. The traffic signal cycle time will be 180 seconds. Intergreen times will be 17 seconds, based upon the time taken for a vehicle to travel 150m past the construction zone (100m plus setback distance for traffic signals) at 20mph.

SINGLE LANE CLOSURE ON HAVANT ROAD BETWEEN FARLINGTON AVENUE AND EASTERN ROAD;

3.4.11. The location of the proposed lane closures on Havant Road is shown below on Figure 3-4. The lane closures at this junction will be assessed within one SRTM scenarios.

Figure 3-4 - Havant Road Lane Closure Location

3.4.12. Within the SRTM, each lane closure will be modelled by removing the right turn lane between Havant Road and Farlington Avenue / Eastern Road in both directions. This right turn will not be permitted from Havant Road to Farlington Avenue or Eastern Road within the DS modelled scenario.

SINGLE LANE CLOSURE ON A2030 EASTERN ROAD BETWEEN AIRPORT SERVICE ROAD AND BURFIELDS ROAD; AND

3.4.13. The location of the proposed lane closures on A2030 Eastern Road is shown below on Figure 3-5. The lane closures in each direction will be assessed within separate SRTM scenarios.

Figure 3-5 - A2030 Eastern Road Lane Closure Location

3.4.14. Within the SRTM, each lane closure will be modelled by reducing a 250m section of the link by 50% (100m plus 150m taper distance as defined by Traffic Signs Manual Chapter 8), to 1,800 vehicles per hour. This is robust as the 50% capacity reduction will be applied to the construction zone and full taper length. This will be completed in the centre of the area highlighted in Figure 3-5.

SHUTTLE WORKING TRAFFIC SIGNALS ON BRANSBURY ROAD BETWEEN BRANSBURY PARK AND FORT CUMBERLAND ROAD.

3.4.15. The location of the proposed shuttle working traffic signals on Bransbury Road is shown below in Figure 3-6.

Figure 3-6 - Bransbury Road Shuttle Working Traffic Signal Location

3.4.16. Within the SRTM, the shuttle working traffic signals will be coded as a traffic signal mode. Traffic signal timings will be provided by WSP and estimated via a Linsig model using the 2026 Do-Minimum traffic flows on this link.

3.4.17. The traffic signal cycle time will be 180 seconds. Intergreen times will be 17 seconds, based upon the time taken for a vehicle to travel 150m past the construction zone (100m plus setback distance for traffic signals) at 20mph.

4. SRTM DATA REQUIREMENTS

4.1. INTRODUCTION

4.1.1. This section provides an overview of the outputs required from the SRTM in order to fully assess the impacts of the proposed onshore cable installation.

4.2. DATA REQUIREMENTS

4.2.1. For each of the assessed scenarios, the following outputs will be required from the SRTM:

- Traffic flow changes along the cable route and on adjacent corridors / junctions;
- Link delays;
- V/C (capacity) assessments at key junctions as defined below; and
- Journey times changes for key routes as defined below.

4.2.2. This data is required to allow for a detailed assessment to be completed at locations along the route and along parallel / adjoining road where the greatest impacts are anticipated. All data will be required for the 2026 scenarios with and without construction of Aquind Interconnector.

JUNCTION AND TURNING COUNT DATA

4.2.3. Locations at which V/C and traffic flow details will be required are as follows and shown on Figure 4.1 and 4.2 below (for which % difference plots are required from the network):

- Hambledon Road / Milton Road roundabout;
- Hambledon Road / Ashton Road traffic signal junction (Wellington Retail Park);
- Hambledon Road / A3 / Maurepas Way roundabout;
- Maurepas Way / A3 London Road roundabout;
- Rocksville Drive / Stakes Hill Road traffic signal junction;
- A3 London Road / Ladybridge road roundabout;
- Stakes Road / Stake Hill Road / Purbrook Way roundabout;
- Stakes Hill Road / Friendstaple Road roundabout;
- Hulbert Road / Friendstaple Road roundabout;
- A3 / Hulbert Road roundabout;
- Purbrook Way / College Road;
- A2030 /Farlington Avenue / A2030 Eastern Road / Havant Road traffic signal junction;
- A2030 Eastern Road / Grove Road and A2030 Eastern Road / Fitzherbert Road traffic signal junction;
- A2030 Eastern Road / Anchorage Road traffic signal junction;
- A2030 Eastern Road / Airport Service Road traffic signal junction;
- A2030 Eastern Road / Burfields Road;
- A2030 Velder Avenue / Milton Road traffic signal junction;
- Burfields Road Copnor Road traffic signal junction;
- Norway Road / Copnor Road traffic signal junction;
- Milton Road / St Mary;s Road roundabout;
- A27 / A3 Portsbridge roundabout; and
- A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout.

Figure 4-1 - HCC Traffic Assessment Locations

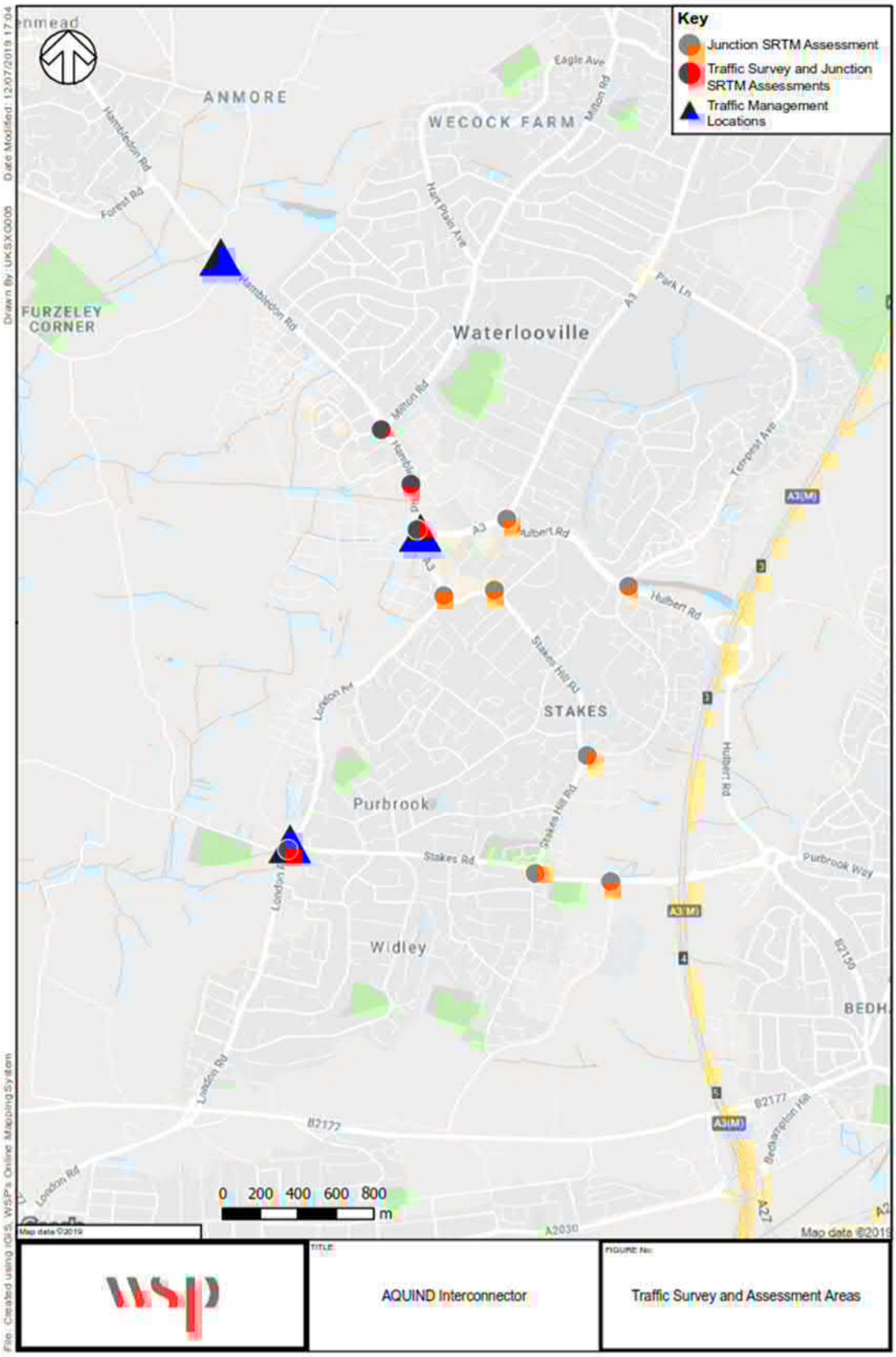
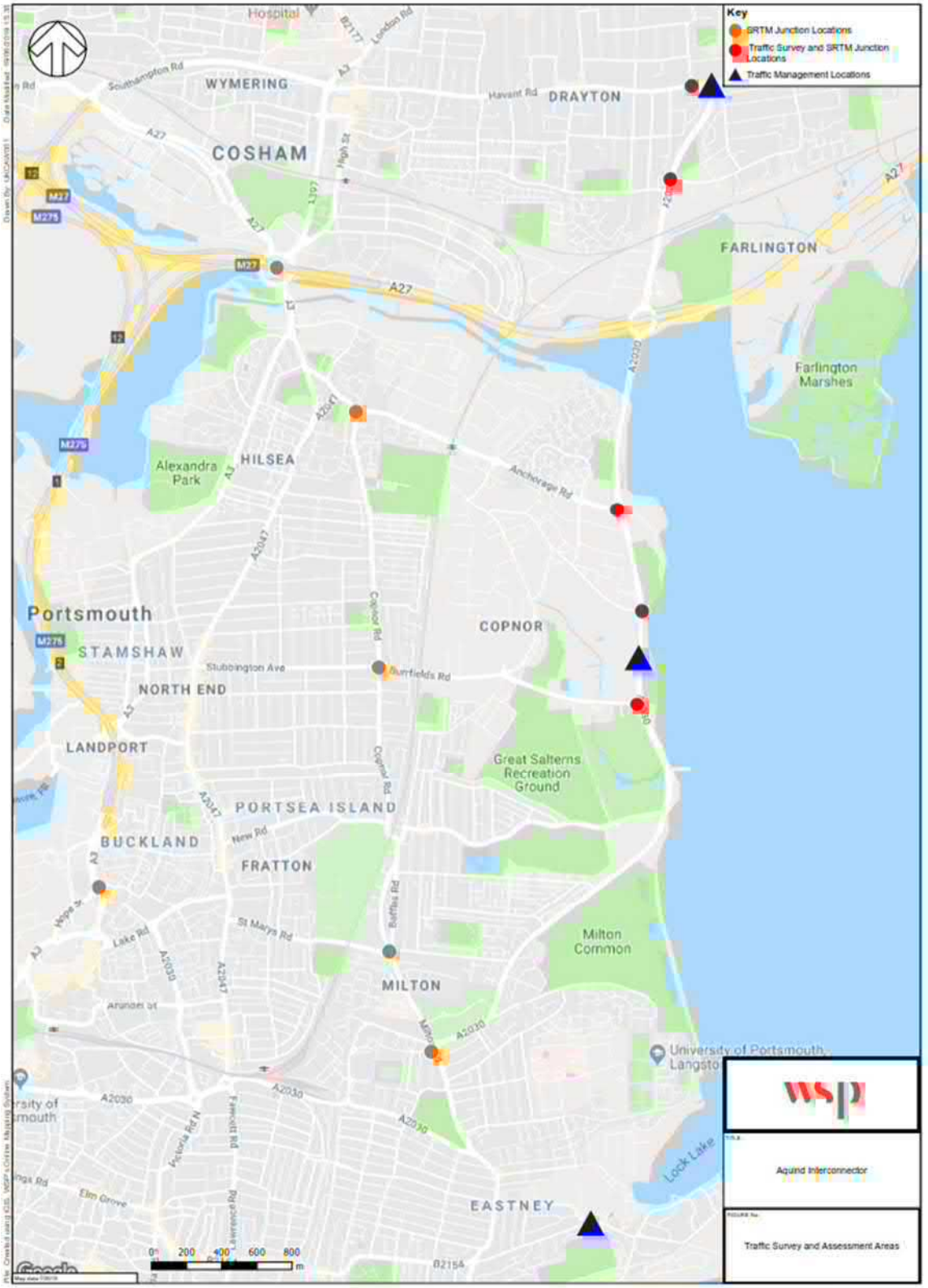


Figure 4-2 - PCC Junction Assessment Locations



JOURNEY TIME DATA

4.2.4. From the 2026 future year models with and without the Aquind Interconnector, journey time assessments will be required for routes between the A27 / M27 and Portsmouth City Centre via:

- A2030 Eastern Road;
- Copnor Road;
- A3 Northern Parade; and
- M275.

4.2.5. Journey time assessments will also be required for routes between Cosham / Purbrook and Waterlooville / Denmead via:

- The A3 London Road;
- Stakes Road and Stakes Hill Road;
- Portsdown Hill Road, Crookhorn Lane and Stakes Hill Road; and
- A27 and A3(M).

4.2.6. For validation purposes, it is also requested that journey time data is provided for the routes identified above from the 2019 future year SRTM model.

AADT TRAFFIC DATA

4.2.7. For air quality and noise EIA assessments the data outputs shown in Table 4.2 are also required.

Table 4-1 – Traffic Data for Air Quality and Noise Assessments

Traffic Data Requests for the Scheme (Converter Station and Cable Route)		
Who	**Description**	**Format**
AQ/Noise	Peak hour traffic flow	Fully georeferenced ArcGIS Shapefile with attributes for each data type (see description column). Shapefile contains: a. a separate row for each road link; b. a unique identifier (e.g. road name or node reference) for each road link; c. Links which are ideally 'fitted' to the road network.
Noise	18-hour (0600-2400 hours) Average Annual Weekday Traffic (AAWT) flow	
Noise	Vehicle speeds (km/h). Separate values for peak hour and 18-hour if different.	
Noise	% Heavy Goods Vehicles (HGVs). Separate values for peak hour and 18-hour if different.	

AQ	24-hour (0000 – 2300) Average Annual Daily Traffic (AADT24) flow	An excel spreadsheet of the above information for cross referencing would also be useful.
AQ	Vehicle speeds (km/h). Separate values for peak hour and 24-hour if different.	
AQ	% Heavy Goods Vehicles (HGVs). Separate values for peak hour and 24-hour if different.	

4.2.8. This data is to be provided as follows, although this will be reviewed once initial traffic data becomes available

- Detailed snapping to ITN layer – Eastern Road, A3 London Road and Hambledon Road PLUS the 5km buffer; and
- Snapping to ITN layer (with no corrections) - all other SRTM links outside of the 5km buffer but within the study area.

Regus House
Southampton International Business Park, George Curl Way
Southampton, Hampshire
SO18 2RZ

wsp.com

Appendix C – Converter Station Access Drawing

N

LOVEDEAN SUBSTATION ACCESS

BROADWAY LANE

132kV POWER CABLES

EXISTING JUNCTION TO BE RETAINED
23m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 22mph (MfS2)

9.6m

OVERHEAD POWER LINE. TO BE UNDERGROUNDED

SSE UNDERGROUND INFRASTRUCTURE TO BE AVOIDED. EXACT LOCATION TO BE CONFIRMED IN SURVEY

AREA WITHIN VISIBILITY SPLAYS TO BE CLEARED OF VEGETATION AND DEDICATED AS HIGHWAY

7.3m

R30

GATES TO CONTROL ACCESS TO LINK

PROPOSED OFF HIGHWAY LINK TO PROVIDE SITE ACCESS FOR CONSTRUCTION AND FUTURE LARGE/OVERSIZED VEHICLES. TO BE CLOSED OFF FROM GENERAL TRAFFIC

DAY LANE

LOVEDEAN LANE (SITE ACCESS ROUTE)

5.8m

70m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 39mph (MfS2)

PROPOSED PERMANENT SITE ACCESS JUNCTION

R10

7.3m

R10

R30

TREE TO BE REMOVED

GATES TO CONTROL ACCESS TO LINK

TREES/LARGE HEDGEROW TO BE REMOVED

ROOT PROTECTION AREA WITH ASSUMED 3m DIAMETER TREE

BROADWAY LANE

7.0m

50m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 33mph (MfS2)

UTILITY RECORDS OVERLAY

KEY TO HEALTH AND SAFETY SYMBOLS

SERVICES SHOWN ON RECORD MAPPING WITHIN PROPOSED WORKS:
- 132kV POWER CABLES
- 11kV OVERHEAD POWER LINES
- GAS
- POTABLE WATER
- TELECOM SERVICES

NOTES

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
2. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE.
3. MANUAL FOR STREETS (MfS) STANDARDS HAVE BEEN ADOPTED TO EVALUATE APPROPRIATE VISIBILITY AND SPEEDS. THIS STANDARD IS TYPICALLY APPLIED TO URBAN AREAS BUT FOR THESE ELEMENTS IS MORE SUITABLE FOR MINOR RURAL ROADS THAN DMRB STANDARDS.
4. 85TH PERCENTILE SPEEDS OF 31mph MEASURED SOUTHBOUND JUST BEFORE BEND TO NORTH OF ACCESS, AND 41mph MEASURED NORTHBOUND WELL SOUTH OF THE ACCESS. 50m RADIUS BEND TO SOUTH OF ACCESS SHOULD LIMIT SPEEDS TO 33mph (MfS2 PARA 8.3.5). THEREFORE A 31mph/50kph DESIGN SPEED HAS BEEN ADOPTED.
5. 45m SSD BASED ON MfS TABLE 7.1
6. ARTICULATED LORRY / LOW LOADER VEHICLE MOVEMENTS INTO ACCESS JUNCTION AND EXISTING SUBSTATION JUNCTION WILL TAKE UP WIDTH OF CARRIAGEWAY SO WILL REQUIRE CONTROL.

KEY

- DEVELOPMENT CONSENT ORDER BOUNDARY
- HIGHWAY BOUNDARY / ASSUMED HIGHWAY BOUNDARY
- 45m FORWARD VISIBILITY
- 2.4m x 45m VISIBILITY SPLAY
- 2.4m x OUTSIDE OF BEND VISIBILITY SPLAY
- ROOT PROTECTION AREA

SERVICES KEY

DISCLAIMER NOTE

INFORMATION ON THE LOCATION AND SIZE FOR EACH SERVICE HAS BEEN BASED ON RECORD INFORMATION PROVIDED BY THE RELEVANT SERVICE COMPANIES. THE POSITIONS SHOWN ARE INDICATIVE ONLY AND MAY NOT BE COMPLETE. THE PRESENCE OF SERVICES ON SITE SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION WORK OR INTRUSIVE INVESTIGATIONS.

- EXISTING GAS PIPE
- EXISTING HIGH VOLTAGE (OVERHEAD)
- EXISTING EXTRA HIGH VOLTAGE (U/G)
- EXISTING VODAFONE CABLE
- EXISTING BRITISH TELECOM (U/G)
- EXISTING POTABLE WATER PIPE

Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
02	31/10/2019	MFB	UPDATED DRG FRAME & ADDED TREE LOCATIONS	CW	CW
01	19/09/2019	MFB	FIRST ISSUE	CW	CW

DRAWING STATUS: SUBMISSION FOR APPROVAL

wsp
Regus House, Southampton Int. Bus. Park, George Curl Way, Southampton, SO18 2RZ, UK
T+ 44 (0) 2380 302 529, F+ 44 (0) 2380 302 001
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: BROADWAY LANE SITE ACCESS JUNCTION - OPTION B GENERAL ARRANGEMENT

SCALE AT A1:	CHECKED:		APPROVED:
1:500	CW		CW
PROJECT No: 62100616	DESIGNED: MFB	DRAWN: MFB	DATE: 19/09/2019

DRAWING No: AQD-WSP-UK-OS-DR-Z-200215 REV: 02

File name: I:\UK\WSPGROUP_COM\CENTRAL DATA\PROJECTS\62100\XX\62100616 - AQUIND VO HO.3\E MODELS AND DRAWINGS\300 - SITES\20 - TASK / UK ROUTE\HIGHWAY ARRANGEMENTS\AQD-WSP-UK-OS-DR-Z-200215.DWG

Appendix D – Bus Timetables

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

1 Gunwharf - City Centre - Eastney - Southsea
Via Fratton Bridge - Goldsmith Avenue - Milton - Festing Road

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	0600	0620	0640	0700	0712	0724	0736	0748	0800	0812	0824	0836
City Centre South	0604	0624	0644	0704	0716	0728	0740	0752	0804	0816	0828	0840
Fratton Bridge	0609	0629	0649	0709	0721	0733	0745	0757	0809	0821	0833	0845
Eastney Health Centre	0617	0637	0657	0717	0729	0741	0753	0805	0817	0829	0841	0853
South Parade Pier	0624	0644	0704	0724	0736	0748	0800	0812	0824	0836	0848	0900

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	0848	0900	0912	0924	0936	0948	1000	1012	1024	1036	1048	1100
City Centre South	0852	0904	0916	0928	0940	0952	1004	1016	1028	1040	1052	1104
Fratton Bridge	0857	0909	0921	0933	0946	0958	1010	1022	1034	1046	1058	1110
Eastney Health Centre	0905	0917	0929	0945	0958	1010	1022	1034	1046	1058	1110	1122
South Parade Pier	0912	0924	0936	0952	1005	1017	1029	1041	1053	1105	1117	1129

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1112	1124	1136	1148	1200	1212	1224	1236	1248	1300	1312	1324
City Centre South	1116	1128	1140	1152	1204	1216	1228	1240	1252	1304	1316	1328
Fratton Bridge	1122	1134	1146	1158	1210	1222	1234	1246	1258	1310	1322	1334
Eastney Health Centre	1134	1146	1158	1210	1222	1234	1246	1258	1310	1322	1334	1346
South Parade Pier	1141	1153	1205	1217	1229	1241	1253	1305	1317	1329	1341	1353

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1336	1348	1400	1412	1424	1436	1448	1500	1512	1524	1536	1548
City Centre South	1340	1352	1404	1416	1428	1440	1452	1504	1516	1528	1540	1552
Fratton Bridge	1346	1358	1410	1422	1434	1446	1458	1510	1522	1534	1546	1558
Eastney Health Centre	1358	1410	1422	1434	1446	1458	1510	1522	1534	1546	1558	1610
South Parade Pier	1405	1417	1429	1441	1453	1505	1517	1529	1541	1553	1605	1617

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1600	1612	1624	1636	1648	1700	1715	1730	1745	1800	1815	1830
City Centre South	1604	1616	1628	1640	1652	1704	1719	1734	1749	1804	1819	1834
Fratton Bridge	1610	1622	1634	1646	1658	1710	1725	1740	1755	1810	1825	1839
Eastney Health Centre	1622	1634	1646	1658	1710	1722	1737	1752	1807	1822	1837	1847
South Parade Pier	1629	1641	1653	1705	1717	1729	1744	1759	1814	1829	1844	1854

Service No.:	1	1	1	1	1	1	1	1	1	1
Notes:										
The Hard/Gunwharf	1850	1920	1950	2020	2050	2120	2150	2220	2250	2320
City Centre South	1854	1924	1954	2024	2054	2124	2154	2224	2254	2324
Fratton Bridge	1859	1929	1959	2029	2059	2129	2159	2229	2259	2329
Eastney Health Centre	1907	1937	2007	2037	2107	2137	2207	2237	2307	2337
South Parade Pier	1914	1944	2014	2044	2114	2144	2214	2244	2314	2344

1 Southsea - Eastney - City Centre - Gunwharf
Via Festing Road - Milton - Goldsmith Avenue - Fratton Bridge

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	0610	0642	0702	0722	0742	0802	0817	0829	0841	0853	0905	0917
Eastney Health Centre	0615	0647	0707	0727	0747	0807	0822	0834	0846	0858	0910	0922
Fratton Bridge	0625	0657	0717	0737	0757	0817	0832	0844	0856	0908	0920	0932
City Centre South	0630	0702	0722	0742	0802	0822	0837	0849	0901	0913	0925	0938
The Hard/Gunwharf	0634	0706	0726	0746	0806	0826	0841	0853	0905	0917	0929	0943

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	0929	0942	0956	1011	1026	1040	1055	1109	1121	1133	1143	1155
Eastney Health Centre	0934	0947	1001	1016	1031	1045	1100	1114	1126	1138	1148	1200
Fratton Bridge	0947	1000	1014	1029	1044	1058	1113	1127	1139	1151	1201	1213
City Centre South	0953	1006	1020	1035	1050	1104	1119	1133	1145	1157	1207	1219
The Hard/Gunwharf	0958	1011	1025	1040	1055	1109	1124	1138	1150	1202	1212	1224

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1207	1219	1231	1243	1255	1307	1319	1331	1343	1355	1407	1419
Eastney Health Centre	1212	1224	1236	1248	1300	1312	1324	1336	1348	1400	1412	1424
Fratton Bridge	1225	1237	1249	1301	1313	1325	1337	1349	1401	1413	1425	1437
City Centre South	1231	1243	1255	1307	1319	1331	1343	1355	1407	1419	1431	1443
The Hard/Gunwharf	1236	1248	1300	1312	1324	1336	1348	1400	1412	1424	1436	1448

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1431	1443	1455	1507	1519	1531	1543	1555	1607	1619	1631	1643
Eastney Health Centre	1436	1448	1500	1512	1524	1536	1548	1600	1612	1624	1636	1648
Fratton Bridge	1449	1501	1513	1525	1537	1549	1601	1613	1625	1637	1649	1701
City Centre South	1455	1507	1519	1531	1543	1555	1607	1619	1631	1643	1655	1707
The Hard/Gunwharf	1500	1512	1524	1536	1548	1600	1612	1624	1636	1648	1700	1712

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1655	1707	1719	1731	1743	1755	1807	1819	1831	1845	1856	1909
Eastney Health Centre	1700	1712	1724	1736	1748	1800	1812	1824	1836	1850	1901	1914
Fratton Bridge	1713	1725	1737	1749	1801	1813	1825	1837	1846	1900	1911	1924
City Centre South	1719	1731	1743	1755	1807	1819	1831	1842	1851	1905	1916	1929
The Hard/Gunwharf	1724	1736	1748	1800	1812	1824	1835	1846	1855	1909	1920	1933

Service No.:	1	1	1	1	1	1	1	1	1	1
Notes:										
South Parade Pier dep	1922	1937	1955	2020	2050	2120	2150	2220	2250	2320
Eastney Health Centre	1927	1942	2000	2025	2055	2125	2155	2225	2255	2325
Fratton Bridge	1937	1952	2010	2035	2105	2135	2205	2235	2305	----
City Centre South	1942	1957	2015	2040	2110	2140	2210	2240	2310	----
The Hard/Gunwharf	1946	2001	2019	2044	2114	2144	2214	2244	2314	----

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

1 Gunwharf - City Centre - Eastney - Southsea
Via Fratton Bridge - Goldsmith Avenue - Milton - Festing Road

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	0710	0730	0750	0810	0830	0850	0910	0930	0950	1010	1030	1050
City Centre South	0714	0734	0754	0814	0834	0854	0914	0934	0954	1014	1034	1054
Fratton Bridge	0719	0739	0759	0819	0839	0859	0919	0939	0959	1020	1040	1100
Eastney Health Centre	0727	0747	0807	0827	0847	0907	0927	0947	1007	1032	1052	1112
South Parade Pier	0734	0754	0814	0834	0854	0914	0934	0954	1014	1039	1059	1119

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1110	1130	1150	1210	1230	1250	1310	1330	1350	1410	1430	1450
City Centre South	1114	1134	1154	1214	1234	1254	1314	1334	1354	1414	1434	1454
Fratton Bridge	1120	1140	1200	1220	1240	1300	1320	1340	1400	1420	1440	1500
Eastney Health Centre	1132	1152	1212	1232	1252	1312	1332	1352	1412	1432	1452	1512
South Parade Pier	1139	1159	1219	1239	1259	1319	1339	1359	1419	1439	1459	1519

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1510	1530	1550	1610	1630	1650	1710	1730	1750	1810	1840	1910
City Centre South	1514	1534	1554	1614	1634	1654	1714	1734	1754	1814	1844	1914
Fratton Bridge	1520	1540	1600	1620	1640	1700	1720	1740	1800	1820	1849	1919
Eastney Health Centre	1532	1552	1612	1632	1652	1712	1732	1752	1812	1832	1857	1927
South Parade Pier	1539	1559	1619	1639	1659	1719	1739	1759	1819	1839	1904	1934

Service No.:	1	1
Notes:		
The Hard/Gunwharf	1940	2010
City Centre South	1944	2014
Fratton Bridge	1949	2019
Eastney Health Centre	1957	2027
South Parade Pier	2004	2034

1 Southsea - Eastney - City Centre - Gunwharf
Via Festing Road - Milton - Goldsmith Avenue - Fratton Bridge

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	0735	0755	0815	0835	0855	0915	0935	0955	1018	1041	1106	1131
Eastney Health Centre	0740	0800	0820	0840	0900	0920	0940	1000	1023	1046	1111	1136
Fratton Bridge	0750	0810	0830	0850	0910	0930	0950	1013	1036	1059	1124	1149
City Centre South	0755	0815	0835	0855	0915	0935	0955	1019	1042	1105	1130	1155
The Hard/Gunwharf	0759	0819	0839	0859	0919	0939	0959	1024	1047	1110	1135	1200

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1151	1211	1231	1251	1311	1331	1351	1411	1431	1451	1511	1531
Eastney Health Centre	1156	1216	1236	1256	1316	1336	1356	1416	1436	1456	1516	1536
Fratton Bridge	1209	1229	1249	1309	1329	1349	1409	1429	1449	1509	1529	1549
City Centre South	1215	1235	1255	1315	1335	1355	1415	1435	1455	1515	1535	1555
The Hard/Gunwharf	1220	1240	1300	1320	1340	1400	1420	1440	1500	1520	1540	1600

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1551	1611	1631	1651	1711	1731	1751	1811	1831	1848	1905	1922
Eastney Health Centre	1556	1616	1636	1656	1716	1736	1756	1816	1836	1853	1910	1927
Fratton Bridge	1609	1629	1649	1709	1729	1749	1809	1829	1846	1903	1920	1937
City Centre South	1615	1635	1655	1715	1735	1755	1815	1835	1851	1908	1925	1942
The Hard/Gunwharf	1620	1640	1700	1720	1740	1800	1820	1839	1855	1912	1929	1946

Service No.:	1
Notes:	
South Parade Pier dep	1945
Eastney Health Centre	1950
Fratton Bridge	2000
City Centre South	2005
The Hard/Gunwharf	2009

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

1 Gunwharf - City Centre - Eastney - Southsea
Via Fratton Bridge - Goldsmith Avenue - Milton - Festing Road

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	0505	0540	0600	0615	0630	0645	0700	0710	0720	0730	0740	0750
City Centre South	0509	0544	0604	0619	0634	0649	0704	0714	0724	0734	0744	0754
Fratton Bridge	0514	0549	0609	0624	0639	0654	0709	0719	0730	0740	0750	0800
Eastney Health Centre	0522	0557	0617	0632	0647	0702	0717	0731	0742	0752	0802	0812
South Parade Pier	0529	0604	0624	0639	0654	0709	0725	0739	0750	0800	0810	0820

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	0800	0810	0820	0830	0840	0850	0900	0910	0920	0930	0940	0950
City Centre South	0804	0814	0824	0834	0844	0854	0904	0914	0924	0934	0944	0954
Fratton Bridge	0810	0820	0830	0840	0850	0900	0910	0920	0930	0940	0950	1000
Eastney Health Centre	0822	0832	0842	0852	0902	0912	0922	0932	0942	0952	1002	1012
South Parade Pier	0830	0840	0850	0900	0910	0920	0929	0939	0949	0959	1009	1019

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1000	1010	1020	1030	1040	1050	1100	1110	1120	1130	1140	1150
City Centre South	1004	1014	1024	1034	1044	1054	1104	1114	1124	1134	1144	1154
Fratton Bridge	1010	1020	1030	1040	1050	1100	1110	1120	1130	1140	1150	1200
Eastney Health Centre	1022	1032	1042	1052	1102	1112	1122	1132	1142	1152	1202	1212
South Parade Pier	1029	1039	1049	1059	1109	1119	1129	1139	1149	1159	1209	1219

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1200	1210	1220	1230	1240	1250	1300	1310	1320	1330	1340	1349
City Centre South	1204	1214	1224	1234	1244	1254	1304	1314	1324	1334	1344	1353
Fratton Bridge	1210	1220	1230	1240	1250	1300	1310	1320	1330	1340	1350	1359
Eastney Health Centre	1222	1232	1242	1252	1302	1312	1322	1332	1342	1352	1402	1411
South Parade Pier	1229	1239	1249	1259	1309	1319	1329	1339	1349	1359	1409	1418

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1359	1409	1419	1429	1439	1450	1500	1509	1518	1528	1538	1548
City Centre South	1403	1413	1423	1433	1443	1454	1504	1513	1523	1533	1543	1553
Fratton Bridge	1409	1419	1429	1439	1449	1500	1510	1519	1529	1539	1549	1559
Eastney Health Centre	1421	1431	1441	1451	1501	1512	1522	1532	1542	1552	1602	1612
South Parade Pier	1428	1438	1448	1458	1508	1519	1529	1539	1549	1559	1609	1619

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1558	1608	1618	1628	1638	1648	1658	1710	1721	1733	1745	1757
City Centre South	1603	1613	1623	1633	1643	1653	1703	1715	1726	1738	1750	1802
Fratton Bridge	1609	1619	1629	1639	1649	1659	1709	1721	1732	1744	1756	1808
Eastney Health Centre	1622	1632	1642	1652	1702	1712	1722	1734	1745	1757	1809	1821
South Parade Pier	1629	1639	1649	1659	1709	1719	1729	1741	1752	1804	1816	1828

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
The Hard/Gunwharf	1809	1821	1843	1918	1950	2020	2050	2120	2150	2220	2250	2320
City Centre South	1814	1826	1848	1923	1954	2024	2054	2124	2154	2224	2254	2324
Fratton Bridge	1820	1832	1854	1929	1959	2029	2059	2129	2159	2229	2259	2329
Eastney Health Centre	1833	1845	1907	1942	2007	2037	2107	2137	2207	2237	2307	2337
South Parade Pier	1840	1852	1914	1949	2014	2044	2114	2144	2214	2244	2314	2344

1 Southsea - Eastney - City Centre - Gunwharf
Via Festing Road - Milton - Goldsmith Avenue - Fratton Bridge

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	0531	0601	0631	0651	0703	0715	0726	0739	0754	0807	0820	0832
Eastney Health Centre	0536	0606	0636	0656	0708	0720	0731	0744	0759	0812	0825	0837
Fratton Bridge	0546	0616	0646	0706	0718	0733	0744	0757	0812	0825	0838	0850
City Centre South	0551	0621	0651	0711	0724	0739	0750	0803	0818	0831	0844	0856
The Hard/Gunwharf	0555	0625	0655	0715	0729	0744	0755	0808	0823	0836	0849	0901

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												Sch
South Parade Pier dep	0843	0856	0906	0916	0926	0936	0946	0955	1004	1014	1024	1034
Eastney Health Centre	0848	0901	0911	0921	0931	0941	0951	1000	1009	1019	1029	1039
Fratton Bridge	0901	0914	0924	0934	0944	0954	1004	1013	1022	1032	1042	1052
City Centre South	0907	0920	0930	0940	0950	1000	1010	1019	1028	1038	1048	1058
The Hard/Gunwharf	0912	0925	0935	0945	0955	1005	1015	1024	1033	1043	1053	1103

Notes:
Sch Schooldays Only

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:	NSch											
South Parade Pier dep	1034	1044	1053	1103	1113	1123	1133	1143	1153	1203	1213	1223
Eastney Health Centre	1039	1049	1058	1108	1118	1128	1138	1148	1158	1208	1218	1228
Fratton Bridge	1052	1102	1111	1121	1131	1141	1151	1201	1211	1221	1231	1241
City Centre South	1058	1108	1117	1127	1137	1147	1157	1207	1217	1227	1237	1247
The Hard/Gunwharf	1103	1113	1122	1132	1142	1152	1202	1212	1222	1232	1242	1252

Notes:
NSch School Holidays

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1233	1243	1253	1303	1313	1323	1333	1343	1353	1403	1413	1423
Eastney Health Centre	1238	1248	1258	1308	1318	1328	1338	1348	1358	1408	1418	1428
Fratton Bridge	1251	1301	1311	1321	1331	1341	1351	1401	1411	1421	1431	1441
City Centre South	1257	1307	1317	1327	1337	1347	1357	1407	1417	1427	1437	1447
The Hard/Gunwharf	1302	1312	1322	1332	1342	1352	1402	1412	1422	1432	1442	1452

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1433	1443	1453	1503	1513	1523	1533	1543	1553	1603	1613	1623
Eastney Health Centre	1438	1448	1458	1508	1518	1528	1538	1548	1558	1608	1618	1628
Fratton Bridge	1451	1501	1511	1521	1531	1541	1551	1601	1611	1621	1631	1641
City Centre South	1457	1507	1517	1527	1537	1547	1557	1607	1617	1627	1637	1647
The Hard/Gunwharf	1502	1512	1522	1532	1542	1552	1602	1612	1622	1632	1642	1652

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1633	1643	1653	1703	1713	1723	1733	1743	1755	1807	1819	1831
Eastney Health Centre	1638	1648	1658	1708	1718	1728	1738	1748	1800	1812	1824	1836
Fratton Bridge	1651	1701	1711	1721	1731	1741	1751	1801	1813	1825	1837	1849
City Centre South	1657	1707	1717	1727	1737	1747	1757	1807	1819	1831	1843	1855
The Hard/Gunwharf	1702	1712	1722	1732	1742	1752	1802	1812	1824	1836	1848	1900

Service No.:	1	1	1	1	1	1	1	1	1	1	1	1
Notes:												
South Parade Pier dep	1843	1855	1906	1918	1931	1943	2000	2020	2050	2120	2150	2220
Eastney Health Centre	1848	1900	1911	1923	1936	1948	2005	2025	2055	2125	2155	2225
Fratton Bridge	1901	1910	1921	1933	1946	1958	2015	2035	2105	2135	2205	2235
City Centre South	1906	1915	1926	1938	1951	2003	2020	2040	2110	2140	2210	2240
The Hard/Gunwharf	1910	1919	1930	1942	1955	2007	2024	2044	2114	2144	2214	2244

Service No.:	1	1
Notes:		
South Parade Pier dep	2250	2320
Eastney Health Centre	2255	2325
Fratton Bridge	2305	----
City Centre South	2310	----
The Hard/Gunwharf	2314	----

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

2 Gunwharf - City Centre - Eastney - Cosham - Paulsgrove
Via Albert Road - St Mary's Hospital - Copnor - Hilsea - QA Hospital

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0527	0547	0607	0622	0637	0652	0707	0722	0737	0752	0807	0822
City Centre Commercial Rd Sth	0531	0551	0611	0626	0641	0656	0711	0726	0741	0756	0811	0826
Kings Theatre	0538	0558	0618	0633	0648	0703	0718	0733	0748	0803	0818	0833
Eastney Health Centre	0543	0603	0623	0638	0653	0708	0723	0738	0753	0808	0823	0838
Copnor Bridge	0553	0613	0633	0648	0703	0718	0733	0748	0803	0818	0833	0848
Copnor Rd, Green Lane	0558	0618	0638	0653	0708	0723	0738	0753	0808	0823	0838	0853
Hilsea Lido	0603	0623	0643	0658	0713	0728	0743	0758	0813	0828	0843	0858
Cosham Health Centre	0606	0626	0646	0701	0716	0731	0746	0801	0816	0831	0846	0901
QA Hospital main entrance	0610	0630	0650	0705	0720	0735	0750	0805	0820	0835	0850	0905
Paulsgrove Shops	0618	0638	0658	0713	0728	0743	0758	0813	0828	0843	0858	0913

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0837	0852	0904	0916	0928	0940	0952	1004	1016	1028	1040	1052
City Centre Commercial Rd Sth	0841	0856	0908	0920	0932	0945	0957	1009	1021	1033	1045	1057
Kings Theatre	0848	0903	0915	0927	0941	0954	1006	1018	1030	1042	1054	1106
Eastney Health Centre	0853	0908	0920	0932	0948	1001	1013	1025	1037	1049	1101	1113
Copnor Bridge	0903	0918	0930	0944	1000	1013	1025	1037	1049	1101	1113	1125
Copnor Rd, Green Lane	0908	0923	0936	0950	1006	1019	1031	1043	1055	1107	1119	1131
Hilsea Lido	0913	0928	0942	0956	1012	1025	1037	1049	1101	1113	1125	1137
Cosham Health Centre	0916	0931	0945	0959	1015	1028	1040	1052	1104	1116	1128	1140
QA Hospital main entrance	0920	0935	0949	1003	1019	1032	1044	1056	1108	1120	1132	1144
Paulsgrove Shops	0928	0944	0958	1012	1028	1041	1053	1105	1117	1129	1141	1153

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1104	1116	1128	1140	1152	1204	1216	1228	1240	1252	1304	1316
City Centre Commercial Rd Sth	1109	1121	1133	1145	1157	1209	1221	1233	1245	1257	1309	1321
Kings Theatre	1118	1130	1142	1154	1206	1218	1230	1242	1254	1306	1318	1330
Eastney Health Centre	1125	1137	1149	1201	1213	1225	1237	1249	1301	1313	1325	1337
Copnor Bridge	1137	1149	1201	1213	1225	1237	1249	1301	1313	1325	1337	1349
Copnor Rd, Green Lane	1143	1155	1207	1219	1231	1243	1255	1307	1319	1331	1343	1355
Hilsea Lido	1149	1201	1213	1225	1237	1249	1301	1313	1325	1337	1349	1401
Cosham Health Centre	1152	1204	1216	1228	1240	1252	1304	1316	1328	1340	1352	1404
QA Hospital main entrance	1156	1208	1220	1232	1244	1256	1308	1320	1332	1344	1356	1408
Paulsgrove Shops	1205	1217	1229	1241	1253	1305	1317	1329	1341	1353	1405	1417

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1328	1340	1352	1404	1416	1428	1440	1452	1504	1516	1528	1540
City Centre Commercial Rd Sth	1333	1345	1357	1409	1421	1433	1445	1457	1509	1521	1533	1545
Kings Theatre	1342	1354	1406	1418	1430	1442	1454	1506	1518	1530	1542	1554
Eastney Health Centre	1349	1401	1413	1425	1437	1449	1501	1513	1525	1537	1549	1601
Copnor Bridge	1401	1413	1425	1437	1449	1501	1513	1525	1537	1549	1601	1613
Copnor Rd, Green Lane	1407	1419	1431	1443	1455	1507	1519	1531	1543	1555	1607	1619
Hilsea Lido	1413	1425	1437	1449	1501	1513	1525	1537	1549	1601	1613	1625
Cosham Health Centre	1416	1428	1440	1452	1504	1516	1528	1540	1552	1604	1616	1628
QA Hospital main entrance	1420	1432	1444	1456	1508	1520	1532	1544	1556	1608	1620	1632
Paulsgrove Shops	1429	1441	1453	1505	1517	1529	1541	1553	1605	1617	1629	1641

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1552	1604	1616	1628	1640	1652	1704	1716	1728	1740	1755	1810
City Centre Commercial Rd Sth	1557	1609	1621	1633	1645	1657	1709	1721	1733	1745	1800	1815
Kings Theatre	1606	1618	1630	1642	1654	1706	1718	1730	1742	1754	1809	1824
Eastney Health Centre	1613	1625	1637	1649	1701	1713	1725	1737	1749	1801	1816	1831
Copnor Bridge	1625	1637	1649	1701	1713	1725	1737	1749	1801	1813	1828	1841
Copnor Rd, Green Lane	1631	1643	1655	1707	1719	1731	1743	1755	1807	1819	1834	1846
Hilsea Lido	1637	1649	1701	1713	1725	1737	1749	1801	1813	1825	1839	1851
Cosham Health Centre	1640	1652	1704	1716	1728	1740	1752	1804	1816	1828	1842	1854
QA Hospital main entrance	1644	1656	1708	1720	1732	1744	1756	1808	1820	1832	1846	1858
Paulsgrove Shops	1653	1705	1717	1729	1741	1753	1805	1817	1829	1840	1854	1906

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1825	1840	1855	1910	1930	1950	2010	2030	2050	2110	2140	2210
City Centre Commercial Rd Sth	1830	1844	1859	1914	1934	1954	2014	2034	2054	2114	2144	2214
Kings Theatre	1837	1851	1906	1921	1941	2001	2021	2041	2101	2121	2151	2221
Eastney Health Centre	1842	1856	1911	1926	1946	2006	2026	2046	2106	2126	2156	2226
Copnor Bridge	1852	1906	1921	1936	1956	2016	2036	2056	2116	2136	2206	2236
Copnor Rd, Green Lane	1857	1911	1926	1941	2001	2021	2041	2101	2121	2141	2211	2241
Hilsea Lido	1902	1916	1931	1946	2006	2026	2046	2106	2126	2146	2216	2246
Cosham Health Centre	1905	1919	1934	1949	2009	2029	2049	2109	2129	2149	2219	2249
QA Hospital main entrance	1909	1923	1938	1953	2013	2033	2053	2113	2133	2153	2223	2253
Paulsgrove Shops	1917	1931	1946	2001	2021	2041	2101	2121	2141	2201	2231	2301

Service No.:	2	2	2
Notes:			
The Hard/Gunwharf	2240	2310	2340
City Centre Commercial Rd Sth	2244	2314	2344
Kings Theatre	2251	2321	2351
Eastney Health Centre	2256	2326	2356
Copnor Bridge	2306	2336	0006
Copnor Rd, Green Lane	2311	2341	0011
Hilsea Lido	2316	2346	0016
Cosham Health Centre	2319	2349	----
QA Hospital main entrance	2323	2353	----
Paulsgrove Shops	2331	0001	----

2 Paulsgrove - Cosham - Eastney - City Centre - Gunwharf
Via QA Hospital - Hilsea - Copnor - St Mary's Hospital - Albert Road

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0523	0549	0609	0629	0644	0659	0714	0729	0744	0759	0814	0829
QA Hospital main entrance	0531	0557	0617	0637	0652	0707	0722	0737	0752	0807	0822	0837
Cosham Health Centre	0534	0600	0620	0640	0655	0710	0725	0740	0755	0810	0825	0840
Hilsea Lido	0538	0604	0624	0644	0659	0714	0729	0744	0759	0814	0829	0844
Copnor Rd, Green Lane	0543	0609	0629	0649	0704	0719	0734	0749	0804	0819	0834	0849
Copnor Bridge	0547	0613	0633	0653	0708	0723	0738	0753	0808	0823	0838	0853
Eastney Health Centre	0556	0622	0642	0702	0717	0732	0747	0802	0817	0832	0847	0902
Albert Road Lights	0600	0626	0646	0706	0721	0736	0751	0806	0821	0836	0851	0906
City Centre Commercial Rd Sth	0608	0634	0654	0714	0729	0744	0759	0814	0829	0844	0859	0914
The Hard/Gunwharf	0612	0638	0658	0718	0733	0748	0803	0818	0833	0848	0903	0918

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0844	0858	0910	0922	0934	0946	0958	1010	1022	1034	1046	1058
QA Hospital main entrance	0852	0906	0918	0930	0943	0955	1007	1019	1031	1043	1055	1107
Cosham Health Centre	0855	0909	0921	0934	0947	0959	1011	1023	1035	1047	1059	1111
Hilsea Lido	0859	0913	0925	0938	0951	1003	1015	1027	1039	1051	1103	1115
Copnor Rd, Green Lane	0904	0918	0930	0944	0957	1009	1021	1033	1045	1057	1109	1121
Copnor Bridge	0908	0922	0937	0951	1004	1016	1028	1040	1052	1104	1116	1128
Eastney Health Centre	0917	0931	0948	1002	1015	1027	1039	1051	1103	1115	1127	1139
Albert Road Lights	0921	0936	0953	1007	1020	1032	1044	1056	1108	1120	1132	1144
City Centre Commercial Rd Sth	0929	0947	1004	1018	1031	1043	1055	1107	1119	1131	1143	1155
The Hard/Gunwharf	0933	0952	1009	1023	1036	1048	1100	1112	1124	1136	1148	1200

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1110	1122	1134	1146	1158	1210	1222	1234	1246	1258	1310	1322
QA Hospital main entrance	1119	1131	1143	1155	1207	1219	1231	1243	1255	1307	1319	1331
Cosham Health Centre	1123	1135	1147	1159	1211	1223	1235	1247	1259	1311	1323	1335
Hilsea Lido	1127	1139	1151	1203	1215	1227	1239	1251	1303	1315	1327	1339
Copnor Rd, Green Lane	1133	1145	1157	1209	1221	1233	1245	1257	1309	1321	1333	1345
Copnor Bridge	1140	1152	1204	1216	1228	1240	1252	1304	1316	1328	1340	1352
Eastney Health Centre	1151	1203	1215	1227	1239	1251	1303	1315	1327	1339	1351	1403
Albert Road Lights	1156	1208	1220	1232	1244	1256	1308	1320	1332	1344	1356	1408
City Centre Commercial Rd Sth	1207	1219	1231	1243	1255	1307	1319	1331	1343	1355	1407	1419
The Hard/Gunwharf	1212	1224	1236	1248	1300	1312	1324	1336	1348	1400	1412	1424

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1334	1346	1358	1410	1422	1434	1446	1458	1510	1522	1534	1546
QA Hospital main entrance	1343	1355	1407	1419	1431	1443	1455	1507	1519	1531	1543	1555
Cosham Health Centre	1347	1359	1411	1423	1435	1447	1459	1511	1523	1535	1547	1559
Hilsea Lido	1351	1403	1415	1427	1439	1451	1503	1515	1527	1539	1551	1603
Copnor Rd, Green Lane	1357	1409	1421	1433	1445	1457	1509	1521	1533	1545	1557	1609
Copnor Bridge	1404	1416	1428	1440	1452	1504	1516	1528	1540	1552	1604	1616
Eastney Health Centre	1415	1427	1439	1451	1503	1515	1527	1539	1551	1603	1615	1627
Albert Road Lights	1420	1432	1444	1456	1508	1520	1532	1544	1556	1608	1620	1632
City Centre Commercial Rd Sth	1431	1443	1455	1507	1519	1531	1543	1555	1607	1619	1631	1643
The Hard/Gunwharf	1436	1448	1500	1512	1524	1536	1548	1600	1612	1624	1636	1648

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1558	1610	1622	1634	1646	1658	1710	1722	1734	1746	1758	1810
QA Hospital main entrance	1607	1619	1631	1643	1655	1707	1719	1731	1743	1755	1807	1819
Cosham Health Centre	1611	1623	1635	1647	1659	1711	1723	1735	1747	1759	1811	1823
Hilsea Lido	1615	1627	1639	1651	1703	1715	1727	1739	1751	1803	1815	1827
Copnor Rd, Green Lane	1621	1633	1645	1657	1709	1721	1733	1745	1757	1809	1821	1833
Copnor Bridge	1628	1640	1652	1704	1716	1728	1740	1752	1804	1816	1828	1837
Eastney Health Centre	1639	1651	1703	1715	1727	1739	1751	1803	1815	1827	1839	1846
Albert Road Lights	1644	1656	1708	1720	1732	1744	1756	1808	1820	1832	1843	1850
City Centre Commercial Rd Sth	1655	1707	1719	1731	1743	1755	1807	1819	1831	1840	1851	1858
The Hard/Gunwharf	1700	1712	1724	1736	1748	1800	1812	1824	1835	1844	1855	1902

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1825	1840	1855	1915	1935	1955	2015	2035	2055	2115	2135	2205
QA Hospital main entrance	1834	1848	1903	1923	1943	2003	2023	2043	2103	2123	2143	2213
Cosham Health Centre	1837	1851	1906	1926	1946	2006	2026	2046	2106	2126	2146	2216
Hilsea Lido	1841	1855	1910	1930	1950	2010	2030	2050	2110	2130	2150	2220
Copnor Rd, Green Lane	1846	1900	1915	1935	1955	2015	2035	2055	2115	2135	2155	2225
Copnor Bridge	1850	1904	1919	1939	1959	2019	2039	2059	2119	2139	2159	2229
Eastney Health Centre	1859	1913	1928	1948	2008	2028	2048	2108	2128	2148	2208	2238
Albert Road Lights	1903	1917	1932	1952	2012	2032	2052	2112	2132	2152	2212	2242
City Centre Commercial Rd Sth	1911	1925	1940	2000	2020	2040	2100	2120	2140	2200	2220	2250
The Hard/Gunwharf	1915	1929	1944	2004	2024	2044	2104	2124	2144	2204	2224	2254

Service No.:	2	2
Notes:		
Paulsgrove Shops	2235	2305
QA Hospital main entrance	2243	2313
Cosham Health Centre	2246	2316
Hilsea Lido	2250	2320
Copnor Rd, Green Lane	2255	2325
Copnor Bridge	2259	2329
Eastney Health Centre	2308	2338
Albert Road Lights	2312	2342
City Centre Commercial Rd Sth	2320	2350
The Hard/Gunwharf	2324	2354

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

2 Gunwharf - City Centre - Eastney - Cosham - Paulsgrove
Via Albert Road - St Mary's Hospital - Copnor - Hilsea - QA Hospital

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0530	0550	0610	0630	0650	0710	0730	0750	0810	0830	0850	0910
City Centre Commercial Rd Sth	0534	0554	0614	0634	0654	0714	0734	0754	0814	0834	0854	0914
Kings Theatre	0541	0601	0621	0641	0701	0721	0741	0801	0821	0841	0901	0921
Eastney Health Centre	0546	0606	0626	0646	0706	0726	0746	0806	0826	0846	0906	0926
Copnor Bridge	0556	0616	0636	0656	0716	0736	0756	0816	0836	0856	0916	0936
Copnor Rd, Green Lane	0601	0621	0641	0701	0721	0741	0801	0821	0841	0901	0921	0941
Hilsea Lido	0606	0626	0646	0706	0726	0746	0806	0826	0846	0906	0926	0946
Cosham Health Centre	0609	0629	0649	0709	0729	0749	0809	0829	0849	0909	0929	0949
QA Hospital main entrance	0613	0633	0653	0713	0733	0753	0813	0833	0853	0913	0933	0953
Paulsgrove Shops	0621	0641	0701	0721	0741	0801	0821	0841	0901	0921	0941	1001

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0930	0950	1005	1020	1035	1050	1105	1120	1135	1150	1205	1220
City Centre Commercial Rd Sth	0934	0954	1010	1025	1040	1055	1110	1125	1140	1155	1210	1225
Kings Theatre	0941	1001	1019	1034	1049	1104	1119	1134	1149	1204	1219	1234
Eastney Health Centre	0946	1008	1026	1041	1056	1111	1126	1141	1156	1211	1226	1241
Copnor Bridge	0956	1020	1038	1053	1108	1123	1138	1153	1208	1223	1238	1253
Copnor Rd, Green Lane	1001	1026	1044	1059	1114	1129	1144	1159	1214	1229	1244	1259
Hilsea Lido	1007	1032	1050	1105	1120	1135	1150	1205	1220	1235	1250	1305
Cosham Health Centre	1010	1035	1053	1108	1123	1138	1153	1208	1223	1238	1253	1308
QA Hospital main entrance	1014	1039	1057	1112	1127	1142	1157	1212	1227	1242	1257	1312
Paulsgrove Shops	1023	1048	1106	1121	1136	1151	1206	1221	1236	1251	1306	1321

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1235	1250	1305	1320	1335	1350	1405	1420	1435	1450	1505	1520
City Centre Commercial Rd Sth	1240	1255	1310	1325	1340	1355	1410	1425	1440	1455	1510	1525
Kings Theatre	1249	1304	1319	1334	1349	1404	1419	1434	1449	1504	1519	1534
Eastney Health Centre	1256	1311	1326	1341	1356	1411	1426	1441	1456	1511	1526	1541
Copnor Bridge	1308	1323	1338	1353	1408	1423	1438	1453	1508	1523	1538	1553
Copnor Rd, Green Lane	1314	1329	1344	1359	1414	1429	1444	1459	1514	1529	1544	1559
Hilsea Lido	1320	1335	1350	1405	1420	1435	1450	1505	1520	1535	1550	1605
Cosham Health Centre	1323	1338	1353	1408	1423	1438	1453	1508	1523	1538	1553	1608
QA Hospital main entrance	1327	1342	1357	1412	1427	1442	1457	1512	1527	1542	1557	1612
Paulsgrove Shops	1336	1351	1406	1421	1436	1451	1506	1521	1536	1551	1606	1621

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1535	1550	1605	1620	1635	1650	1705	1725	1745	1805	1835	1905
City Centre Commercial Rd Sth	1540	1555	1610	1625	1640	1655	1710	1730	1750	1809	1839	1909
Kings Theatre	1549	1604	1619	1634	1649	1704	1719	1739	1759	1816	1846	1916
Eastney Health Centre	1556	1611	1626	1641	1656	1711	1726	1746	1806	1821	1851	1921
Copnor Bridge	1608	1623	1638	1653	1708	1723	1738	1758	1816	1831	1901	1931
Copnor Rd, Green Lane	1614	1629	1644	1659	1714	1729	1744	1804	1821	1836	1906	1936
Hilsea Lido	1620	1635	1650	1705	1720	1735	1750	1809	1826	1841	1911	1941
Cosham Health Centre	1623	1638	1653	1708	1723	1738	1753	1812	1829	1844	1914	1944
QA Hospital main entrance	1627	1642	1657	1712	1727	1742	1757	1816	1833	1848	1918	1948
Paulsgrove Shops	1636	1651	1706	1721	1736	1751	1806	1824	1841	1856	1926	1956

Service No.:	2	2	2	2	2
Notes:					
The Hard/Gunwharf	1935	2005	2105	2205	2305
City Centre Commercial Rd Sth	1939	2009	2109	2209	2309
Kings Theatre	1946	2016	2116	2216	2316
Eastney Health Centre	1951	2021	2121	2221	2321
Copnor Bridge	2001	2031	2131	2231	2331
Copnor Rd, Green Lane	2006	2036	2136	2236	2336
Hilsea Lido	2011	2041	2141	2241	2341
Cosham Health Centre	2014	2044	2144	2244	2344
QA Hospital main entrance	2018	2048	2148	2248	2348
Paulsgrove Shops	2026	2056	2156	2256	2356

2 Paulsgrove - Cosham - Eastney - City Centre - Gunwharf
Via QA Hospital - Hilsea - Copnor - St Mary's Hospital - Albert Road

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0635	0655	0715	0735	0755	0815	0835	0855	0915	0935	0955	1010
QA Hospital main entrance	0643	0703	0723	0743	0803	0823	0843	0903	0923	0943	1003	1019
Cosham Health Centre	0646	0706	0726	0746	0806	0826	0846	0906	0926	0946	1007	1023
Hilsea Lido	0650	0710	0730	0750	0810	0830	0850	0910	0930	0950	1011	1027
Copnor Rd, Green Lane	0655	0715	0735	0755	0815	0835	0855	0915	0935	0955	1017	1033
Copnor Bridge	0659	0719	0739	0759	0819	0839	0859	0919	0939	0959	1024	1040
Eastney Health Centre	0708	0728	0748	0808	0828	0848	0908	0928	0948	1008	1035	1051
Albert Road Lights	0712	0732	0752	0812	0832	0852	0912	0932	0952	1013	1040	1056
City Centre Commercial Rd Sth	0720	0740	0800	0820	0840	0900	0920	0940	1000	1024	1051	1107
The Hard/Gunwharf	0724	0744	0804	0824	0844	0904	0924	0944	1005	1029	1056	1112

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1025	1040	1055	1110	1125	1140	1155	1210	1225	1240	1255	1310
QA Hospital main entrance	1034	1049	1104	1119	1134	1149	1204	1219	1234	1249	1304	1319
Cosham Health Centre	1038	1053	1108	1123	1138	1153	1208	1223	1238	1253	1308	1323
Hilsea Lido	1042	1057	1112	1127	1142	1157	1212	1227	1242	1257	1312	1327
Copnor Rd, Green Lane	1048	1103	1118	1133	1148	1203	1218	1233	1248	1303	1318	1333
Copnor Bridge	1055	1110	1125	1140	1155	1210	1225	1240	1255	1310	1325	1340
Eastney Health Centre	1106	1121	1136	1151	1206	1221	1236	1251	1306	1321	1336	1351
Albert Road Lights	1111	1126	1141	1156	1211	1226	1241	1256	1311	1326	1341	1356
City Centre Commercial Rd Sth	1122	1137	1152	1207	1222	1237	1252	1307	1322	1337	1352	1407
The Hard/Gunwharf	1127	1142	1157	1212	1227	1242	1257	1312	1327	1342	1357	1412

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1325	1340	1355	1410	1425	1440	1455	1510	1525	1540	1555	1610
QA Hospital main entrance	1334	1349	1404	1419	1434	1449	1504	1519	1534	1549	1604	1619
Cosham Health Centre	1338	1353	1408	1423	1438	1453	1508	1523	1538	1553	1608	1623
Hilsea Lido	1342	1357	1412	1427	1442	1457	1512	1527	1542	1557	1612	1627
Copnor Rd, Green Lane	1348	1403	1418	1433	1448	1503	1518	1533	1548	1603	1618	1633
Copnor Bridge	1355	1410	1425	1440	1455	1510	1525	1540	1555	1610	1625	1640
Eastney Health Centre	1406	1421	1436	1451	1506	1521	1536	1551	1606	1621	1636	1651
Albert Road Lights	1411	1426	1441	1456	1511	1526	1541	1556	1611	1626	1641	1656
City Centre Commercial Rd Sth	1422	1437	1452	1507	1522	1537	1552	1607	1622	1637	1652	1707
The Hard/Gunwharf	1427	1442	1457	1512	1527	1542	1557	1612	1627	1642	1657	1712

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1625	1640	1700	1720	1740	1800	1820	1840	1900	1930	----	2000
QA Hospital main entrance	1634	1649	1709	1729	1749	1808	1828	1848	1908	1938	2007	2008
Cosham Health Centre	1638	1653	1713	1733	1753	1811	1831	1851	1911	1941	2010	2011
Hilsea Lido	1642	1657	1717	1737	1757	1815	1835	1855	1915	1945	2014	2015
Copnor Rd, Green Lane	1648	1703	1723	1743	1803	1820	1840	1900	1920	1950	2019	2020
Copnor Bridge	1655	1710	1730	1750	1807	1824	1844	1904	1924	1954	2023	2024
Eastney Health Centre	1706	1721	1741	1801	1816	1833	1853	1913	1933	2003	2032	2033
Albert Road Lights	1711	1726	1746	1805	1820	1837	1857	1917	1937	2007	----	2037
City Centre Commercial Rd Sth	1722	1737	1757	1813	1828	1845	1905	1925	1945	2015	----	2045
The Hard/Gunwharf	1727	1742	1802	1817	1832	1849	1909	1929	1949	2019	----	2049

Service No.:	2	2	2
Notes:			
Paulsgrove Shops	2100	2200	2300
QA Hospital main entrance	2108	2208	2308
Cosham Health Centre	2111	2211	2311
Hilsea Lido	2115	2215	2315
Copnor Rd, Green Lane	2120	2220	2320
Copnor Bridge	2124	2224	2324
Eastney Health Centre	2133	2233	2333
Albert Road Lights	2137	2237	2337
City Centre Commercial Rd Sth	2145	2245	2345
The Hard/Gunwharf	2149	2249	2349

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

2 Gunwharf - City Centre - Eastney - Cosham - Paulsgrove
Via Albert Road - St Mary's Hospital - Copnor - Hilsea - QA Hospital

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0509	0524	0539	0554	0609	0621	0633	0645	0657	0709	0719	0729
City Centre Commercial Rd Sth	0513	0528	0543	0558	0613	0625	0637	0649	0701	0713	0724	0734
Kings Theatre	0520	0535	0550	0605	0620	0632	0644	0656	0708	0720	0733	0743
Eastney Health Centre	0525	0540	0555	0610	0625	0637	0649	0701	0713	0727	0740	0750
Copnor Bridge	0535	0550	0605	0620	0635	0647	0659	0711	0723	0740	0753	0803
Copnor Rd, Green Lane	0540	0555	0610	0625	0640	0652	0704	0716	0730	0747	0800	0810
Hilsea Lido	0545	0600	0615	0630	0645	0657	0709	0723	0737	0754	0807	0817
Cosham Health Centre	0548	0603	0618	0633	0648	0700	0712	0726	0740	0757	0810	0820
QA Hospital main entrance	0552	0607	0622	0637	0652	0704	0716	0730	0744	0801	0814	0824
Paulsgrove Shops	0600	0615	0630	0645	0700	0712	0726	0740	0754	0811	0824	0834

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0739	0749	0759	0809	0819	0829	0839	0849	0859	0909	0919	0929
City Centre Commercial Rd Sth	0744	0754	0804	0814	0824	0834	0844	0854	0904	0914	0924	0934
Kings Theatre	0753	0803	0813	0823	0833	0843	0853	0903	0913	0923	0933	0943
Eastney Health Centre	0800	0810	0820	0830	0840	0850	0900	0910	0920	0930	0940	0950
Copnor Bridge	0813	0823	0833	0843	0853	0903	0913	0923	0933	0942	0952	1002
Copnor Rd, Green Lane	0820	0830	0840	0850	0900	0910	0920	0930	0939	0948	0958	1008
Hilsea Lido	0827	0837	0847	0857	0907	0917	0927	0936	0945	0954	1004	1014
Cosham Health Centre	0830	0840	0850	0900	0910	0920	0930	0939	0948	0957	1007	1017
QA Hospital main entrance	0834	0844	0854	0904	0914	0924	0934	0943	0952	1001	1011	1021
Paulsgrove Shops	0844	0854	0904	0914	0924	0934	0943	0952	1001	1010	1020	1030

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	0939	0949	0959	1009	1019	1029	1039	1049	1059	1109	1119	1129
City Centre Commercial Rd Sth	0944	0954	1004	1014	1024	1034	1044	1054	1104	1114	1124	1134
Kings Theatre	0953	1003	1013	1023	1033	1043	1053	1103	1113	1123	1133	1143
Eastney Health Centre	1000	1010	1020	1030	1040	1050	1100	1110	1120	1130	1140	1150
Copnor Bridge	1012	1022	1032	1042	1052	1102	1112	1122	1132	1142	1152	1202
Copnor Rd, Green Lane	1018	1028	1038	1048	1058	1108	1118	1128	1138	1148	1158	1208
Hilsea Lido	1024	1034	1044	1054	1104	1114	1124	1134	1144	1154	1204	1214
Cosham Health Centre	1027	1037	1047	1057	1107	1117	1127	1137	1147	1157	1207	1217
QA Hospital main entrance	1031	1041	1051	1101	1111	1121	1131	1141	1151	1201	1211	1221
Paulsgrove Shops	1040	1050	1100	1110	1120	1130	1140	1150	1200	1210	1220	1230

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1139	1149	1159	1209	1219	1229	1239	1249	1259	1309	1319	1329
City Centre Commercial Rd Sth	1144	1154	1204	1214	1224	1234	1244	1254	1304	1314	1324	1334
Kings Theatre	1153	1203	1213	1223	1233	1243	1253	1303	1313	1323	1333	1343
Eastney Health Centre	1200	1210	1220	1230	1240	1250	1300	1310	1320	1330	1340	1350
Copnor Bridge	1212	1222	1232	1242	1252	1302	1312	1322	1332	1342	1352	1402
Copnor Rd, Green Lane	1218	1228	1238	1248	1258	1308	1318	1328	1338	1348	1358	1408
Hilsea Lido	1224	1234	1244	1254	1304	1314	1324	1334	1344	1354	1404	1414
Cosham Health Centre	1227	1237	1247	1257	1307	1317	1327	1337	1347	1357	1407	1417
QA Hospital main entrance	1231	1241	1251	1301	1311	1321	1331	1341	1351	1401	1411	1421
Paulsgrove Shops	1240	1250	1300	1310	1320	1330	1340	1350	1400	1410	1420	1430

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1339	1349	1359	1409	1419	1429	1439	1449	1459	1509	1519	1529
City Centre Commercial Rd Sth	1344	1354	1404	1414	1424	1434	1444	1454	1504	1514	1525	1535
Kings Theatre	1353	1403	1413	1423	1433	1443	1453	1503	1513	1523	1534	1544
Eastney Health Centre	1400	1410	1420	1430	1440	1450	1500	1510	1520	1531	1542	1552
Copnor Bridge	1412	1422	1432	1442	1452	1502	1512	1522	1533	1544	1555	1605
Copnor Rd, Green Lane	1418	1428	1438	1448	1458	1508	1518	1529	1540	1551	1602	1612
Hilsea Lido	1424	1434	1444	1454	1504	1514	1525	1536	1547	1558	1609	1619
Cosham Health Centre	1427	1437	1447	1457	1507	1517	1528	1539	1550	1601	1612	1622
QA Hospital main entrance	1431	1441	1451	1501	1511	1521	1532	1543	1554	1605	1616	1626
Paulsgrove Shops	1440	1450	1500	1510	1520	1531	1542	1553	1604	1615	1626	1636

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1539	1549	1559	1609	1619	1629	1639	1649	1659	1710	1722	1734
City Centre Commercial Rd Sth	1545	1555	1605	1615	1625	1635	1645	1655	1705	1716	1728	1740
Kings Theatre	1554	1604	1614	1624	1634	1644	1654	1704	1714	1725	1737	1749
Eastney Health Centre	1602	1612	1622	1632	1642	1652	1702	1712	1722	1733	1745	1757
Copnor Bridge	1615	1625	1635	1645	1655	1705	1715	1725	1735	1746	1758	1810
Copnor Rd, Green Lane	1622	1632	1642	1652	1702	1712	1722	1732	1742	1753	1805	1817
Hilsea Lido	1629	1639	1649	1659	1709	1719	1729	1739	1749	1800	1812	1824
Cosham Health Centre	1632	1642	1652	1702	1712	1722	1732	1742	1752	1803	1815	1827
QA Hospital main entrance	1636	1646	1656	1706	1716	1726	1736	1746	1756	1807	1819	1831
Paulsgrove Shops	1646	1656	1706	1716	1726	1736	1746	1756	1806	1817	1829	1841

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
The Hard/Gunwharf	1746	1758	1810	1825	1840	1855	1910	1930	1950	2010	2030	2050
City Centre Commercial Rd Sth	1752	1804	1816	1831	1846	1901	1915	1934	1954	2014	2034	2054
Kings Theatre	1801	1813	1825	1840	1855	1910	1924	1941	2001	2021	2041	2101
Eastney Health Centre	1809	1821	1833	1848	1903	1917	1931	1946	2006	2026	2046	2106
Copnor Bridge	1822	1834	1846	1901	1915	1929	1941	1956	2016	2036	2056	2116
Copnor Rd, Green Lane	1829	1841	1853	1907	1921	1935	1946	2001	2021	2041	2101	2121
Hilsea Lido	1836	1848	1900	1913	1927	1940	1951	2006	2026	2046	2106	2126
Cosham Health Centre	1839	1851	1903	1916	1930	1943	1954	2009	2029	2049	2109	2129
QA Hospital main entrance	1843	1855	1907	1920	1934	1947	1958	2013	2033	2053	2113	2133
Paulsgrove Shops	1853	1905	1916	1929	1942	1955	2006	2021	2041	2101	2121	2141

Service No.:	2	2	2	2	2	2
Notes:						
The Hard/Gunwharf	2110	2140	2210	2240	2310	2340
City Centre Commercial Rd Sth	2114	2144	2214	2244	2314	2344
Kings Theatre	2121	2151	2221	2251	2321	2351
Eastney Health Centre	2126	2156	2226	2256	2326	2356
Copnor Bridge	2136	2206	2236	2306	2336	0006
Copnor Rd, Green Lane	2141	2211	2241	2311	2341	0011
Hilsea Lido	2146	2216	2246	2316	2346	0016
Cosham Health Centre	2149	2219	2249	2319	2349	----
QA Hospital main entrance	2153	2223	2253	2323	2353	----
Paulsgrove Shops	2201	2231	2301	2331	0001	----

2 Paulsgrove - Cosham - Eastney - City Centre - Gunwharf
Via QA Hospital - Hilsea - Copnor - St Mary's Hospital - Albert Road

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0458	0513	0528	0545	0600	0610	0622	0634	0646	0658	0707	0717
QA Hospital main entrance	0506	0521	0536	0553	0608	0618	0630	0642	0654	0706	0715	0726
Cosham Health Centre	0509	0524	0539	0556	0611	0621	0633	0645	0657	0709	0719	0730
Hilsea Lido	0513	0528	0543	0600	0615	0625	0637	0649	0701	0713	0723	0734
Copnor Rd, Green Lane	0518	0533	0548	0605	0620	0630	0642	0654	0706	0718	0730	0741
Copnor Bridge	0522	0537	0552	0609	0624	0634	0646	0658	0710	0725	0737	0748
Eastney Health Centre	0531	0546	0601	0618	0633	0643	0655	0707	0719	0737	0749	0800
Albert Road Lights	0535	0550	0605	0622	0637	0647	0659	0711	0725	0743	0755	0806
City Centre Commercial Rd Sth	0543	0558	0613	0630	0645	0655	0707	0719	0736	0754	0806	0817
The Hard/Gunwharf	0547	0602	0617	0634	0649	0659	0711	0724	0741	0759	0811	0822

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0727	0738	0748	0758	0808	0818	0828	0838	0848	0858	0908	0918
QA Hospital main entrance	0736	0747	0757	0807	0817	0827	0837	0847	0857	0907	0917	0927
Cosham Health Centre	0740	0751	0801	0811	0821	0831	0841	0851	0901	0911	0921	0931
Hilsea Lido	0744	0755	0805	0815	0825	0835	0845	0855	0905	0915	0925	0935
Copnor Rd, Green Lane	0751	0802	0812	0822	0832	0842	0852	0902	0912	0922	0932	0941
Copnor Bridge	0758	0809	0819	0829	0839	0849	0859	0909	0919	0929	0939	0948
Eastney Health Centre	0810	0821	0831	0841	0851	0901	0911	0921	0931	0941	0950	0959
Albert Road Lights	0816	0827	0837	0847	0857	0907	0917	0927	0936	0946	0955	1004
City Centre Commercial Rd Sth	0827	0838	0848	0858	0908	0918	0928	0938	0947	0957	1006	1015
The Hard/Gunwharf	0832	0843	0853	0903	0913	0923	0933	0943	0952	1002	1011	1020

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	0928	0938	0948	0958	1008	1018	1028	1038	1048	1058	1108	1118
QA Hospital main entrance	0937	0947	0957	1007	1017	1027	1037	1047	1057	1107	1117	1127
Cosham Health Centre	0941	0951	1001	1011	1021	1031	1041	1051	1101	1111	1121	1131
Hilsea Lido	0945	0955	1005	1015	1025	1035	1045	1055	1105	1115	1125	1135
Copnor Rd, Green Lane	0951	1001	1011	1021	1031	1041	1051	1101	1111	1121	1131	1141
Copnor Bridge	0958	1008	1018	1028	1038	1048	1058	1108	1118	1128	1138	1148
Eastney Health Centre	1009	1019	1029	1039	1049	1059	1109	1119	1129	1139	1149	1159
Albert Road Lights	1014	1024	1034	1044	1054	1104	1114	1124	1134	1144	1154	1204
City Centre Commercial Rd Sth	1025	1035	1045	1055	1105	1115	1125	1135	1145	1155	1205	1215
The Hard/Gunwharf	1030	1040	1050	1100	1110	1120	1130	1140	1150	1200	1210	1220

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1128	1138	1148	1158	1208	1218	1228	1238	1248	1258	1308	1318
QA Hospital main entrance	1137	1147	1157	1207	1217	1227	1237	1247	1257	1307	1317	1327
Cosham Health Centre	1141	1151	1201	1211	1221	1231	1241	1251	1301	1311	1321	1331
Hilsea Lido	1145	1155	1205	1215	1225	1235	1245	1255	1305	1315	1325	1335
Copnor Rd, Green Lane	1151	1201	1211	1221	1231	1241	1251	1301	1311	1321	1331	1341
Copnor Bridge	1158	1208	1218	1228	1238	1248	1258	1308	1318	1328	1338	1348
Eastney Health Centre	1209	1219	1229	1239	1249	1259	1309	1319	1329	1339	1349	1359
Albert Road Lights	1214	1224	1234	1244	1254	1304	1314	1324	1334	1344	1354	1404
City Centre Commercial Rd Sth	1225	1235	1245	1255	1305	1315	1325	1335	1345	1355	1405	1415
The Hard/Gunwharf	1230	1240	1250	1300	1310	1320	1330	1340	1350	1400	1410	1420

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1328	1338	1348	1358	1408	1418	1428	1438	1448	1458	1508	1518
QA Hospital main entrance	1337	1347	1357	1407	1417	1427	1437	1447	1457	1507	1517	1527
Cosham Health Centre	1341	1351	1401	1411	1421	1431	1441	1451	1501	1511	1521	1531
Hilsea Lido	1345	1355	1405	1415	1425	1435	1445	1455	1505	1515	1525	1535
Copnor Rd, Green Lane	1351	1401	1411	1421	1431	1441	1451	1501	1511	1522	1532	1542
Copnor Bridge	1358	1408	1418	1428	1438	1448	1458	1508	1518	1529	1539	1549
Eastney Health Centre	1409	1419	1429	1439	1449	1459	1509	1519	1529	1540	1550	1600
Albert Road Lights	1414	1424	1434	1444	1454	1504	1514	1525	1535	1546	1556	1606
City Centre Commercial Rd Sth	1425	1435	1445	1455	1505	1515	1525	1536	1546	1557	1607	1617
The Hard/Gunwharf	1430	1440	1450	1500	1510	1520	1530	1541	1551	1602	1612	1622

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1528	1538	1548	1558	1608	1619	1630	1640	1650	1700	1710	1722
QA Hospital main entrance	1537	1547	1557	1607	1617	1628	1639	1649	1659	1709	1719	1731
Cosham Health Centre	1541	1551	1601	1611	1621	1632	1643	1653	1703	1713	1723	1735
Hilsea Lido	1545	1555	1605	1615	1625	1636	1647	1657	1707	1717	1727	1739
Copnor Rd, Green Lane	1552	1602	1612	1622	1632	1643	1654	1704	1714	1724	1734	1746
Copnor Bridge	1559	1609	1619	1629	1639	1650	1701	1711	1721	1731	1741	1753
Eastney Health Centre	1610	1620	1630	1640	1650	1701	1712	1722	1732	1742	1752	1804
Albert Road Lights	1616	1626	1636	1646	1656	1707	1718	1728	1738	1748	1758	1810
City Centre Commercial Rd Sth	1627	1637	1647	1657	1707	1718	1729	1739	1749	1759	1809	1821
The Hard/Gunwharf	1632	1642	1652	1702	1712	1723	1734	1744	1754	1804	1814	1826

Service No.:	2	2	2	2	2	2	2	2	2	2	2	2
Notes:												
Paulsgrove Shops	1734	1746	1758	1810	1825	1840	1855	1915	1935	1955	2015	2035
QA Hospital main entrance	1743	1755	1807	1819	1834	1849	1904	1924	1943	2003	2023	2043
Cosham Health Centre	1747	1759	1811	1823	1838	1853	1908	1928	1946	2006	2026	2046
Hilsea Lido	1751	1803	1815	1827	1842	1857	1912	1932	1950	2010	2030	2050
Copnor Rd, Green Lane	1758	1810	1822	1834	1849	1904	1918	1937	1955	2015	2035	2055
Copnor Bridge	1805	1817	1829	1841	1856	1911	1925	1941	1959	2019	2039	2059
Eastney Health Centre	1816	1828	1840	1852	1907	1922	1936	1950	2008	2028	2048	2108
Albert Road Lights	1822	1834	1846	1858	1912	1927	1940	1954	2012	2032	2052	2112
City Centre Commercial Rd Sth	1833	1845	1857	1909	1923	1938	1948	2002	2020	2040	2100	2120
The Hard/Gunwharf	1838	1850	1902	1914	1928	1942	1952	2006	2024	2044	2104	2124

Service No.:	2	2	2	2	2	2
Notes:						
Paulsgrove Shops	2055	2115	2135	2205	2235	2305
QA Hospital main entrance	2103	2123	2143	2213	2243	2313
Cosham Health Centre	2106	2126	2146	2216	2246	2316
Hilsea Lido	2110	2130	2150	2220	2250	2320
Copnor Rd, Green Lane	2115	2135	2155	2225	2255	2325
Copnor Bridge	2119	2139	2159	2229	2259	2329
Eastney Health Centre	2128	2148	2208	2238	2308	2338
Albert Road Lights	2132	2152	2212	2242	2312	2342
City Centre Commercial Rd Sth	2140	2200	2220	2250	2320	2350
The Hard/Gunwharf	2144	2204	2224	2254	2324	2354

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

7 City Centre - Cosham - Waterlooville - Wecock Farm
Via North End - Hilsea - Widley - Crookhorn - Milton Road

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	0618	0638	0653	0708	0724	0739	0754	0811	0826	0841	0856	0911
City Centre South	0621	0641	0656	0711	0727	0742	0757	0814	0829	0844	0859	0915
Lake Road Health Centre	0627	0647	0702	0717	0733	0748	0803	0820	0835	0850	0905	0923
North End Junction	0632	0652	0707	0722	0738	0753	0808	0825	0840	0855	0913	0931
Hilsea Lido	0638	0658	0713	0728	0744	0759	0814	0831	0846	0901	0921	0939
Cosham Health Centre	0641	0701	0716	0731	0747	0802	0817	0834	0849	0904	0924	0942
Crookhorn Precinct	0649	0709	0724	0739	0755	0810	0825	0842	0857	0913	0933	0951
Waterlooville Precinct	0656	0716	0731	0746	0802	0817	0832	0849	0904	0922	0942	1000
Wecock Farm, Blackbird Close	0705	0725	0740	0755	0811	0826	0841	0858	0914	0932	0952	1010

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	0926	0941	0956	1011	1026	1041	1056	1111	1126	1141	1156	1211
City Centre South	0930	0945	1000	1015	1030	1045	1100	1115	1130	1145	1200	1215
Lake Road Health Centre	0938	0953	1008	1023	1038	1053	1108	1123	1138	1153	1208	1223
North End Junction	0946	1001	1016	1031	1046	1101	1116	1131	1146	1201	1216	1231
Hilsea Lido	0954	1009	1024	1039	1054	1109	1124	1139	1154	1209	1224	1239
Cosham Health Centre	0957	1012	1027	1042	1057	1112	1127	1142	1157	1212	1227	1242
Crookhorn Precinct	1006	1021	1036	1051	1106	1121	1136	1151	1206	1221	1236	1251
Waterlooville Precinct	1015	1030	1045	1100	1115	1130	1145	1200	1215	1230	1245	1300
Wecock Farm, Blackbird Close	1025	1040	1055	1110	1125	1140	1155	1210	1225	1240	1255	1310

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	1226	1241	1256	1311	1326	1341	1356	1411	1426	1441	1456	1511
City Centre South	1230	1245	1300	1315	1330	1345	1400	1415	1430	1445	1500	1515
Lake Road Health Centre	1238	1253	1308	1323	1338	1353	1408	1423	1438	1453	1508	1523
North End Junction	1246	1301	1316	1331	1346	1401	1416	1431	1446	1501	1516	1531
Hilsea Lido	1254	1309	1324	1339	1354	1409	1424	1439	1454	1509	1524	1539
Cosham Health Centre	1257	1312	1327	1342	1357	1412	1427	1442	1457	1512	1527	1542
Crookhorn Precinct	1306	1321	1336	1351	1406	1421	1436	1451	1506	1521	1536	1551
Waterlooville Precinct	1315	1330	1345	1400	1415	1430	1445	1500	1515	1530	1545	1600
Wecock Farm, Blackbird Close	1325	1340	1355	1410	1425	1440	1455	1510	1525	1540	1555	1610

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	1526	1541	1556	1611	1626	1641	1656	1711	1726	1741	1756	1811
City Centre South	1530	1545	1600	1615	1630	1645	1700	1715	1730	1745	1800	1815
Lake Road Health Centre	1538	1553	1608	1623	1638	1653	1708	1723	1738	1753	1808	1823
North End Junction	1546	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1831
Hilsea Lido	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809	1824	1837
Cosham Health Centre	1557	1612	1627	1642	1657	1712	1727	1742	1757	1812	1827	1840
Crookhorn Precinct	1606	1621	1636	1651	1706	1721	1736	1751	1806	1821	1836	1848
Waterlooville Precinct	1615	1630	1645	1700	1715	1730	1745	1800	1815	1830	1843	1855
Wecock Farm, Blackbird Close	1625	1640	1655	1710	1725	1740	1755	1810	1825	1839	1852	1904

Service No.:	7	7	7	7	7	7	7	7	7	7
Notes:										
Winston Churchill Avenue	1826	1841	1901	1921	1941	2004	2034	2104	2204	2304
City Centre South	1830	1844	1904	1924	1944	2007	2037	2107	2207	2307
Lake Road Health Centre	1836	1850	1910	1930	1950	2013	2043	2113	2213	2313
North End Junction	1841	1855	1915	1935	1955	2018	2048	2118	2218	2318
Hilsea Lido	1847	1901	1921	1941	2001	2024	2054	2124	2224	2324
Cosham Health Centre	1850	1904	1924	1944	2004	2027	2057	2127	2227	2327
Crookhorn Precinct	1858	1912	1932	1952	2012	2035	2105	2135	2235	2335
Waterlooville Precinct	1905	1919	1939	1959	2019	2042	2112	2142	2242	2342
Wecock Farm, Blackbird Close	1914	1928	1948	2008	2028	2051	2121	2151	2251	2351

7 Wecock Farm - Waterlooville - Cosham - City Centre
Via Milton Road - Crookhorn - Widley - Hilsea - North End

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	0527	0547	0608	0628	0648	0710	0730	0745	0800	0815	0830	0845
Waterlooville Precinct	0537	0557	0618	0638	0658	0720	0740	0755	0810	0825	0840	0855
Crookhorn Precinct	0543	0603	0624	0644	0704	0726	0746	0801	0816	0831	0846	0901
Cosham Health Centre	0550	0610	0631	0651	0711	0733	0753	0808	0823	0838	0853	0909
Hilsea Lido	0554	0614	0635	0655	0715	0737	0757	0812	0827	0842	0857	0914
North End Junction	0559	0619	0640	0700	0720	0742	0802	0817	0832	0847	0902	0921
Lake Road Health Centre	0604	0624	0645	0705	0725	0747	0807	0822	0837	0852	0909	0928
City Centre South	0611	0631	0652	0712	0732	0754	0814	0829	0844	0859	0918	0937
Winston Churchill Avenue	0614	0634	0655	0715	0735	0757	0817	0832	0847	0902	0922	0941

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	0900	0915	0930	0945	1000	1015	1030	1045	1100	1115	1130	1145
Waterlooville Precinct	0913	0928	0943	0958	1013	1028	1043	1058	1113	1128	1143	1158
Crookhorn Precinct	0921	0936	0951	1006	1021	1036	1051	1106	1121	1136	1151	1206
Cosham Health Centre	0929	0944	0959	1014	1029	1044	1059	1114	1129	1144	1159	1214
Hilsea Lido	0934	0949	1004	1019	1034	1049	1104	1119	1134	1149	1204	1219
North End Junction	0941	0956	1011	1026	1041	1056	1111	1126	1141	1156	1211	1226
Lake Road Health Centre	0948	1003	1018	1033	1048	1103	1118	1133	1148	1203	1218	1233
City Centre South	0957	1012	1027	1042	1057	1112	1127	1142	1157	1212	1227	1242
Winston Churchill Avenue	1001	1016	1031	1046	1101	1116	1131	1146	1201	1216	1231	1246

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1200	1215	1230	1245	1300	1315	1330	1345	1400	1415	1430	1445
Waterlooville Precinct	1213	1228	1243	1258	1313	1328	1343	1358	1413	1428	1443	1458
Crookhorn Precinct	1221	1236	1251	1306	1321	1336	1351	1406	1421	1436	1451	1506
Cosham Health Centre	1229	1244	1259	1314	1329	1344	1359	1414	1429	1444	1459	1514
Hilsea Lido	1234	1249	1304	1319	1334	1349	1404	1419	1434	1449	1504	1519
North End Junction	1241	1256	1311	1326	1341	1356	1411	1426	1441	1456	1511	1526
Lake Road Health Centre	1248	1303	1318	1333	1348	1403	1418	1433	1448	1503	1518	1533
City Centre South	1257	1312	1327	1342	1357	1412	1427	1442	1457	1512	1527	1542
Winston Churchill Avenue	1301	1316	1331	1346	1401	1416	1431	1446	1501	1516	1531	1546

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1500	1515	1530	1545	1600	1615	1630	1645	1700	1715	1730	1745
Waterlooville Precinct	1513	1528	1543	1558	1613	1628	1643	1658	1713	1728	1743	1758
Crookhorn Precinct	1521	1536	1551	1606	1621	1636	1651	1706	1721	1736	1751	1806
Cosham Health Centre	1529	1544	1559	1614	1629	1644	1659	1714	1729	1744	1759	1814
Hilsea Lido	1534	1549	1604	1619	1634	1649	1704	1719	1734	1749	1804	1819
North End Junction	1541	1556	1611	1626	1641	1656	1711	1726	1741	1756	1811	1826
Lake Road Health Centre	1548	1603	1618	1633	1648	1703	1718	1733	1748	1803	1818	1833
City Centre South	1557	1612	1627	1642	1657	1712	1727	1742	1757	1812	1827	1840
Winston Churchill Avenue	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1831	1843

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1800	1815	1830	1845	1900	1920	1940	2000	2030	2100	2130	2200
Waterlooville Precinct	1813	1828	1840	1855	1910	1930	1950	2010	2040	2110	2140	2210
Crookhorn Precinct	1821	1836	1846	1901	1916	1936	1956	2016	2046	2116	2146	2216
Cosham Health Centre	1829	1843	1853	1908	1923	1943	2003	2023	2053	2123	2153	2223
Hilsea Lido	1834	1847	1857	1912	1927	1947	2007	2027	2057	2127	2157	2227
North End Junction	1839	1852	1902	1917	1932	1952	2012	2032	2102	2132	2202	2232
Lake Road Health Centre	1844	1857	1907	1922	1937	1957	2017	2037	2107	2137	2207	2237
City Centre South	1851	1904	1914	1929	1944	2004	2024	2044	2114	2144	2214	2244
Winston Churchill Avenue	1854	----	1917	1932	1947	----	2027	2047	----	2147	----	2247

Service No.:	7	7
Notes:		
Wecock Farm, Blackbird Close	2300	2400
Waterlooville Precinct	2310	0010
Crookhorn Precinct	2316	0016
Cosham Health Centre	2323	0023
Hilsea Lido	2327	----
North End Junction	2332	----
Lake Road Health Centre	2337	----
City Centre South	2344	----
Winston Churchill Avenue	----	----

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

7 City Centre - Cosham - Waterlooville - Wecock Farm
Via North End - Hilsea - Widley - Crookhorn - Milton Road

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	0731	0751	0811	0831	0846	0911	0936	0956	1011	1026	1041	1056
City Centre South	0734	0754	0814	0834	0849	0915	0940	1000	1015	1030	1045	1100
Lake Road Health Centre	0740	0800	0820	0840	0855	0923	0948	1008	1023	1038	1053	1108
North End Junction	0745	0805	0825	0845	0900	0931	0956	1016	1031	1046	1101	1116
Hilsea Lido	0751	0811	0831	0851	0908	0939	1004	1024	1039	1054	1109	1124
Cosham Health Centre	0754	0814	0834	0854	0911	0942	1007	1027	1042	1057	1112	1127
Crookhorn Precinct	0802	0822	0842	0902	0920	0951	1016	1036	1051	1106	1121	1136
Waterlooville Precinct	0809	0829	0849	0911	0929	1000	1025	1045	1100	1115	1130	1145
Wecock Farm, Blackbird Close	0818	0838	0858	0921	0939	1010	1035	1055	1110	1125	1140	1155

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	1111	1126	1141	1156	1211	1226	1241	1256	1311	1326	1341	1356
City Centre South	1115	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345	1400
Lake Road Health Centre	1123	1138	1153	1208	1223	1238	1253	1308	1323	1338	1353	1408
North End Junction	1131	1146	1201	1216	1231	1246	1301	1316	1331	1346	1401	1416
Hilsea Lido	1139	1154	1209	1224	1239	1254	1309	1324	1339	1354	1409	1424
Cosham Health Centre	1142	1157	1212	1227	1242	1257	1312	1327	1342	1357	1412	1427
Crookhorn Precinct	1151	1206	1221	1236	1251	1306	1321	1336	1351	1406	1421	1436
Waterlooville Precinct	1200	1215	1230	1245	1300	1315	1330	1345	1400	1415	1430	1445
Wecock Farm, Blackbird Close	1210	1225	1240	1255	1310	1325	1340	1355	1410	1425	1440	1455

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Winston Churchill Avenue	1411	1426	1441	1456	1511	1526	1541	1556	1611	1626	1641	1656
City Centre South	1415	1430	1445	1500	1515	1530	1545	1600	1615	1630	1645	1700
Lake Road Health Centre	1423	1438	1453	1508	1523	1538	1553	1608	1623	1638	1653	1708
North End Junction	1431	1446	1501	1516	1531	1546	1601	1616	1631	1646	1701	1716
Hilsea Lido	1439	1454	1509	1524	1539	1554	1609	1624	1639	1654	1709	1724
Cosham Health Centre	1442	1457	1512	1527	1542	1557	1612	1627	1642	1657	1712	1727
Crookhorn Precinct	1451	1506	1521	1536	1551	1606	1621	1636	1651	1706	1721	1736
Waterlooville Precinct	1500	1515	1530	1545	1600	1615	1630	1645	1700	1715	1730	1745
Wecock Farm, Blackbird Close	1510	1525	1540	1555	1610	1625	1640	1655	1710	1725	1740	1755

Service No.:	7	7	7	7	7	7	7	7	7	7	7
Notes:											
Winston Churchill Avenue	1714	1734	1754	1814	1834	1904	1934	2004	2104	2204	2304
City Centre South	1718	1738	1758	1818	1837	1907	1937	2007	2107	2207	2307
Lake Road Health Centre	1726	1746	1806	1826	1843	1913	1943	2013	2113	2213	2313
North End Junction	1734	1754	1814	1834	1848	1918	1948	2018	2118	2218	2318
Hilsea Lido	1742	1802	1822	1840	1854	1924	1954	2024	2124	2224	2324
Cosham Health Centre	1745	1805	1825	1843	1857	1927	1957	2027	2127	2227	2327
Crookhorn Precinct	1754	1814	1834	1851	1905	1935	2005	2035	2135	2235	2335
Waterlooville Precinct	1803	1823	1841	1858	1912	1942	2012	2042	2142	2242	2342
Wecock Farm, Blackbird Close	1813	1833	1850	1907	1921	1951	2021	2051	2151	2251	2351

7 Wecock Farm - Waterlooville - Cosham - City Centre
Via Milton Road - Crookhorn - Widley - Hilsea - North End

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	0638	0700	0720	0740	0755	0815	0830	0845	0900	0915	0930	0945
Waterlooville Precinct	0648	0710	0730	0750	0805	0825	0840	0855	0913	0928	0943	0958
Crookhorn Precinct	0654	0716	0736	0756	0811	0831	0846	0901	0921	0936	0951	1006
Cosham Health Centre	0701	0723	0743	0803	0818	0838	0853	0909	0929	0944	0959	1014
Hilsea Lido	0705	0727	0747	0807	0822	0842	0857	0914	0934	0949	1004	1019
North End Junction	0710	0732	0752	0812	0827	0847	0902	0921	0941	0956	1011	1026
Lake Road Health Centre	0715	0737	0757	0817	0832	0852	0909	0928	0948	1003	1018	1033
City Centre South	0722	0744	0804	0824	0839	0859	0918	0937	0957	1012	1027	1042
Winston Churchill Avenue	0725	0747	0807	0827	0842	0902	0922	0941	1001	1016	1031	1046

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1000	1015	1030	1045	1100	1115	1130	1145	1200	1215	1230	1245
Waterlooville Precinct	1013	1028	1043	1058	1113	1128	1143	1158	1213	1228	1243	1258
Crookhorn Precinct	1021	1036	1051	1106	1121	1136	1151	1206	1221	1236	1251	1306
Cosham Health Centre	1029	1044	1059	1114	1129	1144	1159	1214	1229	1244	1259	1314
Hilsea Lido	1034	1049	1104	1119	1134	1149	1204	1219	1234	1249	1304	1319
North End Junction	1041	1056	1111	1126	1141	1156	1211	1226	1241	1256	1311	1326
Lake Road Health Centre	1048	1103	1118	1133	1148	1203	1218	1233	1248	1303	1318	1333
City Centre South	1057	1112	1127	1142	1157	1212	1227	1242	1257	1312	1327	1342
Winston Churchill Avenue	1101	1116	1131	1146	1201	1216	1231	1246	1301	1316	1331	1346

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1300	1315	1330	1345	1400	1415	1430	1445	1500	1515	1530	1545
Waterlooville Precinct	1313	1328	1343	1358	1413	1428	1443	1458	1513	1528	1543	1558
Crookhorn Precinct	1321	1336	1351	1406	1421	1436	1451	1506	1521	1536	1551	1606
Cosham Health Centre	1329	1344	1359	1414	1429	1444	1459	1514	1529	1544	1559	1614
Hilsea Lido	1334	1349	1404	1419	1434	1449	1504	1519	1534	1549	1604	1619
North End Junction	1341	1356	1411	1426	1441	1456	1511	1526	1541	1556	1611	1626
Lake Road Health Centre	1348	1403	1418	1433	1448	1503	1518	1533	1548	1603	1618	1633
City Centre South	1357	1412	1427	1442	1457	1512	1527	1542	1557	1612	1627	1642
Winston Churchill Avenue	1401	1416	1431	1446	1501	1516	1531	1546	1601	1616	1631	1646

Service No.:	7	7	7	7	7	7	7	7	7	7	7	7
Notes:												
Wecock Farm, Blackbird Close	1600	1615	1630	1645	1700	1720	1740	1800	1820	1840	1900	1930
Waterlooville Precinct	1613	1628	1643	1658	1713	1733	1753	1813	1833	1850	1910	1940
Crookhorn Precinct	1621	1636	1651	1706	1721	1741	1801	1821	1839	1856	1916	1946
Cosham Health Centre	1629	1644	1659	1714	1729	1749	1809	1829	1846	1903	1923	1953
Hilsea Lido	1634	1649	1704	1719	1734	1754	1814	1834	1850	1907	1927	1957
North End Junction	1641	1656	1711	1726	1741	1801	1821	1839	1855	1912	1932	2002
Lake Road Health Centre	1648	1703	1718	1733	1748	1808	1828	1844	1900	1917	1937	2007
City Centre South	1657	1712	1727	1742	1757	1817	1837	1851	1907	1924	1944	2014
Winston Churchill Avenue	1701	1716	1731	1746	1801	1821	1840	1854	----	1927	1947	----

Service No.:	7	7	7	7	7
Notes:					
Wecock Farm, Blackbird Close	2000	2100	2200	2300	2400
Waterlooville Precinct	2010	2110	2210	2310	0010
Crookhorn Precinct	2016	2116	2216	2316	0016
Cosham Health Centre	2023	2123	2223	2323	0023
Hilsea Lido	2027	2127	2227	2327	----
North End Junction	2032	2132	2232	2332	----
Lake Road Health Centre	2037	2137	2237	2337	----
City Centre South	2044	2144	2244	2344	----
Winston Churchill Avenue	2047	2147	2247	----	----

7C

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

7C The Hard/City Centre - Cosham - South Downs Campus Via North End - Hilsea

Service No.:	7C	7C
Notes:	Sch	Sch
The Hard/Gunwharf	0800	----
City Centre South	0805	0810
Lake Road Health Centre	0813	0818
North End Junction	0821	0826
Hilsea Lido	0829	0834
Cosham Health Centre	0832	0837
South Downs Campus	0842	0847

Notes:
Sch Schooldays Only

7C South Downs Campus - Cosham - North End Via Hilsea

Service No.:	7C
Notes:	Sch
South Downs Campus	1535
Crookhorn Precinct	1538
Cosham Health Centre	1547
Hilsea Lido	1552
North End	1600
Lake Road Health Centre	1608
City Centre South	1617
Winston Churchill Avenue	1621

Notes:
Sch Schooldays Only

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

8 Clarence Pier - City Centre - Cosham - Waterlooville - Clanfield
Via Gunwharf - Stamshaw - Hilsea - Widley - Cowplain - Horndean

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	----	----	----	----	----	----	----	----	0803	0815	0828	0842
The Hard/Gunwharf	----	----	----	0644	0704	0724	0739	0754	0809	0821	0834	0848
City Centre South	----	0608	----	0648	0708	0728	0743	0758	0813	0825	0838	0852
Portsmouth International Port	----	0615	----	0655	0715	0735	0750	0805	0820	0832	0845	0859
Hilsea Lido	----	0622	0642	0702	0722	0742	0757	0812	0827	0839	0852	0906
Cosham Health Centre	----	0625	0645	0705	0725	0745	0800	0815	0830	0842	0855	0909
The Hampshire Rose	----	0630	0650	0710	0730	0750	0805	0820	0835	0847	0900	0915
Waterlooville Precinct	----	0637	0657	0717	0737	0757	0812	0827	0842	0854	0908	0923
Cowplain Shops	----	0644	0704	0724	0744	0804	0819	0834	0849	0901	0916	0931
Horndean Precinct	----	0650	0710	0730	0750	0810	0825	0840	0855	0909	0924	0939
Clanfield, South Road	0600	0652	0712	0732	0752	0812	0827	0842	0857	0912	0927	0942
Clanfield, Drift Road Shops	0604	0656	0716	0736	0756	0816	0831	0846	0901	0916	0931	0946

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	0853	0905	0920	0935	0950	1005	1020	1035	1050	1105	1120	1135
The Hard/Gunwharf	0859	0913	0928	0943	0958	1013	1028	1043	1058	1113	1128	1143
City Centre South	0903	0918	0933	0948	1003	1018	1033	1048	1103	1118	1133	1148
Portsmouth International Port	0912	0927	0942	0957	1012	1027	1042	1057	1112	1127	1142	1157
Hilsea Lido	0921	0936	0951	1006	1021	1036	1051	1106	1121	1136	1151	1206
Cosham Health Centre	0924	0939	0954	1009	1024	1039	1054	1109	1124	1139	1154	1209
The Hampshire Rose	0930	0945	1000	1015	1030	1045	1100	1115	1130	1145	1200	1215
Waterlooville Precinct	0938	0953	1008	1023	1038	1053	1108	1123	1138	1153	1208	1223
Cowplain Shops	0946	1001	1016	1031	1046	1101	1116	1131	1146	1201	1216	1231
Horndean Precinct	0954	1009	1024	1039	1054	1109	1124	1139	1154	1209	1224	1239
Clanfield, South Road	0957	1012	1027	1042	1057	1112	1127	1142	1157	1212	1227	1242
Clanfield, Drift Road Shops	1001	1016	1031	1046	1101	1116	1131	1146	1201	1216	1231	1246

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	1150	1205	1220	1235	1250	1305	1320	1335	1350	1405	1420	1435
The Hard/Gunwharf	1158	1213	1228	1243	1258	1313	1328	1343	1358	1413	1428	1443
City Centre South	1203	1218	1233	1248	1303	1318	1333	1348	1403	1418	1433	1448
Portsmouth International Port	1212	1227	1242	1257	1312	1327	1342	1357	1412	1427	1442	1457
Hilsea Lido	1221	1236	1251	1306	1321	1336	1351	1406	1421	1436	1451	1506
Cosham Health Centre	1224	1239	1254	1309	1324	1339	1354	1409	1424	1439	1454	1509
The Hampshire Rose	1230	1245	1300	1315	1330	1345	1400	1415	1430	1445	1500	1515
Waterlooville Precinct	1238	1253	1308	1323	1338	1353	1408	1423	1438	1453	1508	1523
Cowplain Shops	1246	1301	1316	1331	1346	1401	1416	1431	1446	1501	1516	1531
Horndean Precinct	1254	1309	1324	1339	1354	1409	1424	1439	1454	1509	1524	1539
Clanfield, South Road	1257	1312	1327	1342	1357	1412	1427	1442	1457	1512	1527	1542
Clanfield, Drift Road Shops	1301	1316	1331	1346	1401	1416	1431	1446	1501	1516	1531	1546

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	1450	1505	1520	1535	1550	1605	1620	1635	1650	1705	1720	1735
The Hard/Gunwharf	1458	1513	1528	1543	1558	1613	1628	1643	1658	1713	1728	1743
City Centre South	1503	1518	1533	1548	1603	1618	1633	1648	1703	1718	1733	1748
Portsmouth International Port	1512	1527	1542	1557	1612	1627	1642	1657	1712	1727	1742	1757
Hilsea Lido	1521	1536	1551	1606	1621	1636	1651	1706	1721	1736	1751	1806
Cosham Health Centre	1524	1539	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809
The Hampshire Rose	1530	1545	1600	1615	1630	1645	1700	1715	1730	1745	1800	1815
Waterlooville Precinct	1538	1553	1608	1623	1638	1653	1708	1723	1738	1753	1808	1823
Cowplain Shops	1546	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1831
Horndean Precinct	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809	1824	1837
Clanfield, South Road	1557	1612	1627	1642	1657	1712	1727	1742	1757	1812	1827	1839
Clanfield, Drift Road Shops	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1831	1843

Service No.:	8	8	8	8	8	8	8	8
Notes:								
Clarence Pier	1755	----	----	----	----	----	----	----
The Hard/Gunwharf	1803	1828	1851	1921	2015	2115	2215	2315
City Centre South	1808	1833	1855	1925	2019	2119	2219	2319
Portsmouth International Port	1817	1840	1902	1932	2026	2126	2226	2326
Hilsea Lido	1826	1847	1909	1939	2033	2133	2233	2333
Cosham Health Centre	1829	1850	1912	1942	2036	2136	2236	2336
The Hampshire Rose	1835	1855	1917	1947	2041	2141	2241	2341
Waterlooville Precinct	1842	1902	1924	1954	2048	2148	2248	2348
Cowplain Shops	1849	1909	1931	2001	2055	2155	2255	2355
Horndean Precinct	1855	1915	1937	2007	2101	2201	2301	0001
Clanfield, South Road	1857	1917	1939	2009	2103	2203	2303	0003
Clanfield, Drift Road Shops	1901	1921	1943	2013	2107	2207	2307	0007

8 Clanfield - Waterlooville - Cosham - City Centre - Clarence Pier
Via Horndean - Cowplain - Widley - Hilsea - Stamshaw - Gunwharf

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	0604	----	0659	0719	0739	0759	0819	0834	0849	0904	0919	0934
Clanfield, Coombs Close	0607	----	0702	0722	0742	0802	0822	0837	0852	0908	0923	0938
Horndean Precinct	0610	0632	0705	0725	0745	0805	0825	0840	0855	0912	0927	0942
Cowplain Shops	0617	0639	0712	0732	0752	0812	0832	0847	0902	0920	0935	0950
Waterlooville Precinct	0623	0645	0718	0738	0758	0818	0838	0853	0910	0928	0943	0958
The Hampshire Rose	0629	0651	0724	0744	0804	0824	0844	0859	0917	0935	0950	1005
Cosham Health Centre	0634	0656	0729	0749	0809	0829	0849	0904	0923	0941	0956	1011
Hilsea Crescent	0638	0700	0733	0753	0813	0833	0853	0909	0928	0946	1001	1016
Portsmouth International Port	0645	0707	0740	0800	0820	0840	0900	0917	0936	0954	1009	1024
City Centre South	0652	0714	0747	0807	0827	0847	0908	0925	0944	1002	1017	1032
The Hard/Gunwharf	0656	0718	0751	0811	0831	0851	0912	0929	0948	1006	1021	1036
Clarence Pier	----	----	0757	0817	0837	0857	0920	0937	0956	1014	1029	1044

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	0949	1004	1019	1034	1049	1104	1119	1134	1149	1204	1219	1234
Clanfield, Coombs Close	0953	1008	1023	1038	1053	1108	1123	1138	1153	1208	1223	1238
Horndean Precinct	0957	1012	1027	1042	1057	1112	1127	1142	1157	1212	1227	1242
Cowplain Shops	1005	1020	1035	1050	1105	1120	1135	1150	1205	1220	1235	1250
Waterlooville Precinct	1013	1028	1043	1058	1113	1128	1143	1158	1213	1228	1243	1258
The Hampshire Rose	1020	1035	1050	1105	1120	1135	1150	1205	1220	1235	1250	1305
Cosham Health Centre	1026	1041	1056	1111	1126	1141	1156	1211	1226	1241	1256	1311
Hilsea Crescent	1031	1046	1101	1116	1131	1146	1201	1216	1231	1246	1301	1316
Portsmouth International Port	1039	1054	1109	1124	1139	1154	1209	1224	1239	1254	1309	1324
City Centre South	1047	1102	1117	1132	1147	1202	1217	1232	1247	1302	1317	1332
The Hard/Gunwharf	1051	1106	1121	1136	1151	1206	1221	1236	1251	1306	1321	1336
Clarence Pier	1059	1114	1129	1144	1159	1214	1229	1244	1259	1314	1329	1344

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1249	1304	1319	1334	1349	1404	1419	1434	1449	1504	1519	1534
Clanfield, Coombs Close	1253	1308	1323	1338	1353	1408	1423	1438	1453	1508	1523	1538
Horndean Precinct	1257	1312	1327	1342	1357	1412	1427	1442	1457	1512	1527	1542
Cowplain Shops	1305	1320	1335	1350	1405	1420	1435	1450	1505	1520	1535	1550
Waterlooville Precinct	1313	1328	1343	1358	1413	1428	1443	1458	1513	1528	1543	1558
The Hampshire Rose	1320	1335	1350	1405	1420	1435	1450	1505	1520	1535	1550	1605
Cosham Health Centre	1326	1341	1356	1411	1426	1441	1456	1511	1526	1541	1556	1611
Hilsea Crescent	1331	1346	1401	1416	1431	1446	1501	1516	1531	1546	1601	1616
Portsmouth International Port	1339	1354	1409	1424	1439	1454	1509	1524	1539	1554	1609	1624
City Centre South	1347	1402	1417	1432	1447	1502	1517	1532	1547	1602	1617	1632
The Hard/Gunwharf	1351	1406	1421	1436	1451	1506	1521	1536	1551	1606	1621	1636
Clarence Pier	1359	1414	1429	1444	1459	1514	1529	1544	1559	1614	1629	1644

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1549	1604	1619	1634	1649	1704	1719	1734	1749	1804	1819	1831
Clanfield, Coombs Close	1553	1608	1623	1638	1653	1708	1723	1738	1753	1808	1823	1834
Horndean Precinct	1557	1612	1627	1642	1657	1712	1727	1742	1757	1812	1827	----
Cowplain Shops	1605	1620	1635	1650	1705	1720	1735	1750	1805	1820	1835	----
Waterlooville Precinct	1613	1628	1643	1658	1713	1728	1743	1758	1813	1828	1841	----
The Hampshire Rose	1620	1635	1650	1705	1720	1735	1750	1805	1820	1835	1847	----
Cosham Health Centre	1626	1641	1656	1711	1726	1741	1756	1811	1826	1840	1852	----
Hilsea Crescent	1631	1646	1701	1716	1731	1746	1801	1816	1831	1844	1856	----
Portsmouth International Port	1639	1654	1709	1724	1739	1754	1809	1824	1838	1851	1903	----
City Centre South	1647	1702	1717	1732	1747	1802	1817	1832	1845	1858	1910	----
The Hard/Gunwharf	1651	1706	1721	1736	1751	1806	1821	1836	1849	1902	1914	----
Clarence Pier	1659	1714	1729	1744	1759	----	----	----	----	----	----	----

Service No.:	8	8	8	8	8	8	8	8	8
Notes:									
Clanfield, Drift Road Shops	1845	1901	1924	1943	2015	2109	2209	2309	0007
Clanfield, Coombs Close	1848	1904	1927	1946	2018	2112	2212	2312	0010
Horndean Precinct	1851	1907	1930	----	2021	2115	2215	2315	----
Cowplain Shops	1858	1914	1937	----	2028	2122	2222	2322	----
Waterlooville Precinct	1904	1920	1943	----	2034	2128	2228	2328	----
The Hampshire Rose	1910	1926	1949	----	2040	2134	2234	2334	----
Cosham Health Centre	1915	1931	1954	----	2045	2139	2239	2339	----
Hilsea Crescent	1919	1935	1958	----	2049	2143	2243	----	----
Portsmouth International Port	1926	1942	2005	----	2056	2150	2250	----	----
City Centre South	1933	1949	2012	----	2103	2157	2257	----	----
The Hard/Gunwharf	----	1953	----	----	2107	2201	2301	----	----
Clarence Pier	----	----	----	----	----	----	----	----	----

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

8 Clarence Pier - City Centre - Cosham - Waterlooville - Clanfield
Via Gunwharf - Stamshaw - Hilsea - Widley - Cowplain - Horndean

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----
The Hard/Gunwharf	----	----	0744	0814	0844	0908	0925	0943	1003	1023	1043	1103
City Centre South	----	----	0748	0818	0848	0912	0929	0948	1008	1028	1048	1108
Portsmouth International Port	----	----	0755	0825	0855	0919	0936	0957	1017	1037	1057	1117
Hilsea Lido	----	----	0802	0832	0902	0926	0945	1006	1026	1046	1106	1126
Cosham Health Centre	----	0735	0805	0835	0905	0929	0948	1009	1029	1049	1109	1129
The Hampshire Rose	----	0740	0810	0840	0910	0934	0954	1015	1035	1055	1115	1135
Waterlooville Precinct	----	0747	0817	0847	0917	0942	1002	1023	1043	1103	1123	1143
Cowplain Shops	----	0754	0824	0854	0924	0950	1010	1031	1051	1111	1131	1151
Horndean Precinct	----	0800	0830	0900	0930	0958	1018	1039	1059	1119	1139	1159
Clanfield, South Road	0734	0802	0832	0902	0933	1001	1021	1042	1102	1122	1142	1202
Clanfield, Drift Road Shops	0738	0806	0836	0906	0937	1005	1025	1046	1106	1126	1146	1206

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----
The Hard/Gunwharf	1123	1143	1203	1223	1243	1303	1323	1343	1403	1423	1443	1503
City Centre South	1128	1148	1208	1228	1248	1308	1328	1348	1408	1428	1448	1508
Portsmouth International Port	1137	1157	1217	1237	1257	1317	1337	1357	1417	1437	1457	1517
Hilsea Lido	1146	1206	1226	1246	1306	1326	1346	1406	1426	1446	1506	1526
Cosham Health Centre	1149	1209	1229	1249	1309	1329	1349	1409	1429	1449	1509	1529
The Hampshire Rose	1155	1215	1235	1255	1315	1335	1355	1415	1435	1455	1515	1535
Waterlooville Precinct	1203	1223	1243	1303	1323	1343	1403	1423	1443	1503	1523	1543
Cowplain Shops	1211	1231	1251	1311	1331	1351	1411	1431	1451	1511	1531	1551
Horndean Precinct	1219	1239	1259	1319	1339	1359	1419	1439	1459	1519	1539	1559
Clanfield, South Road	1222	1242	1302	1322	1342	1402	1422	1442	1502	1522	1542	1602
Clanfield, Drift Road Shops	1226	1246	1306	1326	1346	1406	1426	1446	1506	1526	1546	1606

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----
The Hard/Gunwharf	1523	1543	1603	1623	1643	1703	1723	1743	1815	1915	2015	2115
City Centre South	1528	1548	1608	1628	1648	1708	1728	1748	1819	1919	2019	2119
Portsmouth International Port	1537	1557	1617	1637	1657	1717	1737	1757	1826	1926	2026	2126
Hilsea Lido	1546	1606	1626	1646	1706	1726	1746	1806	1833	1933	2033	2133
Cosham Health Centre	1549	1609	1629	1649	1709	1729	1749	1809	1836	1936	2036	2136
The Hampshire Rose	1555	1615	1635	1655	1715	1735	1755	1814	1841	1941	2041	2141
Waterlooville Precinct	1603	1623	1643	1703	1723	1743	1803	1821	1848	1948	2048	2148
Cowplain Shops	1611	1631	1651	1711	1731	1751	1810	1828	1855	1955	2055	2155
Horndean Precinct	1619	1639	1659	1719	1739	1759	1816	1834	1901	2001	2101	2201
Clanfield, South Road	1622	1642	1702	1722	1742	1802	1818	1836	1903	2003	2103	2203
Clanfield, Drift Road Shops	1626	1646	1706	1726	1746	1806	1822	1840	1907	2007	2107	2207

Service No.:	8	8
Notes:		
Clarence Pier	----	----
The Hard/Gunwharf	2215	2315
City Centre South	2219	2319
Portsmouth International Port	2226	2326
Hilsea Lido	2233	2333
Cosham Health Centre	2236	2336
The Hampshire Rose	2241	2341
Waterlooville Precinct	2248	2348
Cowplain Shops	2255	2355
Horndean Precinct	2301	0001
Clanfield, South Road	2303	0003
Clanfield, Drift Road Shops	2307	0007

8 Clanfield - Waterlooville - Cosham - City Centre - Clarence Pier Via Horndean - Cowplain - Widley - Hilsea - Stamshaw - Gunwharf

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	----	----	0739	0809	0839	0909	0939	1009	1029	1049	1109	1129
Clanfield, Coombs Close	----	----	0742	0812	0842	0912	0943	1013	1033	1053	1113	1133
Horndean Precinct	----	0718	0745	0815	0845	0915	0947	1017	1037	1057	1117	1137
Cowplain Shops	----	0725	0752	0822	0852	0922	0955	1025	1045	1105	1125	1145
Waterlooville Precinct	0658	0731	0758	0828	0858	0928	1003	1033	1053	1113	1133	1153
The Hampshire Rose	0704	0737	0804	0834	0904	0934	1010	1040	1100	1120	1140	1200
Cosham Health Centre	0709	0742	0809	0839	0909	0940	1016	1046	1106	1126	1146	1206
Hilsea Crescent	0713	0746	0813	0843	0913	0945	1021	1051	1111	1131	1151	1211
Portsmouth International Port	0720	0753	0820	0850	0920	0953	1029	1059	1119	1139	1159	1219
City Centre South	0727	0800	0827	0857	0927	1001	1037	1107	1127	1147	1207	1227
The Hard/Gunwharf	0731	0804	0831	0901	0931	1005	1041	1111	1131	1151	1211	1231
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1149	1209	1229	1249	1309	1329	1349	1409	1429	1449	1509	1529
Clanfield, Coombs Close	1153	1213	1233	1253	1313	1333	1353	1413	1433	1453	1513	1533
Horndean Precinct	1157	1217	1237	1257	1317	1337	1357	1417	1437	1457	1517	1537
Cowplain Shops	1205	1225	1245	1305	1325	1345	1405	1425	1445	1505	1525	1545
Waterlooville Precinct	1213	1233	1253	1313	1333	1353	1413	1433	1453	1513	1533	1553
The Hampshire Rose	1220	1240	1300	1320	1340	1400	1420	1440	1500	1520	1540	1600
Cosham Health Centre	1226	1246	1306	1326	1346	1406	1426	1446	1506	1526	1546	1606
Hilsea Crescent	1231	1251	1311	1331	1351	1411	1431	1451	1511	1531	1551	1611
Portsmouth International Port	1239	1259	1319	1339	1359	1419	1439	1459	1519	1539	1559	1619
City Centre South	1247	1307	1327	1347	1407	1427	1447	1507	1527	1547	1607	1627
The Hard/Gunwharf	1251	1311	1331	1351	1411	1431	1451	1511	1531	1551	1611	1631
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1549	1609	1629	1649	1709	1729	1749	1809	1825	1842	1909	2009
Clanfield, Coombs Close	1553	1613	1633	1653	1713	1733	1753	1812	1828	1845	1912	2012
Horndean Precinct	1557	1617	1637	1657	1717	1737	1757	1815	1831	1848	1915	2015
Cowplain Shops	1605	1625	1645	1705	1725	1745	1805	1822	1838	1855	1922	2022
Waterlooville Precinct	1613	1633	1653	1713	1733	1753	1811	1828	1844	1901	1928	2028
The Hampshire Rose	1620	1640	1700	1720	1740	1800	1817	1834	1850	1907	1934	2034
Cosham Health Centre	1626	1646	1706	1726	1746	1805	1822	1839	1855	1912	1939	2039
Hilsea Crescent	1631	1651	1711	1731	1751	1809	1826	1843	1859	1916	1943	2043
Portsmouth International Port	1639	1659	1719	1739	1759	1816	1833	1850	1906	1923	1950	2050
City Centre South	1647	1707	1727	1747	1807	1823	1840	1857	1913	1930	1957	2057
The Hard/Gunwharf	1651	1711	1731	1751	1811	1827	1844	1901	1917	1934	2001	2101
Clarence Pier	----	----	----	----	----	----	----	----	----	----	----	----

Service No.:	8	8	8	8
Notes:				
Clanfield, Drift Road Shops	2109	2209	2309	0007
Clanfield, Coombs Close	2112	2212	2312	0010
Horndean Precinct	2115	2215	2315	----
Cowplain Shops	2122	2222	2322	----
Waterlooville Precinct	2128	2228	2328	----
The Hampshire Rose	2134	2234	2334	----
Cosham Health Centre	2139	2239	2339	----
Hilsea Crescent	2143	2243	----	----
Portsmouth International Port	2150	2250	----	----
City Centre South	2157	2257	----	----
The Hard/Gunwharf	2201	2301	----	----
Clarence Pier	----	----	----	----

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

8 Clarence Pier - City Centre - Cosham - Waterlooville - Clanfield
Via Gunwharf - Stamshaw - Hilsea - Widley - Cowplain - Horndean

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	----	----	----	----	----	----	----	----	----	----	0705	0720
The Hard/Gunwharf	----	----	----	----	----	----	0613	0626	0641	0656	0711	0728
City Centre South	----	----	----	----	----	0605	0617	0630	0645	0700	0715	0733
Portsmouth International Port	----	----	----	----	----	0612	0624	0637	0652	0707	0724	0742
Hilsea Lido	----	----	0533	----	0607	0619	0631	0644	0659	0714	0733	0751
Cosham Health Centre	----	----	0536	----	0610	0622	0634	0647	0702	0717	0736	0754
The Hampshire Rose	----	----	0541	----	0615	0627	0639	0652	0707	0723	0742	0800
Waterlooville Precinct	----	----	0548	----	0622	0634	0646	0659	0714	0732	0751	0809
Cowplain Shops	----	----	0555	----	0629	0641	0653	0706	0721	0740	0759	0817
Horndean Precinct	----	----	0601	----	0635	0647	0659	0712	0728	0747	0806	0824
Clanfield, South Road	0519	0551	0603	0621	0637	0649	0701	0714	0731	0750	0809	0827
Clanfield, Drift Road Shops	0523	0555	0607	0625	0641	0653	0705	0718	0735	0754	0813	0831

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:	NSch		Sch	NSch								
Clarence Pier	0735	0750	----	0805	0820	0835	0850	0905	0920	0935	0950	1005
The Hard/Gunwharf	0743	0758	----	0813	0828	0843	0858	0913	0928	0943	0958	1013
City Centre South	0748	0803	----	0818	0833	0848	0903	0918	0933	0948	1003	1018
Portsmouth International Port	0757	0812	----	0827	0842	0857	0912	0927	0942	0957	1012	1027
Hilsea Lido	0806	0821	----	0836	0851	0906	0921	0936	0951	1006	1021	1036
Cosham Health Centre	0809	0824	----	0839	0854	0909	0924	0939	0954	1009	1024	1039
The Hampshire Rose	0815	0830	----	0845	0900	0915	0930	0945	1000	1015	1030	1045
Waterlooville Precinct	0824	0839	----	0854	0909	0923	0938	0953	1008	1023	1038	1053
Cowplain Shops	0832	0847	----	0902	0917	0931	0946	1001	1016	1031	1046	1101
Horndean Precinct	0839	0854	----	0909	0925	0939	0954	1009	1024	1039	1054	1109
Clanfield, South Road	0842	0857	0912	0912	0928	0942	0957	1012	1027	1042	1057	1112
Clanfield, Drift Road Shops	0846	0901	0916	0916	0932	0946	1001	1016	1031	1046	1101	1116

Notes:
Sch Schooldays Only
NSch School Holidays

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	1020	1035	1050	1105	1120	1135	1150	1205	1220	1235	1250	1305
The Hard/Gunwharf	1028	1043	1058	1113	1128	1143	1158	1213	1228	1243	1258	1313
City Centre South	1033	1048	1103	1118	1133	1148	1203	1218	1233	1248	1303	1318
Portsmouth International Port	1042	1057	1112	1127	1142	1157	1212	1227	1242	1257	1312	1327
Hilsea Lido	1051	1106	1121	1136	1151	1206	1221	1236	1251	1306	1321	1336
Cosham Health Centre	1054	1109	1124	1139	1154	1209	1224	1239	1254	1309	1324	1339
The Hampshire Rose	1100	1115	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345
Waterlooville Precinct	1108	1123	1138	1153	1208	1223	1238	1253	1308	1323	1338	1353
Cowplain Shops	1116	1131	1146	1201	1216	1231	1246	1301	1316	1331	1346	1401
Horndean Precinct	1124	1139	1154	1209	1224	1239	1254	1309	1324	1339	1354	1409
Clanfield, South Road	1127	1142	1157	1212	1227	1242	1257	1312	1327	1342	1357	1412
Clanfield, Drift Road Shops	1131	1146	1201	1216	1231	1246	1301	1316	1331	1346	1401	1416

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	1320	1335	1350	1405	1420	1435	1450	1505	1520	1535	1550	1605
The Hard/Gunwharf	1328	1343	1358	1413	1428	1443	1458	1513	1528	1543	1558	1613
City Centre South	1333	1348	1403	1418	1433	1448	1503	1518	1534	1549	1604	1619
Portsmouth International Port	1342	1357	1412	1427	1442	1457	1512	1528	1544	1559	1614	1629
Hilsea Lido	1351	1406	1421	1436	1451	1506	1521	1537	1553	1608	1623	1638
Cosham Health Centre	1354	1409	1424	1439	1454	1509	1524	1540	1556	1611	1626	1641
The Hampshire Rose	1400	1415	1430	1445	1500	1515	1531	1547	1603	1618	1633	1648
Waterlooville Precinct	1408	1423	1438	1453	1508	1524	1540	1556	1612	1627	1642	1657
Cowplain Shops	1416	1431	1446	1501	1516	1533	1549	1605	1621	1636	1651	1706
Horndean Precinct	1424	1439	1454	1509	1524	1541	1557	1613	1629	1644	1659	1714
Clanfield, South Road	1427	1442	1457	1512	1527	1544	1600	1616	1632	1647	1702	1717
Clanfield, Drift Road Shops	1431	1446	1501	1516	1531	1548	1604	1620	1636	1651	1706	1721

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clarence Pier	1620	1636	1652	1708	1724	1740	1756	1815	1830	1845	1914	2009
The Hard/Gunwharf	1628	1644	1700	1716	1732	1748	1804	1823	1838	1853	1920	2015
City Centre South	1634	1650	1706	1722	1738	1754	1810	1829	1844	1859	1924	2019
Portsmouth International Port	1644	1700	1716	1732	1748	1804	1820	1839	1854	1909	1931	2026
Hilsea Lido	1653	1709	1725	1741	1757	1813	1829	1848	1903	1916	1938	2033
Cosham Health Centre	1656	1712	1728	1744	1800	1816	1832	1851	1906	1919	1941	2036
The Hampshire Rose	1703	1719	1735	1751	1807	1823	1839	1858	1911	1924	1946	2041
Waterlooville Precinct	1712	1728	1744	1800	1816	1832	1848	1907	1918	1931	1953	2048
Cowplain Shops	1721	1737	1753	1809	1825	1841	1857	1914	1925	1938	2000	2055
Horndean Precinct	1729	1745	1801	1817	1833	1849	1905	1920	1931	1944	2006	2101
Clanfield, South Road	1732	1748	1804	1820	1836	1852	1907	1922	1933	1946	2008	2103
Clanfield, Drift Road Shops	1736	1752	1808	1824	1840	1856	1911	1926	1937	1950	2012	2107

Service No.:	8	8	8
Notes:			
Clarence Pier	----	----	----
The Hard/Gunwharf	2115	2215	2315
City Centre South	2119	2219	2319
Portsmouth International Port	2126	2226	2326
Hilsea Lido	2133	2233	2333
Cosham Health Centre	2136	2236	2336
The Hampshire Rose	2141	2241	2341
Waterlooville Precinct	2148	2248	2348
Cowplain Shops	2155	2255	2355
Horndean Precinct	2201	2301	0001
Clanfield, South Road	2203	2303	0003
Clanfield, Drift Road Shops	2207	2307	0007

8 Clanfield - Waterlooville - Cosham - City Centre - Clarence Pier Via Horndean - Cowplain - Widley - Hilsea - Stamshaw - Gunwharf

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	----	0523	0555	0609	0625	0643	0656	0708	0721	0738	0757	0816
Clanfield, Coombs Close	----	0526	0558	0612	0628	0646	0659	0711	0725	0742	0801	0820
Horndean Precinct	----	0529	0601	0615	0631	0649	0702	0714	0729	0746	0805	0824
Cowplain Shops	----	0536	0608	0622	0638	0656	0709	0721	0737	0754	0813	0832
Waterlooville Precinct	----	0542	0614	0628	0644	0702	0715	0729	0745	0802	0821	0840
The Hampshire Rose	----	0548	0620	0634	0650	0708	0722	0736	0752	0809	0828	0847
Cosham Health Centre	0540	0553	0625	0639	0655	0713	0729	0743	0759	0816	0835	0854
Hilsea Crescent	0544	0557	0629	0643	0659	0717	0734	0748	0804	0821	0840	0859
Portsmouth International Port	0551	0604	0636	0650	0706	0726	0743	0757	0813	0830	0849	0908
City Centre South	0558	0611	0643	0657	0713	0735	0752	0806	0822	0839	0858	0917
The Hard/Gunwharf	0602	0615	0647	0701	0717	0739	0756	0810	0826	0843	0902	0921
Clarence Pier	----	0621	0653	0707	0725	----	0804	0818	0834	0851	0910	0929

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:		Sch	NSch									
Clanfield, Drift Road Shops	0834	----	0849	0904	0919	0935	0949	1004	1019	1034	1049	1104
Clanfield, Coombs Close	0838	----	0853	0908	0923	0939	0953	1008	1023	1038	1053	1108
Horndean Precinct	0842	0857	0857	0912	0927	0943	0957	1012	1027	1042	1057	1112
Cowplain Shops	0850	0905	0905	0920	0935	0951	1005	1020	1035	1050	1105	1120
Waterlooville Precinct	0858	0913	0913	0928	0943	0959	1013	1028	1043	1058	1113	1128
The Hampshire Rose	0905	0920	0920	0935	0950	1006	1020	1035	1050	1105	1120	1135
Cosham Health Centre	0912	0926	0926	0941	0956	1012	1026	1041	1056	1111	1126	1141
Hilsea Crescent	0917	0931	0931	0946	1001	1017	1031	1046	1101	1116	1131	1146
Portsmouth International Port	0925	0939	0939	0954	1009	1025	1039	1054	1109	1124	1139	1154
City Centre South	0933	0947	0947	1002	1017	1033	1047	1102	1117	1132	1147	1202
The Hard/Gunwharf	0937	0951	0951	1006	1021	1037	1051	1106	1121	1136	1151	1206
Clarence Pier	0945	0959	0959	1014	1029	1045	1059	1114	1129	1144	1159	1214

Notes:

Sch Schooldays Only
NSch School Holidays

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1119	1134	1149	1204	1219	1234	1249	1304	1319	1334	1349	1404
Clanfield, Coombs Close	1123	1138	1153	1208	1223	1238	1253	1308	1323	1338	1353	1408
Horndean Precinct	1127	1142	1157	1212	1227	1242	1257	1312	1327	1342	1357	1412
Cowplain Shops	1135	1150	1205	1220	1235	1250	1305	1320	1335	1350	1405	1420
Waterlooville Precinct	1143	1158	1213	1228	1243	1258	1313	1328	1343	1358	1413	1428
The Hampshire Rose	1150	1205	1220	1235	1250	1305	1320	1335	1350	1405	1420	1435
Cosham Health Centre	1156	1211	1226	1241	1256	1311	1326	1341	1356	1411	1426	1441
Hilsea Crescent	1201	1216	1231	1246	1301	1316	1331	1346	1401	1416	1431	1446
Portsmouth International Port	1209	1224	1239	1254	1309	1324	1339	1354	1409	1424	1439	1454
City Centre South	1217	1232	1247	1302	1317	1332	1347	1402	1417	1432	1447	1502
The Hard/Gunwharf	1221	1236	1251	1306	1321	1336	1351	1406	1421	1436	1451	1506
Clarence Pier	1229	1244	1259	1314	1329	1344	1359	1414	1429	1444	1459	1514

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1419	1434	1449	1504	1519	1534	1551	1607	1623	1639	1654	1709
Clanfield, Coombs Close	1423	1438	1453	1508	1523	1538	1555	1611	1627	1643	1658	1713
Horndean Precinct	1427	1442	1457	1512	1527	1542	1559	1615	1631	1647	1702	1717
Cowplain Shops	1435	1450	1505	1520	1535	1550	1607	1623	1639	1655	1710	1725
Waterlooville Precinct	1443	1458	1513	1529	1544	1559	1616	1632	1648	1704	1719	1734
The Hampshire Rose	1450	1505	1520	1536	1551	1606	1623	1639	1655	1711	1726	1741
Cosham Health Centre	1456	1511	1526	1542	1557	1612	1629	1645	1701	1717	1732	1747
Hilsea Crescent	1501	1516	1531	1547	1602	1617	1634	1650	1706	1722	1737	1752
Portsmouth International Port	1509	1524	1539	1555	1610	1625	1642	1658	1714	1730	1745	1800
City Centre South	1517	1532	1547	1603	1618	1633	1650	1706	1722	1738	1753	1808
The Hard/Gunwharf	1522	1537	1552	1608	1623	1638	1655	1711	1727	1743	1758	1813
Clarence Pier	1530	1545	1600	1616	1631	1646	1703	1719	1735	1751	1806	1821

Service No.:	8	8	8	8	8	8	8	8	8	8	8	8
Notes:												
Clanfield, Drift Road Shops	1724	1739	1755	1811	1827	1840	1859	1911	1929	1937	1952	2014
Clanfield, Coombs Close	1728	1743	1759	1815	1831	1844	1903	1914	1932	1940	1955	2017
Horndean Precinct	1732	1747	1803	1819	1835	----	1906	----	1935	----	1958	2020
Cowplain Shops	1740	1755	1811	1827	1843	----	1913	----	1942	----	2005	2027
Waterlooville Precinct	1749	1804	1820	1836	1852	----	1919	----	1948	----	2011	2033
The Hampshire Rose	1756	1811	1827	1843	1859	----	1925	----	1954	----	2017	2039
Cosham Health Centre	1802	1817	1833	1849	1905	----	1930	----	1959	----	2022	2044
Hilsea Crescent	1807	1822	1838	1854	1909	----	1934	----	----	----	2026	2048
Portsmouth International Port	1815	1830	1846	1902	1916	----	1941	----	----	----	2033	2055
City Centre South	1823	1838	1854	1909	1923	----	1948	----	----	----	2040	2102
The Hard/Gunwharf	1828	1843	1859	1913	----	----	1952	----	----	----	2044	2106
Clarence Pier	1836	1851	1907	----	----	----	1958	----	----	----	----	----

Service No.:	8	8	8	8
Notes:				
Clanfield, Drift Road Shops	2109	2209	2309	0007
Clanfield, Coombs Close	2112	2212	2312	0010
Horndean Precinct	2115	2215	2315	----
Cowplain Shops	2122	2222	2322	----
Waterlooville Precinct	2128	2228	2328	----
The Hampshire Rose	2134	2234	2334	----
Cosham Health Centre	2139	2239	2339	----
Hilsea Crescent	2143	2243	----	----
Portsmouth International Port	2150	2250	----	----
City Centre South	2157	2257	----	----
The Hard/Gunwharf	2201	2301	----	----
Clarence Pier	----	----	----	----

13

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

13 Portsmouth - Milton - Baffins
Via Arundel Street - Goldsmith Avenue - Eastern Road

Service No.:	13	13	13	13	13	13	13	13	13
Notes:									
City Centre, Edinburgh Road	0915	1015	1115	1215	1315	1415	1515	1615	1715
Fratton Bridge	0923	1023	1123	1223	1323	1423	1523	1623	1723
Milton, Furze Lane	0935	1035	1135	1235	1335	1435	1535	1635	1735
Portsmouth College	0944	1044	1144	1244	1344	1444	1544	1644	1744

13 Baffins - Milton - Portsmouth
Via Eastern Road - Goldsmith Avenue - Arundel Street

Service No.:	13	13	13	13	13	13	13	13	13	13
Notes:										
Portsmouth College dep	0810	0900	1003	1103	1203	1303	1403	1503	1603	1703
Milton, Furze Lane	0818	0910	1013	1113	1213	1313	1413	1513	1613	1713
Fratton Bridge	0828	0923	1026	1126	1226	1326	1426	1526	1626	1726
City Centre, Edinburgh Road	0836	0931	1034	1134	1234	1334	1434	1534	1634	1734

13

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

13 Portsmouth - Milton - Baffins
Via Arundel Street - Goldsmith Avenue - Eastern Road

Service No.:	13	13	13	13	13	13	13	13	13	13	13	13
Notes:			Sch									
City Centre, Edinburgh Road	0715	0815	0905	0915	1015	1115	1215	1315	1415	1515	1615	1715
Fratton Bridge	0723	0823	0913	0923	1023	1123	1223	1323	1423	1523	1623	1723
Milton, Furze Lane	0735	0835	0925	0935	1035	1135	1235	1335	1435	1536	1636	1736
Portsmouth College	0744	0844	0934	0944	1044	1144	1244	1344	1444	1546	1646	1746

Notes:
Sch Schooldays Only

Service No.:	13
Notes:	
City Centre, Edinburgh Road	1815
Fratton Bridge	1823
Milton, Furze Lane	1836
Portsmouth College	1846

13 Baffins - Milton - Portsmouth
Via Eastern Road - Goldsmith Avenue - Arundel Street

Service No.:	13	13	13	13	13	13	13	13	13	13	13	13
Notes:												
Portsmouth College dep	0703	0803	0903	1003	1103	1203	1303	1403	1503	1605	1705	1805
Milton, Furze Lane	0711	0813	0913	1013	1113	1213	1313	1413	1513	1616	1716	1816
Fratton Bridge	0721	0826	0926	1026	1126	1226	1326	1426	1526	1631	1731	1831
City Centre, Edinburgh Road	0729	0834	0934	1034	1134	1234	1334	1434	1534	1639	1739	1839

15

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

15 Eastney (Ferry Road) - Portsmouth City Centre
Via Devonshire Avenue - Fratton Bridge - Arundel Street

Service No.:	15	15	15	15	15	15	15	15	15
Notes:									
Fort Cumberland	0900	1000	1100	1200	1300	1400	1500	1600	1700
Bransbury Park	0905	1005	1105	1205	1305	1405	1505	1605	1705
Devonshire Square	0911	1011	1111	1211	1311	1411	1511	1611	1711
Fratton Bridge	0917	1017	1117	1217	1317	1417	1517	1617	1717
City Centre, Edinburgh Road	0927	1027	1127	1227	1327	1427	1527	1627	1727

15 Portsmouth City Centre - Eastney (Ferry Road)
Via Arundel Street - Fratton Bridge - Devonshire Avenue

Service No.:	15	15	15	15	15	15	15	15	15	15
Notes:										
City Centre, Edinburgh Road	----	0931	1031	1131	1231	1331	1431	1531	1631	1731
Fratton Bridge	----	0941	1041	1141	1241	1341	1441	1541	1641	1741
Devonshire Square	----	0946	1046	1146	1246	1346	1446	1546	1646	1746
Bransbury Park	0852	0952	1052	1152	1252	1352	1452	1552	1652	1752
Fort Cumberland	0858	0958	1058	1158	1258	1358	1458	1558	1658	1758

15

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

15 Eastney (Hayling Ferry) - Portsmouth City Centre
Via Devonshire Avenue - Fratton Bridge - Arundel Street

Service No.:	15	15	15	15	15	15	15	15	15	15	15	15
Notes:										NSch		
Hayling Ferry	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1714	1814
Bransbury Park	0708	0808	0908	1008	1108	1208	1308	1408	1508	1608	1722	1822
Devonshire Square	0713	0813	0913	1013	1113	1213	1313	1413	1513	1613	1727	1827
Fratton Bridge	0718	0818	0918	1018	1118	1218	1318	1418	1518	1618	1732	1832
City Centre, Edinburgh Road	0727	0827	0927	1027	1127	1227	1327	1427	1527	1627	1741	1841

Notes:
NSch School Holidays

15 Portsmouth City Centre - Eastney (Hayling Ferry)
Via Arundel Street - Fratton Bridge - Devonshire Avenue

Service No.:	15	15	15	15	15	15	15	15	15	15	15	15
Notes:												
City Centre, Edinburgh Road	----	0731	0831	0931	1031	1131	1231	1331	1431	1531	1645	1745
Fratton Bridge	----	0740	0840	0940	1040	1140	1240	1340	1440	1540	1654	1754
Devonshire Square	----	0745	0845	0945	1045	1145	1245	1345	1445	1545	1659	1759
Bransbury Park	0650	0750	0850	0950	1050	1150	1250	1350	1450	1550	1704	1804
Hayling Ferry	0658	0758	0858	0958	1058	1158	1258	1358	1458	1558	1712	1812

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

17 Southsea - Eastney - Copnor - Ocean Park
Via St Mary's Hospital - Copnor Bridge

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
South Parade Pier	0747	0817	0847	0920	0958	1033	1103	1133	1203	1233	1303	1333
Eastney Health Centre	0752	0822	0852	0926	1004	1039	1109	1139	1209	1239	1309	1339
Copnor Bridge	0800	0830	0900	0937	1015	1050	1120	1150	1220	1250	1320	1350
Copnor Road, Stubbington Ave	0802	0832	0903	0940	1018	1053	1123	1153	1223	1253	1323	1353
Admiral Lord Nelson School	0806	0836	0907	0944	1022	1057	1127	1157	1227	1257	1327	1357

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
South Parade Pier	1403	1433	1503	1533	1603	1633	1703	1733	1803	1833	1858	1922
Eastney Health Centre	1409	1439	1509	1539	1609	1639	1709	1739	1809	1838	1903	1927
Copnor Bridge	1420	1450	1520	1550	1620	1650	1720	1750	1820	1846	1911	1935
Copnor Road, Stubbington Ave	1423	1453	1523	1553	1623	1653	1723	1753	1823	1848	1913	1937
Admiral Lord Nelson School	1427	1457	1527	1557	1627	1657	1727	1757	----	1852	----	----

17 Ocean Park - Copnor - Eastney - Southsea
Via Copnor Bridge - St Mary's Hospital

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
Admiral Lord Nelson School	----	----	----	----	0815	0841	----	0925	1000	1033	1103	1133
Copnor Road, Stubbington Ave	0622	0649	0720	0750	0818	0844	0905	0929	1004	1037	1107	1137
Copnor Bridge	0625	0652	0723	0753	0821	0847	0908	0932	1007	1040	1110	1140
Eastney Health Centre	0633	0700	0731	0801	0829	0855	0918	0942	1017	1050	1120	1150
South Parade Pier	0638	0705	0736	0806	0834	0900	0924	0948	1023	1056	1126	1156

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
Admiral Lord Nelson School	1203	1233	1303	1333	1403	1433	1503	1533	1603	1633	1703	1733
Copnor Road, Stubbington Ave	1207	1237	1307	1337	1407	1437	1507	1537	1607	1637	1707	1737
Copnor Bridge	1210	1240	1310	1340	1410	1440	1510	1540	1610	1640	1710	1740
Eastney Health Centre	1220	1250	1320	1350	1420	1450	1520	1550	1620	1650	1720	1750
South Parade Pier	1226	1256	1326	1356	1426	1456	1526	1556	1626	1656	1726	1756

Service No.:	17	17
Notes:		
Admiral Lord Nelson School	1803	1900
Copnor Road, Stubbington Ave	1807	1903
Copnor Bridge	1810	1906
Eastney Health Centre	1820	1914
South Parade Pier	1826	1919

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

17 Southsea - Eastney - Copnor - Ocean Park
Via St Mary's Hospital - Copnor Bridge

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
South Parade Pier	0817	0907	0957	1058	1158	1258	1358	1458	1558	1658	1758	1847
Eastney Health Centre	0822	0912	1002	1104	1204	1304	1404	1504	1604	1704	1804	1852
Copnor Bridge	0830	0920	1013	1115	1215	1315	1415	1515	1615	1715	1812	1900
Copnor Road, Stubbington Ave	0832	0922	1016	1118	1218	1318	1418	1518	1618	1718	1814	1902
Admiral Lord Nelson School	0836	0926	1020	1122	1222	1322	1422	1522	1622	1722	1818	----

17 Ocean Park - Copnor - Eastney - Southsea
Via Copnor Bridge - St Mary's Hospital

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
Admiral Lord Nelson School	----	0845	0935	1030	1130	1230	1330	1430	1530	1630	1730	1825
Copnor Road, Stubbington Ave	0758	0848	0938	1034	1134	1234	1334	1434	1534	1634	1734	1828
Copnor Bridge	0801	0851	0941	1037	1137	1237	1337	1437	1537	1637	1737	1831
Eastney Health Centre	0809	0859	0949	1047	1147	1247	1347	1447	1547	1647	1747	1839
South Parade Pier	0814	0904	0954	1053	1153	1253	1353	1453	1553	1653	1753	1844

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

17 Southsea - Eastney - Copnor - Ocean Park
Via St Mary's Hospital - Copnor Bridge

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
South Parade Pier	0642	0708	0734	0804	0834	0904	0934	1003	1033	1103	1133	1203
Eastney Health Centre	0647	0713	0740	0810	0840	0910	0940	1009	1039	1109	1139	1209
Copnor Bridge	0655	0721	0751	0821	0851	0921	0951	1020	1050	1120	1150	1220
Copnor Road, Stubbington Ave	0657	0724	0754	0824	0854	0924	0954	1023	1053	1123	1153	1223
Admiral Lord Nelson School	0701	0728	0758	0828	0858	0928	0958	1027	1057	1127	1157	1227

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
South Parade Pier	1233	1303	1333	1403	1433	1503	1533	1603	1633	1703	1733	1804
Eastney Health Centre	1239	1309	1339	1409	1439	1509	1540	1610	1640	1710	1740	1811
Copnor Bridge	1250	1320	1350	1420	1450	1520	1552	1622	1652	1722	1752	1823
Copnor Road, Stubbington Ave	1253	1323	1353	1423	1453	1523	1555	1625	1655	1725	1755	1826
Admiral Lord Nelson School	1257	1327	1357	1427	1457	1528	1600	1630	1700	1730	1800	----

Service No.:	17	17	17	17	17
Notes:					
South Parade Pier	1835	1904	1929	1954	2022
Eastney Health Centre	1842	1909	1934	1959	2027
Copnor Bridge	1854	1917	1942	2007	2035
Copnor Road, Stubbington Ave	1857	1919	1944	2009	2037
Admiral Lord Nelson School	1902	----	----	2013	----

17 Ocean Park - Copnor - Eastney - Southsea
Via Copnor Bridge - St Mary's Hospital

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
Admiral Lord Nelson School	----	----	----	----	0708	0733	0803	0833	0903	0933	1003	1033
Copnor Road, Stubbington Ave	0533	0557	0625	0646	0711	0737	0807	0837	0907	0937	1007	1037
Copnor Bridge	0536	0600	0628	0649	0714	0742	0812	0842	0912	0940	1010	1040
Eastney Health Centre	0544	0608	0636	0657	0722	0754	0824	0854	0924	0950	1020	1050
South Parade Pier	0549	0613	0641	0702	0728	0800	0830	0900	0930	0956	1026	1056

Service No.:	17	17	17	17	17	17	17	17	17	17	17	17
Notes:												
Admiral Lord Nelson School	1103	1133	1203	1233	1303	1333	1403	1433	1503	1533	1605	1635
Copnor Road, Stubbington Ave	1107	1137	1207	1237	1307	1337	1407	1437	1507	1537	1609	1639
Copnor Bridge	1110	1140	1210	1240	1310	1340	1410	1440	1510	1541	1613	1643
Eastney Health Centre	1120	1150	1220	1250	1320	1350	1420	1450	1520	1551	1623	1653
South Parade Pier	1126	1156	1226	1256	1326	1356	1426	1456	1526	1557	1629	1659

Service No.:	17	17	17	17	17
Notes:					
Admiral Lord Nelson School	1705	1735	1805	1907	2017
Copnor Road, Stubbington Ave	1709	1739	1809	1910	2020
Copnor Bridge	1713	1743	1813	1913	2023
Eastney Health Centre	1723	1753	1823	1921	2031
South Parade Pier	1729	1759	1829	1926	2036

20

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

20 Fareham - Knowle - Wickham
Via Highlands - Funtley

Service No.:	20	20	20	20	20	20	20	20
Notes:								
Fareham Bus Station [E]	0810	0920	1030	1140	1250	1400	1510	1625
Working Mens Club	0818	0928	1038	1148	1258	1408	1518	1633
The Miners	0824	0934	1044	1154	1304	1414	1524	1639
Knowle Shops	0831	0941	1051	1201	1311	1421	1531	1646
Wickham Square	0841	0951	1101	1211	1321	1431	1541	1656

20 Wickham - Knowle - Fareham
Via Funtley - Highlands

Service No.:	20	20	20	20	20	20	20	20
Notes:								
Wickham Square	0845	0954	1104	1214	1324	1434	1545	1658
Knowle Shops	0855	1004	1114	1224	1334	1444	1555	1708
The Miners	0902	1011	1121	1231	1341	1451	1602	1715
Working Mens Club	0908	1017	1127	1237	1347	1457	1608	1721
Fareham Bus Station	0916	1025	1135	1245	1355	1505	1616	1729

20

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

20 Fareham - Knowle - Wickham
Via Highlands - Funtley

Service No.:	20	20	20	20	20	20	20	20	20	20
Notes:										
Fareham Bus Station [E]	0810	0920	1030	1140	1250	1400	1510	1625	1735	1845
Working Mens Club	0818	0928	1038	1148	1258	1408	1518	1633	1743	1853
The Miners	0824	0934	1044	1154	1304	1414	1524	1639	1749	1859
Knowle Shops	0831	0941	1051	1201	1311	1421	1531	1646	1756	1906
Wickham Square	0841	0951	1101	1211	1321	1431	1541	1656	1806	1916

20 Wickham - Knowle - Fareham
Via Funtley - Highlands

Service No.:	20	20	20	20	20	20	20	20	20	20	20
Notes:											
Wickham Square	0723	0845	0954	1104	1214	1324	1434	1545	1658	1808	1920
Knowle Shops	0733	0855	1004	1114	1224	1334	1444	1555	1708	1818	1930
The Miners	0740	0902	1011	1121	1231	1341	1451	1602	1715	1825	1937
Working Mens Club	0746	0908	1017	1127	1237	1347	1457	1608	1721	1831	1943
Fareham Bus Station	0754	0916	1025	1135	1245	1355	1505	1616	1729	1839	1951

21 Buses to Havant

from 1st September 2019

Mondays to Fridays except public holidays

Portsmouth The Hard Interchange stand K		0540	0600	0615	0630	0645	0700	0715	0730	0745	0800	0815	then at these times each hour	27	37	47	57	07	17	until	1547	1557	
Portsmouth City Centre stop A		0545	0605	0620	0635	0651	0706	0721	0736	0751	0806	0821		33	43	53	03	13	23		1553	1603	
Kingston Prison		0553	0613	0629	0644	0702	0717	0732	0747	0802	0817	0832		42	52	02	12	22	32		1602	1612	
Copnor Green Lane		0559	0619	0636	0651	0710	0725	0741	0756	0811	0826	0840		50	00	10	20	30	40		1610	1620	
Anchorage Park Compass Rose		0604	0624	0643	0658	0717	0732	0750	0805	0820	0835	0847		57	07	17	27	37	47		1617	1627	
Farlington Walton Road	0544	0609	0629	0649	0704	0723	0738	0758	0813	0828		0854				24			54		1624		
Farlington Rectory Avenue	0549	0614	0634	0654	0709	0728	0743	0804	0819	0834		0901				31			01		1631		
Park Parade Dunsbury Way	0557	0622		0702		0737		0815		0845		0913				43			13		1643		
West Leigh Wakefords Shop	0605	0630		0710		0747		0827		0857		0924				54			24		1654		
Havant Bus Station	0615	0640		0720		0800		0840		0910		0937				07			37		1707		

Portsmouth The Hard Interchange stand K	1607	1617	1627	1637	1647	1657	1707	1717	1727	1742	1757	1812	1827	1847	1907	1937	2007	2037	2107	2207	2307	0007	
Portsmouth City Centre stop A	1613	1623	1633	1643	1653	1703	1713	1723	1733	1748	1803	1818	1833	1853	1913	1943	2013	2043	2113	2213	2313	0013	
Kingston Prison	1622	1635	1645	1655	1705	1715	1725	1735	1745	1800	1815	1830	1845	1905	1921	1951	2021	2051	2121	2221	2321	0021	
Copnor Green Lane	1630	1642	1652	1702	1712	1722	1732	1742	1752	1807	1822	1837	1852	1912	1927	1957	2027	2057	2127	2227	2327	0027	
Anchorage Park Compass Rose	1637	1649	1659	1709	1719	1729	1739	1749	1759	1814	1829	1844	1859	1919	1932	2002	2032	2102	2132	2232	2332	0032	
Farlington Walton Road		1656	1706	1716	1726	1736	1746	1756	1806	1821	1836	1851	1904	1924	1936	2006	2036	2106	2136	2236	2336	0036	
Farlington Rectory Avenue		1703	1713	1723	1733	1743	1753	1803	1813	1828	1843	1858	1909	1929	1941	2011	2041	2111	2141	2241	2341	0041	
Park Parade Dunsbury Way		1715			1745			1813		1837		1907		1937			2049		2149				
West Leigh Wakefords Shop		1726			1756			1823		1845		1915		1945			2057		2157				
Havant Bus Station		1739			1809			1835		1855		1925		1955			2107		2207				

This service runs on Fridays only.

21 Buses to Havant

Saturdays

Portsmouth The Hard Interchange stand K	0617	0657	0727	0747	0807		0827	0847	0902	then at these times each hour	17	27	37	47	57	07	until	1517	1527	1537	1547	1557	1612
Portsmouth City Centre stop A	0622	0702	0733	0753	0813		0833	0853	0908		23	33	43	53	03	13		1523	1533	1543	1553	1603	1618
Kingston Prison	0630	0710	0743	0803	0823		0843	0903	0918		33	43	53	03	13	23		1533	1543	1553	1603	1613	1628
Copnor Green Lane	0636	0716	0750	0810	0830		0850	0910	0925		40	50	00	10	20	30		1540	1550	1600	1610	1620	1635
Anchorage Park Compass Rose	0641	0721	0757	0817	0837		0857	0917	0932		47	57	07	17	27	37		1547	1557	1607	1617	1627	1642
Farlington Walton Road	0646	0726	0804		0844	0859		0924			54			24				1554		1613	1624		1648
Farlington Rectory Avenue	0651	0731	0809		0849	0904		0931			01			31				1601			1631		
Park Parade Dunsbury Way	0658	0738	0818		0858	0913		0943			13			43				1613			1643		
West Leigh Wakefords Shop	0708	0748	0828		0908	0924		0954			24			54				1624			1654		
Havant Bus Station	0720	0800	0840		0920	0937		1007			37			07				1637			1707		

Portsmouth The Hard Interchange stand K	1627	1642	1657	1712	1727	1742	1757	1812	1827	1847	1907	1937	2007	2037	2107	2207	2307	0007
Portsmouth City Centre stop A	1633	1648	1703	1718	1733	1748	1803	1818	1833	1853	1913	1943	2013	2043	2113	2213	2313	0013
Kingston Prison	1643	1658	1713	1728	1743	1758	1813	1828	1843	1903	1921	1951	2021	2051	2121	2221	2321	0021
Copnor Green Lane	1650	1705	1720	1735	1750	1805	1820	1835	1850	1910	1927	1957	2027	2057	2127	2227	2327	0027
Anchorage Park Compass Rose	1657	1712	1727	1742	1757	1812	1827	1842	1857	1917	1932	2002	2032	2102	2132	2232	2332	0032
Farlington Walton Road	1703	1718	1733	1748	1803	1818	1833	1848	1903	1923	1936	2006	2036	2106	2136	2236	2336	0036
Farlington Rectory Avenue	1710		1740	1754	1809	1824	1839	1854	1910	1929	1941	2011	2041	2111	2141	2241	2341	0041
Park Parade Dunsbury Way	1720			1802		1832		1902		1937			2049		2149			
West Leigh Wakefords Shop	1730			1810		1840		1910		1945			2057		2157			
Havant Bus Station	1740			1820		1850		1920		1955			2107		2207			

21 Buses to Havant

Sundays and public holidays

Portsmouth The Hard Interchange stand K		0835	0905	0935	1005	1030	1050	1110	then at these times each hour	30	50	10	until	1630	1650	1710	1730	1750	1810	1835	1935	2035	2145
Portsmouth City Centre stop A		0840	0910	0940	1010	1036	1056	1116		36	56	16		1636	1656	1716	1736	1756	1816	1841	1941	2040	2150
Kingston Prison		0848	0918	0948	1018	1046	1106	1126		46	06	26		1646	1706	1726	1746	1806	1826	1849	1949	2048	2158
Copnor Green Lane		0855	0925	0955	1025	1053	1113	1133		53	13	33		1653	1713	1733	1753	1813	1833	1855	1955	2054	2204
Anchorage Park Compass Rose		0900	0930	1000	1030	1100	1120	1140		00	20	40		1700	1720	1740	1800	1820	1840	1900	2000	2058	2208
Farlington Walton Road	0751	0906		1006		1106				06				1706			1805			1905	2005	2102	2212
Farlington Rectory Avenue	0757	0912		1012		1112				12				1712			1810			1910	2010	2106	2216
Park Parade Dunsbury Way	0805	0921		1021		1121				21				1721			1817			1917	2017		
West Leigh Wakefords Shop	0813	0930		1030		1130				30				1730			1825			1925	2025		
Havant Bus Station	0822	0942		1042		1142				42				1742			1835			1935	2035		

21 Buses to Portsmouth

from 1st September 2019

Mondays to Fridays except public holidays

Stop																							
Havant Bus Station Stand G		0525		0555				0635		0700			0730			then at these times each hour	00			30			until
West Leigh Wakefords Shop		0534		0604				0645		0710			0740				12			42			
Park Parade Dunsbury Way		0543		0613				0655		0720			0750				23			53			
Farlington Rectory Avenue		0550		0620	0635	0645	0655	0705	0718	0730	0740	0750	0800	0810			33			03			
Farlington Walton Road	0531	0556	0611	0626	0641	0652	0702	0712	0725	0737	0747	0757	0807	0817			42			12			
Anchorage Park Compass Rose	0535	0600	0615	0630	0645	0657	0708	0718	0731	0743	0753	0803	0814	0824	0837		49	59	09	19	29	39	
Copnor Green Lane	0540	0605	0620	0635	0650	0703	0715	0725	0739	0751	0800	0810	0822	0832	0844		56	06	16	26	36	46	
Kingston Prison	0547	0612	0627	0642	0657	0711	0724	0736	0750	0802	0812	0822	0833	0843	0853		05	15	25	35	45	55	
Portsmouth City Centre Stop G	0555	0620	0635	0650	0705	0720	0735	0750	0803	0815	0827	0837	0847	0857	0907		16	26	36	46	56	06	
Portsmouth The Hard Interchange	0600	0625	0640	0655	0710	0725	0740	0755	0808	0820	0832	0842	0852	0902	0912		21	31	41	51	01	11	

Stop																					
Havant Bus Station Stand G	1500			1530			1600		1630		1700	1730	1800	1830	1900		2000	2100		2200	2300
West Leigh Wakefords Shop	1512			1542			1612		1642		1712	1742	1810	1839	1909		2009	2109		2209	2309
Park Parade Dunsbury Way	1523			1553			1623		1653		1723	1752	1820	1848	1918		2018	2118		2218	2318
Farlington Rectory Avenue	1533			1603			1633	1648	1703	1718	1733	1800	1828	1855	1925	1955	2025	2125	2225	2225	2325
Farlington Walton Road	1542			1612			1642	1657	1712	1727	1742	1808	1835	1901	1931	2001	2031	2131	2231	2231	2331
Anchorage Park Compass Rose	1549	1559	1609	1619	1629	1639	1649	1704	1719	1734	1749	1815	1840	1905	1935	2005	2035	2135	2235	2235	2335
Copnor Green Lane	1556	1606	1616	1626	1636	1646	1656	1711	1726	1741	1756	1821	1846	1910	1940	2010	2040	2140	2240	2240	2340
Kingston Prison	1605	1617	1627	1637	1647	1657	1707	1722	1737	1752	1807	1828	1853	1917	1947	2017	2047	2147	2247	2247	2347
Portsmouth City Centre Stop G	1616	1628	1638	1648	1658	1708	1718	1733	1748	1803	1818	1838	1903	1925	1955	2025	2055	2155	2255	2255	2355
Portsmouth The Hard Interchange	1621	1633	1643	1653	1703	1713	1723	1738	1753	1808	1823	1843	1908	1930	2000	2030	2100	2200	2300	2300	2400

These services run on Fridays only. (last two columns: 2200, 2300 from Havant)

This service runs every day other than Fridays (2225 from Farlington Rectory Avenue)

21 Buses to Portsmouth

Saturdays

Stop																							
Havant Bus Station Stand G			0615		0650		0730		0800				0830			then at these times each hour	00			30			until
West Leigh Wakefords Shop			0624		0659		0739		0809				0842				12			42			
Park Parade Dunsbury Way			0633		0708		0748		0818				0853				23			53			
Farlington Rectory Avenue			0640		0715		0755		0825		0845		0903				33			03			
Farlington Walton Road	0601	0626	0647	0707	0722	0742	0802		0832	0842	0852		0912	0922			42			12			
Anchorage Park Compass Rose	0605	0630	0652	0712	0729	0749	0809	0824	0839	0849	0859	0909	0919	0929	0939		49	59	09	19	29	39	
Copnor Green Lane	0610	0635	0658	0718	0736	0756	0816	0831	0846	0856	0906	0916	0926	0936	0946		56	06	16	26	36	46	
Kingston Prison	0617	0642	0705	0725	0745	0805	0825	0840	0855	0905	0915	0925	0935	0945	0955		05	15	25	35	45	55	
Portsmouth City Centre Stop G	0625	0650	0715	0735	0755	0815	0835	0851	0906	0916	0926	0936	0946	0956	1006		16	26	36	46	56	06	
Portsmouth The Hard Interchange	0630	0655	0720	0740	0800	0820	0840	0856	0911	0921	0931	0941	0951	1001	1011		21	31	41	51	01	11	

Stop																							
Havant Bus Station Stand G	1400			1430		1500		1530		1600		1630		1700	1730	1800	1830	1900		2000	2100	2200	2300
West Leigh Wakefords Shop	1412			1442		1512		1542		1612		1642		1712	1740	1809	1839	1909		2009	2109	2209	2309
Park Parade Dunsbury Way	1423			1453		1523		1553		1623		1653		1723	1750	1818	1848	1918		2018	2118	2218	2318
Farlington Rectory Avenue	1433			1503		1533		1603		1633		1703		1733	1758	1825	1855	1925	1955	2025	2125	2225	2325
Farlington Walton Road	1442			1512		1542		1612		1642	1657	1712	1727	1742	1805	1831	1901	1931	2001	2031	2131	2231	2331
Anchorage Park Compass Rose	1449	1459	1509	1519	1534	1549	1604	1619	1634	1649	1704	1719	1734	1749	1810	1835	1905	1935	2005	2035	2135	2235	2335
Copnor Green Lane	1456	1506	1516	1526	1541	1556	1611	1626	1641	1656	1711	1726	1741	1756	1815	1840	1910	1940	2010	2040	2140	2240	2340
Kingston Prison	1505	1515	1525	1535	1550	1605	1620	1635	1650	1705	1720	1735	1750	1805	1822	1847	1917	1947	2017	2047	2147	2247	2347
Portsmouth City Centre Stop G	1516	1526	1536	1546	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1830	1855	1925	1955	2025	2055	2155	2255	2355
Portsmouth The Hard Interchange	1521	1531	1541	1551	1606	1621	1636	1651	1706	1721	1736	1751	1806	1821	1835	1900	1930	2000	2030	2100	2200	2300	2400

21 Buses to Portsmouth

Sundays and public holidays

Stop																			
Havant Bus Station Stand G	0730		0830			0930		then at these times each hour		30		until		1630		1730	1830	1930	
West Leigh Wakefords Shop	0740		0840			0940				40				1640		1740	1840	1940	
Park Parade Dunsbury Way	0750		0850			0950				50				1650		1750	1850	1950	
Farlington Rectory Avenue	0758		0858			0959				59				1659		1759	1859	1959	2109
Farlington Walton Road	0802		0902			1005				05				1705		1803	1903	2003	2113
Anchorage Park Compass Rose	0806	0836	0906	0930	0950	1010	1030		50	10	30		1650	1710	1730	1807	1907	2007	2117
Copnor Green Lane	0811	0841	0911	0936	0957	1017	1037		57	17	37		1657	1717	1737	1811	1911	2011	2121
Kingston Prison	0817	0847	0917	0944	1006	1026	1046		06	26	46		1706	1726	1746	1817	1917	2017	2127
Portsmouth City Centre Stop G	0825	0855	0925	0955	1017	1037	1057		17	37	57		1717	1737	1757	1825	1925	2025	2135
Portsmouth The Hard Interchange	0830	0900	0930	1000	1022	1042	1102		22	42	02		1722	1742	1802	1830	1930	2030	2140

20 & 21 Summary of services between *Havant, Leigh Park* & *Portsmouth*

Mondays to Fridays except public holidays

Route Number	*21*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*		*21*	*20*	*21*	*20*		*20*	*21*	*20*
Havant Bus Station Stand G	0525	0555	0615	0635	0645	0700	0715	0730	0745	0800	0815	0830	0845	*then at these times*	00	15	30	45	*until*	1445	1500	1515
West Leigh Wakefords Shop	0534	0604	0625	0645	0655	0710	0725	0740	0757	0812	0827	0842	0857		12	27	42	57		1457	1512	1527
Park Parade Dunsbury Way	0543	0613	0635	0655	0705	0720	0735	0750	0808	0823	0838	0853	0908		23	38	53	08		1508	1523	1538
Portsmouth City Centre Stop G	0620	0650	0715	0750	0753	0815	0823	0847	0856	0916	0926	0946	0956		16	26	46	56		1556	1616	1623
Portsmouth The Hard Interchange	0625	0655	0720	0755	0758	0820	0828	0852	0901	0921	0931	0951	1001		21	31	51	01		1601	1621	1628

Route Number	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*20*	*21*	*21*	*21*	*21*	*21*	*21*
Havant Bus Station Stand G	1530	1545	1600	1615	1630	1645	1700	1715	1730	1745	1800	1815	1830	1900	2000	2100	2200	2300
West Leigh Wakefords Shop	1542	1557	1612	1627	1642	1657	1712	1727	1742	1757	1810	1825	1839	1909	2009	2109	2209	2309
Park Parade Dunsbury Way	1553	1608	1623	1638	1653	1708	1723	1738	1752	1808	1820	1835	1848	1918	2018	2118	2218	2318
Portsmouth City Centre Stop G	1648	1653	1718	1723	1748	1753	1818	1823	1838	1847	1903	1911	1925	1955	2055	2155	2255	2355
Portsmouth The Hard Interchange	1653	1658	1723	1728	1753	1758	1823	1828	1843	1852	1908	1916	1930	2000	2100	2200	2300	2400

These services run on Fridays only.

Please see full timetable at the back of this booklet for full route details and additional services.

20 & 21 Summary of services between *Havant, Leigh Park* & *Portsmouth*

Saturdays

Route Number	21	20	21	20	21	20	21	20	21	20		21	20	21	20		20	21	20	21	20	21
Havant Bus Station Stand G	0615	0640	0650	0715	0730	0745	0800	0815	0830	0845	*then at these times*	00	15	30	45	*until*	1445	1500	1515	1530	1545	1600
West Leigh Wakefords Shop	0624	0649	0659	0724	0739	0754	0809	0827	0842	0857		12	27	42	57		1457	1512	1527	1542	1557	1612
Park Parade Dunsbury Way	0633	0658	0708	0733	0748	0803	0818	0838	0853	0908		23	38	53	08		1508	1523	1538	1553	1608	1623
Portsmouth City Centre Stop G	0715	0735	0755	0810	0835	0840	0906	0920	0946	0956		16	26	46	56		1556	1616	1623	1646	1653	1716
Portsmouth The Hard Interchange	0720	0740	0800	0815	0840	0845	0911	0925	0951	1001		21	31	51	01		1601	1621	1628	1651	1658	1721

Route Number	20	21	20	21	20	21	20	21	20	21	21	21	21	21	21
Havant Bus Station Stand G	1615	1630	1645	1700	1715	1730	1745	1800	1815	1830	1900	2000	2100	2200	2300
West Leigh Wakefords Shop	1627	1642	1657	1712	1727	1740	1755	1809	1824	1839	1909	2009	2109	2209	2309
Park Parade Dunsbury Way	1638	1653	1708	1723	1738	1750	1805	1818	1833	1848	1918	2018	2118	2218	2318
Portsmouth City Centre Stop G	1723	1746	1753	1816	1823	1830	1843	1855	1908	1925	1955	2055	2155	2255	2355
Portsmouth The Hard Interchange	1728	1751	1758	1821	1828	1835	1848	1900	1913	1930	2000	2100	2200	2300	2400

Please see full timetable at the back of this booklet for full route details and additional services.

20 & 21 Summary of services between *Havant, Leigh Park* & *Portsmouth*

Sundays and public holidays

Route Number	21	21	21		21		21	21	21	21
Havant Bus Station Stand G	0730	0830	0930	*then at these times*	30	*until*	1630	1730	1830	1930
West Leigh Wakefords Shop	0740	0840	0940		40		1640	1740	1840	1940
Park Parade Dunsbury Way	0750	0850	0950		50		1650	1750	1850	1950
Portsmouth City Centre Stop G	0825	0925	1037		37		1737	1825	1925	2025
Portsmouth The Hard Interchange	0830	0930	1042		42		1742	1830	1930	2030

Please see full timetable at the back of this booklet for full route details and additional services.

20 & 21 Summary of services between *Portsmouth, Leigh Park* & *Havant*

Mondays to Fridays except public holidays

Route Number	21	20	21	20	21	20	21	20	21	20	21	20	21	then at these times	20	21	20	21	until	21	20	21
Portsmouth The Hard Interchange	0540	0605	0615	0635	0645	0705	0715	0735	0745	0805	0815	0835	0847		05	17	35	47		1547	1605	1617
Portsmouth City Centre	0545	0610	0620	0640	0651	0710	0721	0740	0751	0810	0821	0841	0853		11	23	41	53		1553	1611	1623
Park Parade Dunsbury Way	0622	0642	0702	0717	0737	0755	0815	0825	0845	0857	0913	0928	0943		58	13	28	43		1643	1700	1715
West Leigh Wakefords Shop	0630	0650	0710	0727	0747	0807	0827	0837	0857	0909	0924	0939	0954		09	24	39	54		1654	1711	1726
Havant Bus Station	0640	0700	0720	0740	0800	0820	0840	0850	0910	0922	0937	0952	1007		22	37	52	07		1707	1724	1739

Route Number	20	21	20	21	21	20	21	20	21	20	21	21
Portsmouth The Hard Interchange	1635	1647	1715	1717	1742	1805	1812	1840	1847	1920	2007	2107
Portsmouth City Centre	1641	1653	1721	1723	1748	1811	1818	1845	1853	1925	2013	2113
Park Parade Dunsbury Way	1730	1745	1805	1813	1837	1852	1907	1922	1937	2002	2049	2149
West Leigh Wakefords Shop	1741	1756	1815	1823	1845	1900	1915	1930	1945	2010	2057	2157
Havant Bus Station	1754	1809	1827	1835	1855	1910	1925	1940	1955	2020	2107	2207

Please see full timetable at the back of this booklet for full route details and additional services.

20 & 21 Summary of services between *Portsmouth, Leigh Park* & *Havant*

Saturdays

Route Number	21	20	21	20	21	20	21	21	20	21		20	21	20	21		21	20	21	20	21	20
Portsmouth The Hard Interchange	0617	0635	0657	0715	0727	0755	0807		0835	0847	*then at these times*	05	17	35	47	*until*	1547	1605	1627	1635	1712	1715
Portsmouth City Centre	0622	0640	0702	0720	0733	0800	0813		0841	0853		11	23	41	53		1553	1611	1633	1641	1718	1721
Park Parade Dunsbury Way	0658	0718	0738	0758	0818	0838	0858	0913	0928	0943		58	13	28	43		1643	1658	1720	1728	1802	1808
West Leigh Wakefords Shop	0708	0728	0748	0808	0828	0848	0908	0924	0939	0954		09	24	39	54		1654	1709	1730	1739	1810	1819
Havant Bus Station	0720	0740	0800	0820	0840	0900	0920	0937	0952	1007		22	37	52	07		1707	1722	1740	1750	1820	1830

Route Number	21	20	21	20	21	20	21	21
Portsmouth The Hard Interchange	1742	1805	1812	1840	1847	1920	2007	2107
Portsmouth City Centre	1748	1811	1818	1845	1853	1925	2013	2113
Park Parade Dunsbury Way	1832	1852	1902	1922	1937	2002	2049	2149
West Leigh Wakefords Shop	1840	1900	1910	1930	1945	2010	2057	2157
Havant Bus Station	1850	1910	1920	1940	1955	2020	2107	2207

Please see full timetable at the back of this booklet for full route details and additional services.

20 & 21 Summary of services between *Portsmouth, Leigh Park* & *Havant*

Sundays and public holidays

Route Number	21	21	21	21		21		21	21	21	21
Portsmouth The Hard Interchange		0835	0935	1030	*then at these times*	30	*until*	1630	1730	1835	1935
Portsmouth City Centre		0840	0940	1036		36		1636	1736	1841	1941
Park Parade Dunsbury Way	0805	0921	1021	1121		21		1721	1817	1917	2017
West Leigh Wakefords Shop	0813	0930	1030	1130		30		1730	1825	1925	2025
Havant Bus Station	0822	0942	1042	1142		42		1742	1835	1935	2035

Please see full timetable at the back of this booklet for full route details and additional services.

22

Sundays & Bank Holidays
Valid from: 07/07/2019
Valid to: 31/08/2019

22 Highbury - Cosham - Drayton - Farlington
Via Cosham High Street - Lower Drayton - Eastern Road

Service No.:	22	22	22	22	22	22	22	22
Notes:								
Highbury, Hawthorn Cres	0930	1040	1150	1300	1410	1520	1630	1740
Cosham High Street	0940	1050	1200	1310	1420	1530	1640	1750
Court Lane	0944	1054	1204	1314	1424	1534	1644	----
Drayton Shops	0951	1101	1211	1321	1431	1541	1651	----
Farlington, Sainsbury's	0959	1109	1219	1329	1439	1549	1659	----

22 Farlington - Drayton - Cosham - Highbury
Via Eastern Road - Lower Drayton - Cosham High Street

Service No.:	22	22	22	22	22	22	22	22
Notes:								
Farlington, Sainsbury's	----	1002	1112	1222	1332	1442	1552	1702
Drayton Shops	----	1007	1117	1227	1337	1447	1557	1707
Court Lane	----	1014	1124	1234	1344	1454	1604	1714
Cosham Wayte Street	----	1021	1131	1241	1351	1501	1611	1721
Lower Wymering, Parr Road	----	1025	1135	1245	1355	1505	1615	1725
Cosham High Street	0919	1029	1139	1249	1359	1509	1619	1729
Highbury, Hawthorn Cres	0927	1037	1147	1257	1407	1517	1627	1737

22

Monday to Friday
Valid from: 07/07/2019
Valid to: 31/08/2019

22 Highbury - Cosham - Drayton - Farlington
Via Cosham High Street - Lower Drayton - Eastern Road

Service No.:	22	22	22	22	22	22	22	22	22	22
Notes:										
Highbury, Hawthorn Cres	0710	0820	0930	1040	1150	1300	1410	1520	1630	1740
Cosham High Street	0720	0830	0940	1050	1200	1310	1420	1530	1640	1750
Court Lane	0724	0834	0944	1054	1204	1314	1424	1534	1644	1754
Drayton Shops	0731	0841	0951	1101	1211	1321	1431	1541	1651	1801
Farlington, Sainsbury's	0739	0849	0959	1109	1219	1329	1439	1549	1659	1809

22 Farlington - Drayton - Cosham - Highbury
Via Eastern Road - Lower Drayton - Cosham High Street

Service No.:	22	22	22	22	22	22	22	22	22	22	22
Notes:											
Farlington, Sainsbury's	----	0742	0852	1002	1112	1222	1332	1442	1552	1702	1812
Drayton Shops	----	0747	0857	1007	1117	1227	1337	1447	1557	1707	1817
Court Lane	----	0754	0904	1014	1124	1234	1344	1454	1604	1714	1824
Cosham Wayte Street	----	0801	0911	1021	1131	1241	1351	1501	1611	1721	1831
Lower Wymering, Parr Road	----	0805	0915	1025	1135	1245	1355	1505	1615	1725	----
Cosham High Street	0659	0809	0919	1029	1139	1249	1359	1509	1619	1729	----
Highbury, Hawthorn Cres	0707	0817	0927	1037	1147	1257	1407	1517	1627	1737	----

22

Saturday
Valid from: 07/07/2019
Valid to: 31/08/2019

22 Highbury - Cosham - Drayton - Farlington
Via Cosham High Street - Lower Drayton - Eastern Road

Service No.:	22	22	22	22	22	22	22	22	22	22
Notes:										
Highbury, Hawthorn Cres	0710	0820	0930	1040	1150	1300	1410	1520	1630	1740
Cosham High Street	0720	0830	0940	1050	1200	1310	1420	1530	1640	1750
Court Lane	0724	0834	0944	1054	1204	1314	1424	1534	1644	1754
Drayton Shops	0731	0841	0951	1101	1211	1321	1431	1541	1651	1801
Farlington, Sainsbury's	0739	0849	0959	1109	1219	1329	1439	1549	1659	1809

22 Farlington - Drayton - Cosham - Highbury
Via Eastern Road - Lower Drayton - Cosham High Street

Service No.:	22	22	22	22	22	22	22	22	22	22	22
Notes:											
Farlington, Sainsbury's	----	0742	0852	1002	1112	1222	1332	1442	1552	1702	1812
Drayton Shops	----	0747	0857	1007	1117	1227	1337	1447	1557	1707	1817
Court Lane	----	0754	0904	1014	1124	1234	1344	1454	1604	1714	1824
Cosham Wayte Street	----	0801	0911	1021	1131	1241	1351	1501	1611	1721	1831
Lower Wymering, Parr Road	----	0805	0915	1025	1135	1245	1355	1505	1615	1725	----
Cosham High Street	0659	0809	0919	1029	1139	1249	1359	1509	1619	1729	----
Highbury, Hawthorn Cres	0707	0817	0927	1037	1147	1257	1407	1517	1627	1737	----

Mondays to Fridays except public holidays

																then at these times each hour							until				
Leigh Park Strouden Court		0502	0522		0542		0602	0612		0625	0635	0645	0655		0702		12	22	32	42	52	02		1352	1402	1412	1422
Leigh Park Southfield Walk		0505	0525		0545		0605	0615		0628	0638	0648	0658		0705		15	25	35	45	55	05		1355	1405	1415	1425
Park Parade Dunsbury Way		0511	0531		0551		0611	0621		0634	0644	0654	0704		0712		22	32	42	52	02	12		1402	1412	1422	1432
Havant Bus Station Stand E *arr*		0519	0539		0559		0619	0629		0642	0652	0702	0712		0720		30	40	50	00	10	20		1410	1420	1430	1440
Havant Bus Station Stand E *dep*		0521	0541		0601		0621	0632		0646	0656	0706	0716		0724		34	44	54	04	14	24		1414	1424	1434	1444
Farlington Rectory Avenue	0509	0529	0549	0559	0609	0619	0629	0641	0650	0654	0704	0714	0724	0729	0734		44	54	04	14	24	34		1424	1434	1444	1454
Cosham Health Centre Stop F	0517	0537	0557	0607	0617	0627	0637	0649	0658	0705	0715	0725	0735	0740	0745		55	05	15	25	35	45		1435	1445	1455	1505
North End Junction Stop G	0526	0546	0606	0616	0626	0636	0646	0658	0707	0715	0725	0735	0745	0750	0755		05	15	25	35	45	55		1445	1455	1505	1515
Portsmouth City Centre Stop C	0536	0556	0616	0626	0636	0646	0656	0710	0719	0727	0737	0747	0757	0803	0810		20	30	40	50	00	10		1500	1512	1524	1534
Portsmouth The Hard Interchange Stop M	0541	0601	0621	0631	0641	0651	0701	0716	0725	0733	0743	0753	0803	0809	0816		26	36	46	56	06	16		1506	1518	1530	1540
Southsea Palmerston Road Stop A	0547	0607	0627	0637	0647	0657	0707	0722	0731	0740	0750	0800	0810	0816	0823		33	43	53	03	13	23		1513	1525	1537	1547
Southsea South Parade Pier	0551	0611	0631	0641	0651	0701	0711	0726	0735	0744	0754	0804	0814	0820	0827		37	47	57	07	17	27		1517	1529	1541	1551

Leigh Park Strouden Court	1432	1442	1452	1502	1512	1522	1532	1542	1554	1606	1618	1630	1642	1652	1702	1712	1722	1732	1742	1806		1836		1906		1954	
Leigh Park Southfield Walk	1435	1445	1455	1505	1515	1525	1535	1545	1557	1609	1621	1633	1645	1655	1705	1715	1725	1735	1745	1809		1839		1909		1957	
Park Parade Dunsbury Way	1442	1452	1502	1512	1522	1532	1542	1552	1604	1616	1628	1640	1652	1702	1712	1722	1732	1742	1752	1816		1846		1916		2002	
Havant Bus Station Stand E *arr*	1450	1500	1510	1520	1530	1540	1550	1600	1612	1624	1636	1648	1700	1710	1720	1730	1740	1750	1800	1824		1854		1924		2010	
Havant Bus Station Stand E *dep*	1454	1504	1514	1524	1534	1544	1554	1604	1616	1628	1640	1652	1704	1714	1724	1734	1744	1754	1804	1828	1843	1858	1913	1928	1943	2013	2043
Farlington Rectory Avenue	1504	1514	1524	1534	1544	1554	1604	1614	1626	1638	1650	1702	1714	1724	1734	1744	1754	1804	1814	1836	1851	1906	1921	1934	1951	2021	2051
Cosham Health Centre Stop F	1515	1525	1535	1545	1555	1605	1615	1625	1637	1649	1701	1713	1725	1735	1745	1755	1805	1815	1825	1845	1900	1915	1930	1945	2000	2030	2100
North End Junction Stop G	1525	1535	1545	1555	1605	1615	1625	1635	1647	1659	1711	1723	1735	1745	1755	1805	1815	1825	1835	1853	1908	1923	1938	1953	2008	2038	2108
Portsmouth City Centre Stop C	1544	1554	1604	1614	1624	1634	1644	1654	1706	1718	1730	1742	1752	1802	1808	1820	1830	1835	1848	1904	1919	1934	1949	2004	2019	2049	2119
Portsmouth The Hard Interchange Stop M	1550	1600	1610	1620	1630	1640	1650	1700	1712	1724	1736	1748	1758	1808		1826	1836		1854	1909	1924	1939	1954	2009	2024	2054	2124
Southsea Palmerston Road Stop A	1557	1607	1617	1627	1637	1645	1657	1707	1719	1731	1743	1755	1805	1815		1833	1843		1900	1916	1931	1946	2001	2016	2031	2101	2131
Southsea South Parade Pier	1601	1611	1621	1631	1641	1651	1701	1711	1723	1735	1747	1759	1809	1819		1837	1847		1903	1920	1935	1950	2005	2020	2035	2105	2135

Leigh Park Strouden Court	2054		2154	2254
Leigh Park Southfield Walk	2057		2157	2257
Park Parade Dunsbury Way	2102		2202	2303
Havant Bus Station Stand E *arr*	2110		2210	2310
Havant Bus Station Stand E *dep*	2113	2143	2213	2313
Farlington Rectory Avenue	2121	2151	2221	2321
Cosham Health Centre Stop F	2130	2200	2230	2330
North End Junction Stop G	2138	2208	2238	2338
Portsmouth City Centre Stop C	2149	2219	2249	2349
Portsmouth The Hard Interchange Stop M	2154	2224	2254	2354
Southsea Palmerston Road Stop A	2201	2231	2301	
Southsea South Parade Pier	2205	2235	2305	

Saturdays

												then at these times each hour							until								
Leigh Park Strouden Court		0639		0709	0724	0736	0746	0756	0806	0816	0826		36	46	56	06	16	26		1526	1538	1550	1602	1614	1626	1638	1651
Leigh Park Southfield Walk		0642		0712	0727	0739	0749	0759	0809	0819	0829		39	49	59	09	19	29		1529	1541	1553	1605	1617	1629	1641	1654
Park Parade Dunsbury Way		0648		0718	0733	0746	0756	0806	0816	0826	0836		46	56	06	16	26	36		1536	1548	1600	1612	1624	1636	1648	1701
Havant Bus Station Stand E *arr*		0656		0726	0741	0754	0804	0814	0824	0834	0844		54	04	14	24	34	44		1544	1556	1608	1620	1632	1644	1656	1709
Havant Bus Station Stand E *dep*		0658		0728	0743	0758	0808	0818	0828	0838	0848		58	08	18	28	38	48		1548	1600	1612	1624	1636	1648	1700	1713
Farlington Rectory Avenue	0646	0706	0726	0736	0751	0806	0816	0826	0836	0846	0856		06	16	26	36	46	56		1556	1608	1620	1632	1644	1656	1708	1721
Cosham Health Centre Stop F	0653	0713	0733	0746	0801	0816	0826	0836	0846	0856	0906		16	26	36	46	56	06		1606	1618	1630	1642	1654	1706	1718	1730
North End Junction Stop G	0702	0722	0742	0755	0810	0825	0835	0845	0855	0905	0915		25	35	45	55	05	15		1615	1627	1639	1651	1703	1715	1727	1739
Portsmouth City Centre Stop C	0713	0733	0753	0808	0823	0838	0848	0858	0908	0918	0928		38	48	58	08	18	28		1628	1640	1652	1704	1716	1728	1740	1752
Portsmouth The Hard Interchange Stop M	0719	0739	0759	0814	0829	0844	0854	0904	0914	0924	0934		44	54	04	14	24	34		1634	1646	1658	1710	1722	1734	1746	1758
Southsea Palmerston Road Stop A	0726	0746	0806	0821	0836	0851	0901	0911	0921	0931	0941		51	01	11	21	31	41		1641	1653	1705	1717	1729	1741	1753	1805
Southsea South Parade Pier	0730	0750	0810	0825	0840	0855	0905	0915	0925	0935	0945		55	05	15	25	35	45		1645	1657	1709	1721	1733	1745	1757	1809

Leigh Park Strouden Court	1706	1721	1736	1751	1806		1836		1906		1954		2054		2154	2254
Leigh Park Southfield Walk	1709	1724	1739	1754	1809		1839		1909		1957		2057		2157	2257
Park Parade Dunsbury Way	1716	1731	1746	1801	1816		1846		1916		2003		2103		2203	2303
Havant Bus Station Stand E *arr*	1724	1739	1754	1809	1824		1854		1924		2010		2110		2210	2310
Havant Bus Station Stand E *dep*	1728	1743	1758	1813	1828	1843	1858	1913	1928	1943	2013	2043	2113	2143	2213	2313
Farlington Rectory Avenue	1736	1751	1806	1821	1836	1851	1906	1921	1936	1951	2021	2051	2121	2151	2221	2321
Cosham Health Centre Stop F	1746	1800	1815	1830	1845	1900	1915	1930	1945	2000	2030	2100	2130	2200	2230	2330
North End Junction Stop G	1754	1808	1823	1838	1853	1908	1923	1938	1953	2008	2038	2108	2138	2208	2238	2338
Portsmouth City Centre Stop C	1805	1819	1834	1849	1904	1919	1934	1949	2004	2019	2049	2119	2149	2219	2249	2349
Portsmouth The Hard Interchange Stop M	1810	1824	1839	1854	1909	1924	1939	1954	2009	2024	2054	2124	2154	2224	2254	2354
Southsea Palmerston Road Stop A	1817	1831	1846	1901	1916	1931	1946	2001	2016	2031	2101	2131	2201	2231	2301	
Southsea South Parade Pier	1821	1835	1850	1905	1920	1935	1950	2005	2020	2035	2105	2135	2205	2235	2305	

Sundays and public holidays

							then at these times each hour				until																
Leigh Park Strouden Court	0741	0816	0846	0916	0936	0956		16	36	56		1416	1436	1456	1516	1536	1604	1634	1704	1734	1804		1904		2004	2104	2234
Leigh Park Southfield Walk	0744	0819	0849	0919	0939	0959		19	39	59		1419	1439	1459	1519	1539	1607	1637	1707	1737	1807		1907		2007	2107	2237
Park Parade Dunsbury Way	0750	0825	0856	0926	0946	1006		26	46	06		1426	1446	1506	1526	1546	1613	1643	1713	1743	1813		1913		2013	2113	2243
Havant Bus Station Stand E *arr*	0757	0832	0904	0934	0954	1014		34	54	14		1434	1454	1514	1534	1554	1620	1650	1720	1750	1820		1920		2020	2120	2250
Havant Bus Station Stand E *dep*	0800	0835	0908	0938	0958	1018		38	58	18		1438	1458	1518	1538	1558	1623	1653	1723	1753	1823	1853	1923	1953	2023	2123	2253
Farlington Rectory Avenue	0807	0842	0916	0946	1006	1026		46	06	26		1446	1506	1526	1546	1606	1631	1701	1731	1801	1831	1901	1931	2001	2031	2131	2259
Cosham Health Centre Stop F	0817	0852	0926	0956	1016	1036		56	16	36		1456	1516	1536	1556	1616	1640	1710	1740	1810	1840	1910	1940	2010	2040	2140	2306
North End Junction Stop G	0826	0901	0935	1005	1025	1045		05	25	45		1505	1525	1545	1605	1625	1648	1718	1748	1818	1848	1918	1948	2018	2048	2148	2314
Portsmouth City Centre Stop C	0838	0913	0948	1018	1038	1058		18	38	58		1518	1538	1558	1618	1638	1659	1729	1759	1829	1859	1929	1959	2029	2059	2159	2324
Portsmouth The Hard Interchange Stop M	0844	0919	0954	1024	1044	1104		24	44	04		1524	1544	1604	1624	1644	1704	1734	1804	1834	1904	1934	2004	2034	2104	2204	2329
Southsea Palmerston Road Stop A	0851	0926	1001	1031	1051	1111		31	51	11		1531	1551	1611	1631	1651	1711	1741	1811	1841	1911	1941	2011	2041	2111	2211	
Southsea South Parade Pier	0855	0930	1005	1035	1055	1115		35	55	15		1535	1555	1615	1635	1655	1715	1745	1815	1845	1915	1945	2015	2045	2115	2215	

23 Buses to **Leigh Park**

Mondays to Fridays except public holidays

Southsea South Parade Pier Stop D				0555	0615	0635	0650	0700	0710	0720	0730	0740	0750	0800	0810	0820	0829	0837	then at these times each hour	47	57	07	17									
Southsea Palmerston Road Stop B				0559	0619	0639	0654	0704	0714	0724	0734	0744	0754	0804	0814	0824	0834	0842		52	02	12	22									
Portsmouth The Hard Interchange Stand E				0607	0627	0647	0702	0712	0722	0732	0742	0752	0802	0812	0822	0832	0842	0851		01	11	21	31									
Portsmouth City Centre Stop D				0613	0633	0653	0708	0718	0728	0738	0748	0758	0808	0818	0828	0838	0848	0858		08	18	28	38									
North End Junction Stop C				0625	0645	0705	0722	0732	0742	0752	0802	0812	0822	0832	0842	0852	0902	0912		22	32	42	52									
Cosham Health Centre Stop B	0550	0610	0625	0634	0654	0714	0732	0742	0752	0802	0812	0822	0832	0842	0852	0902	0912	0922		32	42	52	02									
Farlington Rectory Aveune	0600	0620	0636	0644	0704	0724	0742	0752	0802	0812	0822	0832	0842	0852	0902	0912	0922	0932		42	52	02	12									
Havant Bus Station Stand F *arr*	0609	0629	0645	0653	0713	0733	0752	0802	0812	0822	0832	0842	0852	0902	0912	0922	0932	0942		52	02	12	22									
Havant Bus Station Stand F *dep*	0611	0631	0647	0657	0717	0737	0756	0806	0816	0826	0836	0846	0856	0906	0916	0926	0936	0946		56	06	16	26									
Park Parade Dunsbury Way	0618	0638	0654	0704	0724	0744	0804	0814	0824	0834	0844	0854	0904	0914	0924	0934	0944	0954		04	14	24	34									
Leigh Park Strouden Court	0624	0644	0700	0710	0730	0750	0810	0820	0830	0840	0850	0900	0910	0920	0930	0940	0950	1000		10	20	30	40									

Southsea South Parade Pier Stop D	27	37	until	1417	1427	1437	1447	1457	1507	1517	1527	1537	1547	1557	1607	1617	1627	1637	1647	1657	1707	1717	1727									
Southsea Palmerston Road Stop B	32	42		1422	1432	1442	1452	1502	1512	1522	1532	1542	1552	1602	1612	1622	1632	1642	1652	1702	1712	1722	1732									
Portsmouth The Hard Interchange Stand E	41	51		1431	1441	1451	1501	1511	1521	1531	1541	1551	1601	1611	1621	1631	1641	1651	1701	1711	1721	1731	1741									
Portsmouth City Centre Stop D	48	58		1438	1448	1458	1508	1518	1528	1538	1548	1558	1608	1618	1628	1638	1648	1658	1708	1718	1728	1738	1748									
North End Junction Stop C	02	12		1452	1503	1514	1525	1535	1545	1555	1605	1615	1625	1635	1645	1655	1705	1715	1725	1735	1745	1754	1804									
Cosham Health Centre Stop B	12	22		1502	1513	1524	1535	1545	1555	1605	1615	1625	1635	1645	1655	1705	1715	1725	1735	1745	1755	1804	1814									
Farlington Rectory Aveune	22	32		1512	1523	1534	1545	1555	1605	1615	1625	1635	1645	1655	1705	1715	1725	1735	1745	1755	1805	1813	1823									
Havant Bus Station Stand F *arr*	32	42		1522	1534	1546	1558	1610	1621	1631	1641	1651	1701	1711	1721	1731	1741	1751	1759	1806	1816	1822	1832									
Havant Bus Station Stand F *dep*	36	46		1526	1538	1550	1602	1614	1625	1635	1645	1655	1705	1715	1725	1735	1745	1755	1803	1810	1820	1826	1836									
Park Parade Dunsbury Way	44	54		1534	1546	1558	1610	1622	1634	1644	1654	1704	1714	1724	1734	1744	1754	1804	1811	1818	1828	1834	1844									
Leigh Park Strouden Court	50	00		1540	1552	1604	1616	1628	1640	1650	1700	1710	1720	1730	1740	1750	1800	1810	1817	1824	1834	1840	1850									
Leigh Park Southfield Walk																1753		1813	1820	1827		1843	1853									

Southsea South Parade Pier Stop D	1739	1751	1803	1815	1830	1845	1900	1915	1930	1945	2000	2015	2030	2045	2115	2145	2215	2245	2315													
Southsea Palmerston Road Stop B	1744	1756	1808	1820	1834	1849	1904	1919	1934	1949	2004	2019	2034	2049	2119	2149	2219	2249	2319													
Portsmouth The Hard Interchange Stand E	1753	1804	1816	1828	1842	1857	1912	1927	1942	1957	2012	2027	2042	2057	2127	2157	2227	2257	2327	2357												
Portsmouth City Centre Stop D	1800	1810	1822	1834	1847	1902	1917	1932	1947	2002	2017	2032	2047	2102	2132	2202	2232	2302	2332	0002												
North End Junction Stop C	1816	1826	1836	1846	1858	1913	1928	1943	1958	2013	2028	2043	2058	2113	2143	2213	2243	2313	2343	0013												
Cosham Health Centre Stop B	1826	1834	1844	1854	1905	1920	1935	1950	2005	2020	2035	2050	2105	2120	2150	2220	2250	2320	2350	0020												
Farlington Rectory Aveune	1835	1843	1853	1902	1914	1929	1944	1959	2014	2029	2044	2059	2114	2129	2159	2229	2259	2329	2359	0029												
Havant Bus Station Stand F *arr*	1844	1852	1902	1911	1923	1938	1953	2008	2022	2037		2107		2137	2207	2237		2337														
Havant Bus Station Stand F *dep*	1848	1856	1906	1915	1925	1940	1955	2010		2040		2110		2140	2210	2240		2340														
Park Parade Dunsbury Way	1854	1904	1914	1922	1932	1947	2002	2017		2047		2117		2147	2217	2247		2347														
Leigh Park Strouden Court	1902	1910	1920	1928	1938	1953	2008	2023		2053		2123		2153	2223	2253		2353														
Leigh Park Southfield Walk		1913	1923	1931	1941		2011	2026				2126			2226			2356														

Saturdays

Southsea South Parade Pier Stop D			0715	0735	0755	0815		0835	then at these times each hour	45	55	05	15	25	35	until	1545	1555	1605	1615	1625	1635	1645									
Southsea Palmerston Road Stop B			0719	0739	0759	0819		0840		50	00	10	20	30	40		1550	1600	1610	1620	1630	1640	1650									
Portsmouth The Hard Interchange Stand E			0725	0745	0805	0825		0848		58	08	18	28	38	48		1558	1608	1618	1628	1638	1648	1658									
Portsmouth City Centre Stop D		0711	0731	0751	0811	0831		0854		04	14	24	34	44	54		1604	1614	1624	1634	1644	1654	1704									
North End Junction Stop C		0724	0744	0804	0824	0844		0907		17	27	37	47	57	07		1617	1627	1637	1647	1657	1707	1717									
Cosham Health Centre Stop B	0712	0732	0752	0812	0832	0852	0904	0916		26	36	46	56	06	16		1626	1636	1646	1656	1706	1716	1726									
Farlington Rectory Aveune	0720	0740	0800	0820	0840	0900	0913	0925		35	45	55	05	15	25		1635	1645	1655	1705	1715	1725	1735									
Havant Bus Station Stand F *arr*	0728	0748	0808	0828	0848	0908	0921	0934		44	54	04	14	24	34		1644	1654	1704	1714	1724	1734	1744									
Havant Bus Station Stand F *dep*	0730	0750	0810	0830	0850	0910	0924	0938		48	58	08	18	28	38		1648	1658	1708	1718	1728	1738	1748									
Park Parade Dunsbury Way	0738	0758	0818	0838	0858	0918	0933	0947		57	07	17	27	37	47		1657	1707	1717	1727	1737	1747	1757									
Leigh Park Strouden Court	0744	0804	0824	0844	0904	0924	0939	0954		04	14	24	34	44	54		1704	1714	1724	1734	1744	1754	1804									
Leigh Park Southfield Walk																			1727			1757										

Southsea South Parade Pier Stop D	1655	1705	1715	1730	1745	1800	1815	1830	1845	1900	1915	1930	1945	2000	2015	2030	2045	2115	2145	2215	2245	2315										
Southsea Palmerston Road Stop B	1700	1710	1720	1734	1749	1804	1819	1834	1849	1904	1919	1934	1949	2004	2019	2034	2049	2119	2149	2219	2249	2319										
Portsmouth The Hard Interchange Stand E	1708	1718	1728	1741	1757	1812	1827	1842	1857	1912	1927	1942	1957	2012	2027	2042	2057	2127	2157	2227	2257	2327	2357									
Portsmouth City Centre Stop D	1714	1724	1734	1747	1802	1817	1832	1847	1902	1917	1932	1947	2002	2017	2032	2047	2102	2132	2202	2232	2302	2332	0002									
North End Junction Stop C	1727	1737	1747	1759	1813	1828	1843	1858	1913	1928	1943	1958	2013	2028	2043	2058	2113	2143	2213	2243	2313	2343	0013									
Cosham Health Centre Stop B	1736	1746	1756	1808	1820	1835	1850	1905	1920	1935	1950	2005	2020	2035	2050	2105	2120	2150	2220	2250	2320	2350	0020									
Farlington Rectory Aveune	1745	1755	1805	1817	1829	1844	1859	1914	1929	1944	1959	2014	2029	2044	2059	2114	2129	2159	2229	2259	2329	2359	0029									
Havant Bus Station Stand F *arr*	1754	1804	1814	1826	1838	1853	1907	1923	1938	1953	2007	2022	2037		2107		2137	2207	2237		2337											
Havant Bus Station Stand F *dep*	1758	1808	1818	1830	1842	1855	1910	1925	1940	1955	2010		2040		2110		2140	2210	2240		2340											
Park Parade Dunsbury Way	1807	1817	1827	1839	1851	1903	1917	1932	1947	2002	2017		2047		2117		2147	2217	2247		2347											
Leigh Park Strouden Court	1814	1824	1834	1846	1858	1910	1923	1938	1953	2008	2023		2053		2123		2153	2223	2253		2353											
Leigh Park Southfield Walk	1817	1827		1849		1913	1926	1941		2011	2026				2126			2226			2356											

Sundays and public holidays

Southsea South Parade Pier Stop D		0820	0900	0935	0955	1015		35	55	15	until	1335	1355	1415	1435	1455	1515	1535	1555	1615	1635	1655	1725									
Southsea Palmerston Road Stop B		0824	0904	0940	1000	1020		40	00	20		1340	1400	1420	1440	1500	1520	1540	1600	1620	1640	1700	1729									
Portsmouth The Hard Interchange Stand E		0832	0912	0948	1008	1028		48	08	28		1348	1408	1428	1448	1508	1528	1548	1608	1628	1648	1708	1737									
Portsmouth City Centre Stop D		0838	0918	0954	1014	1034		54	14	34		1354	1414	1434	1454	1514	1534	1554	1614	1634	1654	1714	1743									
North End Junction Stop C		0850	0930	1007	1027	1047		07	27	47		1407	1427	1447	1507	1527	1547	1607	1627	1647	1707	1727	1755									
Cosham Health Centre Stop B	0814	0859	0939	1016	1036	1056		16	36	56		1416	1436	1456	1516	1536	1556	1616	1636	1656	1716	1736	1803									
Farlington Rectory Aveune	0821	0907	0947	1025	1045	1105		25	45	05		1425	1445	1505	1525	1545	1605	1625	1645	1705	1725	1745	1812									
Havant Bus Station Stand F *arr*	0828	0915	0955	1034	1054	1114		34	54	14		1434	1454	1514	1534	1554	1614	1634	1654	1714	1734	1754	1820									
Havant Bus Station Stand F *dep*	0830	0918	0958	1038	1058	1118		38	58	18		1438	1458	1518	1538	1558	1618	1638	1658	1718	1738	1758	1824									
Park Parade Dunsbury Way	0838	0927	1007	1047	1107	1127		47	07	27		1447	1507	1527	1547	1607	1627	1647	1707	1727	1747	1807	1832									
Leigh Park Strouden Court	0844	0934	1014	1054	1114	1134		54	14	34		1454	1514	1534	1554	1614	1634	1654	1714	1734	1754	1814	1838									
Leigh Park Southfield Walk																1617			1717			1817	1841									

Southsea South Parade Pier Stop D	1755	1825	1855	1925	1955	2025	2055	2125	2225																							
Southsea Palmerston Road Stop B	1759	1829	1859	1929	1959	2029	2059	2129	2229																							
Portsmouth The Hard Interchange Stand E	1806	1836	1906	1936	2006	2036	2106	2136	2236	2336																						
Portsmouth City Centre Stop D	1812	1842	1912	1942	2012	2042	2112	2142	2242	2341																						
North End Junction Stop C	1823	1853	1923	1953	2023	2053	2123	2153	2253	2350																						
Cosham Health Centre Stop B	1831	1901	1931	2001	2031	2101	2131	2201	2301	2357																						
Farlington Rectory Aveune	1840	1910	1940	2010	2040	2110	2140	2210	2310	0005																						
Havant Bus Station Stand F *arr*	1847	1917	1947	2017	2047	2117		2217	2317																							
Havant Bus Station Stand F *dep*	1850	1920	1950	2020	2050	2120		2220	2320																							
Park Parade Dunsbury Way	1857	1927	1957	2027	2057	2127		2227	2327																							
Leigh Park Strouden Court	1903	1933	2003	2033	2103	2133		2233	2333																							
Leigh Park Southfield Walk		1936		2036		2136			2336																							

from 1st September 2019

38 Buses to Alton | Mondays to Fridays except Public Holidays

School & College days only

Route Number	38	38	38	38
Petersfield Rail Station stop S	0703	0843	1143	1353
Petersfield Square stop A	0706	0846	1146	1356
Moggs Mead Co-Op	0709	0849	1149	1359
Sheet Half Moon	0712	0852	1152	1402
Liss Whistle Stop	0721	0859	1159	1409
Liss Forest Post Office	0725	0903	1203	1413
Greatham Digby Way	0732	0911	1211	1421
Selborne Selborne Arms	0744	0921	1221	1431
Chawton The Greyfriar	0755	0929	1229	1439
Alton High Street stop H	0803	0937	1237	1447
Alton College	▼	0942	▼	▼
Alton Rail Station stop R	▼	0947	1240	1450
Amery Hill School	0808			
Holybourne Eggars School	0816			

Non School / College days only

38	38	38
0843	1143	1353
0846	1146	1356
0849	1149	1359
0852	1152	1402
0859	1159	1409
0903	1203	1413
0911	1211	1421
0921	1221	1431
0929	1229	1439
0937	1237	1447
▼	▼	▼
0940	1240	1450

38 Buses to Petersfield | Mondays to Fridays except Public Holidays

School & College days only

Route Number	38	38	38	38	38
Holybourne Eggars School				1500	
Alton Rail Station stop R	0825	0955	1245	1505	
Amery Hill School	▼	▼	▼	1515	
Alton College	▼	▼	▼	▼	1625
Alton High Street stop B	0829	0959	1249	1519	1629
Alton Community Hospital	0840	1010	1300	1530	1640
Chawton The Greyfriar	0845	1015	1305	1535	1645
Selborne Selborne Arms	0853	1023	1313	1543	1653
Greatham Digby Way	0905	1035	1325	1555	1705
Liss Forest Post Office	0912	1042	1332	1602	1712
Liss Whistle Stop	0916	1046	1336	1606	1716
Sheet Half Moon	0923	1053	1343	1613	1723
Moggs Mead Co-Op	0925	1055	1345	1615	1725
Petersfield Square stop B	▼	1058	▼	1618	1728
Petersfield Rail Station stop S	0928	1100	1348	1620	1730

Non School / College days only

38	38	38	38
	0955	1245	1515
	▼	▼	▼
	▼	▼	▼
	0959	1249	1519
	1010	1300	1530
	1015	1305	1535
	1023	1313	1543
0905	1035	1325	1555
0912	1042	1332	1602
0916	1046	1336	1606
0923	1053	1343	1613
0925	1055	1345	1615
▼	1058	▼	1618
0928	1100	1348	1620

These services continue to Petersfield Square.

37X Cowplain & Petersfield towards Alton

Alton College days - Monday to Friday

Cowplain Shops	0833 1223	Alton College	1340 1630
Horndean Precinct	0840 1230	Alton High Street stop B	1344 1634
Clanfield Drift Road Shops	0845 1235	Selborne Selborne Arms	1358 1648
Clanfield Rising Sun	0851 1241	Petersfield Rail Station stop S	1420 1705
Buriton Crossroads	0900 1250	Petersfield Square stop A	1423 1708
Petersfield Square stop B	0910 1300	Petersfield Cranford Road	1430 1710
Petersfield Rail Station stop R	0912 1302	Clanfield Rising Sun	1442 1723
Selborne Selborne Arms	0925 1315	Clanfield Drift Road Shops	1446 1728
Alton High Street stop H	0940 1330	Horndean Precinct	1451 1733
Alton College	0945 1335	Cowplain Shops	1457 1739

737 HSDC towards Petersfield, Bordon & Whitehill

Havant & South Downs College days - Monday to Friday

HSDC Havant Campus	1625	Whitehill Turning Circle	0752 ▼
HSDC South Downs Campus	1640	Hollybrook Park Chalet Hill	0757 ▼
Buriton Crossroads	1655	Bordon Camp Crossroads	0802 ▼
Petersfield Square stop B	1706	Lindford Elderberry Rd	0806 ▼
Petersfield Rail Station stop R	1708	Liphook Co-Op	0815 ▼
Moggs Mead Co-Op	1711	Greatham Digby Way	0825 ▼
Sheet Half Moon	1714	Liss Forest Post Office	0832 ▼
Liss Whistle Stop	1721	Liss Whistle Stop	0836 ▼
Liss Forest Post Office	1725	Sheet Half Moon	0843 ▼
Greatham Digby Way	1731	Moggs Mead Co-Op	0845 ▼
Liphook Co-Op	1739	Petersfield Rail Station stop S	0850 0850
Lindford Elderberry Road	1747	Petersfield Square stop A	0853 0853
Bordon Camp Crossroads	1751	Buriton Crossroads	0900 0900
Hollybrook Park Chalet Hill	1755	HSDC South Downs Campus	0915 0915
Whitehill Turning Circle	1800	HSDC Havant Campus	0930 0930

37 Buses to Petersfield

Mondays to Fridays except public holidays

Route Number	37	37	637	37	37	37	37	37	37	37	37	37	37
Havant Bus Station stand A				0700	0845	1005	1105	1205	1305	1405	1505	1605	1710	1810
HSDC Havant Campus				0701	0847	1007	1107	1207	1307	1407	1507	1607	1712	1811
HSDC South Downs Campus				0708	0855	1015	1115	1215	1315	1415	1515	1617	1722	1818
Crookhorn Precinct				0711	0859	1019	1119	1219	1319	1419	1519	1621	1726	1822
Waterlooville Precinct stop C	0555	0620	*This service runs on school days only.*	0722	0912	1032	1132	1232	1332	1432	1532	1634	1739	1834
Waterlooville Highfield Parade	0559	0624		0726	0916	1036	1136	1236	1336	1436	1536	1639	1744	1838
Cowplain Shops	0604	0629		0732	0923	1043	1143	1243	1343	1443	1543	1647	1752	1844
Cowplain Hazleton Shops	0607	0632		0735	0927	1047	1147	1247	1347	1447	1547	1651	1756	1847
Horndean Precinct	0612	0637	0737	0742	0933	1053	1153	1253	1353	1453	1553	1658	1803	1852
Clanfield Drift Road Shops	0616	0641	0745	0750	0938	1058	1158	1258	1358	1458	1558	1703	1808	1857
Clanfield Rising Sun	0620	0645	0751	0756	0943	1103	1203	1303	1403	1503	1603	1708	1813	1903
Petersfield Tesco	0631	0656	0806	0811	0956	1116	1216	1316	1416	1516	1616	1721	1826	
Petersfield Square stop B	0635	0700		0815	1000	1120	1220	1320	1420	1520	1620	1725	1830	
Petersfield Rail Station stop S	0638	0703		0818	1003	1123	1223	1323	1423	1523	1623	1728	1833	

Saturdays

37	37	37	37	37	37	37	37
	0820	0935	1105	1235	1405	1535	1715
	0821	0937	1107	1237	1407	1537	1716
	0828	0945	1115	1245	1415	1545	1724
	0831	0949	1119	1249	1419	1549	1728
0717	0842	1002	1132	1302	1432	1602	1741
0721	0846	1006	1136	1306	1436	1606	1745
0726	0851	1013	1143	1313	1443	1613	1751
0729	0854	1017	1147	1317	1447	1617	1754
0734	0859	1023	1153	1323	1453	1623	1800
0738	0903	1028	1158	1328	1458	1628	1805
0742	0907	1033	1203	1333	1503	1633	1810
0753	0918	1046	1216	1346	1516	1646	1821
0756	0921	1050	1220	1350	1520	1650	1825
0758	0923	1053	1223	1353	1523	1653	1827

37 Buses to Havant

Mondays to Fridays except public holidays

Route Number	37	37	37	37	37	37	37	37	37	637	37	37	37	37
Petersfield Rail Station stop S	0640	0710		0930	1030	1130	1230	1330	1430		1530	1630	1740	1840
Petersfield Square stop A	0643	0713		0933	1033	1133	1233	1333	1433		1533	1633	1743	1843
Petersfield Tesco	0645	0715		0936	1036	1136	1236	1336	1436		1536	1636	1746	1846
Clanfield Rising Sun	0658	0730	0846	0951	1051	1151	1251	1351	1451	1537	1551	1651	1758	1858
Clanfield Drift Road Shops	0703	0735	0851	0956	1056	1156	1256	1356	1456	1541	1556	1656	1802	1902
Horndean Precinct	0708	0740	0856	1001	1101	1201	1301	1401	1501	1548	1601	1701	1807	1907
Cowplain Hazleton Shops	0712	0746	0901	1006	1106	1206	1306	1406	1506		1606	1706	1811	1911
Cowplain Shops	0716	0751	0906	1011	1111	1211	1311	1411	1511		1611	1711	1815	1915
Waterlooville Highfield Parade	0721	0758	0912	1017	1117	1217	1317	1417	1517		1617	1717	1820	1920
Waterlooville Precinct stop A	0727	0805	0919	1024	1124	1224	1324	1424	1524		1624	1724	1827	1927
Crookhorn Precinct	0738	0818	0931	1036	1136	1236	1336	1436	1536		1636	1736	1837	1937
HSDC South Downs Campus	0741	0823	0935	1040	1140	1240	1340	1440	1540		1640	1740	1840	1940
HSDC Havant Campus	0747	0836	0942	1047	1147	1247	1347	1447	1547		1647	1747	1847	1947
Havant Bus Station stand A	0750	0840	0945	1050	1150	1250	1350	1450	1550		1650	1750	1850	1950

This bus runs Monday, Tuesday & Thursday school days only, departing Petersfield, Cranford Road at 1525. On Wednesdays & Fridays this journey will be replaced by a 37X, departing Petersfield, Cranford Road at 1430.

Saturdays

37	37	37	37	37	37	37	37	37
	0800	0930	1100	1230	1400	1530	1700	1830
	0803	0933	1103	1233	1403	1533	1703	1833
	0806	0936	1106	1236	1406	1536	1705	1835
0726	0821	0951	1121	1251	1421	1551	1717	1847
0730	0826	0956	1126	1256	1426	1556	1721	1851
0735	0831	1001	1131	1301	1431	1601	1726	1856
0739	0836	1006	1136	1306	1436	1606	1730	1900
0743	0841	1011	1141	1311	1441	1611	1734	1904
0746	0847	1017	1147	1317	1447	1617	1738	1908
0751	0854	1024	1154	1324	1454	1624	1744	1914
0800	0906	1036	1206	1336	1506	1636	1754	1924
0803	0910	1040	1210	1340	1510	1640	1757	1927
0808	0917	1047	1217	1347	1517	1647	1803	1933
0810	0920	1050	1220	1350	1520	1650	1805	1935

39 Buses to **Havant**

from 28th January 2018

Mondays to Fridays except public holidays

Wecock Farm Eagle Avenue	0540	0620	0640	0700	0712	0724	0736	0748	0801	0816	0831		0850	0904	0916	then at these times each hour	28	40	52	04	16	until	1428
Waterlooville Precinct stop A	0550	0630	0650	0710	0724	0736	0751	0803	0816	0831	0845	0855	0905	0917	0928		40	52	04	16	28		1440
Purbrook Cunningham Road	0554	0634	0654	0714	0729	0741	0756	0808	0821	0836	0850	0900	0910	0921	0932		44	56	08	20	32		1444
Crookhorn Precinct	0557	0637	0659	0719	0735	0749	0804	0816	0829	0843	0855	0905	0915	0926	0937		49	01	13	25	37		1449
South Downs College *opposite*	0600	0640	0702	0722	0738	0754	0809	0821	0834	0846	0858	0908	0918	0929	0940		52	04	16	28	40		1452
ASDA Superstore	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	0913	0923	0934	0945		57	09	21	33	45		1457
Middle Park Way Woolston Road	0605	0645	0708	0728	0746	0802	0817	0829	0842	0854	0906	0918	0928	0939	0950		02	14	26	38	50		1502
Leigh Park Park Parade	0610	0650	0714	0734	0752	0808	0823	0835	0848	0900	0912	0924	0934	0945	0956		08	20	32	44	56		1508
Havant Bus Station	0617	0657	0722	0742	0800	0816	0831	0843	0856	0908	0920	0932	0944	0955	1006		18	30	42	54	06		1518

Wecock Farm Eagle Avenue	1440	1452	1504	1516	1528	1540	1552	1604	1616	1628	1640	1652	1706	1720	1735	1755	1815	1835	1918	1958	2038	2118
Waterlooville Precinct stop A	1452	1504	1516	1528	1540	1552	1604	1616	1628	1640	1652	1704	1718	1732	1747	1805	1825	1845	1928	2008	2048	2128
Purbrook Cunningham Road	1457	1509	1521	1533	1545	1557	1609	1621	1633	1645	1657	1709	1723	1737	1752	1810	1829	1849	1932	2012	2052	2132
Crookhorn Precinct	1502	1514	1526	1538	1550	1602	1614	1626	1638	1650	1702	1714	1728	1742	1757	1814	1832	1852	1935	2015	2055	2135
South Downs College *opposite*	1505	1517	1529	1541	1553	1605	1617	1629	1641	1653	1705	1717	1731	1745	1800	1817	1835	1855	1938	2018	2058	2138
Middle Park Way Woolston Road	1513	1525	1537	1549	1601	1613	1625	1637	1649	1701	1713	1725	1739	1753	1808	1824	1840	1900	1943	2023	2103	2143
Leigh Park Park Parade	1519	1531	1543	1555	1607	1619	1631	1643	1655	1707	1719	1731	1745	1759	1814	1829	1845	1905	1948	2028	2108	2148
Havant Bus Station	1530	1542	1554	1606	1618	1630	1642	1654	1706	1718	1730	1742	1756	1810	1823	1838	1853	1913	1955	2035	2115	2155

Saturdays

Wecock Farm Eagle Avenue	0642	0702	0722	0742	0802	0822		0840	then at these times each hour	52	04	16	28	40	until	1452	1504	1516	1530	1545	1600	1615	1630
Waterlooville Precinct stop A	0652	0712	0732	0752	0812	0832		0852		04	16	28	40	52		1504	1516	1528	1542	1557	1611	1626	1641
Purbrook Cunningham Road	0656	0716	0736	0756	0816	0836		0856		08	20	32	44	56		1508	1520	1532	1546	1602	1615	1630	1645
Crookhorn Precinct	0659	0719	0739	0759	0819	0839		0901		13	25	37	49	01		1513	1525	1537	1551	1605	1618	1633	1648
South Downs College *opposite*	0702	0722	0742	0802	0822	0842		0904		16	28	40	52	04		1516	1528	1540	1554	1608	1621	1636	1651
ASDA Superstore	▼	▼	▼	▼	▼	▼		0909		21	33	45	57	09		1521	1533	1545	1559	▼	▼	▼	▼
Middle Park Way Woolston Road	0708	0728	0748	0808	0828	0848	0902	0914		26	38	50	02	14		1526	1538	1550	1604	1614	1627	1642	1657
Leigh Park Park Parade stop A	0714	0734	0754	0814	0834	0854	0908	0920		32	44	56	08	20		1532	1544	1556	1610	1620	1633	1648	1703
Havant Bus Station	0721	0741	0801	0821	0841	0901	0915	0930		42	54	06	18	30		1542	1554	1606	1620	1630	1640	1655	1710

This service starts at Hordle Road, 0859

Saturdays

Wecock Farm Eagle Avenue	1645	1700	1718	1738	1758	1818	1838	1918	1958	2038	2118
Waterlooville Precinct stop A	1656	1711	1729	1748	1808	1828	1848	1928	2008	2048	2128
Purbrook Cunningham Road	1700	1715	1733	1752	1812	1832	1852	1932	2012	2052	2132
Crookhorn Precinct	1703	1718	1736	1755	1815	1835	1855	1935	2015	2055	2135
South Downs College *opposite*	1706	1721	1739	1758	1818	1838	1858	1938	2018	2058	2138
ASDA Superstore	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
Middle Park Way Woolston Road	1712	1727	1745	1803	1823	1843	1903	1943	2023	2103	2143
Leigh Park Park Parade stop A	1718	1733	1751	1808	1828	1848	1908	1948	2028	2108	2148
Havant Bus Station	1725	1740	1758	1815	1835	1855	1915	1955	2035	2115	2155

Sundays and public holidays

Wecock Farm Eagle Avenue	0838	0938	then at these times each hour	38	until	1538	1638	1738
Waterlooville Precinct stop A	0849	0949		49		1549	1649	1749
Purbrook Cunningham Road	0853	0953		53		1553	1653	1753
Crookhorn Precinct	0858	0958		58		1558	1658	1758
South Downs College *opposite*	0901	1001		01		1601	1701	1801
ASDA Superstore	▼	1005		05		1605	▼	▼
Middle Park Way Woolston Road	0906	1011		11		1611	1706	1806
Leigh Park Park Parade stop A	0911	1016		16		1616	1711	1811
Havant Bus Station	0918	1023		23		1623	1718	1818

39 Buses to **Waterlooville**

from 28th January 2018

Mondays to Fridays except public holidays

Havant Bus Station stand D	0600	0620	0640	0700	0715	0730	0745	0800	0812	0824	0836	0848	0900	then at these times each hour	12	24	36	48	00	until	1512	1524	1536
Leigh Park Park Parade stop B	0606	0626	0646	0707	0722	0737	0752	0807	0819	0831	0843	0855	0907		19	31	43	55	07		1519	1532	1544
Middle Park Way Woolston Road	0610	0630	0650	0712	0727	0742	0757	0812	0824	0836	0848	0900	0912		24	36	48	00	12		1524	1537	1549
ASDA Superstore	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	0906	0918		30	42	54	06	18		1530	▼	▼
South Downs College	0616	0636	0656	0719	0734	0749	0804	0821	0833	0845	0857	0911	0923		35	47	59	11	23		1535	1546	1558
Crookhorn Precinct	0619	0639	0659	0722	0737	0752	0807	0824	0836	0848	0900	0914	0926		38	50	02	14	26		1538	1549	1601
Purbrook Cunningham Road	0623	0643	0703	0727	0742	0757	0812	0828	0840	0852	0904	0919	0931		43	55	07	19	31		1543	1554	1606
Waterlooville Precinct stop C	0628	0648	0708	0734	0749	0804	0819	0835	0847	0859	0911	0925	0937		49	01	13	25	37		1549	1601	1613
Wecock Farm Eagle Avenue	0637	0657	0717	0743	0758	0813	0828	0845	0857	0909	0921	0936	0948		00	12	24	36	48		1600	1612	1624

Havant Bus Station stand D	1548	1600	1612	1624	1636	1648	1700	1715	1730	1745	1800	1820	1840	1900	1920	2000	2040	2120	2200	2300	*These services run on Fridays only.*
Leigh Park Park Parade stop B	1556	1608	1620	1632	1644	1656	1708	1723	1738	1753	1807	1826	1846	1906	1926	2006	2046	2126	2206	2306	
Middle Park Way Woolston Road	1601	1613	1625	1637	1649	1701	1713	1728	1743	1758	1812	1831	1851	1911	1931	2011	2051	2131	2211	2311	
South Downs College	1610	1622	1634	1646	1658	1710	1722	1737	1752	1807	1820	1837	1857	1917	1937	2017	2057	2137	2217	2317	
Crookhorn Precinct	1613	1625	1637	1649	1701	1713	1725	1740	1755	1810	1823	1840	1900	1920	1940	2020	2100	2140	2220	2320	
Purbrook Cunningham Road	1618	1630	1642	1654	1706	1718	1730	1745	1759	1814	1827	1844	1904	1924	1944	2024	2104	2144	2224	2324	
Waterlooville Precinct stop C	1625	1637	1649	1701	1713	1725	1737	1752	1806	1821	1834	1849	1909	1929	1949	2029	2109	2149	2229	2329	
Wecock Farm Eagle Avenue	1636	1648	1700	1712	1724	1736	1748	1803	1815	1830	1842	1857	1917	1937	1957	2037	2117	2157	2237	2337	

Saturdays

Havant Bus Station stand D	0655	0715	0735	0755	0815	0833	0847	0900	then at these times each hour	12	24	36	48	00	until	1512	1526	1540	1555	1610	1625	1640	1700
Leigh Park Park Parade stop B	0702	0722	0742	0802	0822	0840	0854	0907		19	31	43	55	07		1519	1533	1547	1602	1617	1632	1647	1706
Middle Park Way Woolston Road	0707	0727	0747	0807	0827	0845	0859	0912		24	36	48	00	12		1524	1538	1552	1607	1622	1637	1652	1711
ASDA Superstore	▼	▼	▼	▼	▼	▼	0905	0918		30	42	54	06	18		1530	1544	▼	▼	▼	▼	▼	▼
South Downs College	0713	0733	0753	0813	0833	0851	0910	0923		35	47	59	11	23		1535	1549	1558	1613	1628	1643	1658	1717
Crookhorn Precinct	0716	0736	0756	0816	0836	0854	0913	0926		38	50	02	14	26		1538	1552	1601	1616	1631	1646	1701	1720
Purbrook Cunningham Road	0720	0740	0800	0820	0840	0858	0918	0931		43	55	07	19	31		1543	1557	1605	1620	1635	1650	1705	1724
Waterlooville Precinct stop C	0727	0747	0807	0827	0847	0905	0924	0937		49	01	13	25	37		1549	1603	1612	1627	1642	1657	1712	1729
Wecock Farm Eagle Avenue	0737	0757	0817	0837	0857	0915	0935	0948		00	12	24	36	48		1600	1614	1622	1637	1652	1707	1722	1737

Saturdays

Havant Bus Station stand D	1720	1740	1800	1820	1840	1900	1920	2000	2040	2120	2200	2300
Leigh Park Park Parade stop B	1726	1746	1806	1826	1846	1906	1926	2006	2046	2126	2206	2306
Middle Park Way Woolston Road	1731	1751	1811	1831	1851	1911	1931	2011	2051	2131	2211	2311
ASDA Superstore	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
South Downs College	1737	1757	1817	1837	1857	1917	1937	2017	2057	2137	2217	2317
Crookhorn Precinct	1740	1800	1820	1840	1900	1920	1940	2020	2100	2140	2220	2320
Purbrook Cunningham Road	1744	1804	1824	1844	1904	1924	1944	2024	2104	2144	2224	2324
Waterlooville Precinct stop C	1749	1809	1829	1849	1909	1929	1949	2029	2109	2149	2229	2329
Wecock Farm Eagle Avenue	1757	1817	1837	1857	1917	1937	1957	2037	2117	2157	2237	2337

Sundays and public holidays

0855	0950	then at these times each hour	50	until	1550	1655	1755
0902	0957		57		1557	1702	1802
0907	1002		02		1602	1707	1807
▼	1007		07		1607	▼	▼
0912	1012		12		1612	1712	1812
0915	1015		15		1615	1715	1815
0920	1020		20		1620	1720	1820
0926	1026		26		1626	1726	1826
0935	1035		35		1635	1735	1835

D1/D2

Saturdays
Valid from: 01/09/2019
Valid to: 28/03/2020

D1 Waterlooville - Denmead - Hambledon
Via Auger Row - Berewood
D2 Waterlooville - Denmead
Via Berewood - Milton Road - Sunnymead Drive

Service No.:	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1
Notes:										
Waterlooville Precinct	0835	0935	1035	1135	1235	1335	1435	1535	1635	1735
Berewood Primary School	0840	0940	1040	1140	1240	1340	1440	1540	1640	1740
The Rainbow	0846	----	1046	----	1246	----	1446	----	1646	----
Denmead Green	0854	0949	1054	1149	1254	1349	1454	1549	1654	1749
Mead End, Great Mead	0900	----	1100	----	1300	----	1500	----	1700	----
Hambledon, The Gardens	----	0958	----	1158	----	1358	----	1558	----	1758

D1 Hambledon - Denmead - Waterlooville
Via Berewood - Auger Row
D2 Denmead - Waterlooville
Via Sunnymead Drive - Milton Road - Berewood

Service No.:	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2
Notes:										
Hambledon, The Gardens	0804	----	1004	----	1204	----	1404	----	1604	----
Mead End, Great Mead	----	0903	----	1103	----	1303	----	1503	----	1703
Denmead Green	0813	0909	1013	1109	1213	1309	1413	1509	1613	1709
The Rainbow	----	0916	----	1116	----	1316	----	1516	----	1716
Berewood Primary School	0821	0921	1021	1121	1221	1321	1421	1521	1621	1721
Waterlooville Precinct	0828	0927	1027	1127	1227	1327	1427	1527	1627	1727

D1/D2

Monday to Friday
Valid from: 01/09/2019
Valid to: 28/03/2020

D1 Waterlooville - Denmead - Hambledon
Via Auger Row - Berewood
D2 Waterlooville - Denmead
Via Berewood - Milton Road - Sunnymead Drive

Service No.:	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1
Notes:											
Waterlooville Precinct	0735	0835	0935	1035	1135	1235	1335	1435	1535	1635	1735
Berewood Primary School	0740	0840	0940	1040	1140	1240	1340	1440	1540	1640	1740
The Rainbow	----	0846	----	1046	----	1246	----	1446	----	1646	----
Denmead Green	0749	0854	0949	1054	1149	1254	1349	1454	1549	1654	1749
Mead End, Great Mead	----	0900	----	1100	----	1300	----	1500	----	1700	----
Hambledon, The Gardens	0758	----	0958	----	1158	----	1358	----	1558	----	1758

D1 Hambledon - Denmead - Waterlooville
Via Berewood - Auger Row
D2 Denmead - Waterlooville
Via Sunnymead Drive - Milton Road - Berewood

Service No.:	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1
Notes:												
Hambledon, The Gardens	----	0804	----	1004	----	1204	----	1404	----	1604	----	1800
Mead End, Great Mead	0701	----	0903	----	1103	----	1303	----	1503	----	1703	----
Denmead Green	0707	0813	0909	1013	1109	1213	1309	1413	1509	1613	1709	1809
The Rainbow	0714	----	0916	----	1116	----	1316	----	1516	----	1716	----
Berewood Primary School	0719	0821	0921	1021	1121	1221	1321	1421	1521	1621	1721	1817
Waterlooville Precinct	0727	0828	0927	1027	1127	1227	1327	1427	1527	1627	1727	1823

from 28th July 2019

Mondays to Fridays except public holidays

Littlehampton Anchor Springs							0619			0652		0707		0727		0747		0817		0845		0905		0928					
Yapton Sparks Corner		0529		0559			0629			0702		0718		0738		0758		0827		0856		0916		0940					
Flansham Park Alfriston Close		0534		0604		0616	0636	0652	0702	0709	0717	0727	0737	0747	0757	0808	0821	0837	0855	0905	0915	0925	0935	0949	0959				
Felpham The Southdowns		0537		0607		0620	0640	0656	0706	0713	0722	0733	0743	0753	0803	0814	0827	0843	0859	0909	0919	0929	0939	0953	1003				
Bognor Regis High Street Stop R		0545		0615		0630	0650	0706	0716	0725	0737	0747	0757	0807	0817	0831	0843	0857	0911	0921	0931	0941	0951	1005	1015				
North Bersted Shops		0552		0622		0639	0659	0715	0725	0735	0747	0757	0807	0817	0827	0841	0853	0907	0921	0931	0941	0951	1001	1013	1023				
Chichester Bus Station stand 9	0531	0607	0631	0637	0644	0657	0715	0717	0737	0753	0803	0817	0827	0842	0852	0902	0912	0922	0932	0942	0952	1002	1012	1022	1032	1042			
Chichester Cathedral	0535	0610	0635	0640	0648	0701	0718	0721	0741	0758	0806	0822	0830	0847	0855	0907	0915	0927	0935	0947	0955	1007	1015	1027	1035	1047			
Bosham Roundabout	0544		0644		0657	0712		0732	0752	0809		0833		0858		0918		0938		0958		1018		1038		1058			
Southbourne Church	0550		0650		0703	0719		0739	0759	0817		0841		0905		0925		0945		1005		1025		1045		1105			
Emsworth Square	0554		0654		0707	0724		0744	0804	0823		0847		0910		0930		0950		1010		1030		1050		1110			
Havant Bus Station stand C	0605		0705		0718	0738		0758	0818	0837		0901		0924		0944		1004		1024		1044		1104		1124			
Hilsea Lido stop E	0615		0715		0729	0749		0809	0830	0850		0914		0934		0954		1014		1034		1054		1114		1134			
North End Junction stop G	0621		0721		0736	0756		0816	0837	0857		0921		0941		1001		1021		1041		1101		1121		1141			
Portsmouth Commercial Rd stop C	0631		0731		0751	0811		0831	0852	0912		0931		0951		1011		1031		1051		1111		1131		1151			
University of Portsmouth	0634		0734		0754	0814		0834	0855	0915		0934		0954		1014		1034		1054		1114		1134		1154			
Portsmouth Hard Interchange	0640		0740		0800	0820		0840	0901	0921		0940		1000		1020		1040		1100		1120		1140		1200			

These services start from Rollaston Park approximately 2 minutes earlier.

Mondays to Fridays except public holidays

Littlehampton Anchor Springs	0948		1012		1032		1052			12		32		52			1412		1432		1452		1512		1532				
Yapton Sparks Corner	1000		1022		1042		1102			22		42		02			1422		1442		1502		1522		1542				
Flansham Park Alfriston Close	1009	1019	1029	1039	1049	1059	1109		19	29	39	49	59	09		1419	1429	1439	1449	1459	1509	1519	1529	1539	1549				
Felpham The Southdowns	1013	1023	1033	1043	1053	1103	1113		23	33	43	53	03	13		1423	1433	1443	1453	1503	1513	1523	1533	1543	1553				
Bognor Regis High Street Stop R	1025	1035	1045	1055	1105	1115	1125		35	45	55	05	15	25		1435	1445	1455	1505	1515	1525	1535	1545	1555	1605				
North Bersted Shops	1033	1043	1053	1103	1113	1123	1133		43	53	03	13	23	33		1443	1453	1503	1513	1523	1533	1543	1553	1603	1613				
Chichester Bus Station stand 9	1052	1102	1112	1122	1132	1142	1152	*then at*	02	12	22	32	42	52	*until*	1502	1512	1522	1532	1542	1552	1602	1612	1622	1632				
Chichester Cathedral	1055	1107	1115	1127	1135	1147	1155	*these*	07	15	27	35	47	55		1507	1515	1527	1535	1547	1555	1607	1615	1627	1635				
Bosham Roundabout		1118		1138		1158		*mins*	18		38		58			1518		1540		1600		1620		1640					
Southbourne Church		1125		1145		1205		*past*	25		45		05			1525		1547		1607		1627		1647					
Emsworth Square		1130		1150		1210		*each*	30		50		10			1530		1552		1612		1632		1652					
Havant Bus Station stand C		1144		1204		1224		*hour*	44		04		24			1544		1606		1626		1646		1706					
Hilsea Lido stop E		1154		1214		1234			54		14		34			1554		1618		1638		1658		1718					
North End Junction stop G		1201		1221		1241			01		21		41			1601		1624		1644		1704		1724					
Portsmouth Commercial Rd stop C		1211		1231		1251			11		31		51			1611		1634		1654		1714		1734					
University of Portsmouth		1214		1234		1254			14		34		54			1614		1637		1657		1717		1737					
Portsmouth Hard Interchange		1220		1240		1300			20		40		00			1620		1642		1702		1722		1742					

Please note:
Additional journey on West Sussex school days starts from Bishop Luffa School at 1443, via Bosham Roundabout (1453), Southbourne Church (1500), Emsworth Square (1505) arriving at Havant Bus Station at 1513.

Mondays to Fridays except public holidays

Littlehampton Anchor Springs		1552		1612		1632		1652		1712		1737		1802		1822	1844	1904		1934		2034		2134	2234				
Yapton Sparks Corner		1602		1622		1642		1703		1723		1747		1812		1832	1853	1913		1943		2043		2143	2243				
Flansham Park Alfriston Close	1559	1609	1619	1629	1639	1649	1701	1711	1721	1731	1744	1754	1804	1819	1834	1839	1859	1919	1934	1949	2034	2049	2134	2149	2249	0003			
Felpham The Southdowns	1603	1613	1623	1633	1643	1653	1705	1715	1725	1735	1748	1758	1806	1823	1836	1841	1901	1921	1936	1951	2036	2051	2136	2151	2251	0005			
Bognor Regis High Street Stop R	1615	1625	1635	1645	1655	1705	1717	1727	1737	1747	1800	1810	1814	1834	1844	1849	1909	1929	1944	1959	2044	2059	2144	2159	2259	0013			
North Bersted Shops	1623	1633	1643	1653	1703	1713	1725	1735	1745	1755	1808	1818	1821	1840	1851	1856	1916	1936	1951	2006	2051	2106	2151	2206	2306	0020			
Chichester Bus Station stand 9	1642	1652	1702	1712	1722	1732	1744	1754	1804	1814	1823	1833	1838	1853	1908	1913	1929	1949	2008	2021	2108	2121	2208	2221	2321	0033			
Chichester Cathedral	1647	1655	1707	1715	1727	1735	1749	1757	1808	1817			1842		1912	1916			2012	2024	2112	2124	2212	2224	2324				
Bosham Roundabout	1700		1720		1740		1800		1818				1851		1921				2021		2121		2221						
Southbourne Church	1707		1727		1747		1807		1825				1857		1927				2027		2127		2227						
Emsworth Square	1712		1732		1752		1812		1830				1902		1932				2032		2132		2232						
Havant Bus Station stand C	1726		1746		1806		1826		1840				1910		1940				2040		2140		2240						
Hilsea Lido stop E	1738		1758		1816		1836		**c**				**c**		**c**				**c**		**c**								
North End Junction stop G	1744		1804		1822		1842																						
Portsmouth Commercial Rd stop C	1754		1814		1832		1852																						
University of Portsmouth	1757		1817		1835		1855																						
Portsmouth Hard Interchange	1802		1822		1840		1900																						

c = Connections and through fares available to route 23 towards Hilsea, North End, City Centre, The Hard & Southsea.

from 28th July 2019

Saturdays

Littlehampton Anchor Springs						0652		0712		0732		0752		0812		0832		0852		0912		0932		0952					
Yapton Sparks Corner		0609			0649	0702		0722		0742		0802		0822		0842		0902		0922		0942		1002					
Flansham Park Alfriston Close		0616			0656	0659	0709	0719	0729	0739	0749	0759	0809	0819	0829	0839	0849	0859	0909	0919	0929	0939	0949	0959	1009	1019				
Felpham The Southdowns		0619			0659	0703	0713	0723	0733	0743	0753	0803	0813	0823	0833	0843	0853	0903	0913	0923	0933	0943	0953	1003	1013	1023				
Bognor Regis High Street stop C		0628			0708	0715	0725	0735	0745	0755	0805	0815	0825	0835	0845	0855	0905	0915	0925	0935	0945	0955	1005	1015	1025	1035				
North Bersted Shops		0636			0716	0723	0733	0743	0753	0803	0813	0823	0833	0843	0853	0903	0913	0923	0933	0943	0953	1003	1013	1023	1033	1043				
Chichester Bus Station stand 9	0627	0652	0657	0727	0732	0742	0752	0802	0812	0822	0832	0842	0852	0902	0912	0922	0932	0942	0952	1002	1012	1022	1032	1042	1052	1102				
Chichester Cathedral	0630	0655	0700	0730	0735	0747	0755	0807	0815	0827	0835	0847	0855	0907	0915	0927	0935	0947	0955	1007	1015	1027	1035	1047	1055	1107				
Bosham Roundabout	0639		0709	0739		0758		0818		0838		0858		0918		0938		0958		1018		1038		1058		1118				
Southbourne Church	0645		0715	0745		0805		0825		0845		0905		0925		0945		1005		1025		1045		1105		1125				
Emsworth Square	0649		0719	0749		0810		0830		0850		0910		0930		0950		1010		1030		1050		1110		1130				
Havant Bus Station stand C	0700		0730	0800		0824		0844		0904		0924		0944		1004		1024		1044		1104		1124		1144				
Hilsea Lido stop E	0709		0739	0809		0834		0854		0914		0934		0954		1014		1034		1054		1114		1134		1154				
North End Junction stop G	0714		0744	0814		0841		0901		0921		0941		1001		1021		1041		1101		1121		1141		1201				
Portsmouth Commercial Rd stop C	0723		0753	0823		0851		0911		0931		0951		1011		1031		1051		1111		1131		1151		1211				
University of Portsmouth	0726		0756	0826		0854		0914		0934		0954		1014		1034		1054		1114		1134		1154		1214				
Portsmouth Hard Interchange	0730		0800	0830		0900		0920		0940		1000		1020		1040		1100		1120		1140		1200		1220				

These services start from Rollaston Park approximately 2 minutes earlier.

Saturdays

Littlehampton Anchor Springs	1012		1032		1052			12		32		52		1632		1652		1712		1732		1752		1822	1844	1904			
Yapton Sparks Corner	1022		1042		1102			22		42		02		1642		1702		1722		1742		1802		1832	1853	1913			
Flansham Park Alfriston Close	1029	1039	1049	1059	1109		19	29	39	49	59	09		1649	1659	1709	1719	1729	1739	1749	1804	1809	1834	1839	1859	1919			
Felpham The Southdowns	1033	1043	1053	1103	1113		23	33	43	53	03	13		1653	1703	1713	1723	1733	1743	1753	1806	1813	1836	1841	1901	1921			
Bognor Regis High Street stop C	1045	1055	1105	1115	1125		35	45	55	05	15	25		1705	1715	1725	1735	1745	1755	1805	1814	1825	1844	1849	1909	1929			
North Bersted Shops	1053	1103	1113	1123	1133		43	53	03	13	23	33		1713	1723	1733	1743	1753	1803	1813	1821	1833	1851	1856	1916	1936			
Chichester Bus Station stand 9	1112	1122	1132	1142	1152	*then at these mins past each hour*	02	12	22	32	42	52	*until*	1732	1742	1752	1802	1812	1818	1828	1838	1848	1908	1913	1929	1949			
Chichester Cathedral	1115	1127	1135	1147	1155		07	15	27	35	47	55		1735	1747	1755	1807	1815			1842		1912	1916						
Bosham Roundabout		1138		1158			18		38		58				1758		1818				1851		1921							
Southbourne Church		1145		1205			25		45		05				1805		1825				1857		1927							
Emsworth Square		1150		1210			30		50		10				1810		1830				1902		1932							
Havant Bus Station stand C		1204		1224			44		04		24				1824		1840				1910		1940							
Hilsea Lido stop E		1214		1234			54		14		34				1834		**c**				**c**		**c**							
North End Junction stop G		1221		1241			01		21		41				1841															
Portsmouth Commercial Rd stop C		1231		1251			11		31		51				1851															
University of Portsmouth		1234		1254			14		34		54				1854															
Portsmouth Hard Interchange		1240		1300			20		40		00				1900															

Saturdays

Littlehampton Anchor Springs		1934		2034		2134	2234	
Yapton Sparks Corner		1943		2043		2143	2243	
Flansham Park Alfriston Close	1934	1949	2034	2049	2134	2149	2249	0003
Felpham The Southdowns	1936	1951	2036	2051	2136	2151	2251	0005
Bognor Regis High Street stop C	1944	1959	2044	2059	2144	2159	2259	0013
North Bersted Shops	1951	2006	2051	2106	2151	2206	2306	0020
Chichester Bus Station stand 9	2008	2021	2108	2121	2208	2221	2321	0033
Chichester Cathedral	2012	2024	2112	2124	2212	2224	2324	
Bosham Roundabout	2021		2121		2221			
Southbourne Church	2027		2127		2227			
Emsworth Square	2032		2132		2232			
Havant Bus Station stand C	2040		2140		2240			
	c		**c**					

c = Connections and through fares available to route 23 towards Hilsea, North End, City Centre, The Hard & Southsea.

from 28th July 2019

Sundays and public holidays

Littlehampton Anchor Springs							0745		0815			45		15			1445		1515	1545		1615	1645		1715	1745				
Yapton Sparks Corner							0755		0825			55		25			1455		1525	1555		1625	1655		1725	1755				
Flansham Park Alfriston Close					0732		0802		0832			02		32			1502		1532	1602		1632	1702		1732	1802				
Felpham The Southdowns					0736		0806		0836			06		36			1506		1536	1606		1636	1706		1736	1806				
Bognor Regis High Street stop R					0746		0816		0846			16		46			1516		1546	1616		1646	1716		1746	1816				
North Bersted Shops					0754		0824		0854			24		54			1524		1554	1624		1654	1724		1754	1824				
Chichester Bus Station stand 9	0710	0740	0800	0813	0830	0843	0900	0913	0930	*then at these mins past hour*	43	00	13	30	*until*	1543	1600	1613	1643	1700	1713	1743	1800	1813	1843				
Chichester Cathedral	0714	0744	0805	0816	0835	0846	0905	0916	0935		46	05	16	35		1546	1605	1616	1646	1705	1716	1746	1805	1816	1846				
Bosham Roundabout	0724	0754	0816		0846		0916		0946			16		46			1616			1716			1816						
Southbourne Church	0730	0800	0823		0853		0923		0953			23		53			1623			1723			1823						
Emsworth Square	0735	0805	0828		0858		0928		0958			28		58			1628			1728			1828						
Havant Bus Station stand C	0718	0748	0818	0842		0912		0942		1012			42		12			1642			1742			1842						
Hilsea Lido stop E	0727	0757	0827	0852		0922		0952		1022			52		22			1652			1752			1852						
North End Junction stop G	0733	0803	0833	0859		0929		0959		1029			59		29			1659			1759			1859						
Portsmouth Commercial Rd stop C	0741	0811	0841	0909		0939		1009		1039			09		39			1709			1809			1909						
University of Portsmouth	0744	0814	0844	0912		0942		1012		1042			12		42			1712			1812			1912						
Portsmouth Hard Interchange	0748	0818	0848	0918		0948		1018		1048			18		48			1718			1818			1918						

This service has a connection that requires a change of bus.

Sundays and public holidays

Littlehampton Anchor Springs		1815	1835	1855		1955		2055
Yapton Sparks Corner		1825	1845	1904		2004		2104
Flansham Park Alfriston Close		1832	1852	1911		2011		2111
Felpham The Southdowns		1836	1856	1914		2014		2114
Bognor Regis High Street stop C		1846	1906	1922		2022		2122
North Bersted Shops		1854	1914	1930		2030		2130
Chichester Bus Station stand 9	1900	1913	1929	1945	2000	2043	2100	2143
Chichester Cathedral	1904	1916		1948	2004		2104	
Bosham Roundabout	1913				2013		2113	
Southbourne Church	1919				2019		2119	
Emsworth Square	1924				2024		2124	
Havant Bus Station stand C	1933				2033		2133	
	c							

c = Connections and through fares available to route 23 towards Hilsea, North End, City Centre, The Hard & Southsea.

from 28th July 2019

Mondays to Fridays except public holidays

Portsmouth Hard Interchange											0625		0647		0707		0727		0752		0812		0832		0852	
University of Portsmouth											0629		0652		0712		0732		0757		0817		0837		0857	
Portsmouth Commercial Road stop D							0553		0613		0633		0658		0718		0738		0803		0823		0843		0903	
North End Junction stop C							0601		0621		0641		0708		0728		0748		0813		0833		0853		0913	
Hilsea Lido stop C							0607		0627		0647		0714		0734		0754		0819		0839		0859		0919	
Havant Bus Station stand H					0602		0618		0638		0658		0728		0748		0808		0834		0854		0914		0934	
Emsworth By-Pass					0610		0626		0646		0706		0737		0757		0817		0843		0903		0923		0943	
Southbourne Church					0614		0631		0651		0711		0742		0802		0822		0848		0908		0928		0948	
Bosham Roundabout					0620		0638		0658		0718		0750		0810		0830		0855		0915		0935		0955	
Chichester Cathedral				0620	0630	0640	0650		0710	0720	0730		0805	0815	0825	0835	0845	0857	0909	0919	0929	0939	0949	0959	1009	1019
Chichester Bus Station stand 8	0520	0551	0611	0626	0636	0646	0656	0706	0716	0728	0738	0756	0814	0824	0834	0844	0854	0905	0917	0927	0937	0947	0957	1007	1017	1027
North Bersted Shops	0533	0605	0625	0641	0651	0701	0711	0721	0731	0744	0754	0812	0830	0840	0850	0900	0910	0921	0933	0943	0953	1003	1013	1023	1033	1043
Bognor Regis High Street stop C	0543	0615	0635	0651	0701	0711	0721	0731	0741	0757	0807	0825	0843	0853	0903	0913	0923	0934	0946	0956	1006	1016	1026	1036	1046	1056
Felpham The Southdowns	0550	0622	0642	0658	0708	0718	0729	0739	0749	0805	0815	0833	0851	0901	0911	0921	0931	0942	0954	1004	1014	1024	1034	1044	1054	1104
Flansham Park Alfriston Close	0553	0625	0645	0702	0717	0722	0737	0743	0757	0809	0821	0837	0855	0904	0915	0924	0935	0946	0959	1007	1019	1027	1039	1047	1059	1107
Yapton Sparks Corner	0600	0632	0652	0710		0730		0751		0817		0845		0912		0932		0955		1015		1035		1055		1115
Littlehampton Anchor Springs	0610	0642	0702	0722		0742		0808		0834		0900		0923		0943		1006		1026		1046		1106		1126

Mondays to Fridays except public holidays

Portsmouth Hard Interchange	*then at these mins past each hour*	12		32		52		*until*	1352		1412		1432		1452		1512		1532		1552		1612		1632	
University of Portsmouth		17		37		57			1357		1417		1437		1457		1517		1537		1557		1617		1637	
Portsmouth Commercial Road stop D		23		43		03			1403		1423		1443		1503		1523		1543		1603		1623		1643	
North End Junction stop C		33		53		13			1413		1433		1453		1513		1533		1553		1613		1633		1653	
Hilsea Lido stop C		39		59		19			1419		1439		1459		1519		1539		1559		1619		1639		1659	
Havant Bus Station stand H		54		14		34			1434		1454		1514		1534		1554		1614		1634		1654		1714	
Emsworth By-Pass		03		23		43			1443		1503		1523		1543		1603		1623		1643		1703		1723	
Southbourne Church		08		28		48			1448		1508		1528		1548		1608		1628		1648		1708		1728	
Bosham Roundabout		15		35		55			1455		1515		1535		1555		1615		1635		1655		1715		1735	
Chichester Cathedral		29	39	49	59	09	19		1509	1519	1529	1539	1549	1559	1609	1619	1629	1639	1649	1659	1709	1719	1729	1739	1749	1759
Chichester Bus Station stand 8		37	47	57	07	17	27		1517	1527	1537	1547	1557	1607	1617	1627	1637	1647	1657	1707	1717	1727	1737	1747	1757	1807
North Bersted Shops		53	03	13	23	33	43		1533	1543	1554	1604	1614	1624	1636	1646	1656	1708	1719	1730	1740	1749	1758	1807	1817	1825
Bognor Regis High Street stop C		06	16	26	36	46	56		1546	1556	1607	1617	1627	1637	1649	1659	1709	1721	1732	1743	1753	1802	1811	1820	1830	1837
Felpham The Southdowns		14	24	34	44	54	04		1554	1604	1615	1625	1635	1645	1657	1707	1717	1729	1740	1751	1801	1810	1819	1828	1837	1844
Flansham Park Alfriston Close		19	27	39	47	59	07		1559	1607	1619	1628	1639	1648	1701	1710	1721	1732	1744	1754	1804	1813	1822	1831	1840	1847
Yapton Sparks Corner			35		55		15			1615		1636		1656		1718		1740		1802		1821		1839		1854
Littlehampton Anchor Springs			46		06		26			1626		1647		1707		1732		1752		1813		1832		1850		1905

Mondays to Fridays except public holidays

Portsmouth Hard Interchange	1652		1712	1732	1752	1812		1852		1942				
University of Portsmouth	1657		1717	1737	1757	1817		1856		▼				
Portsmouth Commercial Road stop D	1703		1723	1743	1803	1823		1900		1947				
North End Junction stop C	1713		1733	1753	1813	1833		1909		1958				
Hilsea Lido stop C	1719		1739	1759	1819	1839		1914		2002				
Havant Bus Station stand H	1734		1754	1814	1834	1854		1926		2026				
Emsworth By-Pass	1743		1803	1823	1843	1903		1934		2034				
Southbourne Church	1748		1808	1828	1848	1908		1939		2039				
Bosham Roundabout	1755		1815	1835	1855	1915		1945		2045				
Chichester Cathedral	1809	1819	1829	1845	1905	1925	1925	1955	2025	2055	2125	2225	2325	
Chichester Bus Station stand 8	1817	1827	1837	1852	1912	1928	1932	2002	2032	2102	2132	2232	2332	
North Bersted Shops	1835	1842	1852	1907	1926		1946	2016	2046	2116	2146	2246	2346	
Bognor Regis High Street stop C	1845	1852	1902	1917	1934		1954	2024	2054	2124	2154	2254	2354	
Felpham The Southdowns	1852	1859	1908	1923	1940		2000	2030	2100	2130	2200	2300	2400	
Flansham Park Alfriston Close	1855	1902	1911	1926	1943		2003	2034	2103	2134	2203	2303	0003	
Yapton Sparks Corner		1909					2010		2110		2210			
Littlehampton Anchor Springs		1920					2020		2120		2220			

This journey runs as route 23 between The Hard and Havant. Through fares are available.

Please note: Additional journey on West Sussex school days only starts from Havant Bus Station at 0708, via Emsworth By-pass (0716) , Southbourne Church (0721), Bosham Roundabout (0728) arriving at Bishop Luffa School layby at 0740.

from 28th July 2019

Saturdays

Portsmouth Hard Interchange											0647			0727			0752		0812		0832		0852		
University of Portsmouth											0650			0730			0757		0817		0837		0857		
Portsmouth Commercial Road stop D											0654			0734			0803		0823		0843		0903		
North End Junction stop C											0702			0742			0813		0833		0853		0913		
Hilsea Lido stop C											0707			0747			0819		0839		0859		0919		
Havant Bus Station stand H					0619		0639		0659		0719			0759		0814	0834		0854		0914		0934		
Emsworth By-Pass					0628		0648		0708		0728			0808		0823	0843		0903		0923		0943		
Southbourne Church					0633		0653		0713		0733			0813		0828	0848		0908		0928		0948		
Bosham Roundabout					0639		0659		0719		0739			0819		0835	0855		0915		0935		0955		
Chichester Cathedral					0649	0659	0709		0729	0739	0749	0759		0819	0829	0839	0849	0859	0909	0919	0929	0939	0949	0959	1009	1019
Chichester Bus Station stand 8	0556	0616	0636	0653	0657	0707	0717	0727	0737	0747	0757	0807	0817	0827	0837	0847	0857	0907	0917	0927	0937	0947	0957	1007	1017	1027
North Bersted Shops	0610	0630	0650	0707	0713	0723	0733	0743	0753	0803	0813	0823	0833	0843	0853	0903	0913	0923	0933	0943	0953	1003	1013	1023	1033	1043
Bognor Regis High Street stop C	0620	0640	0700	0717	0726	0736	0746	0756	0806	0816	0826	0836	0846	0856	0906	0916	0926	0936	0946	0956	1006	1016	1026	1036	1046	1056
Felpham The Southdowns	0627	0647	0707	0724	0734	0744	0754	0804	0814	0824	0834	0844	0854	0904	0914	0924	0934	0944	0954	1004	1014	1024	1034	1044	1054	1104
Flansham Park Alfriston Close	0630	0650	0710	0727	0739	0747	0759	0807	0819	0827	0839	0847	0859	0907	0919	0927	0939	0947	0959	1007	1019	1027	1039	1047	1059	1107
Yapton Sparks Corner	0637	0657	0717	0735		0755		0815		0835		0855		0915		0935		0955		1015		1035		1055		1115
Littlehampton Anchor Springs	0647	0707	0727	0746		0806		0826		0846		0906		0926		0946		1006		1026		1046		1106		1126

Saturdays

Portsmouth Hard Interchange	*then at these mins past each hour*	12		32		52		*until*	1352		1412		1432		1452		1512		1532		1552		1612		1632	
University of Portsmouth		17		37		57			1357		1417		1437		1457		1517		1537		1557		1617		1637	
Portsmouth Commercial Road stop D		23		43		03			1403		1423		1443		1503		1523		1543		1603		1623		1643	
North End Junction stop C		33		53		13			1413		1433		1453		1513		1533		1553		1613		1633		1653	
Hilsea Lido stop C		39		59		19			1419		1439		1459		1519		1539		1559		1619		1639		1659	
Havant Bus Station stand H		54		14		34			1434		1454		1514		1534		1554		1614		1634		1654		1714	
Emsworth By-Pass		03		23		43			1443		1503		1523		1543		1603		1623		1643		1603		1723	
Southbourne Church		08		28		48			1448		1508		1528		1548		1608		1628		1648		1708		1728	
Bosham Roundabout		15		35		55			1455		1515		1535		1555		1615		1635		1655		1715		1735	
Chichester Cathedral		29	39	49	59	09	19		1509	1519	1529	1539	1549	1559	1609	1619	1629	1639	1649	1659	1709	1719	1729	1739	1749	1759
Chichester Bus Station stand 8		37	47	57	07	17	27		1517	1527	1537	1547	1557	1607	1617	1627	1637	1647	1657	1707	1717	1727	1737	1747	1757	1807
North Bersted Shops		53	03	13	23	33	43		1533	1543	1553	1603	1613	1623	1633	1643	1653	1703	1713	1723	1733	1743	1753	1803	1813	1823
Bognor Regis High Street stop C		06	16	26	36	46	56		1546	1556	1606	1616	1626	1636	1646	1656	1706	1716	1726	1736	1746	1756	1806	1816	1826	1836
Felpham The Southdowns		14	24	34	44	54	04		1554	1604	1614	1624	1634	1644	1654	1704	1714	1724	1734	1744	1754	1804	1814	1824	1834	1844
Flansham Park Alfriston Close		19	27	39	47	59	07		1559	1607	1619	1627	1639	1647	1659	1707	1719	1727	1739	1747	1804	1807	1817	1827	1837	1847
Yapton Sparks Corner			35		55		15			1615		1635		1655		1715		1735		1755		1815		1835		1854
Littlehampton Anchor Springs			46		06		26			1626		1646		1706		1726		1746		1806		1826		1846		1905

Saturdays

Portsmouth Hard Interchange	1652		1712	1732	1752	1812		1852		1942			
University of Portsmouth	1657		1717	1737	1757	1817		1856		▼			
Portsmouth Commercial Road stop D	1703		1723	1743	1803	1823		1900		1947			
North End Junction stop C	1713		1733	1753	1813	1833		1909		1958			
Hilsea Lido stop C	1719		1739	1759	1819	1839		1914		2002			
Havant Bus Station stand H	1734		1754	1814	1834	1854		1926		2026			
Emsworth By-Pass	1743		1803	1823	1843	1903		1934		2034			
Southbourne Church	1748		1808	1828	1848	1908		1939		2039			
Bosham Roundabout	1755		1815	1835	1855	1915		1945		2045			
Chichester Cathedral	1809	1819	1829	1845	1905	1925	1925	1955	2025	2055	2125	2225	2325
Chichester Bus Station stand 8	1817	1827	1837	1852	1912	1928	1932	2002	2032	2102	2132	2232	2332
North Bersted Shops	1833	1842	1852	1907	1926		1946	2016	2046	2116	2146	2246	2346
Bognor Regis High Street stop C	1844	1852	1902	1917	1934		1954	2024	2054	2124	2154	2254	2354
Felpham The Southdowns	1852	1859	1908	1923	1940		2000	2030	2100	2130	2200	2300	2400
Flansham Park Alfriston Close	1855	1902	1911	1926	1943		2003	2034	2103	2134	2203	2303	0003
Yapton Sparks Corner		1909					2010		2110		2210		
Littlehampton Anchor Springs		1920					2020		2120		2220		

This journey runs as route 23 between The Hard and Havant. Through fares are available.

from 28th July 2019

Sundays and public holidays

Portsmouth Hard Interchange								0730		*then at these mins past each hour*	00		30		*until*	1600		1630			1730			1830		1930
University of Portsmouth								0735			05		35			1605		1635			1735			1835		1935
Portsmouth Commercial Road stop D								0741			11		41			1611		1641			1741			1841		1941
North End Junction stop C								0751			21		51			1621		1651			1751			1851		1951
Hilsea Lido stop C								0757			27		57			1627		1657			1757			1857		1957
Havant Bus Station stand H				0718		0748		0812			42		12			1642		1712			1812			1912		2012
Emsworth By-Pass				0727		0757		0821			51		21			1651		1721			1821			1921		2021
Southbourne Church				0731		0801		0826			56		26			1656		1726			1826			1926		2016
Bosham Roundabout				0737		0807		0833			03		33			1703		1733			1833			1933		2033
Chichester Cathedral				0747		0817	0822	0847	0852		17	22	47	52		1717	1722	1747	1752	1822	1847	1852	1922	1947	1952	2047
Chichester Bus Station stand 8	0640	0710	0740	0751	0800	0821	0830	0851	0900		21	30	51	00		1721	1730	1751	1800	1830	1851	1900	1930	1951	2000	2051
North Bersted Shops	0654	0724	0754		0816		0846		0916			46		16			1746		1814	1844		1914	1944		2014	
Bognor Regis High Street stop C	0702	0732	0802		0829		0859		0929			59		29			1759		1824	1854		1924	1954		2024	
Felpham The Southdowns	0709	0739	0809		0837		0907		0937			07		37			1807		1830	1900		1930	2000		2030	
Flansham Park Alfriston Close	0712	0742	0812		0840		0910		0940			10		40			1810		1833	1903		1933	2003		2033	
Yapton Sparks Corner	0719	0749	0819		0848		0918		0948			18		48			1818		1839	1909		1939	2009		2039	
Littlehampton Anchor Springs	0729	0759	0829		0859		0929		0959			29		59			1829		1849			1949			2049	

These journeys continue to Rollaston Park arriving 2 minutes later.

from 28th July 2019

Mondays to Fridays except public holidays

Portsmouth Hard Interchange								0625	0647	0707	0727	0752	*then every 20 mins until*	1352	1412	1432	1452	1512	1532	1552	1612	1632	1652	1812	1852	1941
Havant Bus Station *(arr)*								0656	0724	0744	0804	0830		1430	1450	1510	1530	1550	1610	1630	1650	1710	1730	1850	1924	2022
Havant Bus Station stand H *(dep)*					0602	0618	0638	0658	0728	0748	0808	0834		1434	1454	1514	1534	1554	1614	1634	1654	1714	1734	1854	1926	2026
Chichester Bus Station *(arr)*					0634	0654	0714	0734	0810	0830	0850	0913		1513	1533	1553	1613	1633	1653	1713	1733	1753	1813	1928	1958	2058
Chichester Bus Station stand 8 *(dep)*	0520	0551	0611	0626	0646	0706	0728	0756	0824	0844	0905	0927		1527	1547	1607	1627	1647	1707	1727	1747	1807	1827	1932	2032	2132
Bognor Regis High Street stop C	0543	0615	0635	0651	0711	0731	0757	0825	0853	0913	0934	0956		1556	1617	1637	1659	1721	1743	1802	1820	1837	1852	1954	2054	2154
Littlehampton Anchor Springs *(arr)*	0610	0642	0702	0722	0742	0808	0834	0900	0923	0943	1006	1026		1626	1647	1707	1732	1752	1813	1832	1850	1905	1920	2020	2120	2220
Littlehampton Anchor Springs *(dep)*	0630	0650	0710	0737	0749	0824	0844	0914	0934	0954	1014	1034		1634	1654	1714	1744	1804	1824	1854		1914	1934	2034	2134	2234
Worthing Marine Parade stop G	0725	0745	0805	0837	0849	0925	0945	1015	1035	1055	1115	1135		1735	1755	1815	1845	1900	1920	1940		2000	2020	2120	2220	2318
Brighton Old Steine	0830	0850	0910	0940	0950	1020	1040	1110	1130	1150	1210	1230		1830	1850	1910	1940	1955	2010	2025		2045	2105	2205	2225	

Saturdays

Portsmouth Hard Interchange								0647		0727		0752	*then every 20 mins until*	1432	1452	1512	1532	1552	1612	1632	1652	1812	1852	1941
Havant Bus Station *(arr)*								0717		0757		0830		1510	1530	1550	1610	1630	1650	1710	1730	1850	1924	2022
Havant Bus Station stand H *(dep)*					0619	0639	0659	0719		0759	0814	0834		1514	1534	1554	1614	1634	1654	1714	1734	1854	1926	2026
Chichester Bus Station *(arr)*					0653	0713	0733	0753		0833	0853	0910		1553	1613	1633	1653	1713	1733	1753	1813	1928	1958	2058
Chichester Bus Station stand 8 *(dep)*	0556	0616	0636	0653	0707	0727	0747	0807	0827	0847	0907	0927		1607	1627	1647	1707	1727	1747	1807	1827	1932	2032	2132
Bognor Regis High Street stop C	0620	0640	0700	0717	0736	0756	0816	0836	0856	0916	0936	0956		1636	1656	1716	1736	1756	1816	1836	1852	1954	2054	2154
Littlehampton Anchor Springs *(arr)*	0647	0707	0727	0746	0806	0826	0846	0906	0926	0946	1006	1026		1706	1726	1746	1806	1826	1846	1905	1920	2020	2120	2220
Littlehampton Anchor Springs *(dep)*	0654	0714	0744	0804	0814	0834	0854	0914	0934	0954	1014	1034		1714	1734	1804	1824	1834	1854	1914	1934	2034	2134	2234
Worthing Marine Parade stop G	0744	0804	0835	0855	0915	0935	0955	1015	1035	1055	1115	1135		1815	1830	1900	1920	1924	1940	2000	2020	2120	2220	2318
Brighton Old Steine	0830	0850	0930	0950	1010	1030	1050	1110	1130	1150	1210	1230		1910	1925	1955	2010		2025	2045	2105	2205	2225			

These services run as route 23 between Portsmouth and Havant.

Sundays and public holidays

Portsmouth Hard Interchange						0730	*then at these mins past each hour*	00	30	*until*	1400	1430	1500	1530	1600	1630	1730	1830	1930		
Havant Bus Station *(arr)*						0808		38	08		1438	1508	1538	1608	1638	1708	1808	1908	2008		
Havant Bus Station stand H *(dep)*				0718	0748	0812		42	12		1442	1512	1542	1612	1642	1712	1812	1912	2012		
Chichester Bus Station *(arr)*				0751	0821	0851		21	51		1521	1551	1621	1651	1721	1751	1851	1951	2051		
Chichester Bus Station stand 8 *(dep)*	0640	0710	0740	0800	0830	0900		30	00		1530	1600	1630	1700	1730	1800	1900	2000			
Bognor Regis High Street stop C	0702	0732	0802	0829	0859	0929		59	29		1559	1629	1659	1729	1759	1824	1924	2024			
Littlehampton Anchor Springs *(arr)*	0729	0759	0829	0859	0929	0959		29	59		1629	1659	1729	1759	1829	1849	1949	2049			
Littlehampton Anchor Springs *(dep)*	0744	0804	0844	0904	0944	1004		44	04		1644	1704	1744	1804		1854	1954	2054			
Worthing Marine Parade stop G	0840	0900	0940	1000	1040	1100		40	00		1740	1800	1840	1900		1945	2045	2145			
Brighton Old Steine	0935	0955	1035	1055	1135	1155		35	55		1835	1850	1930	1950		2025	2125	2225			

Coastliner runs in three parts between Portsmouth and Brighton. Connections can be made in Chichester bus station and at Littlehampton Anchor Springs by changing buses. Connecting buses run up to every 20 minutes (or every 30 minutes on Sundays). Ask your driver on the day if you need any help.

from 28th July 2019

Mondays to Fridays except public holidays

Brighton Old Steine stop T				0530	0550	0630	0645	0700	0720	0740	0800	then every 20 mins until	1400	1420	1440	1500	1530	1550	1610	1640	1700	1740	1850	1945	2050
Worthing Marine Parade stop C	0525	0545	0605	0620	0640	0720	0740	0805	0825	0845	0905		1505	1525	1545	1605	1635	1655	1715	1745	1805	1842	1942	2042	2142
Littlehampton Anchor Springs *(arr)*	0609	0629	0649	0704	0724	0810	0830	0900	0920	0940	1000		1600	1620	1640	1700	1730	1750	1810	1840	1850	1925	2025	2125	2225
Littlehampton Anchor Springs *(dep)*	0619	0652	0707	0727	0747	0817	0845	0905	0928	0948	1012		1612	1632	1652	1712	1737	1802	1822	1844	1904	1934	2034	2134	2234
Bognor Regis High Street Stop R	0650	0725	0747	0807	0831	0857	0921	0941	1005	1025	1045		1645	1705	1727	1747	1810	1834	1849	1909	1929	1959	2059	2159	2259
Chichester Bus Station *(arr)*	0713	0759	0823	0848	0908	0928	0948	1008	1028	1048	1108		1708	1728	1750	1810	1833	1853	1909	1929	1949	2019	2119	2219	2319
Chichester Bus Station stand 9 *(dep)*	0717	0817	0842	0902	0922	0942	1002	1022	1042	1102	1122		1722	1744	1804		1838	1908			2008	2108	2208		
Havant Bus Station *(arr)*	0754	0857	0920	0940	1000	1020	1040	1100	1120	1140	1200		1802	1822	1840		1910	1940			2040	2140	2240		
Havant Bus Station stand C *(dep)*	0758	0901	0924	0944	1004	1024	1044	1104	1124	1144	1204		1806	1826	**c**		**c**	**c**			**c**	**c**			
Portsmouth Hard Interchange	0840	0940	1000	1020	1040	1100	1120	1140	1200	1220	1240		1840	1900											

Saturdays

Brighton Old Steine stop T					0635		0655	0715	0730	0745	0800		1420	1440	1500	1520	1540	1610	1640	1700	1740	1850	1945	2050	
Worthing Marine Parade stop C	0555		0630	0705	0725	0735	0745	0805	0825	0845	0905		1525	1545	1605	1625	1645	1715	1745	1805	1842	1942	2042	2142	
Littlehampton Anchor Springs *(arr)*	0635		0710	0745	0805	0820	0835	0900	0920	0940	1000		1620	1640	1700	1720	1740	1810	1840	1850	1925	2025	2125	2225	
Littlehampton Anchor Springs *(dep)*	0652	0712	0732	0752	0812	0832	0852	0912	0932	0952	1012	then every 20 mins until	1632	1652	1712	1732	1752	1822	1844	1904	1934	2034	2134	2234	
Bognor Regis High Street Stop R	0725	0745	0805	0825	0845	0905	0925	0945	1005	1025	1045		1705	1725	1745	1805	1825	1849	1909	1929	1959	2059	2159	2259	
Chichester Bus Station *(arr)*	0748	0808	0828	0848	0908	0928	0948	1008	1028	1048	1108		1728	1748	1808	1828	1848	1909	1929	1949	2019	2119	2219	2319	
Chichester Bus Station stand 9 *(dep)*	0802	0822	0842	0902	0922	0942	1002	1022	1042	1102	1122		1742	1802		1838	1908			2008	2108	2208			
Havant Bus Station *(arr)*	0840	0900	0920	0940	1000	1020	1040	1100	1120	1140	1200		1820	1840		1910	1940			2040	2140	2240			
Havant Bus Station stand C *(dep)*	0844	0904	0924	0944	1004	1024	1044	1104	1124	1144	1204		1824	**c**		**c**	**c**			**c**	**c**				
Portsmouth Hard Interchange	0920	0940	1000	1020	1040	1100	1120	1140	1200	1220	1240		1900												

c = Connections and through fares available to route 23 towards Hilsea, North End, City Centre, The Hard & Southsea.

Sundays and public holidays

Brighton Old Steine stop T				0745	0805	0845	then at these mins past each hour	05	45	until	1305	1345	1405	1445	1505	1545	1605	1625	1645	1805	1915				
Worthing Marine Parade stop C	0715	0755	0815	0845	0905	0945		05	45		1405	1445	1505	1545	1605	1645	1705	1725	1745	1902	2002				
Littlehampton Anchor Springs *(arr)*	0800	0840	0900	0940	1000	1040		00	40		1500	1540	1600	1640	1700	1740	1800	1820	1840	1950	2050				
Littlehampton Anchor Springs *(dep)*	0815	0845	0915	0945	1015	1045		15	45		1515	1545	1615	1645	1715	1745	1815	1835	1855	1955	2055				
Bognor Regis High Street Stop R	0846	0916	0946	1016	1046	1116		46	16		1546	1616	1646	1716	1746	1816	1846	1906	1922	2022	2122				
Chichester Bus Station *(arr)*	0909	0939	1009	1039	1109	1139		09	39		1609	1639	1709	1739	1809	1839	1909	1929	1943	2043	2143				
Chichester Bus Station stand 9 *(dep)*	0930	1000	1030	1100	1130	1200		30	00		1630	1700		1800		1900			2000	2100					
Havant Bus Station *(arr)*	1008	1038	1108	1138	1208	1238		08	38		1708	1738		1838		1933			2033	2133					
Havant Bus Station stand C *(dep)*	1012	1042	1112	1142	1212	1242		12	42		1712	1742		1842		**c**									
Portsmouth Hard Interchange	1048	1118	1148	1218	1248	1318		48	18		1748	1818		1918											

c = Connections and through fares available to route 23 towards Hilsea, North End, City Centre, The Hard & Southsea.

Coastliner runs in three parts between Brighton and Portsmouth. Connections can be made at Littlehampton Anchor Springs and in Chichester Bus Station by changing buses. Connecting buses run up to every 20 minutes (or every 30 minutes on Sundays).
Ask your driver on the day if you need any help.

University of Portsmouth - Southsea - Eastney - Fratton - University of Portsmouth U1

via Elm Grove - Albert Road - Eastney Road - Goldsmith Avenue

Monday to Fridays (Not Public Holidays)

University of Portsmouth	....	....	....	0805	0820	0835	0850	0905	0920	0935	0950	1005	1020	1040	1100	1120	1140	1200	1220	1240	1300	1320	1340	
Elm Grove	....	....	....	0809	0824	0839	0854	0909	0924	0939	0954	1009	1024	1044	1104	1124	1144	1204	1224	1244	1304	1324	1344	
Kings Theatre	....	0744	0759	0813	0828	0843	0858	0913	0928	0943	0958	1013	1028	1048	1108	1128	1148	1208	1228	1248	1308	1328	1348	
Festing Hotel	....	0748	0803	0817	0832	0847	0902	0917	0932	0947	1002	1017	1032	1052	1112	1132	1152	1212	1232	1252	1312	1332	1352	
Eastney Health Centre	0736	0751	0806	0820	0835	0850	0905	0920	0935	0950	1005	1020	1035	1055	1115	1135	1155	1215	1235	1255	1315	1335	1355	
Bransbury Park	0740	0755	0810	0824	0839	0854	0909	0924	0939	0954	1009	1024	1039	1059	1119	1139	1159	1219	1239	1259	1319	1339	1359	
Prince Albert Road	0744	0759	0814	0828	0843	0858	0913	0928	0943	0958	1013	1028	1043	1103	1123	1143	1203	1223	1243	1303	1323	1343	1403	
Francis Avenue	0747	0802	0817	0831	0846	0901	0916	0931	0946	1001	1016	1031	1046	1106	1126	1146	1206	1226	1246	1306	1326	1346	1406	
Fratton Bridge	0750	0805	0820	0834	0849	0904	0919	0934	0949	1004	1019	1034	1049	1109	1129	1149	1209	1229	1249	1309	1329	1349	1409	
Somers Road	0752	0807	0822	0836	0851	0906	0921	0936	0951	1006	1021	1036	1051	1111	1131	1151	1211	1231	1251	1311	1331	1351	1411	
Winston Churchill Avenue	0755	0810	0825	0839	0854	0909	0924	0939	0954	1009	1024	1039	1054	1114	1134	1154	1214	1234	1254	1314	1334	1354	1414	
University of Portsmouth	0758	0813	0828	0842	0857	0912	0927	0942	0957	1012	1027	1042	1057	1117	1137	1157	1217	1237	1257	1317	1337	1357	1417	

University of Portsmouth	1400	1420	1435	1450	1505	1520	1535	1550	1605	1620	1635	1650	1705	1720	1735	1750	1805	1845	1925	2005	2045	2125	2205	
Elm Grove	1404	1424	1439	1454	1509	1524	1539	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809	1849	1929	2009	2049	2129	2209	
Kings Theatre	1408	1428	1443	1458	1513	1528	1543	1558	1613	1628	1643	1658	1713	1728	1743	1758	1813	1853	1931	2011	2051	2131	2211	
Festing Hotel	1412	1432	1447	1502	1517	1532	1547	1602	1617	1632	1647	1702	1717	1732	1747	1802	1817	1857	1934	2014	2054	2134	2214	
Eastney Health Centre	1415	1435	1450	1505	1520	1535	1550	1605	1620	1635	1650	1705	1720	1735	1750	1805	1820	1900	1937	2017	2057	2137	2217	
Bransbury Park	1419	1439	1454	1509	1524	1539	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809	1824	1903	1940	2020	2100	2140	2220	
Prince Albert Road	1423	1443	1458	1513	1528	1543	1558	1613	1628	1643	1658	1713	1728	1743	1758	1813	1828	1905	1942	2022	2102	2142	2222	
Francis Avenue	1426	1446	1501	1516	1531	1546	1601	1616	1631	1646	1701	1716	1731	1746	1801	1816	1831	1908	1945	2025	2105	2145	2225	
Fratton Bridge	1429	1449	1504	1519	1534	1549	1604	1619	1634	1649	1704	1719	1734	1749	1804	1819	1834	1910	1947	2027	2107	2147	2227	
Somers Road	1431	1451	1506	1521	1536	1551	1606	1621	1636	1651	1706	1721	1736	1751	1806	1821	1836	1912	1949	2029	2109	2149	2229	
Winston Churchill Avenue	1434	1454	1509	1524	1539	1554	1609	1624	1639	1654	1709	1724	1739	1754	1809	1824	1839	1915	1952	2032	2112	2152	2232	
University of Portsmouth	1437	1457	1512	1527	1542	1557	1612	1627	1642	1657	1712	1727	1742	1757	1812	1827	1842	1918	1955	2035	2115	2155	2235	

University of Portsmouth	2245	2325	0005
Elm Grove	2249	2329	0009
Kings Theatre	2251	2331	0011
Festing Hotel	2254	2334	0014
Eastney Health Centre	2257	2337	0017
Bransbury Park	2300	2340	0020
Prince Albert Road	2302	2342	0022
Francis Avenue	2305	2345	0025
Fratton Bridge	2307	2347	0027
Somers Road	2309	2349	....
Winston Churchill Avenue	2312	2352	....
University of Portsmouth	2315	2355	....

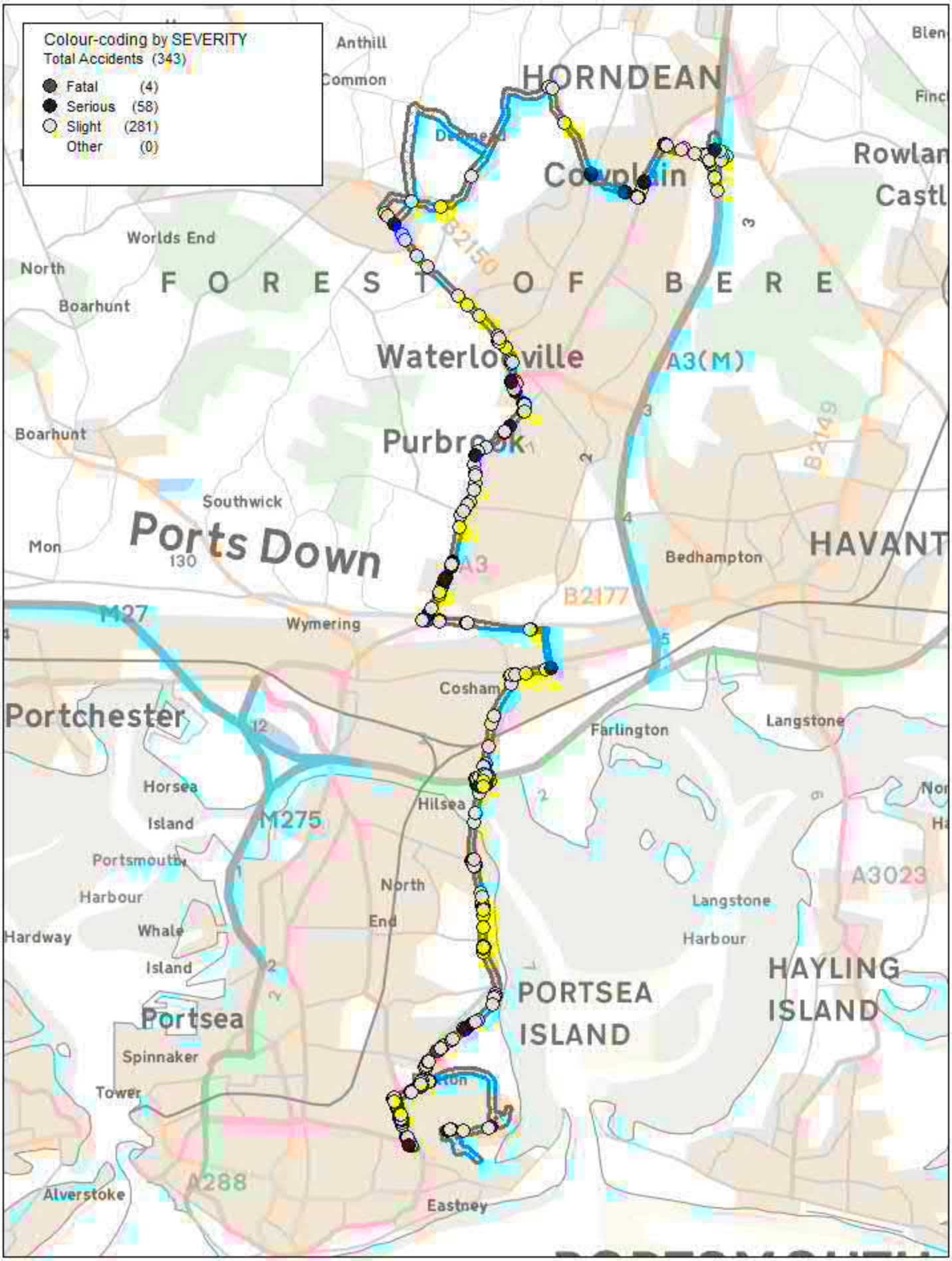
Stopping Points – as shown on timetable

Route

From University of Portsmouth Cambridge Road, then via Cambridge Junction, Museum Road, King Road, Elm Grove, Victoria Road South, Albert Road, Highland Road, Eastney Road, Goldsmith Avenue, Fratton Bridge, Victoria Road North, Bradford Junction, Winston Churchill Avenue, The Terraces and Cambridge Road.

Updated for introduction on Monday 29 April 2019 -: Evening service amended

Appendix E – COLLISION DATA



Selected map area

SCALE	1 : 64960
DATE	16/07/2019
DRAWING No.	
DRAWN BY	

wkt_geom	Date	police_ref	easting	northing	Severity	Road_cond	Visibility	casualties	pedestrian	cycles	p2w	oaps	children	Manoeuvre	Time	vehicles	Roadclass1
Point (466367 100107)	16/01/2016	1.6E+08	466367	100107	2	1. Dry	1. Daylight	2	2	0	0	0	1	0. No turn	08:55:00	1	3. A
Point (466429 99883)	01/11/2017	4.42E+10	466429	99883	3	1. Dry	7. Darkness: street lighting	2	2	1	0	0	1	0. No turn	17:00:00	1	3. A
Point (467220 101138)	22/09/2014	1.4E+08	467220	101138	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	16:08:00	1	6. Unclassified
Point (466403 99967)	11/11/2014	1.4E+08	466403	99967	3	2. Wet/Damp	4. Darkness: street lights	1	1	0	0	0	0	1. Left turn	18:35:00	1	3. A
Point (466722 106415)	06/03/2014	1.4E+08	466722	106415	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	11:43:00	1	3. A
Point (466198 111674)	07/10/2015	1.5E+08	466198	111674	3	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	08:35:00	1	6. Unclassified
Point (467898 109374)	07/12/2014	1.4E+08	467898	109374	2	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	13:00:00	1	3. A
Point (469459 111894)	20/03/2015	1.5E+08	469459	111894	2	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	14:45:00	1	6. Unclassified
Point (467614 101530)	11/05/2015	1.5E+08	467614	101530	3	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	19:20:00	1	3. A
Point (467999 109220)	01/05/2015	1.5E+08	467999	109220	2	1. Dry	1. Daylight	2	1	0	1	1	0	0. No turn	16:18:00	1	3. A
Point (467372 108183)	16/07/2016	1.6E+08	467372	108183	3	1. Dry	4. Darkness: street	1	1	0	0	0	0	0. No turn	23:20:00	1	3. A
Point (466741 100647)	16/11/2016	1.6E+08	466741	100647	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	08:10:00	1	3. A
Point (466532 100306)	14/01/2016	1.6E+08	466532	100306	2	1. Dry	1. Daylight	1	1	0	0	1	0	0. No turn	11:28:00	1	3. A
Point (467057 99819)	15/05/2017	4.42E+10	467057	99819	3	2. Wet/Damp	1. Daylight	1	1	0	0	0	0	0. No turn	09:55:00	1	6. Unclassified
Point (466238 111646)	13/06/2017	4.42E+10	466238	111646	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	15:41:00	1	4. B
Point (467589 99859)	03/08/2017	4.42E+10	467589	99859	2	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	19:28:00	1	6. Unclassified
Point (466664 100384)	12/12/2016	1.6E+08	466664	100384	2	2. Wet/Damp	1. Daylight	1	1	0	0	1	0	0. No turn	11:25:00	1	3. A
Point (466486	30/01/2017	4.42E+10	466486	99723	3	2. Wet/Dam	4. Darkness:	1	1	0	0	0	0	0. No turn	20:02:00	1	3. A
Point (466509 99686)	05/07/2018	4.42E+10	466509	99686	3	1. Dry	1. Daylight	1	1	0	0	0	1	0. No turn	08:05:00	1	3. A
Point (467857 109752)	01/09/2018	4.42E+10	467857	109752	3	1. Dry	1. Daylight	1	1	0	0	0	0	2. Right turn	17:35:00	1	6. Unclassified
Point (467542 99850)	03/10/2017	4.42E+10	467542	99850	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	15:20:00	1	6. Unclassified
Point (467500 104519)	26/01/2018	4.42E+10	467500	104519	3	1. Dry	1. Daylight	1	1	0	0	0	0	0. No turn	15:30:00	1	3. A
Point (467404 104285)	26/06/2014	1.4E+08	467404	104285	2	1. Dry	1. Daylight	1	0	0	1	0	0	1. Left turn	16:00:00	2	3. A
Point (467622 101519)	03/07/2014	1.4E+08	467622	101519	2	1. Dry	1. Daylight	2	0	1	1	0	1	0. No turn	15:04:00	2	3. A
Point (467344 103310)	20/06/2014	1.4E+08	467344	103310	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	11:52:00	4	3. A
Point (467837 105657)	25/06/2014	1.4E+08	467837	105657	2	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	16:44:00	3	3. A
Point (467461 102774)	24/07/2014	1.4E+08	467461	102774	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	13:41:00	1	3. A
Point (467596 101438)	10/08/2014	1.4E+08	467596	101438	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	14:20:00	2	3. A
Point (466315 100229)	11/07/2014	1.4E+08	466315	100229	2	1. Dry	1. Daylight	2	0	0	0	1	0	2. Right turn	10:11:00	2	3. A
Point (469481 111880)	21/07/2014	1.4E+08	469481	111880	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	13:50:00	3	3. A
Point (467829	23/08/2014	1.4E+08	467829	105690	3	1. Dry	1. Daylight	1	0	0	0	0	0	1. Left turn	12:40:00	1	3. A
Point (466941 106843)	01/09/2014	1.4E+08	466941	106843	3	1. Dry	1. Daylight	3	0	0	0	1	0	0. No turn	12:50:00	3	3. A
Point (467342 103274)	15/08/2014	1.4E+08	467342	103274	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	06:48:00	2	3. A
Point (467306 107946)	19/08/2014	1.4E+08	467306	107946	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:31:00	3	3. A
Point (466557 111832)	08/09/2014	1.4E+08	466557	111832	3	1. Dry	1. Daylight	1	0	1	0	0	1	0. No turn	17:21:00	2	6. Unclassified
Point (467379 108317)	09/09/2014	1.4E+08	467379	108317	3	1. Dry	1. Daylight	1	0	1	0	1	0	0. No turn	15:00:00	2	3. A
Point	03/09/2014	1.4E+08	467686	110053	3	1. Dry	1.	1	0	1	0	0	0	2. Right	08:20:00	2	4. B

Point (466409 99966)	08/09/2014	1.4E+08	466409	99966	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	15:20:00	2	3. A
Point (467486 101105)	17/09/2014	1.4E+08	467486	102105	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	16:28:00	3	3. A
Point (468004 109204)	11/09/2014	1.4E+08	468004	109204	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	16:14:00	1	3. A
Point (467505 108651)	15/09/2014	1.4E+08	467505	108651	3	1. Dry	4. Darkness:	1	0	0	0	0	0	0. No turn	19:30:00	1	3. A
Point (466748 110983)	02/10/2014	1.4E+08	466748	110983	3	1. Dry	1. Daylight	2	0	0	0	0	1	1. Left turn	08:25:00	3	4. B
Point (467268 101143)	09/10/2014	1.4E+08	467268	101143	2	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	15:42:00	2	3. A
Point (466424 111401)	01/10/2014	1.4E+08	466424	111401	3	1. Dry	1. Daylight	1	0	1	0	0	1	0. No turn	16:55:00	2	4. B
Point (467529 104314)	01/10/2014	1.4E+08	467529	104314	3	1. Dry	4. Darkness:	2	0	0	0	0	0	0. No turn	20:06:00	2	3. A
Point (469519 111978)	29/10/2014	1.4E+08	469519	111978	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	2. Right turn	10:20:00	3	3. A
Point (467319 103296)	03/11/2014	1.4E+08	467319	103296	3	1. Dry	4. Darkness:	1	0	1	0	0	0	0. No turn	17:08:00	2	3. A
Point (466908 106747)	20/10/2014	1.4E+08	466908	106747	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	10:59:00	2	3. A
Point (468020 109170)	22/10/2014	1.4E+08	468020	109170	3	1. Dry	4. Darkness:	1	0	1	0	0	0	0. No turn	21:20:00	2	3. A
Point (468330 105792)	18/11/2014	1.4E+08	468330	105792	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	07:40:00	2	3. A
Point (467434 104245)	19/11/2014	1.4E+08	467434	104245	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	08:20:00	2	3. A
Point (467345 103316)	14/11/2014	1.4E+08	467345	103316	3	1. Dry	1. Daylight	3	0	0	0	0	0	0. No turn	15:10:00	4	3. A
Point (467084 107168)	15/01/2014	1.4E+08	467084	107168	2	2. Wet/Dam	7. Darkness:	1	0	0	1	1	0	2. Right turn	16:05:00	2	3. A
Point (466698 106421)	17/01/2014	1.4E+08	466698	106421	2	2. Wet/Dam	4. Darkness:	1	0	1	0	0	0	3. Both left &	20:00:00	2	3. A
Point (467407 104281)	08/01/2014	1.4E+08	467407	104281	3	2. Wet/Dam	4. Darkness: street	1	0	0	0	0	0	0. No turn	18:00:00	2	3. A
Point (467470 104338)	10/01/2014	1.4E+08	467470	104338	2	2. Wet/Dam	5. Darkness:	1	0	0	1	0	0	0. No turn	17:10:00	1	3. A
Point (467756 108844)	04/02/2014	1.4E+08	467756	108844	3	2. Wet/Dam	4. Darkness:	1	0	1	0	0	0	2. Right turn	05:30:00	2	3. A
Point (467431 104256)	06/02/2014	1.4E+08	467431	104256	3	2. Wet/Dam	1. Daylight	2	0	0	0	0	0	0. No turn	10:50:00	2	3. A
Point (467468 102711)	21/01/2014	1.4E+08	467468	102711	1	1. Dry	4. Darkness:	2	0	0	1	0	0	0. No turn	18:40:00	2	3. A
Point (467377 103231)	29/01/2014	1.4E+08	467377	103231	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	09:30:00	2	3. A
Point (467436 104254)	03/03/2014	1.4E+08	467436	104254	2	1. Dry	4. Darkness: street	1	0	1	0	0	0	0. No turn	18:24:00	2	3. A
Point (470396 112355)	26/02/2014	1.4E+08	470396	112355	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	14:17:00	2	2. A(M)
Point (467997 109110)	01/03/2014	1.4E+08	467997	109110	3	2. Wet/Dam	1. Daylight	1	0	1	1	0	0	0. No turn	11:37:00	2	3. A
Point (467165 107616)	17/03/2014	1.4E+08	467165	107616	3	1. Dry	1. Daylight	2	0	0	0	1	0	2. Right turn	15:40:00	2	3. A
Point (467861 109459)	20/03/2014	1.4E+08	467861	109459	2	2. Wet/Dam	4. Darkness:	1	0	1	0	0	0	2. Right turn	18:15:00	2	3. A
Point (467356 103319)	07/03/2014	1.4E+08	467356	103319	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	11:20:00	2	3. A
Point (467846 109738)	17/03/2014	1.4E+08	467846	109738	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:30:00	2	4. B
Point (468089 106299)	31/03/2014	1.4E+08	468089	106299	3	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	18:00:00	2	4. B
Point (467228 107821)	01/04/2014	1.4E+08	467228	107821	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	0. No turn	06:46:00	2	3. A
Point (467543 104398)	24/03/2014	1.4E+08	467543	104398	2	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	07:00:00	1	3. A
Point (466558 100315)	30/03/2014	1.4E+08	466558	100315	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	13:24:00	2	3. A
Point (466394 100038)	04/05/2014	1.4E+08	466394	100038	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	16:30:00	2	3. A
Point (466358 100137)	06/05/2014	1.4E+08	466358	100137	2	1. Dry	1. Daylight	2	0	0	2	0	0	0. No turn	19:24:00	2	3. A
Point (467365 103281)	04/04/2014	1.4E+08	467365	103281	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	16:43:00	2	3. A
Point (467484 102661)	19/04/2014	1.4E+08	467484	102661	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	13:17:00	2	3. A
Point (467073 107137)	02/06/2014	1.4E+08	467073	107137	3	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	18:05:00	2	3. A
Point (467623 105179)	09/06/2014	1.4E+08	467623	105179	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	08:18:00	2	3. A
Point (470538 112471)	16/05/2014	1.4E+08	470538	112471	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	13:05:00	2	2. A(M)
Point (467507 104402)	16/05/2014	1.4E+08	467507	104402	3	1. Dry	1. Daylight	2	0	0	0	0	0	1. Left turn	16:30:00	2	3. A
Point (467536 104307)	12/06/2014	1.4E+08	467536	104307	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	10:13:00	3	3. A
Point (467237 101119)	13/06/2014	1.4E+08	467237	101119	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	10:50:00	2	3. A
Point (467398 104288)	10/06/2014	1.4E+08	467398	104288	2	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	17:31:00	2	3. A
Point (468320 113314)	11/06/2014	1.4E+08	468320	113314	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:00:00	2	6. Unclassified

Point (470570 112394)	18/06/2015	1.5E+08	470570	112394	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	19:05:00	2	4. B
Point (466538 99654)	19/06/2015	1.5E+08	466538	99654	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	11:00:00	2	3. A
Point (467188 107774)	09/06/2015	1.5E+08	467188	107774	3	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	16:00:00	2	3. A
Point (466410 99973)	11/06/2015	1.5E+08	466410	99973	3	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	16:55:00	2	3. A
Point (469839 112563)	02/07/2015	1.5E+08	469839	112563	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	10:30:00	1	3. A
Point (466786 100444)	25/07/2015	1.5E+08	466786	100444	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	16:45:00	1	6. Unclassified
Point (469472 111889)	25/06/2015	1.5E+08	469472	111889	3	1. Dry	4. Darkness: street	1	0	1	0	0	1	0. No turn	22:00:00	2	6. Unclassified
Point (467482 102684)	29/06/2015	1.5E+08	467482	102684	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	08:00:00	2	3. A
Point (467481 102189)	18/08/2015	1.5E+08	467481	102189	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	15:44:00	2	3. A
Point (466686 100385)	21/08/2015	1.5E+08	466686	100385	2	1. Dry	1. Daylight	1	0	0	1	1	0	2. Right turn	16:50:00	2	3. A
Point (467428 104266)	07/08/2015	1.5E+08	467428	104266	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	11:45:00	2	3. A
Point (469841 112563)	08/08/2015	1.5E+08	469841	112563	3	1. Dry	4. Darkness: street	2	0	0	0	0	0	0. No turn	20:40:00	2	3. A
Point (466312 100229)	12/09/2015	1.5E+08	466312	100229	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	15:20:00	2	3. A
Point (466549 99614)	16/09/2015	1.5E+08	466549	99614	3	2. Wet/Damp	1. Daylight	1	0	0	0	0	0	0. No turn	13:50:00	2	3. A
Point (468019 109170)	08/09/2015	1.5E+08	468019	109170	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	07:00:00	2	3. A
Point (469474 111887)	11/09/2015	1.5E+08	469474	111887	3	1. Dry	4. Darkness: street	1	0	0	0	0	0	3. Both left & right turns	23:09:00	2	3. A
Point (466681 100463)	07/10/2015	1.5E+08	466681	100463	3	1. Dry	4. Darkness: street	1	0	0	1	0	0	1. Left turn	18:10:00	2	3. A
Point (467916 105714)	24/09/2015	1.5E+08	467916	105714	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	10:10:00	2	3. A
Point (467844 105595)	25/09/2015	1.5E+08	467844	105595	3	1. Dry	4. Darkness: street lights	1	0	0	0	0	0	0. No turn	21:43:00	2	3. A
Point (466723 106417)	24/10/2015	1.5E+08	466723	106417	2	1. Dry	4. Darkness: street	1	0	0	0	0	0	0. No turn	22:30:00	1	4. B
Point (467661 110029)	27/10/2015	1.5E+08	467661	110029	2	2. Wet/Damp	1. Daylight	1	0	0	1	0	0	0. No turn	15:30:00	2	4. B
Point (470367 112434)	13/10/2015	1.5E+08	470367	112434	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	07:53:00	2	2. A(M)
Point (469833 112555)	22/10/2015	1.5E+08	469833	112555	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	07:43:00	2	3. A
Point (470460 112457)	24/11/2015	1.5E+08	470460	112457	3	2. Wet/Damp	1. Daylight	1	0	0	0	0	0	0. No turn	08:00:00	2	2. A(M)
Point (466757 106481)	05/12/2015	1.5E+08	466757	106481	2	1. Dry	4. Darkness: street	1	0	0	1	1	0	1. Left turn	18:55:00	2	3. A
Point (467624 101532)	13/11/2015	1.5E+08	467624	101532	3	1. Dry	4. Darkness: street	1	0	1	1	0	0	0. No turn	16:38:00	2	3. A
Point (467507 104282)	23/11/2015	1.5E+08	467507	104282	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	07:35:00	2	3. A
Point (469304 111948)	24/12/2015	1.5E+08	469304	111948	3	2. Wet/Damp	1. Daylight	1	0	0	0	0	1	2. Right turn	11:00:00	2	6. Unclassified
Point (470077 112515)	26/12/2015	1.5E+08	470077	112515	3	1. Dry	4. Darkness:	1	0	0	0	0	0	2. Right turn	16:55:00	2	6. Unclassifi
Point (467151 110615)	09/12/2015	1.5E+08	467151	110615	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:46:00	2	4. B
Point (467072 107134)	16/12/2015	1.5E+08	467072	107134	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	09:05:00	2	3. A
Point (470399 112350)	07/12/2014	1.4E+08	470399	112350	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	15:23:00	2	2. A(M)
Point (467266 110495)	12/12/2014	1.4E+08	467266	110495	3	1. Dry	4. Darkness:	1	0	0	0	1	0	2. Right turn	16:55:00	2	4. B
Point (466540 99649)	06/12/2014	1.4E+08	466540	99649	3	1. Dry	4. Darkness: street	1	0	0	0	0	0	0. No turn	22:25:00	1	3. A
Point (467585 105064)	05/01/2015	1.5E+08	467585	105064	3	1. Dry	4. Darkness:	1	0	0	0	1	0	0. No turn	18:20:00	2	3. A
Point (467636 101576)	08/01/2015	1.5E+08	467636	101576	3	2. Wet/Damp	4. Darkness:	1	0	0	0	0	0	0. No turn	23:40:00	1	3. A
Point (466894 100846)	23/12/2014	1.4E+08	466894	100846	3	2. Wet/Damp	4. Darkness: street	3	0	0	0	0	0	0. No turn	17:13:00	3	3. A
Point (466670 100379)	24/12/2014	1.4E+08	466670	100379	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	14:00:00	2	3. A
Point (467991 109211)	26/01/2015	1.5E+08	467991	109211	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	11:27:00	1	3. A
Point (467504 104504)	03/02/2015	1.5E+08	467504	104504	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	08:15:00	2	3. A

Point (466557 100317)	17/01/2015	1.5E+08	466557	100317	3	2. Wet/Dam p	4. Darkness: street	1	0	0	0	0	0	2. Right turn	17:00:00	2	3. A
Point (467898	21/01/2015	1.5E+08	467898	109478	3	2. Wet/Dam	4. Darkness:	1	0	1	0	1	0	0. No turn	07:45:00	2	3. A
Point (470316 112424)	24/02/2015	1.5E+08	470316	112424	3	2. Wet/Dam p	1. Daylight	1	0	0	0	0	0	0. No turn	07:55:00	2	4. B
Point (467227	26/02/2015	1.5E+08	467227	107822	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	2. Right turn	16:00:00	2	3. A
Point (466393 100043)	08/02/2015	1.5E+08	466393	100043	3	1. Dry	1. Daylight	2	0	0	0	0	1	2. Right turn	16:58:00	3	3. A
Point (469564 112078)	13/02/2015	1.5E+08	469564	112078	3	2. Wet/Dam p	4. Darkness: street	1	0	0	0	0	0	0. No turn	23:10:00	1	3. A
Point (467485	03/04/2015	1.5E+08	467485	102601	3	2. Wet/Dam	4. Darkness:	1	0	0	0	0	0	0. No turn	20:50:00	2	3. A
Point (466357 100145)	06/04/2015	1.5E+08	466357	100145	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	15:39:00	2	3. A
Point (466766	04/03/2015	1.5E+08	466766	100699	2	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	08:00:00	2	3. A
Point (466337 100224)	21/04/2015	1.5E+08	466337	100224	2	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	13:25:00	2	3. A
Point (468867 112178)	22/04/2015	1.5E+08	468867	112178	2	1. Dry	4. Darkness: street	1	0	0	1	0	0	2. Right turn	20:41:00	2	6. Unclassifi ed
Point (466435	14/04/2015	1.5E+08	466435	99907	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	10:00:00	2	3. A
Point (466931 111765)	18/04/2015	1.5E+08	466931	111765	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	11:30:00	2	6. Unclassifi ed
Point (467066 09820)	27/04/2015	1.5E+08	467066	99820	3	1. Dry	1. Daylight	1	0	1	0	0	1	0. No turn	07:00:00	2	6. Unclassifi ed
Point (467482	30/04/2015	1.5E+08	467482	102717	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:00:00	5	3. A
Point (467847 109507)	25/04/2015	1.5E+08	467847	109507	3	1. Dry	1. Daylight	2	0	0	1	0	0	0. No turn	17:00:00	2	3. A
Point (467436	26/04/2015	1.5E+08	467436	104242	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	18:30:00	2	3. A
Point (466319	09/06/2015	1.5E+08	466319	111535	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	07:41:00	2	4. B
Point (467364 108425)	06/05/2015	1.5E+08	467364	108425	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	17:20:00	2	3. A
Point (470572 112395)	02/07/2016	1.6E+08	470572	112395	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	10:50:00	2	4. B
Point (467431 110352)	02/07/2016	1.6E+08	467431	110352	3	2. Wet/Dam p	1. Daylight	1	0	0	0	0	0	2. Right turn	15:07:00	2	4. B
Point (467383	13/06/2016	1.6E+08	467383	104358	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	09:10:00	3	3. A
Point (470570 112390)	14/06/2016	1.6E+08	470570	112390	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	06:10:00	2	4. B
Point (466966	16/07/2016	1.6E+08	466966	100902	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	10:25:00	2	3. A
Point (466731 100624)	08/07/2016	1.6E+08	466731	100624	3	1. Dry	4. Darkness: street	1	0	0	1	0	0	2. Right turn	00:01:00	2	3. A
Point (468091	13/07/2016	1.6E+08	468091	106297	3	1. Dry	1. Daylight	2	0	0	0	2	0	0. No turn	17:20:00	2	4. B
Point (466730	15/08/2016	1.6E+08	466730	100639	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	19:00:00	2	3. A
Point (467895	18/08/2016	1.6E+08	467895	105712	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	19:00:00	2	3. A
Point (466355 100121)	19/07/2016	1.6E+08	466355	100121	3	1. Dry	7. Darkness: street lighting unknown	1	0	1	0	0	1	0. No turn	21:03:00	2	3. A
Point (467343 103273)	06/08/2016	1.6E+08	467343	103273	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	07:10:00	2	3. A
Point (470219	24/08/2016	1.6E+08	470219	112454	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	06:03:00	2	4. B
Point (466638 100372)	24/08/2016	1.6E+08	466638	100372	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	17:30:00	2	3. A
Point (467012	23/08/2016	1.6E+08	467012	99808	2	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	12:10:00	2	6. Unclassifi
Point (466399 100018)	23/08/2016	1.6E+08	466399	100018	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	16:10:00	3	3. A
Point (467480	31/08/2016	1.6E+08	467480	104412	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	10:15:00	2	3. A
Point (467377 108288)	03/09/2016	1.6E+08	467377	108288	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:40:00	2	3. A
Point (467076 107147)	25/08/2016	1.6E+08	467076	107147	2	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	18:55:00	2	3. A
Point (470402 112251)	29/08/2016	1.6E+08	470402	112351	3	1. Dry	1. Daylight	3	0	0	0	0	0	1. Left turn	13:50:00	2	2. A(M)
Point (466484	09/10/2016	1.6E+08	466484	99726	2	1. Dry	4. Darkness:	1	0	0	0	0	0	0. No turn	06:14:00	1	3. A
Point (468010	19/10/2016	1.6E+08	468010	109208	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	09:00:00	2	3. A
Point (467659	10/09/2016	1.6E+08	467659	110090	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	13:34:00	2	4. B
Point (466544 99628)	21/09/2016	1.6E+08	466544	99628	3	1. Dry	1. Daylight	1	0	1	0	0	1	0. No turn	17:30:00	2	3. A
Point (467175 107614)	03/11/2016	1.6E+08	467175	107614	2	1. Dry	1. Daylight	1	0	1	0	0	1	2. Right turn	08:32:00	2	6. Unclassifi
Point (466376 100085)	12/11/2016	1.6E+08	466376	100085	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	2. Right turn	11:40:00	2	3. A

Point (466878	26/10/2016	1.6E+08	466878	100841	1	1. Dry	4. Darkness:	1	0	0	1	0	0	2. Right turn	06:20:00	2	3. A
Point (467064 100977)	31/10/2016	1.6E+08	467064	100977	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	13:20:00	3	3. A
Point (466335 100221)	22/11/2016	1.6E+08	466335	100221	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	0. No turn	16:00:00	2	3. A
Point (467259 101129)	09/12/2016	1.6E+08	467259	101129	3	2. Wet/Dam	4. Darkness:	1	0	0	0	0	0	0. No turn	21:10:00	1	3. A
Point (466767 100696)	19/11/2016	1.6E+08	466767	100696	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	1	2. Right turn	09:05:00	2	3. A
Point (467437	12/01/2016	1.6E+08	467437	104257	2	2. Wet/Dam	4. Darkness:	1	0	0	1	0	0	0. No turn	00:25:00	1	3. A
Point (466745 100664)	31/12/2015	1.5E+08	466745	100664	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	11:14:00	1	3. A
Point (467505	08/01/2016	1.6E+08	467505	104398	2	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	1. Left turn	11:45:00	2	3. A
Point (466490	16/01/2016	1.6E+08	466490	99727	3	2. Wet/Dam	4. Darkness:	1	0	0	0	0	0	0. No turn	00:05:00	2	3. A
Point (467505	19/01/2016	1.6E+08	467505	104288	2	2. Wet/Dam	4. Darkness:	1	0	0	1	0	0	1. Left turn	17:20:00	2	3. A
Point (467443 102891)	15/01/2016	1.6E+08	467443	102891	3	1. Dry	7. Darkness:	1	0	0	0	0	0	0. No turn	19:10:00	2	3. A
Point (466781	03/02/2016	1.6E+08	466781	100444	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	08:20:00	2	6. Unclassifi
Point (467836 105703)	05/02/2016	1.6E+08	467836	105703	3	1. Dry	4. Darkness:	1	0	0	0	0	0	2. Right turn	17:55:00	2	3. A
Point (468293 105779)	20/01/2016	1.6E+08	468293	105779	3	2. Wet/Dam	7. Darkness:	1	0	0	1	0	0	0. No turn	16:20:00	1	3. A
Point (467632	01/02/2016	1.6E+08	467632	101551	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	17:00:00	2	3. A
Point (467221	18/02/2016	1.6E+08	467221	99812	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	16:30:00	2	6. Unclassifi
Point (467247 106381)	29/02/2016	1.6E+08	467247	106381	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	08:35:00	2	4. B
Point (467428	16/02/2016	1.6E+08	467428	104265	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	07:40:00	2	3. A
Point (466980 106943)	16/02/2016	1.6E+08	466980	106943	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	11:06:00	2	3. A
Point (467356	20/03/2016	1.6E+08	467356	103323	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	14:20:00	2	3. A
Point (466316 100229)	22/03/2016	1.6E+08	466316	100229	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	09:50:00	2	3. A
Point (470367 112437)	01/03/2016	1.6E+08	470367	112437	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:45:00	2	4. B
Point (467753 109953)	07/03/2016	1.6E+08	467753	109953	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:15:00	2	4. B
Point (466751	02/05/2016	1.6E+08	466751	106416	1	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	14:45:00	1	3. A
Point (470497	04/05/2016	1.6E+08	470497	111973	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	08:05:00	4	2. A(M)
Point (470535 112471)	22/03/2016	1.6E+08	470535	112471	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	13:25:00	2	2. A(M)
Point (467479 102166)	14/04/2016	1.6E+08	467479	102166	3	2. Wet/Dam	4. Darkness:	1	0	1	0	0	0	0. No turn	23:35:00	2	3. A
Point (467317	12/05/2016	1.6E+08	467317	112150	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	17:30:00	1	6. Unclassifi
Point (470540	13/05/2016	1.6E+08	470540	112472	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	17:27:00	2	2. A(M)
Point (467555	06/05/2016	1.6E+08	467555	104319	3	1. Dry	4. Darkness:	1	0	0	0	0	0	0. No turn	23:15:00	2	3. A
Point (467479	08/05/2016	1.6E+08	467479	102448	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	16:14:00	4	3. A
Point (467267	24/05/2016	1.6E+08	467267	110494	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	18:00:00	2	4. B
Point (470426	12/06/2016	1.6E+08	470426	112318	3	1. Dry	6. Darkness:	1	0	0	0	0	0	0. No turn	02:50:00	1	2. A(M)
Point (467684	16/05/2016	1.6E+08	467684	110056	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	15:28:00	2	4. B
Point (469310 111946)	18/05/2016	1.6E+08	469310	111946	2	2. Wet/Dam	1. Daylight	1	0	0	1	0	0	2. Right turn	17:00:00	2	6. Unclassifi ed
Point (468290	25/05/2017	4.42E+10	468290	105777	3	1. Dry	1. Daylight	1	0	0	0	1	0	2. Right turn	16:19:00	2	3. A
Point (468034 105730)	01/06/2017	4.42E+10	468034	105730	3	1. Dry	4. Darkness:	1	0	0	0	0	0	2. Right turn	22:20:00	2	3. A
Point (468087	15/05/2017	4.42E+10	468087	106299	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	2. Right turn	18:10:00	2	4. B
Point (466913	09/06/2017	4.42E+10	466913	106407	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	08:00:00	2	4. B
Point (467353	10/06/2017	4.42E+10	467353	103795	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	09:40:00	3	3. A
Point (467839	01/06/2017	4.42E+10	467839	109497	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	07:15:00	2	3. A
Point (467493	02/06/2017	4.42E+10	467493	102180	1	1. Dry	1. Daylight	1	0	2	0	0	0	0. No turn	17:34:00	3	3. A
Point (467508	19/06/2017	4.42E+10	467508	104559	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	07:55:00	2	3. A
Point (466622 111131)	24/06/2017	4.42E+10	466622	111131	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	17:49:00	2	6. Unclassifi ed
Point (466423	17/06/2017	4.42E+10	466423	99954	2	1. Dry	1. Daylight	1	0	0	0	0	0	1. Left turn	08:54:00	2	3. A
Point (469492	12/07/2017	4.42E+10	469492	111884	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	19:21:00	2	3. A
Point (467422	16/07/2017	4.42E+10	467422	104170	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	13:49:00	3	3. A
Point (467356	02/07/2017	4.42E+10	467356	108101	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	13:00:00	2	3. A
Point (467279	11/07/2017	4.42E+10	467279	107908	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	0. No turn	18:52:00	2	3. A
Point (467847	21/07/2017	4.42E+10	467847	109769	3	1. Dry	1. Daylight	3	0	0	0	0	2	1. Left turn	17:00:00	2	4. B
Point (466989	22/07/2017	4.42E+10	466989	106969	2	2. Wet/Dam	1. Daylight	1	0	0	0	1	0	2. Right turn	15:00:00	1	3. A

Point (466337 100100)	17/07/2017	4.42E+10	466337	100190	3	1. Dry	4. Darkness: street	1	0	1	0	0	0	1. Left turn	21:36:00	2	3. A
Point (467386 104360)	19/07/2017	4.42E+10	467386	104360	3	1. Dry	1. Daylight	2	0	0	0	0	0	0. No turn	13:30:00	3	3. A
Point (467070 107136)	04/08/2017	4.42E+10	467070	107136	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	16:50:00	2	3. A
Point (468863 112184)	05/08/2017	4.42E+10	468863	112184	2	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	18:00:00	2	6. Unclassifi
Point (467763 109934)	23/07/2017	4.42E+10	467763	109934	3	2. Wet/Dam p	1. Daylight	1	0	0	0	0	0	0. No turn	11:55:00	2	4. B
Point (467623 105182)	17/08/2017	4.42E+10	467623	105182	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	17:14:00	2	3. A
Point (470470 112131)	05/09/2017	4.42E+10	470470	112131	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	07:58:00	2	2. A(M)
Point (466421 99960)	05/08/2017	4.42E+10	466421	99960	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	16:40:00	2	3. A
Point (467693 110009)	17/08/2017	4.42E+10	467693	110009	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	13:24:00	2	4. B
Point (467358 103314)	14/09/2017	4.42E+10	467358	103314	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:12:00	2	3. A
Point (467059 107102)	19/09/2017	4.42E+10	467059	107102	2	1. Dry	4. Darkness: street	1	0	0	1	0	0	0. No turn	21:00:00	1	3. A
Point (467405 108598)	07/09/2017	4.42E+10	467405	108598	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	06:30:00	2	3. A
Point (466330 100216)	12/09/2017	4.42E+10	466330	100216	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	1	0. No turn	16:40:00	2	3. A
Point (467511 104280)	16/12/2016	1.6E+08	467511	104280	3	2. Wet/Dam	4. Darkness:	1	0	1	0	1	0	0. No turn	05:38:00	2	3. A
Point (468005 109172)	21/12/2016	1.6E+08	468005	109172	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	15:45:00	1	3. A
Point (466416 99972)	13/12/2016	1.6E+08	466416	99972	3	2. Wet/Dam	1. Daylight	2	0	0	0	1	0	2. Right turn	15:00:00	2	3. A
Point (467433 104263)	10/01/2017	4.42E+10	467433	104263	3	2. Wet/Dam p	7. Darkness: street	1	0	0	0	0	0	0. No turn	07:25:00	2	3. A
Point (467826 108922)	10/01/2017	4.42E+10	467826	108922	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	09:03:00	2	3. A
Point (469835 112554)	05/01/2017	4.42E+10	469835	112554	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:50:00	2	3. A
Point	09/01/2017	4.42E+10	467369	103900	3	2.	4.	1	0	2	0	0	0	0. No turn	16:15:00	2	3. A
Point (467367 103273)	24/01/2017	4.42E+10	467367	103273	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	0. No turn	08:51:00	2	3. A
Point (467235 107833)	26/01/2017	4.42E+10	467235	107833	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	08:05:00	2	3. A
Point (466421 99962)	14/01/2017	4.42E+10	466421	99962	3	2. Wet/Dam p	1. Daylight	2	0	0	0	1	0	0. No turn	12:43:00	3	3. A
Point (468009 109163)	20/01/2017	4.42E+10	468009	109163	3	1. Dry	7. Darkness: street	1	0	0	1	0	0	2. Right turn	07:30:00	2	3. A
Point (467504 104501)	01/02/2017	4.42E+10	467504	104501	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	1. Left turn	09:45:00	2	3. A
Point (466677 100446)	10/02/2017	4.42E+10	466677	100446	3	1. Dry	7. Darkness:	1	0	0	1	0	0	2. Right turn	19:30:00	2	3. A
Point (467562 104323)	01/02/2017	4.42E+10	467562	104323	3	2. Wet/Dam	1. Daylight	1	0	1	0	0	0	0. No turn	07:15:00	2	3. A
Point (469821 112565)	25/02/2017	4.42E+10	469821	112565	3	2. Wet/Dam	4. Darkness:	1	0	0	0	0	0	2. Right turn	23:00:00	2	3. A
Point (466715 106424)	02/03/2017	4.42E+10	466715	106424	2	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	09:00:00	2	6. Unclassifi
Point (467239 101116)	17/02/2017	4.42E+10	467239	101116	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	14:05:00	2	3. A
Point (466410 99971)	24/02/2017	4.42E+10	466410	99971	3	1. Dry	7. Darkness:	1	0	1	0	0	0	0. No turn	04:18:00	2	3. A
Point (466555 100314)	23/03/2017	4.42E+10	466555	100314	3	1. Dry	1. Daylight	1	0	0	0	0	0	1. Left turn	12:50:00	2	3. A
Point (467431 104268)	29/03/2017	4.42E+10	467431	104268	3	1. Dry	7. Darkness:	1	0	0	0	0	0	0. No turn	21:50:00	2	3. A
Point (467900 109478)	10/03/2017	4.42E+10	467900	109478	3	2. Wet/Dam	4. Darkness: street	1	0	1	0	0	1	0. No turn	19:00:00	2	3. A
Point (468011 109202)	22/03/2017	4.42E+10	468011	109202	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	12:00:00	2	3. A
Point (466671 100417)	06/04/2017	4.42E+10	466671	100417	3	1. Dry	4. Darkness:	1	0	0	0	0	0	0. No turn	20:01:00	3	3. A
Point (467613 101533)	10/04/2017	4.42E+10	467613	101533	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	17:48:00	3	3. A
Point (470398 112355)	31/03/2017	4.42E+10	470398	112355	3	1. Dry	7. Darkness:	1	0	0	0	1	0	0. No turn	18:25:00	2	2. A(M)
Point (466397 100040)	31/03/2017	4.42E+10	466397	100040	2	1. Dry	5. Darkness:	1	0	0	1	0	0	0. No turn	19:15:00	2	3. A
Point	26/04/2017	4.42E+10	467423	104274	3	1. Dry	1.	1	0	0	1	0	0	1. Left	13:00:00	2	3. A
Point (467685 110054)	10/05/2017	4.42E+10	467685	110054	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	19:39:00	2	4. B
Point (466663 100418)	11/04/2017	4.42E+10	466663	100418	2	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	12:05:00	2	3. A
Point (467478 102198)	24/04/2017	4.42E+10	467478	102198	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:10:00	2	3. A
Point (467425 104270)	16/02/2018	4.42E+10	467425	104270	3	1. Dry	7. Darkness:	1	0	0	0	0	0	0. No turn	19:35:00	2	3. A
Point (467265 110496)	22/02/2018	4.42E+10	467265	110496	3	1. Dry	4. Darkness:	1	0	1	0	0	0	1. Left turn	19:55:00	2	4. B
Point (467488 104423)	15/02/2018	4.42E+10	467488	104423	3	1. Dry	4. Darkness:	1	0	0	0	1	0	0. No turn	18:12:00	3	3. A
Point (466392 100040)	16/02/2018	4.42E+10	466392	100040	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	14:40:00	2	3. A
Point (469480 111889)	09/03/2018	4.42E+10	469480	111889	3	3. Snow	7. Darkness:	1	0	0	0	1	0	1. Left turn	19:10:00	2	3. A
Point (466761 100699)	10/04/2018	4.42E+10	466761	100699	3	1. Dry	1. Daylight	1	0	1	0	0	0	2. Right turn	18:20:00	2	3. A
Point (467344 101194)	27/02/2018	4.42E+10	467344	101194	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	09:59:00	2	3. A
Point (467465 102828)	08/03/2018	4.42E+10	467465	102828	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	16:40:00	2	3. A
Point (467519 104299)	05/05/2018	4.42E+10	467519	104299	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:29:00	2	3. A
Point (466390 100051)	05/05/2018	4.42E+10	466390	100051	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	14:31:00	2	3. A
Point	13/04/2018	4.42E+10	469843	112550	3	1. Dry	4.	2	0	0	0	0	0	2. Right	20:00:00	2	4. B
Point (467484 102189)	14/04/2018	4.42E+10	467484	102189	3	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	13:00:00	2	3. A
Point (467376 108541)	14/05/2018	4.42E+10	467376	108541	2	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	08:39:00	2	3. A

Point (468005	15/05/2018	4.42E+10	468005	109118	3	1. Dry	1. Daylight	1	0	1	0	0	0	1. Left turn	14:37:00	2	3. A
Point (466321	08/05/2018	4.42E+10	466321	100237	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	17:26:00	2	3. A
Point (466767	10/05/2018	4.42E+10	466767	100703	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	08:59:00	2	3. A
Point (466685	14/06/2018	4.42E+10	466685	106419	3	1. Dry	1. Daylight	1	0	0	0	1	0	2. Right turn	19:08:00	2	4. B
Point (467482	28/06/2018	4.42E+10	467482	102186	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	13:47:00	2	3. A
Point (466669	17/05/2018	4.42E+10	466669	100412	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	14:26:00	2	6. Unclassifi
Point (466329	22/05/2018	4.42E+10	466329	100193	3	1. Dry	1. Daylight	1	0	0	0	0	1	0. No turn	08:22:00	1	3. A
Point (466906	05/07/2018	4.42E+10	466906	106403	3	1. Dry	1. Daylight	2	0	0	0	1	0	0. No turn	08:27:00	2	4. B
Point (468347	16/07/2018	4.42E+10	468347	105798	2	1. Dry	1. Daylight	1	0	1	0	0	1	0. No turn	07:45:00	2	3. A
Point (466914	04/07/2018	4.42E+10	466914	106768	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:41:00	3	3. A
Point (468529 112844)	05/08/2018	4.42E+10	468529	112844	3	1. Dry	1. Daylight	2	0	0	0	0	0	2. Right turn	11:12:00	2	6. Unclassified
Point (466460	07/08/2018	4.42E+10	466460	111325	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	14:11:00	2	4. B
Point (466807	21/07/2018	4.42E+10	466807	106574	3	1. Dry	4. Darkness:	1	0	0	1	0	0	2. Right turn	23:29:00	2	3. A
Point (470036	26/07/2018	4.42E+10	470036	112494	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	15:56:00	2	4. B
Point (466924	28/08/2018	4.42E+10	466924	100870	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	11:36:00	3	3. A
Point (466401	08/08/2018	4.42E+10	466401	100016	3	1. Dry	1. Daylight	1	0	0	0	1	0	2. Right turn	12:52:00	2	6. Unclassifi
Point (466406	10/08/2018	4.42E+10	466406	100015	3	2. Wet/Dam	1. Daylight	2	0	0	0	0	1	2. Right turn	15:46:00	2	3. A
Point (470548	16/10/2017	4.42E+10	470548	112365	3	2. Wet/Dam	7. Darkness:	2	0	0	0	0	0	0. No turn	07:10:00	2	4. B
Point (467475	25/10/2017	4.42E+10	467475	102664	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	16:05:00	3	3. A
Point (467879	23/09/2017	4.42E+10	467879	109404	3	2. Wet/Dam	7. Darkness:	1	0	0	1	0	0	0. No turn	19:03:00	1	3. A
Point (467609	31/10/2017	4.42E+10	467609	105162	3	1. Dry	1. Daylight	2	0	0	0	0	1	0. No turn	12:20:00	2	3. A
Point (467402	27/10/2017	4.42E+10	467402	101240	3	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	13:07:00	2	3. A
Point (467215 107825)	27/10/2017	4.42E+10	467215	107825	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	08:44:00	1	3. A
Point (467070 107138)	16/11/2017	4.42E+10	467070	107138	3	1. Dry	4. Darkness:	1	0	1	0	0	0	0. No turn	18:00:00	2	3. A
Point (466412 99962)	21/11/2017	4.42E+10	466412	99962	3	1. Dry	4. Darkness:	1	0	1	0	0	1	0. No turn	17:00:00	2	3. A
Point (467237 101118)	09/11/2017	4.42E+10	467237	101118	2	1. Dry	1. Daylight	1	0	0	1	0	0	2. Right turn	11:28:00	2	3. A
Point (467275	15/11/2017	4.42E+10	467275	106374	3	2. Wet/Dam	1. Daylight	2	0	0	0	0	0	2. Right turn	08:30:00	2	4. B
Point (467830 108927)	08/12/2017	4.42E+10	467830	108927	2	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	15:05:00	2	3. A
Point (467533 104357)	09/12/2017	4.42E+10	467533	104357	2	4. Frost/Ice	4. Darkness:	1	0	0	1	0	0	0. No turn	05:49:00	1	3. A
Point (469820 112563)	29/11/2017	4.42E+10	469820	112563	2	2. Wet/Dam	4. Darkness:	1	0	0	0	0	0	2. Right turn	20:18:00	2	3. A
Point (467472	04/12/2017	4.42E+10	467472	102185	3	1. Dry	1. Daylight	1	0	0	1	0	0	0. No turn	10:27:00	2	3. A
Point (466405	20/12/2017	4.42E+10	466405	100016	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	2. Right turn	13:46:00	2	3. A
Point (467425	28/12/2017	4.42E+10	467425	104389	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	10:30:00	2	3. A
Point (467542	17/12/2017	4.42E+10	467542	104770	3	2. Wet/Dam	1. Daylight	2	0	0	0	0	0	0. No turn	14:10:00	2	3. A
Point	17/12/2017	4.42E+10	467361	103306	3	2.	1.	2	0	0	0	0	0	0. No turn	13:15:00	2	3. A
Point (467838 109495)	08/01/2018	4.42E+10	467838	109495	2	1. Dry	4. Darkness: street	1	0	0	1	0	0	0. No turn	17:45:00	2	3. A
Point (466557	15/01/2018	4.42E+10	466557	100316	3	2. Wet/Dam	4. Darkness:	2	0	0	0	1	0	2. Right turn	07:11:00	2	3. A
Point (470631	31/12/2017	4.42E+10	470631	112415	3	2. Wet/Dam	6. Darkness:	1	0	0	0	0	0	0. No turn	18:50:00	2	4. B
Point (467077	08/01/2018	4.42E+10	467077	100989	3	1. Dry	7. Darkness:	1	0	0	0	0	0	0. No turn	16:42:00	2	3. A
Point (467482	24/01/2018	4.42E+10	467482	104529	3	1. Dry	1. Daylight	1	0	0	0	0	1	2. Right turn	08:31:00	2	3. A
Point (467680	16/01/2018	4.42E+10	467680	110057	3	1. Dry	7. Darkness:	1	0	1	0	0	0	2. Right turn	17:30:00	2	4. B
Point (466404 100013)	19/01/2018	4.42E+10	466404	100013	3	1. Dry	1. Daylight	1	0	0	0	1	0	2. Right turn	12:20:00	2	3. A
Point (466965	10/02/2018	4.42E+10	466965	106891	2	2. Wet/Dam	4. Darkness:	1	0	1	0	0	0	0. No turn	20:39:00	1	3. A
Point (466333	15/02/2018	4.42E+10	466333	100222	3	1. Dry	4. Darkness:	1	0	0	0	0	0	0. No turn	20:08:00	2	3. A
Point (468379 113284)	29/01/2018	4.42E+10	468379	113284	3	2. Wet/Dam	5. Darkness: street	1	0	0	1	0	0	2. Right turn	19:02:00	2	6. Unclassified
Point (466382	07/02/2018	4.42E+10	466382	100065	3	1. Dry	1. Daylight	1	0	0	0	0	0	1. Left turn	14:35:00	2	3. A
Point (467371	18/09/2018	4.42E+10	467371	103913	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	14:09:00	1	3. A
Point (467514	26/09/2018	4.42E+10	467514	104287	2	1. Dry	1. Daylight	2	0	2	0	0	0	0. No turn	09:55:00	2	3. A
Point (467338 101199)	08/09/2018	4.42E+10	467338	101199	2	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	09:00:00	2	3. A
Point (469567	10/09/2018	4.42E+10	469567	112094	2	1. Dry	4. Darkness:	1	0	0	1	0	0	2. Right turn	22:36:00	2	3. A
Point (466491	06/10/2018	4.42E+10	466491	99729	3	2. Wet/Dam	1. Daylight	1	0	0	0	0	0	0. No turn	16:00:00	2	3. A
Point (466973	09/10/2018	4.42E+10	466973	106942	2	1. Dry	4. Darkness:	1	0	0	1	0	0	2. Right turn	06:39:00	2	3. A
Point (467378 101220)	29/09/2018	4.42E+10	467378	101220	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	12:01:00	3	3. A
Point (467426 104268)	04/10/2018	4.42E+10	467426	104268	2	1. Dry	1. Daylight	1	0	0	0	1	0	0. No turn	14:21:00	2	3. A
Point (467520	23/10/2018	4.42E+10	467520	104398	3	1. Dry	1. Daylight	1	0	1	0	0	0	0. No turn	17:50:00	2	3. A

Point (467266 106373)	26/10/2018	4.42E+10	467266	106373	3	1. Dry	1. Daylight	2	0	0	0	2	0	2. Right turn	12:12:00	3	6. Unclassified
Point (470536 112474)	19/10/2018	4.42E+10	470536	112474	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:26:00	2	3. A
Point (466517 99619)	21/10/2018	4.42E+10	466517	99619	2	1. Dry	7. Darkness: street lighting	1	0	1	0	0	0	2. Right turn	20:20:00	2	3. A
Point (467171 107620)	12/11/2018	4.42E+10	467171	107620	3	2. Wet/Dam p	1. Daylight	1	0	0	0	0	1	2. Right turn	08:12:00	2	3. A
Point (467470 104329)	15/11/2018	4.42E+10	467470	104329	3	1. Dry	7. Darkness: street	1	0	0	0	1	0	0. No turn	16:45:00	3	3. A
Point (467147 110610)	29/10/2018	4.42E+10	467147	110610	3	1. Dry	4. Darkness: street	2	0	0	0	0	0	2. Right turn	22:01:00	2	4. B
Point (467886 109510)	01/11/2018	4.42E+10	467886	109510	3	2. Wet/Dam p	6. Darkness: no street	1	0	0	1	0	0	0. No turn	16:52:00	2	3. A
Point (467751 108846)	03/12/2018	4.42E+10	467751	108846	3	1. Dry	1. Daylight	1	0	0	0	1	0	2. Right turn	15:41:00	2	3. A
Point (467352	11/12/2018	4.42E+10	467352	103225	3	2. Wet/Dam	7. Darkness:	1	0	0	0	0	0	0. No turn	17:10:00	3	3. A
Point (467485	26/11/2018	4.42E+10	467485	104529	3	1. Dry	1. Daylight	1	0	0	0	0	0	2. Right turn	11:44:00	2	3. A
Point (466323 111536)	28/11/2018	4.42E+10	466323	111536	2	1. Dry	7. Darkness: street	1	0	0	0	0	0	0. No turn	17:30:00	2	6. Unclassified
Point (467480	18/12/2018	4.42E+10	467480	104271	3	1. Dry	7. Darkness:	1	0	0	0	0	0	0. No turn	18:05:00	2	3. A
Point (470475 112504)	11/12/2018	4.42E+10	470475	112504	2	1. Dry	7. Darkness: street	4	0	0	0	0	0	0. No turn	19:25:00	3	3. A
Point (467358 103320)	17/12/2018	4.42E+10	467358	103320	3	1. Dry	1. Daylight	1	0	0	0	0	0	0. No turn	08:45:00	2	3. A

roadnum1	Road_type	speed_lim	Junct_Det	Junct_Ctrl	Roadclass2	roadnum2	Cross_Ctrl	Cross_Fac	Weather	SpCond	Carr_Haz	dftsp	location	Local_Auth	acc_desc	acc_desc2	Day	pol_force
288	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD OUTSIDE	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN) CARRYING	NT.	7. Saturday	44
288	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT JUNCTION	E0600004 4. PORTSMOUTH	CAS1 (PEDESTRIAN) AND CAS2		4. Wednesday	44
	6. Single carriageway	20	3. Staggered or T Junction	4. Give way or Uncontrolled	3. A	2030	0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		HAYLING AVENUE AT THE JUNCTION	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLING F		2. Monday	44
288	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	1. Zebra crossing	5. Raining - high winds	0. None	0. None		A288 MILTON ROAD AT JUNCTION	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN) TRAVELLI		3. Tuesday	44
3	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	4. B	2177	0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT JUNCTION	E0600004 4. PORTSMOUTH	VEH 1 (BUS) TRAVELLING W		5. Thursday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	4. B	2150	2. Controlled by other	0. No crossing facility	1. Fine - no high winds	0. None	0. None		BERE ROAD AT JUNCTION	E0700009 4. WINCHES	CAS 1 (PEDESTRIAN)		4. Wednesday	44
3	3. Dual carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	1. Zebra crossing	1. Fine - no high winds	0. None	0. None		A3 MAUREPAS WAY OUTSIDE	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLING SE		1. Sunday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEAN LANE AT JUNCTION	E0700009 0. HAVANT	VEH 1 (CAR) WAS		6. Friday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		2. Monday	44
3	3. Dual carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A3 MAUREPAS WAY 55 METRES	E0700009 0. HAVANT	INTOXICATED CAS 1 (PEDESTRIAN)		6. Friday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	INTENDING TO COMMIT		7. Saturday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		4. Wednesday	44
2030	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	8. Central refuge - no other	4. Fine - high winds	0. None	0. None		A2030 VELDER AVENUE	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		5. Thursday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		LOCKSWAY ROAD AT	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN)		2. Monday	44
2150	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 4. WINCHES	VEH 1 (CAR) TRAVELLI		3. Tuesday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOCKSWAY ROAD AT	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN) RAN		5. Thursday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN)		2. Monday	44
288	6. Single carriageway	30	2. Mini roundabout	4. Give way or	6. Unclassified		0. None in 50m / not controlled	8. Central refuge - no other	2. Raining - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (BUS) TRAVELLING		2. Monday	44
288	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD 24	E0600004 4. PORTSMOUTH	VEH1 (CAR) TRAVELLI		5. Thursday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	4. B	2150	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		ASTON ROAD AT JUNCTION	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		7. Saturday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOCKSWAY ROAD AT	E0600004 4. PORTSMOUTH	CAS 1 (PEDESTRIAN)		3. Tuesday	44
2030	6. Single carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	CAS1 (PEDESTRIAN)		6. Friday	44
2030	1. Roundabout	50	1. Normal roundabout	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		5. Thursday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (M/CYCLE)		5. Thursday	44
2030	3. Dual carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		2. Controlled by other	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		6. Friday	44
2030	3. Dual carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD 24	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		4. Wednesday	44
2030	6. Single carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD	E0600004 4. PORTSMOUTH	VEH 1 (M/CYCLE)		5. Thursday	44
2030	3. Dual carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD 104	E0600004 4. PORTSMOUTH	VEH 1 (VAN) TRAVELLI		1. Sunday	44
288	6. Single carriageway	30	6. Crossroads	2. Automatic traffic	3. A	2030	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		6. Friday	44
3	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT JUNCTION	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLING SW		2. Monday	44
2030	6. Single carriageway	30	3. Staggered	2. Automatic	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (M/CYCLE		7. Saturday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	4. Road works	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (AMBULANCE)		2. Monday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMOUTH	VEH 1 (CAR) TRAVELLI		6. Friday	44
3	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 1 (VAN) TRAVELLI		3. Tuesday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		MILL ROAD AT JUNCTION	E0700009 4. WINCHES TER	VEH 1 (P/CYCLE) TRAVELLING N		2. Monday	44
3	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 2 (VAN) TRAVELLI		3. Tuesday	44
2150	1.	30	1. Normal	4. Give	6.		0. None in	0. No	1. Fine -	0. None	0. None		B2150	E0700009	VEH 1		4.	44

288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	1. Zebra crossing	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAV W		2. Monday	44
2030	6. Single carriageway	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4. PORTSMO	VEH 1 (CAR)			4. Wednesd	44
3	6. Single carriageway	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A3 MAUREPA	E0700009 0.	VEH 1 (CAR)			5. Thursday	44
3	6. Single carriageway	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (CAR)			2. Monday	44
2150	6. Single carriageway	30	3. Staggered	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not	0. No crossing facility	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 4.	VEH 1 (CAR)			5. Thursday	44
2030	6. Single carriageway	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing facility	2. Raining - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)			5. Thursday	44
2150	6. Single carriageway	30	8. Private road/drive	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 4.	VEH 1 (CAR)			4. Wednesd	44
27	1. Roundabout	40	1. Normal roundabout	2. Automatic	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A27 OFF SLIP WEST	E0600004 4.	VEH 1 (CAR)			4. Wednesd	44
3	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	8. Central refuge -	2. Raining - no high	0. None	0. None		A3 PORTSMO	E0700008 5. EAST	VEH 3 (CAR)			4. Wednesd	44
2030	6. Single carriageway	30	3. Staggered	2. Automatic	6. Unclassified		0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (P/CYCLE)			2. Monday	44
3	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (M/CYCLE			2. Monday	44
3	1. Roundabout	30	1. Normal roundabout	4. Give way or	3. A	31	0. None in 50m / not	4. Pelican, puffin	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (TAXI)			4. Wednesd	44
2030	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (P/CYCLE)			3. Tuesday	44
2030	3. Dual carriageway	50	1. Normal roundabout	2. Automatic	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)			4. Wednesd	44
2030	3. Dual carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not	0. No crossing facility	1. Fine - no high	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (VAN)	TRAVELLI		6. Friday	44
3	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	4. Fine - high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (M/CYCLE			4. Wednesd	44
3	6. Single carriageway	30	6. Crossroad	2. Automatic	4. B	2177	0. None in 50m / not	5. Pedestrian	2. Raining - no high	0. None	0. None		A3 LONDON	E0600004 4.	VEH 1 (CAR)			6. Friday	44
27	6. Single carriageway	40	1. Normal roundabout	2. Automatic traffic	3. A	2030	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A27 WESTBOUND	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		4. Wednesd	44
27	3. Dual carriageway	70	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	1. Dislodged		A27 WESTBOU	E0600004 4.	VEH 1 (M/CYCLE			6. Friday	44
3	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (CAR)			3. Tuesday	44
2030	3. Dual carriageway	40	1. Normal roundabout	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	5. Pedestrian phase at	5. Raining - high winds	1. Automatic traffic	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		5. Thursday	44
2030	3. Dual carriageway	50	3. Staggered	2. Automatic traffic	6. Unclassified		0. None in 50m / not	0. No crossing facility	1. Fine - no high	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (M/CYCLE			3. Tuesday	44
2030	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD 60	E0600004 4. PORTSMO	VEH 2 (CAR)	TRAVELLI		4. Wednesd	44
2030	6. Single carriageway	40	1. Normal roundabout	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (P/CYCLE)	TRAVELLI		2. Monday	44
3	7. Slip road	70	1. Normal roundabout	4. Give way or Uncontrol	4. B	2149	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) NORTHBO	E0700008 5. EAST	VEH 1 (CAR)			4. Wednesd	44
3	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 2 (M/CYCLE			7. Saturday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 2 (CAR)	TRAVELLI		2. Monday	44
3	1. Roundabout	40	1. Normal roundabout	4. Give way or	4. B	2150	0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A3 MAUREPA	E0700009 4.	VEH 2 (CAR)			5. Thursday	44
3020	6. Single carriageway	60	3. Staggered or T Junction	2. Automatic traffic signal	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT JUNCTION	E0600004 4. PORTSMO UTH	VEH 1 (CAR)	TRAVELLI NG SE		6. Friday	44
2150	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 2 (BUS)	TRAVELLI		2. Monday	44
2177	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2177 PORTSDOWN HILL	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		2. Monday	44
3	6. Single carriageway	30	1. Normal roundabout	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (VAN)	TRAVELLI		3. Tuesday	44
27	7. Slip road	70	1. Normal roundabout	4. Give way or Uncontrol	3. A	2030	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A27 EASTBOUND AT	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		2. Monday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 VELDER AVENUE	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		1. Sunday	44
288	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		1. Sunday	44
288	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD OUTSIDE	E0600004 4. PORTSMO UTH	VEH 2 (M/CYCLE)	TRAVELLI		3. Tuesday	44
2030	6. Single carriageway	30	1. Normal roundabout	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)			6. Friday	44
2030	6. Single carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD 29	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		7. Saturday	44
3	6. Single carriageway	40	3. Staggered	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON ROAD AT	E0700009 0.	VEH 1 (CAR)			2. Monday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		2. Controlled by other	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR)	TRAVELLI		2. Monday	44
3	7. Slip road	40	1. Normal roundabout	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M) SOUTHBOUND	E0700008 5. EAST HAMPSHI	VEH 1 (CAR)	TRAVELLI		6. Friday	44
2030	1. Roundabout	50	1. Normal roundabout	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR)	TRAVELLI		6. Friday	44
27	7. Slip road	70	1. Normal roundabout	2. Automatic	3. A	2030	0. None in 50m / not	5. Pedestrian	1. Fine - no high	0. None	0. None		A27 OFF SLIP WEST	E0600004 4.	VEH 3 (CAR)			5. Thursday	44
2030	6. Single carriageway	40	3. Staggered or T Junction	4. Give way or Uncontrol led	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT JUNCTION	E0600004 4. PORTSMO UTH	VEH 2 (CAR)	TRAVELLI NG SE		6. Friday	44
2030	1. Roundabout	40	1. Normal roundabout	4. Give way or	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (M/CYCLE			3. Tuesday	44
	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		DAY LANE OUTSIDE OF THE	E0700008 5. EAST HAMPSHI	VEH 2 (CAR)	TRAVELLI		4. Wednesd	44

2149	6. Single carriageway	30	1. Normal roundabout	4. Give way or Uncontrol	2. A(M)	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2149 DELL PIECE	E0700008 5. EAST HAMPSHI	VEH 2 (CAR) TRAVELLI		5. Thursday	44
288	6. Single carriageway	30	3. Staggered or T	2. Automatic traffic signal	3. A	2030	0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT JUNCTION	E0600004 4. PORTSMO UTH	VEH 2 (CAR) TRAVELLI NG SE		6. Friday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT JUNCTION	E0700009 0. HAVANT	VEH 2 (CAR) TRAVELLI		3. Tuesday	44
288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	1. Zebra crossing	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		5. Thursday	44
3	6. Single carriageway	30	6. Crossroads	2. Automatic traffic	2. A(M)	2149	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A3 PORTSMO UTH	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		5. Thursday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		MOORING S WAY AT JUNCTION	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		7. Saturday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700009 0. HAVANT	VEH 2 (P/CYCLE) TRAVELLI		5. Thursday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	8. Central refuge - no other	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (P/CYCLE) WAITING		2. Monday	44
2030	6. Single carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		3. Tuesday	44
2030	6. Single carriageway	30	8. Private road/driv	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		MOORING S WAY AT JUNCTION	E0600004 4. PORTSMO	VEH 1 (FUNERAL CAR)		6. Friday	44
2030	6. Single carriageway	40	1. Normal roundabout	2. Automatic traffic	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (GOODS VEH)		6. Friday	44
3	6. Single carriageway	30	6. Crossroads	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 PORTSMO UTH	E0700009 5. EAST HAMPSHI	VEH 1 (AMBULA NCE CAR)		7. Saturday	44
288	6. Single carriageway	30	6. Crossroads	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT JUNCTION	E0600004 4. PORTSMO UTH	VEH 1 (CAR) TRAVELLI NG S		7. Saturday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or	3. A	288	0. None in 50m / not	0. No crossing	5. Raining - high	0. None	0. None		A2030 GOLDSMI	E0600004 4.	VEH 1 (CAR)		4. Wednesd	44
3	1. Roundabout	30	1. Normal roundabout	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 2 (CAR) TRAVELLI		3. Tuesday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		6. Friday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		4. Wednesd ay	44
2030	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 HAVANT ROAD	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLIN		5. Thursday	44
2030	3. Dual carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		94 METRES SOUTH OF HAVANT	E0600004 4. PORTSMO UTH	VEH 1 (CAR) TRAVELLI NG S		6. Friday	44
2177	6. Single carriageway	30	5. Slip Road	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2177 PORTSDO WN HILL	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		7. Saturday	44
2150	1. Dual carriageway	30	1. Normal roundabout	4. Give way or	6. Unclassified		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 0.	VEH 2 (CAR)		3. Tuesday	44
3	6. Single carriageway	50	1. Normal roundabout	4. Give way or Uncontrol	4. B	2149	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M) NORTHBO UND AT	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		3. Tuesday	44
3	6. Single carriageway	30	6. Crossroads	2. Automatic traffic	4. B	2149	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A3 PORTSMO UTH	E0700008 5. EAST HAMPSHI	VEH 2 (CAR) TRAVELLI		5. Thursday	44
3	3. Dual carriageway	70	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility within 50	2. Raining - no high winds	0. None	0. None		A3(M) NORTHBO UND MARKER	E0700008 5. EAST HAMPSHI RE	VEH 1 (CAR) TRAVELLI NG N		3. Tuesday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	4. Fine - high winds	0. None	0. None		A3 LONDON ROAD AT	E0600004 4. PORTSMO	VEH 1 (M/CYCLE		7. Saturday	44
2030	6. Single carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (M/CYCLE		6. Friday	44
27	1. Roundabout	40	1. Normal roundabout	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A27 WESTBOU ND	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		2. Monday	44
	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		5. Thursday	44
	6. Single carriageway	30	1. Normal roundabout	4. Give way or	4. B	2149	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		LAKESME RE ROAD	E0700008 5. EAST	VEH 2 (CAR)		7. Saturday	44
2150	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD AT	E0700009 0. HAVANT	VEH 2 (CAR) TRAVELLI NG SW		4. Wednesd ay	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH (CAR) TRAVELLI NG NE		4. Wednesd ay	44
3	7. Slip road	70	1. Normal roundabout	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) NORTHBO	E0700008 5. EAST	VEH 1 (CAR)		1. Sunday	44
2150	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD AT	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI NG SW		6. Friday	44
288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	3. A	2030	0. None in 50m / not controlled	1. Zebra crossing	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (VAN) TRAVELLI		7. Saturday	44
2030	3. Dual carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		2. Monday	44
2030	3. Dual carriageway	50	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		5. Thursday	44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) AND VEH		3. Tuesday	44
2030	6. Single carriageway	30	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (VAN) TRAVELLI		4. Wednesd ay	44
3	3. Dual carriageway	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or similar non-	1. Fine - no high winds	0. None	0. None		A3 MAUREPA S WAY 50 METRES NORTH OF	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI NG N ALONG A3		2. Monday	44
2030	6. Single carriageway	40	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (P/CYCLE) WAS		3. Tuesday	44

2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 VELDER AVENUE	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		7. Saturday		44
3	6. Single carriageway	30	1. Normal roundabo	4. Give way or	4. B	2150	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 MAUREPA	E0700009 4.	VEH 1 (CAR)		4. Wednesd		44
2149	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		B2149 DELL PIECE WEST 58	E0700008 5. EAST HAMPSHI RE	VEH 2 (CAR) TRAVELLI NG SE		3. Tuesday		44
3	1. Roundabo	30	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 2 (CAR)		5. Thursday		44
288	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		1. Sunday		44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	8. Central refuge - no other	2. Raining - no high winds	0. None	0. None		A3 PORTSMO UTH	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		6. Friday		44
2030	3. Dual carriageway	50	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 TRAVELLI		6. Friday		44
288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		2. Monday		44
2030	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		4. Wednesd		44
288	6. Single carriageway	30	6. Crossroads	2. Automatic traffic	3. A	2030	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 VELDER AVENUE	E0600004 4. PORTSMO	VEH 2 (M/CYCLE)		3. Tuesday		44
	6. Single carriageway	30	3. Staggered	4. Give way or Uncontrol	6. Unclassifi		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		4. Wednesd		44
288	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH 1 (CAR)		3. Tuesday		44
	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		SOAKE ROAD AT JUNCTION WITH	E0700009 4. WINCHES TER	VEH 1 (CAR) TRAVELLI NG N		7. Saturday		44
	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		LOCKSWA Y ROAD AT	E0600004 4.	VEH 1 (TAXI) TRAVELLI		2. Monday		44
2030	3. Dual carriageway	40	3. Staggered	2. Automatic	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 5 (CAR)		5. Thursday		44
3	1. Roundabo ut	40	1. Normal roundabo	4. Give way or Uncontrol	4. B	2150	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 MAUREPA S WAY AT	E0700009 4. WINCHES	VEH 1 (CAR) TRAVELLI		7. Saturday		44
2030	3. Dual carriageway	40	1. Normal roundabo	4. Give way or	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		1. Sunday		44
2150	6. Single carriageway	30	6. Crossroads	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 4.	VEH 1 (CAR)		3. Tuesday		44
3	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (M/CYCLE) TRAVELLI		4. Wednesd ay		44
2149	6. Single carriageway	60	1. Normal roundabo ut	4. Give way or Uncontrol	3		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2149 DELL PIECE	E0700008 5. EAST HAMPSHI	VEH 2 (CAR) TRAVELLI		7. Saturday		44
2150	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		7. Saturday		44
2030	7. Slip road	50	1. Normal roundabo	2. Automatic	3. A	2030	0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		2. Monday		44
2149	6. Single carriageway	60	1. Normal roundabo ut	4. Give way or Uncontrol	2. A(M)	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2149 DELL PIECE	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		3. Tuesday		44
2030	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (CAR)		7. Saturday		44
2030	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (M/CYCLE)		6. Friday		44
2177	6. Single carriageway	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B217 PORTSDO	E0600004 4.	VEH 1 (CAR)		4. Wednesd		44
2030	6. Single carriageway	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (M/CYCLE		2. Monday		44
2030	6. Single carriageway	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (VAN)		5. Thursday		44
288	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50 metres	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT JUNCTION WITH	E0600004 4. PORTSMO UTH	VEH 1 (VAN) TRAVELLI NG E OUT OF		3. Tuesday		44
2030	6. Single carriageway	50	3. Staggered or T Junction	2. Automatic traffic signal	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT JUNCTION	E0600004 4. PORTSMO UTH	VEH 1 (CAR) WAS TRAVELLI		7. Saturday		44
2149	6. Single carriageway	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2149 DELL	E0700008 5. EAST	VEH 1 (CAR)		4. Wednesd		44
2030	6. Single carriageway	30	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A2030 VELDER AVENUE	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		4. Wednesd ay		44
	6. Single carriageway	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		LOCKSWA Y ROAD	E0600004 4.	VEH 1 (CAR)		3. Tuesday		44
288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		3. Tuesday		44
27	1. Roundabo	30	1. Normal roundabo	2. Automatic	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A27 EASTBOU	E0600004 4.	VEH 1 (CAR)		4. Wednesd		44
3	6. Single carriageway	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 2 (CAR) TRAVELLI		7. Saturday		44
3	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (VAN) TRAVELLI		5. Thursday		44
3	7. Slip road	60	1. Normal roundabo ut	4. Give way or Uncontrol	4. B	2149	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M) NORTHBO UND	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		2. Monday		44
288	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 CAS (PASSENG TRAVELLI		1. Sunday		44
3	6. Single carriageway	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	5. Pedestrian	1. Fine - no high	0. None	0. None		A3 MAUREPA	E0700009 0.	VEH 1 (POLICE		4. Wednesd		44
2149	6. Single carriageway	20	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2149 HAMBLED	E0700009 0.	VEH 2 (CAR)		7. Saturday		44
288	6. Single carriageway	30	3. Staggered or T	2. Automatic traffic	3. A	2030	0. None in 50m / not controlled	5. Pedestrian phase at	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (P/CYCLE) WAS TRAVELLI		4. Wednesd ay		44
	6. Single carriageway	30	3. Staggered	4. Give way or	3. A	3	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		PARK ROAD AT	E0700009 0.	VEH 2 (P/CYCLE)		5. Thursday		44
288	6. Single carriageway	30	8. Private road/drive	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		7. Saturday		44

2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (VAN)		4. Wednesd	44
2030	6. Single carriagew	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		2. Monday	44
2030	6. Single carriagew	30	3. Staggered	2. Automatic	3. A	288	0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		A2030 VELDER	E0600004 4.	VEH 1 (VAN)		3. Tuesday	44
2030	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		6. Friday	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (VAN)		7. Saturday	44
2030	1. Roundabo	40	1. Normal roundabo	2. Automatic	3. A	27	0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (M/CYCLE)		3. Tuesday	44
2030	6. Single carriagew	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
2030	1. Roundabo	40	1. Normal roundabo	2. Automatic	3. A	27	0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		6. Friday	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH 1 (CAR)		7. Saturday	44
2030	1. Roundabo	60	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (M/CYCLE		3. Tuesday	44
2030	6. Single carriagew	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (CAR)		6. Friday	44
	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		MOORING S WAY AT	E0600004 4.	VEH 1 (CAR)		4. Wednesd	44
2030	6. Single carriagew	30	3. Staggered	2. Automatic	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (CAR)		6. Friday	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (M/CYCLE		4. Wednesd	44
2030	6. Single carriagew	40	3. Staggered	2. Automatic	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		2. Monday	44
	6. Single carriagew	20	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 SWA Y ROAD	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
2177	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2177 PORTSDO WN HILL	E0600004 4.	VEH 1 (P/CYCLE)		2. Monday	44
2030	1. Roundabo	30	1. Normal roundabo	2. Automatic	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (CAR)		3. Tuesday	44
3	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON ROAD AT	E0700009 0.	VEH 2 (CAR)		3. Tuesday	44
2030	6. Single carriagew	50	3. Staggered	2. Automatic	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		1. Sunday	44
288	6. Single carriagew	30	6. Crossroad	2. Automatic	3. A	288	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH 2 (CAR)		3. Tuesday	44
2149	6. Single carriagew	60	1. Normal roundabo	4. Give way or	2. A(M)	3	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2149 DELL	E0700008 5. EAST	VEH 2 (CAR)		3. Tuesday	44
2150	6. Single carriagew	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0.	VEH 1 (CAR)		2. Monday	44
3	3. Dual carriagew	50	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0600004 4.	VEH 1 (M/CYCLE		2. Monday	44
3	6. Single carriagew	70	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) SOUTHBO UND AT	E0700008 5. EAST	VEH 1 (VAN)		4. Wednesd	44
3	6. Single carriagew	40	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) SOUTHBO UND AT	E0700008 5. EAST	VEH 1 (VAN)		3. Tuesday	44
2030	6. Single carriagew	50	3. Staggered	2. Automatic	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	2. Raining - no high	4. Road works	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
	6. Single carriagew	60	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		ANMORE ROAD	E0700008 5. EAST	VEH 1 (CAR)		5. Thursday	44
3	7. Slip road	70	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) SOUTHBO	E0700008 5. EAST	VEH 1 (CAR)		6. Friday	44
27	7. Slip road	70	1. Normal roundabo	2. Automatic	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A27 OFF SLIP WEST	E0600004 4.	VEH 1 (CAR)		6. Friday	44
2030	6. Single carriagew	50	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		1. Sunday	44
2150	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 0.	VEH 1 (CAR)		3. Tuesday	44
3	7. Slip road	70	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3(M) NORTHBO	E0700008 5. EAST	CAS 1 (PASSENG		1. Sunday	44
2150	6. Single carriagew	40	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 0.	VEH 1 (CAR)		2. Monday	44
	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700009 0.	VEH 1 (M/CYCLE		4. Wednesd	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
2177	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		B2177 PORTSDO	E0600004 4.	VEH 1 (BUS)		2. Monday	44
2177	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B21777 PORTSDO	E0600004 4.	V2 (CAR) TRAVELLI		6. Friday	44
3020	6. Single carriagew	50	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3020 EASTERN	E0600004 4.	VEH 1 (CAR)		7. Saturday	44
3	1. Roundabo	30	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 MAURERA	E0700009 4.	VEH 2 (CAR)		5. Thursday	44
3020	3. Dual carriagew	50	6. Crossroad	2. Automatic	6. Unclassifi		0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A3020 EASTERN	E0600004 4.	VEH 1 (P/CYCLE)		6. Friday	44
2030	6. Single carriagew	50	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	4. Pelican, puffin,	1. Fine - no high	0. None	0. None		A2030 EASTERN ROAD	E0600004 4.	VEH 1 (VAN)		2. Monday	44
	6. Single carriagew	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		HAMBLED ON ROAD 180M NW	E0700009 4.	V2 (CAR) TRAVELLI NG SE		7. Saturday	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH 1 (CAR)		7. Saturday	44
3	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 2 (CAR)		4. Wednesd	44
2030	3. Dual carriagew	50	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		1. Sunday	44
3	6. Single carriagew	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON ROAD	E0700009 0.	VEH 1 (VAN)		1. Sunday	44
3	6. Single carriagew	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	4. Pelican, puffin,	2. Raining - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (CAR)		3. Tuesday	44
2150	6. Single carriagew	40	3. Staggered	2. Automatic	6. Unclassifi	1500	0. None in 50m / not	8. Central refuge -	1. Fine - no high	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0.	VEH 2 (VAN)		6. Friday	44
3	6. Single carriagew	30	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	8. Central refuge -	2. Raining - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (CAR)		7. Saturday	44

288	6. Single carriagew ay	30	6. Crossroad	2. Automatic traffic	3. A	2030	0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		2. Monday	44
27	1. Roundabo ut	40	1. Normal roundabo	4. Give way or Uncontrol	3. A	2030	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A27 ROUNDAB OUT WITH	E0600004 4. PORTSMO	V1 (CAR) TRAVELLI NG		4. Wednesd ay	44
3	6. Single carriagew ay	40	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 1 (CAR)		6. Friday	44
	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEA N LANE AT	E0700009 0.	VEH 1 (CAR)		7. Saturday	44
2150	6. Single carriagew ay	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		1. Sunday	44
2030	6. Single carriagew ay	40	3. Staggered or T	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		5. Thursday	44
3	3. Dual carriagew ay	70	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M), MARKER	E0700008 5. EAST	VEH 2 TRAVELLI		3. Tuesday	44
288	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	4. Pelican, puffin,	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		7. Saturday	44
2150	1. Roundabo ut	30	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 1 (P/CYCLE) TRAVELLI		5. Thursday	44
2030	6. Single carriagew ay	50	3. Staggered or T	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		5. Thursday	44
3	6. Single carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 1 (M/CYCLE) TRAVELLI		3. Tuesday	44
3	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (VAN) TRAVELLI		5. Thursday	44
2030	6. Single carriagew ay	30	3. Staggered or T	2. Automatic traffic	3. A	288	0. None in 50m / not controlled	4. Pelican, puffin,	1. Fine - no high winds	0. None	0. None		A2030 VELDER ROAD AT	E0600004 4. PORTSMO	VEH 2 (P/CYCLE) TRAVELLI		3. Tuesday	44
27	1. Roundabo ut	40	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A27 WESTBOU ND AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		6. Friday	44
3	3. Dual carriagew ay	30	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 MAUREPA S WAY AT	E0700009 0. WINCHES	VH1 (M/CYCLE) TRAVELLI		4. Wednesd ay	44
288	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	1. Zebra crossing	2. Raining - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		3. Tuesday	44
2030	3. Dual carriagew ay	40	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		3. Tuesday	44
3	6. Single carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD	E0700009 0. HAVANT	VEH 2 (M/CYCLE) TRAVELLI		3. Tuesday	44
3	6. Single carriagew ay	30	6. Crossroad	2. Automatic traffic	4. B	2149	0. None in 50m / not controlled	4. Pelican, puffin,	1. Fine - no high winds	0. None	0. None		A3 PORTSMO	E0700008 5. EAST	VEH 1 (CAR)		5. Thursday	44
2030	6. Single carriagew ay	50	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A3020 EASTERN ROAD AT	E0600004 4. PORTSMO	VH1 TRAVELLI		2. Monday	44
2030	6. Single carriagew ay	50	3. Staggered or T	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (P/CYCLE) TRAVELLI		3. Tuesday	44
3	1. Roundabo ut	30	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	8. Central refuge -	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		5. Thursday	44
288	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	1. Zebra crossing	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (VAN) TRAVELLI		7. Saturday	44
3	1. Roundabo ut	30	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 2 (VAN) TRAVELIN G		6. Friday	44
2030	3. Dual carriagew ay	50	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (P/CYCLE)		4. Wednesd	44
2030	3. Dual carriagew ay	40	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (M/CYCLE		6. Friday	44
27	7. Slip road	30	1. Normal roundabo	2. Automatic	3. A	2030	0. None in 50m / not	4. Pelican, puffin	2. Raining - no high	0. None	0. None		A27 WESTBOU	E0600004 4.	VEH 1 (CAR)		4. Wednesd	44
3	6. Single carriagew ay	30	6. Crossroad	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	5. Pedestria	2. Raining - no high winds	0. None	0. None		A3 PORTSMO	E0700008 5. EAST	VH1 (CAR) TRAVELLI		7. Saturday	44
	6. Single carriagew ay	40	6. Crossroad	4. Give way or Uncontrol	3. A	3	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		PORTDO WN HILL	E0600004 4. PORTSMO	VEH 1 (M/CYCLE) TRAVELLI		5. Thursday	44
2030	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		6. Friday	44
228	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VH2 (CAR) TRAVELLI		6. Friday	44
2030	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 VELDER ROAD AT	E0600004 4. PORTSMO	VH1 (CAR) TRAVELLI		5. Thursday	44
2030	1. Roundabo ut	30	1. Normal roundabo ut	2. Automatic traffic	3. A	27	0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (GOOD TRAVELLI		4. Wednesd ay	44
3	1. Roundabo ut	30	1. Normal roundabo ut	4. Give way or Uncontrol	4. B	2150	0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A3 MAUREPA S WAY AT	E0700009 4. WINCHES	VEH 2 (CAR) TRAVELLI		6. Friday	44
3	6. Single carriagew ay	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 MAUREPA S WAY AT	E0700009 0. WINCHES	VEH 2 (CAR) TRAVELLI		4. Wednesd ay	44
2030	6. Single carriagew ay	30	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
2030	6. Single carriagew ay	40	3. Staggered or T	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		2. Monday	44
3	7. Slip road	50	1. Normal roundabo ut	4. Give way or Uncontrol	4. B	2149	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M) NORTHBO UND AT	E0700008 5. EAST	VEH 1 (CAR) TRAVELLI		6. Friday	44
288	6. Single carriagew ay	30	8. Private road/driv	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		6. Friday	44
2030	1. Roundabo ut	40	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 TRAVELLI		4. Wednesd ay	44
2150	1. Roundabo ut	30	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 1 (CAR) TRAVELLI		4. Wednesd ay	44
2030	6. Single carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (M/CYCLE) TRAVELLI		3. Tuesday	44
2030	3. Dual carriagew ay	50	6. Crossroad	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VH1 (CAR) TRAVELLI		2. Monday	44
3020	1. Roundabo ut	60	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3020 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		6. Friday	44
2150	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLED ON ROAD	E0700009 0. HAVANT	VEH 2 (CAR) TRAVELLI		5. Thursday	44
2030	3. Dual carriagew ay	40	1. Normal roundabo ut	2. Automatic traffic	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		5. Thursday	44
288	6. Single carriagew ay	30	8. Private road/driv	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		6. Friday	44
3	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH 2 (VAN) TRAVELLI		6. Friday	44
2030	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (VAN) TRAVELLI		3. Tuesday	44
2030	6. Single carriagew ay	40	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		3. Tuesday	44
2030	3. Dual carriagew ay	50	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (VAN) TRAVELLI		5. Thursday	44
2030	3. Dual carriagew ay	60	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		A2030, EASTERN ROAD AT	E0600004 4. PORTSMO	VEH1 (CAR) TRAVELLI		7. Saturday	44
288	3. Dual carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288, MILTON ROAD AT	E0600004 4. PORTSMO	VEH1 (CAR) TRAVELLI	URNS RIGHT.	7. Saturday	44
2149	3. Dual carriagew ay	30	6. Crossroad	2. Automatic traffic	3. A	3	0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		B2149, DELL	E0700008 5. EAST	VEH2 TRAVELLI		6. Friday	44
2030	3. Dual carriagew ay	40	3. Staggered or T	2. Automatic traffic	6. Unclassifi ed		0. None in 50m / not controlled	5. Pedestria	1. Fine - no high winds	0. None	0. None		A2030, EASTERN ROAD AT	E0600004 4. PORTSMO	VEH2 (TAXI) TRAVELLI		7. Saturday	44
3	3. Dual carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3, LONDON ROAD AT	E0700009 0. HAVANT	VEH1 (M/CYCLE) TRAVELLI		2. Monday	44

3	6. Single carriagew	30	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH1 (CAR)		3. Tuesday	44
288	6. Single carriagew	30	6. Crossroad	4. Give way or	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH 2 (CAR)		3. Tuesday	44
2030	3. Dual carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030, EASTERN	E0600004 4.	VEH1 (CAR)		5. Thursday	44
2177	6. Single carriagew	40	3. Staggered	4. Give way or	3. A	3	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2177 PORTSDO	E0600004 4.	VEH1 (CAR)		5. Thursday	44
2030	6. Single carriagew	50	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	4. Pelican, puffin	1. Fine - no high	0. None	0. None		A2030 EASTER	E0600004 4.	VEH1 (CAR)		5. Thursday	44
	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		EASTERN ROAD, AT	E0600004 4.	VEH1 (CAR)		5. Thursday	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	3. A	2030	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH1 (CAR)		3. Tuesday	44
2177	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2177 PORTSDO	E0600004 4.	VEH1 (CAR)		5. Thursday	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 HAVANT	E0600004 4.	VEH2 (P/CYCLE)		2. Monday	44
3	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH1 (CAR)		4. Wednesd	44
	6. Single carriagew ay	30	3. Staggered or T	4. Give way or	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700008 5. EAST HAMPSHI	VEH2 (CAR) TRAVELLI		1. Sunday	44
2150	6. Single carriagew	40	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 4.	VEH1 (CAR)		3. Tuesday	44
3	6. Single carriagew	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0600004 4.	VEH1 (M/CYCLE		7. Saturday	44
2149	6. Single carriagew	60	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2149 DELL	E0700008 5. EAST	VEH1 (CAR)		5. Thursday	44
2030	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH3 (CAR)		3. Tuesday	44
	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		MILTON ROAD, AT	E0600004 4.	VEH1 (CAR)		4. Wednesd	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	1. Zebra crossing	2. Raining - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH2 (CAR)		6. Friday	44
2149	1. Roundabo ut	60	1. Normal roundabo	4. Give way or	2. A(M)	3	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2149 DELL	E0700008 5. EAST	VEH 2 (CAR)		2. Monday	44
2030	6. Single carriagew	40	3. Staggered	2. Automatic traffic	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 TRAVELLI		4. Wednesd	44
3	3. Dual carriagew	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	4. Fire - high	0. None	0. None		A3 MAUREPA	E0700009 0.	VEH 1 (M/CYCLE		7. Saturday	44
2030	6. Single carriagew	30	3. Staggered	2. Automatic traffic	6. Unclassifi		0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 JUNCTION	E0600004 4.	V1 (CAR) WAS		3. Tuesday	44
2030	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (CAR)		6. Friday	44
3	6. Single carriagew ay	30	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LONDON ROAD JUNCTION	E0700009 0. HAVANT	VEH 1 (BICYCLE) TRAVELLI		6. Friday	44
3	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD, AT	E0700009 0. HAVANT	VEH1 (P/CYCLE) TRAVELLI		5. Thursday	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	1. Zebra crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH1 (CAR)		3. Tuesday	44
2030	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH1 (CAR)		5. Thursday	44
2177	6. Single carriagew	40	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2177 PORTSDO	E0600004 4.	VEH 1 (VAN)		4. Wednesd	44
3	6. Single carriagew ay	30	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	4. Pelican, puffin, toucan or	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD,	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		6. Friday	44
2030	1. Roundabo ut	50	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH1 (M/CYCLE)		7. Saturday	44
3	6. Single carriagew	30	6. Crossroad	2. Automatic traffic	4. B	2149	0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A3 PORTSMO UTH	E0700008 5. EAST HAMPSHI	VEH1 (CAR) TRAVELLI		4. Wednesd	44
2030	3. Dual carriagew	50	6. Crossroad	2. Automatic traffic	6. Unclassifi		0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH1 (CAR)		2. Monday	44
288	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH1 (CAR)		4. Wednesd	44
27	1. Roundabo ut	40	1. Normal roundabo ut	4. Give way or Uncontrol	3. A	2030	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A27 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH 2 (CAR) TRAVELLI		5. Thursday	44
2030	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 2 (VAN)		1. Sunday	44
2030	6. Single carriagew	50	3. Staggered	2. Automatic traffic	6. Unclassifi		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 TRAVELLI		1. Sunday	44
3	6. Single carriagew ay	40	1. Normal roundabo ut	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 MAUREPA S WAY AT	E0700009 4. WINCHES	VEH1 (M/CYCLE)		2. Monday	44
2030	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	8. Central refuge -	2. Raining - no high	0. None	0. None		A2030 VELDER	E0600004 4.	VEH1 (CAR)		2. Monday	44
2149	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	5. Raining - high	0. None	0. None		B2149 DELL	E0700008 5. EAST	VEH1 (CAR)		1. Sunday	44
2030	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH2 (CAR)		2. Monday	44
2030	3. Dual carriagew	40	3. Staggered	2. Automatic traffic	6. Unclassifi		0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH 1 (CAR)		4. Wednesd	44
2150	6. Single carriagew	30	1. Normal roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		B2150 HAMBLED	E0700009 0.	VEH1 (P/CYCLE)		3. Tuesday	44
288	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A288 MILTON ROAD AT	E0600004 4. PORTSMO	VEH 1 (CAR) TRAVELLI		6. Friday	44
3	6. Single carriagew	30	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 LONDON	E0700009 0.	VEH 1 (P/CYCLE)		7. Saturday	44
2030	6. Single carriagew	30	6. Crossroad	2. Automatic traffic	3. A	288	0. None in 50m / not	5. Pedestria	1. Fine - no high	0. None	0. None		A3020 VELDER	E0600004 4.	VEH 1 (CAR)		5. Thursday	44
	6. Single carriagew ay	30	8. Private road/driv e	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		LOVEDEA N LANE AT JUNCTION	E0700008 5. EAST HAMPSHI	VEH 1 (CAR) TRAVELLI		2. Monday	44
288	6. Single carriagew	40	8. Private road/driv	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH1 (CAR)		4. Wednesd	44
2030	6. Single carriagew	40	0. Not at or within	. Not applicable	. Not applicable		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH1 (P/CYCLE)		3. Tuesday	44
2030	6. Single carriagew	40	1. Normal roundabo	4. Give way or	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH1 (P/CYCLE)		4. Wednesd	44
2030	6. Single carriagew ay	40	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3020 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH2 (P/CYCLE) TRAVELLI		7. Saturday	44
3	6. Single carriagew	30	3. Staggered	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A3 PORTSMO	E0700008 5. EAST	VEH1 (CAR)		2. Monday	44
288	6. Single carriagew	30	2. Mini roundabo	4. Give way or	6. Unclassifi		0. None in 50m / not	0. No crossing	2. Raining - no high	0. None	0. None		A288 MILTON	E0600004 4.	VEH1 (CAR)		7. Saturday	44
3	6. Single carriagew ay	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassifi ed		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		3. Tuesday	44
2030	6. Single carriagew ay	40	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD, 40	E0600004 4. PORTSMO	VEH1 (CAR) TRAVELLI		7. Saturday	44
2030	6. Single carriagew ay	30	1. Normal roundabo ut	2. Automatic traffic	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH2 (CAR) TRAVELLI		5. Thursday	44
2030	6. Single carriagew	30	1. Normal roundabo	4. Give way or	3. A	27	0. None in 50m / not	0. No crossing	1. Fine - no high	0. None	0. None		A2030 EASTERN	E0600004 4.	VEH1 (CAR)		3. Tuesday	44

	6. Single carriageway	40	3. Staggered or T Junction	4. Give way or Uncontrolled	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility within 50	1. Fine - no high winds	0. None	0. None		PORTSDOWN HILL ROAD AT JUNCTION	E0600004 4. PORTSMOUTH	VEH1 (CAR) TRAVELLING NW		6. Friday	44
3	6. Single carriageway	60	1. Normal roundabout	4. Give way or Uncontrol	4. B	2149	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3(M) OFF SLIP AT	E0700008 5. EAST HAMPSHI	VEH1 (VAN) TRAVELLI		6. Friday	44
2030	6. Single carriageway	30	3. Staggered or T Junction	4. Give way or Uncontrolled	3. A	288	0. None in 50m / not controlled	5. Pedestrian phase at traffic	1. Fine - no high winds	0. None	0. None		A2030 GOLDSMITH AVENUE	E0600004 4. PORTSMOUTH	VEH 2 (P/CYCLE) TRAVELLING SE		1. Sunday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		2. Monday	44
27	3. Dual carriageway	70	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A27 HAVANT BYPASS	E0600004 4. PORTSMO	VEH3 (CAR) TRAVELLI		5. Thursday	44
2150	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		B2150 HAMBLEDON ROAD	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		2. Monday	44
3	6. Single carriageway	40	1. Normal roundabout	4. Give way or Uncontrol	4. B	2150	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 MAUREPAS WAY AT	E0700009 4. WINCHES	VEH1 (CAR) TRAVELLI		5. Thursday	44
3	6. Single carriageway	30	3. Staggered or T	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 LONDON ROAD AT	E0700009 0. HAVANT	VEH1 (CAR) TRAVELLI		2. Monday	44
2030	6. Single carriageway	50	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	2. Raining - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH3 (CAR) TRAVELLI		3. Tuesday	44
2030	6. Single carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH2 (CAR) TRAVELLI		2. Monday	44
	6. Single carriageway	30	6. Crossroads	4. Give way or Uncontrol	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		HAMBLEDON ROAD AT	E0700009 4. WINCHES	VEH2 (CAR) TRAVELLI		4. Wednesday	44
2030	6. Single carriageway	40	1. Normal roundabout	2. Automatic traffic	3. A	27	0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH1 (CAR) TRAVELLI		3. Tuesday	44
3	3. Dual carriageway	70	0. Not at or within 20M	. Not applicable	. Not applicable		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A3 SOUTHBOUND AT	E0700008 5. EAST HAMPSHI	VEH1 (CAR) TRAVELLI		3. Tuesday	44
2030	3. Dual carriageway	40	3. Staggered or T	2. Automatic traffic	6. Unclassified		0. None in 50m / not controlled	0. No crossing facility	1. Fine - no high winds	0. None	0. None		A2030 EASTERN ROAD AT	E0600004 4. PORTSMO	VEH2 (CAR) TRAVELLI		2. Monday	44

REPORTEDAT	pf	vorc	ref_no	CF1	CONF1	CF2	CONF2	CF3	CONF3	CF4	CONF4	othercause	localsp	status	statusdate	errortypes	VCU1	vcuref1
1. Yes	1			802. Failed to look properly	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		C. Casualty	1
2. No - accident was reported	1			405. Failed to look properly	A. Very likely	602. Careless/ Reckless/In a hurry	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20180209		V. Vehicle	1
2. No - accident was reported	1			801. Crossed road masked	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		C. Casualty	1
1. Yes	1			103. Slippery road (due to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		C. Casualty	1
2. No - accident was reported	1			407. Too close to cyclist, horse or	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident was	1			802. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		C. Casualty	1
1. Yes	1			804. Wrong use of pedestria	A. Very likely	802. Failed to look properly	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		C. Casualty	1
1. Yes	1			808. Careless/ Reckless/I	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		C. Casualty	1
1. Yes	1			802. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		C. Casualty	1
1. Yes	1			802. Failed to look	B. Possible	806. Impaired by alcohol	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		C. Casualty	1
1. Yes	1			806. Impaired by alcohol	A. Very likely	810. Disability or illness	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		C. Casualty	1
2. No - accident was	1			405. Failed to look	A. Very likely	509. Distractio n in	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			505. Illness or disability	A. Very likely	304. Uncorrect ed	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			999. Other	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	PEDESTRIAN TRYING		33	20171215		C. Casualty	1
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			801. Crossed road	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		C. Casualty	1
1. Yes	1			802. Failed to look	B. Possible	805. Failed to judge	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		C. Casualty	1
1. Yes	1			802. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		C. Casualty	1
2. No - accident	1			301. Disobeyed automatic	B. Possible	405. Failed to look	B. Possible	802. Failed to look	B. Possible	. Not coded	. Not Coded			33	20181109		V. Vehicle	1
2. No - accident was	1			405. Failed to look	B. Possible	802. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190115		V. Vehicle	1
1. Yes	1			801. Crossed road	A. Very likely	806. Impaired by alcohol	A. Very likely	810. Disability or illness	A. Very likely	. Not coded	. Not Coded			33	20180112		C. Casualty	1
2. No - accident was	1			405. Failed to look	B. Possible	304. Disobeyed pedestria	B. Possible	802. Failed to look	B. Possible	. Not coded	. Not Coded			33	20180517		V. Vehicle	1
1. Yes	1			305. Illegal turn or	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	408. Sudden braking	A. Very likely	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			204. Defective steering	A. Very likely	603. Nervous/ Uncertain	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident was	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	509. Distractio n in	B. Possible	602. Careless/ Reckless/I	B. Possible			22	20151209		V. Vehicle	1
1. Yes	1			305. Illegal turn or	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look properly	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			605. Inexperie	B. Possible	410. Loss of control	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			306. Following too close	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	2
1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			203. Defective brakes	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
2. No - accident was	1			403. Poor turn or manoeuvre	B. Possible	308. Driver using	B. Possible	409. Swerved	B. Possible	409. Swerved	B. Possible			22	20151209		V. Vehicle	2
1. Yes	1			302.	A. Very	405.	A. Very	. Not	. Not	. Not	. Not			22	20151209		V. Vehicle	1

1. Yes	1			701. Stationary or parked	A. Very likely	405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	2
1. Yes	1			603. Nervous/	A. Very likely	406. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			605. Inexperie	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			401. Junction	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident	1			403. Poor turn or	A. Very likely	601. Aggressiv	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			309. Vehicle	A. Very likely	405. Failed to	A. Very likely	702. Vegetatio	A. Very likely	702. Vegetatio	A. Very likely			22	20151209		V. Vehicle	2
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			503. Fatigue	A. Very likely	307. Travelling	B. Possible	707. Rain, sleet,	B. Possible	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	3
2. No - accident	1			405. Failed to	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident	1			407. Too close to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			510. Cyclist	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			408. Sudden	A. Very likely	405. Failed to	A. Very likely	509. Distractio	B. Possible	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			501. Impaired	A. Very likely	405. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident	1			403. Poor turn or	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			109. Animal or	A. Very likely	410. Loss of control	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
2. No - accident	1			105. Defective	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			601. Aggressiv	B. Possible	602. Careless/	B. Possible	410. Loss of control	A. Very likely	403. Poor turn or	B. Possible		M	22	20151209		V. Vehicle	2
2. No - accident	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			402. Junction	B. Possible	406. Failed to	B. Possible	408. Sudden	B. Possible	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
2. No - accident	1			406. Failed to	B. Possible	405. Failed to	B. Possible	403. Poor turn or	B. Possible	706. Dazzling	B. Possible			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
2. No - accident was	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/I	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			308. Following too close	B. Possible	408. Sudden braking	A. Very likely	602. Careless/ Reckless/I	B. Possible	406. Failed to judge	B. Possible			22	20151209		V. Vehicle	2
2. No - accident was	1			406. Failed to judge	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident was	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			701. Stationary or parked	A. Very likely	404. Failed to signal/Mis	A. Very likely	405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely			22	20151209		V. Vehicle	1
1. Yes	1			602. Careless/ Reckless/I	B. Possible	403. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			509. Distractio n in	A. Very likely	602. Careless/ Reckless/I	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			403. Failed to	A. Very likely	410. Loss of control	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			32	20150427		V. Vehicle	2
1. Yes	1			601. Aggressiv e driving	B. Possible	602. Careless/ Reckless/I	A. Very likely	405. Failed to look	B. Possible	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			308. Following too close	B. Possible	405. Failed to look	A. Very likely	408. Sudden braking	B. Possible	. Not coded	. Not Coded			22	20151209		V. Vehicle	2
1. Yes	1			403. Poor turn or	B. Possible	403. Poor turn or	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			405. Failed to look properly	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	2
1. Yes	1			305. Illegal	A. Very likely	405. Failed to	B. Possible	403. Poor turn or	A. Very likely	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
2. No - accident was	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	2

1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
2. No - accident was	1			607. Inexperience with type of	B. Possible	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
2. No - accident was	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			410. Loss of control	B. Possible	605. Inexperienced or	A. Very likely	103. Slippery road (due	B. Possible	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			501. Impaired by alcohol	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			203. Defective brakes	A. Very likely	401. Junction overshoot	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
2. No - accident was	1			405. Failed to look	A. Very likely	603. Nervous/ Uncertain	B. Possible	310. Cyclist entering	A. Very likely	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			601. Aggressive driving	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			401. Junction overshoot	B. Possible	301. Disobeyed automatic	B. Possible	606. Inexperience of	B. Possible	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			602. Careless/ Inexperie	B. Possible	305. Emergenc	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	308. Driver using mobile	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
2. No - accident	1			308. Following	B. Possible	307. Travelling	B. Possible	408. Sudden	B. Possible	103. Slippery	B. Possible			22	20170112		V. Vehicle	2
2. No - accident was	1			401. Junction overshoot	B. Possible	405. Failed to look	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			501. Impaired by alcohol	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
1. Yes	1			403. Poor turn or manoeuvre	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			901. Stolen vehicle	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			307. Travelling too fast	B. Possible	410. Loss of control	B. Possible	505. Illness or disability,	A. Very likely	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
2. No - accident	1			406. Failed to	B. Possible	406. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
2. No - accident was	1			308. Following too close	B. Possible	408. Sudden braking	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			301. Disobeyed automatic	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			510. Distraction outside vehicle	A. Very likely	405. Failed to look properly	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			402. Junction restart	A. Very likely	401. Junction overshoot	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
2. No - accident	1			602. Careless/ Reckless/I	B. Possible	602. Careless/ Reckless/I	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
2. No - accident was	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/I	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
2. No - accident	1			308. Following	B. Possible	408. Sudden	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
2. No - accident was	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/I	A. Very likely	408. Sudden braking	B. Possible	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			410. Loss of control	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	2
1. Yes	1			405. Failed to	B. Possible	406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	1
1. Yes	1			501. Impaired by alcohol	A. Very likely	307. Travelling too fast	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20151209		V. Vehicle	1
2. No - accident	1			402. Junction	B. Possible	403. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			601. Aggressive driving	A. Very likely	602. Careless/ Reckless/I	A. Very likely	306. Exceeding speed	A. Very likely	501. Impaired by alcohol	B. Possible		M	22	20170112		V. Vehicle	1
1. Yes	1			508. Driver using	B. Possible	509. Distraction in	B. Possible	510. Distraction outside	B. Possible	405. Failed to look	A. Very likely		M	22	20151209		V. Vehicle	3
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20151209		V. Vehicle	2
1. Yes	1			505. Illness or disability, mental or physical	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
2. No - accident was	1			403. Poor turn or manoeuvre	B. Possible	405. Failed to look	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded			22	20170112		V. Vehicle	2

1. Yes	1			403. Poor turn or manoeuvr	B. Possible	405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	601. Aggressiv e driving	B. Possible		M	22	20170112		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			706. Dazzling sun	A. Very likely	706. Dazzling sun	A. Very likely	408. Sudden braking	A. Very likely	406. Failed to judge other	A. Very likely			22	20170112		V. Vehicle	1
2. No - accident	1			401. Junction	B. Possible	405. Failed to	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			701. Stationary or parked	A. Very likely	701. Stationary or parked	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			103. Slippery road (due	B. Possible	605. Inexperie nced or	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			802. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		U. Uninjured	0
2. No - accident was	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			706. Dazzling	A. Very likely	406. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			408. Sudden braking	A. Very likely	409. Swerved	A. Very likely	410. Loss of control	A. Very likely	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			403. Poor turn or manoeuvr	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	904. Vehicle	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
2. No - accident was reported	1			108. Road layout (eg bend, hill, narrow	A. Very likely	403. Poor turn or manoeuvr e	A. Very likely	406. Failed to judge other	A. Very likely	703. Road layout (eg bend, winding	A. Very likely			22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	701. Stationary or parked	A. Very likely	701. Stationary or parked	A. Very likely	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	2
2. No - accident	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	5
1. Yes	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/	A. Very likely	603. Nervous/ Uncertain	A. Very likely	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
2. No - accident	1			601. Aggressiv	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20170112		V. Vehicle	1
1. Yes	1			403. Poor turn or manoeuvr	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident	1			405. Failed to	B. Possible	307. Travelling	B. Possible	408. Sudden	B. Possible	408. Sudden	B. Possible			22	20171012		V. Vehicle	1
2. No - accident was	1			308. Following too close	B. Possible	408. Sudden braking	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident	1			308. Following	B. Possible	408. Sudden	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			403. Poor turn or	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident was reported 'over the	1			405. Failed to look properly	A. Very likely	406. Failed to judge other persons	B. Possible	406. Failed to judge other persons	B. Possible	703. Road layout (eg bend, winding road, hill	B. Possible			22	20171012		V. Vehicle	1
1. Yes	1			307. Travelling too fast for	A. Very likely	405. Failed to look properly	A. Very likely	501. Impaired by alcohol	B. Possible	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
2. No - accident	1			308. Following	B. Possible	408. Sudden	B. Possible	405. Failed to	B. Possible	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			308. Following too close	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			402. Junction restart	B. Possible	403. Poor turn or manoeuvr	B. Possible	405. Failed to look	A. Very likely	406. Failed to judge	B. Possible		M	22	20171012		V. Vehicle	1
2. No - accident	1			602. Careless/	A. Very likely	405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
2. No - accident was	1			901. Stolen vehicle	B. Possible	902. Vehicle in course of	B. Possible	308. Following too close	B. Possible	605. Inexperie nced or	B. Possible			22	20171012		V. Vehicle	2
1. Yes	1			306. Exceeding speed	A. Very likely	405. Failed to look	A. Very likely	602. Careless/ Reckless/	A. Very likely	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/	A. Very likely	605. Inexperie nced or	A. Very likely	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident	1			999. Other	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	CP1 999 - CAS 1 FELL OVER		22	20171012		C. Casualty	1
1. Yes	1			903. Emergenc	A. Very likely	602. Careless/	A. Very likely	406. Failed to	A. Very likely	903. Emergenc	B. Possible			22	20171012		V. Vehicle	1
2. No - accident	1			405. Failed to	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
2. No - accident was	1			405. Failed to look	B. Possible	602. Careless/ Reckless/	B. Possible	602. Careless/ Reckless/	B. Possible	407. Too close to cyclist	B. Possible			22	20171012		V. Vehicle	1
1. Yes	1			410. Loss of control	A. Very likely	408. Sudden braking	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	701. Stationary or parked	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1

1. Yes	1			302. Disobeyed	A. Very likely	402. Junction	A. Very likely	405. Failed to	A. Very likely	406. Failed to	B. Possible		M	22	20171012		V. Vehicle	1
1. Yes	1			308. Following too close	B. Possible	405. Failed to look	B. Possible	405. Failed to look	B. Possible	406. Failed to judge	B. Possible		M	22	20171012		V. Vehicle	1
1. Yes	1			403. Poor turn or manoeuvr	B. Possible	405. Failed to look	B. Possible	406. Failed to judge	B. Possible	407. Too close to cyclist	B. Possible		M	22	20171012		V. Vehicle	1
1. Yes	1			603. Nervous/ Uncertain	A. Very likely	307. Travelling too fast	B. Possible	408. Sudden braking	A. Very likely	410. Loss of control	A. Very likely			22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			501. Impaired	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident was	1			601. Aggressiv e driving	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20170112		V. Vehicle	1
1. Yes	1			307. Travelling	B. Possible	405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to	B. Possible	509. Distractio	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			406. Failed to	B. Possible	405. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
2. No - accident was	1			308. Following too close	B. Possible	408. Sudden braking	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			403. Poor turn or	B. Possible	405. Failed to	B. Possible	406. Failed to	B. Possible	701. Stationary	A. Very likely		M	22	20171012		V. Vehicle	1
1. Yes	1			501. Disobeyed	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			307. Travelling too fast	B. Possible	405. Failed to look	B. Possible	605. Inexperie nced or	B. Possible	408. Sudden braking	A. Very likely			22	20171012		V. Vehicle	1
2. No - accident	1			405. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	904. Vehicle	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			308. Following too close	B. Possible	706. Dazzling sun	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
2. No - accident	1			405. Failed to	B. Possible	405. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	408. Sudden braking	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
2. No - accident	1			405. Failed to	A. Very likely	408. Sudden	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			505. Illegal	B. Possible	405. Failed to look	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
2. No - accident was	1			405. Failed to	A. Very likely	406. Failed to judge	A. Very likely	308. Following too close	A. Very likely	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	509. Distractio n	B. Possible	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			410. Loss of control	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			406. Failed to	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	4
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	602. Careless/ Reckless/I	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	2
1. Yes	1			505. Illness or	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	2
2. No - accident	1			308. Following	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			501. Impaired	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	605. Inexperie	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			22	20171012		V. Vehicle	1
1. Yes	1			501. Impaired	A. Very likely	999. Other	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			602. Careless/ Reckless/I	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			406. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171215		V. Vehicle	1
1. Yes	1			403. Poor turn or manoeuvr	B. Possible	405. Failed to look	B. Possible	602. Careless/ Reckless/I	B. Possible	302. Disobeyed Give Way	B. Possible		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	406. Failed to judge	A. Very likely	999. Other	A. Very likely	. Not coded	. Not Coded	VISABILITY NOT		33	20171215		V. Vehicle	1
1. Yes	1			405. Failed to	B. Possible	406. Failed to judge	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			503. Fatigue	A. Very likely	501. Impaired	B. Possible	509. Distractio n	B. Possible	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			999. Other	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	FELL INTO ROAD	M	33	20171115		V. Vehicle	1
2. No - accident was	1			403. Poor turn or	B. Possible	601. Aggressiv	B. Possible	408. Sudden braking	B. Possible	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			403. Poor turn or	A. Very likely	405. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	408. Sudden braking	B. Possible	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	404. Failed to signal/Mis	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			602. Careless/	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	1
2. No - accident was	1			999. Other	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	HANDBRAKE NOT ON		33	20171115		V. Vehicle	2
1. Yes	1			403. Poor turn or	A. Very likely	103. Slippery	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	1

1. Yes	1			310. Cyclist	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	2
2. No - accident	1			405. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	3
1. Yes	1			308. Following	B. Possible	405. Failed to	A. Very likely	406. Failed to	A. Very likely	509. Distractio	B. Possible		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			501. Impaired by alcohol	A. Very likely	509. Distractio n in	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			308. Following	B. Possible	408. Sudden	B. Possible	405. Failed to	B. Possible	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			307. Travelling	B. Possible	405. Failed to	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded		M	33	20171215		V. Vehicle	1
2. No - accident	1			405. Failed to	B. Possible	406. Failed to	B. Possible	407. Too close to	B. Possible	. Not coded	. Not Coded			33	20171115		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
2. No - accident	1			308. Following	B. Possible	306. Exceeding	B. Possible	405. Failed to	B. Possible	408. Sudden	A. Very likely			33	20171215		V. Vehicle	2
1. Yes	1			410. Loss of control	A. Very likely	110. Slippery inspection	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171215		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171215		V. Vehicle	1
1. Yes	1			310. Cyclist	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171215		V. Vehicle	2
1. Yes	1			702. Vegetatio	A. Very likely	702. Vegetatio	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			204. Defective	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	22	20171012		V. Vehicle	1
1. Yes	1			103. Slippery	B. Possible	402. Junction	A. Very likely	403. Failed to look	A. Very likely	602. Careless/	B. Possible			22	20171012		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	2
1. Yes	1			403. Poor turn or	A. Very likely	405. Failed to look	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			203. Defective	B. Possible	301. Disobeyed	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			406.	A. Very	603.	B.	602.	B.	. Not	. Not			33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	607. Inexperie	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident was	1			602. Careless/ Reckless/I	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
2. No - accident	1			405. Failed to	B. Possible	404. Failed to	B. Possible	406. Failed to	B. Possible	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
2. No - accident	1			403. Poor turn or	B. Possible	405. Failed to	B. Possible	410. Loss of control	B. Possible	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			304. Disobeyed	B. Possible	310. Cyclist	B. Possible	405. Failed to	B. Possible	405. Failed to	B. Possible			33	20171115		V. Vehicle	2
1. Yes	1			301. Disobeyed	A. Very likely	605. Inexperie	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			405. Failed to	B. Possible	405. Failed to	A. Very likely	406. Failed to	A. Very likely	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	602. Careless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			301. Disobeyed	A. Very likely	509. Distractio	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	2
1. Yes	1			506. Not displaying	A. Very likely	307. Rider wearing	A. Very likely	707. Rain, sleet,	A. Very likely	. Not coded	. Not Coded			33	20171115		V. Vehicle	1
2. No - accident	1			404. Failed to	A. Very likely	405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	2
1. Yes	1			405. Failed to	B. Possible	999. Other	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	FLASHED HEADLIGH	M	33	20171115		V. Vehicle	1
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	B. Possible	406. Failed to	B. Possible	706. Dazzling	B. Possible	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			405. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
1. Yes	1			605.	A. Very	. Not	. Not	. Not	. Not	. Not	. Not		M	33	20171115		V. Vehicle	1
2. No - accident	1			302. Disobeyed	A. Very likely	405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171215		V. Vehicle	1
1. Yes	1			403. Poor turn or	A. Very likely	405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20171115		V. Vehicle	1
2. No - accident	1			308. Following	B. Possible	408. Sudden	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171115		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	406. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			33	20180619		V. Vehicle	2
1. Yes	1			405. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	2
1. Yes	1			405. Failed to	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	1
1. Yes	1			405. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	1
2. No - accident	1			405. Failed to	A. Very likely	406. Failed to	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			33	20180712		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	701. Stationary	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180809		V. Vehicle	1
1. Yes	1			407. Too close to	A. Very likely	408. Sudden	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	1
2. No - accident	1			602. Careless/	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20180712		V. Vehicle	2
1. Yes	1			301. Disobeyed	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20180913		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180913		V. Vehicle	1
1. Yes	1			403. Poor	A. Very	. Not	. Not	. Not	. Not	. Not	. Not		M	33	20180809		V. Vehicle	1
2. No - accident	1			403. Poor turn or	B. Possible	405. Failed to	B. Possible	308. Following	B. Possible	408. Sudden	B. Possible			33	20180809		V. Vehicle	2
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180913		V. Vehicle	1

1. Yes	1			405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180913		V. Vehicle	1
1. Yes	1			406. Failed to look	A. Very likely	308. Following	A. Very likely	408. Sudden	B. Possible	. Not coded	. Not Coded			33	20180913		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180913		V. Vehicle	1
1. Yes	1			401. Junction	A. Very likely	405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	501. Impaired	A. Very likely		M	33	20181011		V. Vehicle	1
1. Yes	1			408. Sudden	B. Possible	308. Following	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20181011		V. Vehicle	2
1. Yes	1			406. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180913		V. Vehicle	2
1. Yes	1			999. Other	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	CHILD WITH		33	20180913		C. Casualty	1
1. Yes	1			403. Poor turn or	A. Very likely	404. Failed to	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded		M	33	20181109		V. Vehicle	1
1. Yes	1			302. Disobeyed	B. Possible	307. Travelling	B. Possible	401. Junction	B. Possible	405. Failed to look	B. Possible		M	33	20181109		V. Vehicle	2
1. Yes	1			403. Poor turn or	B. Possible	405. Failed to look	B. Possible	405. Failed to look	B. Possible	405. Failed to look	B. Possible		M	33	20181109		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20181218		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20181218		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20181109		V. Vehicle	1
1. Yes	1			602. Careless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20181109		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20181218		V. Vehicle	3
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20181218		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	703. Road layout (eg	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20181218		V. Vehicle	2
1. Yes	1			503. Fatigue	A. Very likely	502. Impaired	B. Possible	409. Swerved	A. Very likely	. Not coded	. Not Coded		M	33	20180112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180112		V. Vehicle	3
1. Yes	1			410. Loss of control	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20171215		V. Vehicle	1
1. Yes	1			308. Following	B. Possible	408. Sudden	B. Possible	410. Loss of control	B. Possible	505. Illness or	A. Very likely			33	20180112		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20180112		V. Vehicle	2
1. Yes	1			403. Poor turn or	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180112		V. Vehicle	1
2. No - accident	1			904. Vehicle	A. Very likely	403. Poor turn or	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20180209		V. Vehicle	2
2. No - accident was	1			304. Disobeyed	A. Very likely	505. Illness or disability	B. Possible	509. Distractio n in	B. Possible	. Not coded	. Not Coded			33	20180209		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180209		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180209		V. Vehicle	1
1. Yes	1			304. Disobeyed pedestria n crossing	A. Very likely	706. Dazzling sun	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	32	20180426		V. Vehicle	1
1. Yes	1			410. Loss of control	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180314		V. Vehicle	1
1. Yes	1			501. Disobeyed automatic	A. Very likely	602. Careless/ Reckless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180209		V. Vehicle	1
1. Yes	1			406. Failed to look	A. Very likely	408. Sudden	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180314		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180314		V. Vehicle	1
2. No - accident	1			403. Poor turn or	B. Possible	606. Unexperie	B. Possible	407. Too close to	B. Possible	. Not coded	. Not Coded			33	20180314		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	408. Sudden	B. Possible	602. Careless/	B. Possible		M	33	20180314		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	103. Driver	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180314		V. Vehicle	1
2. No - accident was	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	602. Careless/ Reckless/I	A. Very likely	. Not coded	. Not Coded			33	20180517		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180517		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180314		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	510. Distractio	A. Very likely	. Not coded	. Not Coded			33	20180517		V. Vehicle	2
1. Yes	1			301. Disobeyed	B. Possible	301. Disobeyed	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180517		V. Vehicle	1
2. No - accident	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	602. Careless/	A. Very likely	. Not coded	. Not Coded			33	20180517		V. Vehicle	2
1. Yes	1			403. Poor turn or	B. Possible	405. Failed to look	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180517		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	410. Loss of control	A. Very likely	502. Impaired	B. Possible	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	1
1. Yes	1			406. Failed to judge	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180619		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20180517		V. Vehicle	1
2. No - accident	1			405. Failed to look	B. Possible	406. Failed to judge	B. Possible	602. Careless/	B. Possible	. Not coded	. Not Coded			33	20180619		V. Vehicle	2
1. Yes	1			410. Loss of control	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190115		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190115		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190115		V. Vehicle	2
1. Yes	1			403. Poor turn or	A. Very likely	405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	. Not coded	. Not Coded		M	33	20190115		V. Vehicle	1
2. No - accident	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190207		V. Vehicle	2
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190207		V. Vehicle	1
1. Yes	1			406. Failed to judge	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190115		V. Vehicle	1
1. Yes	1			105. Defective traffic	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190207		V. Vehicle	2
1. Yes	1			406. Failed to	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190207		V. Vehicle	1

1. Yes	1			405. Failed to look properly	A. Very likely	409. Swerved	A. Very likely	503. Illness or disability, mental or	B. Possible	. Not coded	. Not Coded		M	33	20190207		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190207		V. Vehicle	1
2. No - accident was reported	1			405. Failed to look properly	B. Possible	406. Failed to judge other	B. Possible	403. Poor turn or manoeuvre	B. Possible	406. Failed to judge other	B. Possible			33	20190207		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190228		V. Vehicle	1
2. No - accident was	1			406. Failed to judge	B. Possible	602. Careless/ Reckless/I	B. Possible	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190228		V. Vehicle	3
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	B. Possible	602. Careless/ Reckless/I	B. Possible	605. Inexperienced or	B. Possible			33	20190207		V. Vehicle	1
1. Yes	1			405. Failed to look	B. Possible	405. Failed to look	B. Possible	406. Failed to judge	B. Possible	406. Failed to judge	B. Possible			33	20190228		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190321		V. Vehicle	1
1. Yes	1			510. Distractio	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190321		V. Vehicle	3
1. Yes	1			301. Disobeyed	A. Very likely	510. Distractio	A. Very likely	706. Dazzling	A. Very likely	. Not coded	. Not Coded		M	33	20190228		V. Vehicle	1
1. Yes	1			405. Failed to look	A. Very likely	406. Failed to judge	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded		M	33	20190228		V. Vehicle	2
2. No - accident	1			. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190321		. Not Coded	
1. Yes	1			406. Failed to judge	A. Very likely	405. Failed to look	A. Very likely	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190321		V. Vehicle	1
2. No - accident was	1			. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded	. Not coded	. Not Coded			33	20190321		. Not Coded	

VCU2	vcuref2	VCU3	vcuref3	VCU4	vcuref4	VCU5	vcuref5	CONF5	VCU6	vcuref6	CONF6	CF5	CF6	lastedit	parish	oic_name	oic_num	station
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160205		FORRESTER	25681	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171212		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141016		LANSLEY	2926	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141124		GAWTHORPE	3494	PS
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		CAT	8172	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151022		WOODFIELD	24088	FF
C. Casualty	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141223		SMITH	21087	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150409		THOMAS	24345	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150520		VOLLER	5551	JH
C. Casualty	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150721		OLIVER	3663	JH
C. Casualty	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160817		BATTEN	2658	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161207		HESLIN	27023	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160204		BODENHAM	1489	FP
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170616		GREENWOOD	27104	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170712		BRIDGEMAN-	2351	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170929		SHEPPARD	21940	EM
C. Casualty	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170124		BATTEN	2658	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170309		PIPER	27033	PN
V. Vehicle	1	C. Casualty	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180809		CAT	912043	OY
C. Casualty	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181001		CAT	912043	OY
C. Casualty	1	C. Casualty	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171113		BAKER	3803	JH
V. Vehicle	1	C. Casualty	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180321		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140716		VOLLER	5551	PF
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140716		ADCOCK	3350	PF
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140704		SARGINSON	2606	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140704		VOLLER	5551	PF
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140731		DICKETY	27022	PN
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140826		DAW	23378	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140724		STEVENSON	31	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140807		RADCLIFFE	24208	OP
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140904		DALE	1058	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140923		ROGERS	24120	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140827		BRIDGEMAN	2351	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140902		O'CONNOR	2240	EM
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141110		DAVISON	1308	PF
V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141110		CAT	912043	OY
V. Vehicle	1	. Not		. Not		. Not		. Not	. Not		. Not	. Not	. Not	20140924		GIBBON	1017	JW

V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141124		GOODCHILD	22528	PS
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140926		SHAW	428	PF
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141001		KILGALLON	24059	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141007		SMITH	23515	JW
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141017		ROGERS	24120	JW
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141023		FRUIN	1712	EM
V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141010		BAKER	21271	WC
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141017		ADCOCK	3350	PF
V. Vehicle	3	V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141112		ROBERTSON	22977	JW
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150108		SACREE	21719	PS
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141104		ADCOCK	3350	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141105		COX	27036	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141127		ADAMS	95957	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141202		HAMPSON	13828	PC
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141126		OATLEY	24225	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		VOLLER	5551	PF
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		LYNCH	24097	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		LYNCH	24097	PN
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		INNESS	22813	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		HOUGHTON	876	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		HENDRY	25164	PN
V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	V. Vehicle	2	B. Possible	. Not Coded		. Not Coded	403. Failed to	. Not coded	20140430		SHEPPARD	21940	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		O'CONNOR	2240	PF
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		SKINGSLEY	3197	PF
V. Vehicle	1	V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	B. Possible	V. Vehicle	2	B. Possible	405. Failed to	406. Failed to	20140430		BAVIN	3279	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		KILGALLON	24059	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		HINCKESMAN	4	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		CAT	912043	OY
V. Vehicle	1	V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		GOODING	25366	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		CASH	13052	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		SMITH	24268	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		BLAKE	3790	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		DAVISON	1308	PF
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	B. Possible	V. Vehicle	2	B. Possible	302. Disobeyed Give Way	307. Travelling too fast	20140519		SHARLAND	27025	PS
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140516		STEVENSON	31	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140430		CAT	912043	30
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140506		OAKLEY	25183	PN
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150427		GLASBY	22048	CS
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140704		SARGINSON	2606	PF
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140530		HURST	21892	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140530		HEATH	23848	OR
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140624		ROBERTSON	23701	EM
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140703		GILES	3241	PF
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140618		DAVISON	1308	PF
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20140624		BURDEN	20225	JW

. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150810		STEVENSON	31	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150709		WELLS	25727	PS	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150630		ROBERTSON	23701	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150625		DALE	1058	JH	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150716		SHEPPARD	21940	EM	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150805		WELLS	25727	PS	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150703		GRAY	23676	JW	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150714		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150901		ROBERTSON	23701	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150904		BRIDGEMAN-	2351	JH	
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150820		SHARLAND	27025	PS	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150824		SANDERSON	1774	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151001		HOUGHTON	876	JH	
V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151006		CAT	912043	OY	
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170203		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151001		BODENHAM	1489	EM	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151029		ROBERTSON	23701	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151015		ADCOCK	3350	EM	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151019		CHAPMAN	1847	JH	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151117		HOUGHTON	876	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151123		COX	27036	JH	
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151103		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151113		FRUIN	1712	JH	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151214		DAW	23378	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151230		ROBERTSON	23701	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151204		O'CONNOR	2240	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151214		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160111		GREEN	23754	EM	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160106		CAT	912043	OY	
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20151218		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160111		DALE	1058	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141223		FRUIN	1712	PF	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160614		DALE	1058	PF	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20141219		POTTER	22325	OC	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150126		CAT	912043	OY	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	B. Possible	V. Vehicle	1	B. Possible	502. Impaired by drugs	509. Distractio n in	20150126		ROSSER	24012	JH	
V. Vehicle	3	V. Vehicle	3	V. Vehicle	3	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150114		DICKETY	27022		30
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150904		FRUIN	1712	EM	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150212		BIANCHINI	25515	JW	
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150224		CAT	912043	OY	

V. Vehicle	1	V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150204		HOUGHTON	876	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150205		TOMPKINS	2762	EM
V. Vehicle	2	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150312		SEAL	21213	JW
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150317		SMITH	21087	JW
V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150226		SIMPSON	21990	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150303		BURKE	24064	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150420		TOMPKINS	2762	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150428		ROBERTSON	23701	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150318		MOORE	95849	PS
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150505		BROUGHTON	24251	PS
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150507		LANSLEY	2926	EM
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150423		AINSLEY	23815	PS
V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	A. Very likely	. Not Coded		. Not Coded	405. Failed to look properly	. Not coded	20150501		PALMER	3872	FF
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150507		ADCOCK	3350	EM
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150512		CAT	912043	OY
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160218		MOORE	21516	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150602		COX	24153	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150810		BODENHAM	1489	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20150528		LAYCOCK	3609	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160713		PAGE	21645	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160725		OLIVER	3663	JH
V. Vehicle	1	V. Vehicle	2	V. Vehicle	3	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160711		CAT	912043	OY
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160815		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160805		MCEWEN	24454	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160729		GILES	3241	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160803		ADCOCK	3350	EM
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160912		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160905		SARJEANT	549	JH
V. Vehicle	1	V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	B. Possible	. Not Coded		. Not Coded	703. Road layout (eg bend, winding road, hill	. Not coded	20160825		DICKETY	27022	PN
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160831		JEVONS	24239	PN
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160921		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160923		VOLLER	5551	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160907		BATTEN	2658	JH
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	2	B. Possible	V. Vehicle	2	B. Possible	405. Failed to look	406. Failed to judge	20160919		STUART	3073	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160928		CAT	912043	OY
V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	B. Possible	V. Vehicle	2	B. Possible	602. Careless/ Reckless/I	405. Failed to look	20160930		COLLIS	25299	JW
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161020		HECTOR	2859	JH
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161020		DAW	23378	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161101		SHEPPARD	21940	EM
V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161115		WITHERS	3886	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160930		CAT	912043	OY
V. Vehicle	1	V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	B. Possible	V. Vehicle	2	B. Possible	406. Failed to judge	406. Failed to judge	20161017		CAT	912043	OY
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170120		SHEPPARD	21940	EM
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161207		DIXON	25194	PN

V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	B. Possible	. Not Coded		. Not Coded	602. Careless/	. Not coded	20161118		LEECH	24078	EE	
V. Vehicle	1	V. Vehicle	2	V. Vehicle	1	V. Vehicle	1	A. Very likely	V. Vehicle	1	A. Very likely	410. Loss of control	605. Inexperie nced or	20161123		SINENSE	27193	PN	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	B. Possible	. Not Coded		. Not Coded	602. Careless/ Reckless/	. Not coded	20161222		STUART	3073	JH	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170113		DEAN	25210	PN	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20161221		PAGE	21645	JW	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160126		BRIDGEM AN	2351	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160113		TRAN	27136	PS	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160125		SARJEANT	549	JH	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160205		DAW	23378		30
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160211		SKINGSLE Y	3197	EM	
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160205		CAT	912043	OY	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	2	B. Possible	. Not Coded		. Not Coded	406. Failed to	. Not coded	20160223		STUART	3073	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160225		GILES	3241	JH	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160211		FORRESTE R	25681	PN	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160210		O'CONNO R	2240	JH	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160223		MEACHA M	20066	PS	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160321		SARGINSO N	2606	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160301		FLEET	22137	PN	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160310		BRIDGEM AN-	2351	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160421		WATSON	24019	PN	
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160413		CAT	912043	OY	
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160321		SWAN	21522	JW	
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160330		HECTOR	2859	BW	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160708		HOUGHT ON	876	JH	
V. Vehicle	4	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160525		GILES	3241	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160414		CHAMBER S	1235	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160505		COLE	24179	PN	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160606		BOTTEN	24195	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160606		ROBERTS ON	23701	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160614		SEWELL	23085	PN	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160525		STEVENSO N	31	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160614		ORRISS	25175	JW	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160713		NOL	24427	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160607		LEWIS	3057	EM	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20160613		HUNT	1183	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170606		SKINGSLE Y	3197	JH	
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170630		DAY	9497	JH	
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170616		LOYNES	27518	JH	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170707		SKINGSLE Y	3197	JH	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170710		KILLGALL ON	24059	JH	
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170706		CAT	912043	OY	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170630		BRIDGEM AN	2351	PC	
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170719		CAT	912043	OY	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170721		SKINGSLE Y	3197		30
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170717		ROGERS	24120	JH	
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170927		CAT	912043	OY	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170816		LEWIS	3057	EM	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171115		KILGALLO N	24059	JH	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170804		ALLEN	21516	JW	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170825		ROLFE	27358	JW	
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170822		JOHNSON	21906	JH	

V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170804		SKINGSLEY	3197	EM
V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170816		CAT	912043	OY
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	B. Possible	V. Vehicle	1	A. Very likely	510. Distractio	605. Inexperie	20170901		STUART	3073	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171003		TOMPKINS	2762	EM
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170822		KILGALLON	24059	JH
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170922		CAT	912043	OY
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171021		SARGINSON	2606	JH
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171003		ATTWOOD	27468	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170927		CAT	912043	OY
V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171101		CAT	912043	OY
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171110		JOHNSON	21906	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171027		GILES	3241	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171030		GREENWOOD	27104	PN
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170123		BRIDGEMAN-	2351	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170119		DALE	1058	JH
V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170118		SIMPSON	3154	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170208		LEWIS	3057	JH
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170206		BATTEN	2658	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170130		BOTTON	24195	JH
V. Vehicle	1	V. Vehicle	2	. Not		. Not		. Not	. Not		. Not	. Not	. Not	20170206		DAW	23378	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170221		DAVISON	1308	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170224		DAW	23378	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170214		FRUIN	1712	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170203		CAT	912043	OY
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170224		CAT	912043	OY
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170413		CAT	912043	OY
V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170224		MCDERMOTT	27327	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170320		BOTTEN	24195	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170314		CAT	912043	OY
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170321		GILES	3240	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170316		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170405		SARJEANT	549	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170412		ROLFE	27360	GR
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170517		OTT	27229	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170407		BURDEN	23894	JW
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170503		SARGINSON	2606	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170508		BODENHAM	1489	EM
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170428		MCEWAN	27328	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170428		DALE	1058	JH
. Not		. Not		. Not		. Not		. Not	. Not		. Not	. Not	. Not	20170524		DAW	23378	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170727		HALL	840	JW
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170515		BRIDGEMAN	2351	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20170601		CAT	312043	OY
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180427		CAT	912043	OY
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180409		ROBERTSON	23701	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180427		OLIVER	3663	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180423		DAVISON	1308	JH
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180518		CAT	912043	OY
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180615		SHEPPARD	21940	EM
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180502		BATTEN	2658	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180516		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180627		DAW	23378	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180627		DAW	23378	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180612		BATTEN	2658	JH
V. Vehicle	2	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180712		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180702		DAVISON	1308	JH

. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180821		OLIVER	3663	JH
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180629		KING	27665	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180629		SARJEANT	549	JH
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	A. Very likely	. Not Coded		. Not Coded	602. Careless/	. Not coded	20180727		NORMAN	1908	EM
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180806		OLIVER	3663	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180705		POWLING	1046	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180709		KERSHAW	25503	PN
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180809		WILBY	27635	PN
V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180815		OWEN	27080	EM
V. Vehicle	1	V. Vehicle	2	V. Vehicle	3	V. Vehicle	1	B. Possible	. Not Coded		. Not Coded	406. Failed to	. Not coded	20180808		WILBY	27365	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180903		DAVISON	1308	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181120		CROWE	20345	GR
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180828		NOL	24427	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180904		CHALCRAFT	27278	JW
V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181102		HARPER	21480	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180910		LEWIS	3057	EM
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180906		GLASBY	22048	PC
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171222		ROBERTSON	23701	JH
V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171130		GILES	3241	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171028		LOYNES	27518	JH
V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	V. Vehicle	2	B. Possible	V. Vehicle	2	A. Very likely	603. Nervous/	406. Failed to	20171202		RICHARDS	27304	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171122		DIXON	25194	PN
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171202		BODENHAM	1489	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171227		CAT	8172	OY
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180110		COZZOLINO	27285	PN
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171218		OLIVER	3663	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171216		DAVISON	1308	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180426		DAVISON	1308	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180129		BRIDGEMAN-	2351	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20171222		DAVISON	1308	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180111		GREEN	23754	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180131		LEWIS	3057	EM
V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180117		CAT	912043	OY
V. Vehicle	1	V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180202		STUART	3073	JH
V. Vehicle	1	. Not		. Not		. Not		. Not	. Not		. Not	. Not	. Not	20180202		BATTEN	2658	JH
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180221		CAT	8172	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180305		GREEN	23754	EM
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180208		BATTEN	2658	JH
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180222		BIGGS	24090	PN
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180301		SARJEANT	549	JH
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180309		CAT	912043	OY
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180308		DAW	23378	JH
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180601		BRIDGEMAN	2351	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180420		DAW	23378	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180404		SARJEANT	549	JH
V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20180417		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181004		PHILLIPS	20890	EM
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181023		TOMPKINS	2762	EM
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181001		POWLING	1046	JH
V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181001		DAVISON	1308	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181022		DERHAM	12096	PC
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20190129		OLIVER	3663	JH
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181015		KIRRANE	27312	PN
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181016		MARTIN	27147	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181101		TESTER	3277	JH

V. Vehicle	2	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181102		HOWARD	27645	GR
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181030		LEWIS	3057	EM
V. Vehicle	1	V. Vehicle	2	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181101		CAT	912043	OY
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181121		HARRISON	27301	GR
V. Vehicle	3	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181203		COOKE	6590	PC
V. Vehicle	1	V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181105		GARD	27200	JW
V. Vehicle	2	V. Vehicle	1	V. Vehicle	2	. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181109		HARRISON	27638	JW
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181214		KILGALLON	24059	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20190102		WHITE	27385	
V. Vehicle	1	V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181210		FRUIN	1712	JH
V. Vehicle	2	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20181211		FRUIN	1712	JH
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20190108		CAT	912131	OY
V. Vehicle	1	. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20190110		DAVISON	1308	
. Not Coded		. Not Coded		. Not Coded		. Not Coded		. Not Coded	. Not Coded		. Not Coded	. Not coded	. Not coded	20190104		CAT	912131	OY

crashid	acc_desc3	acc_desc4	location2	Time_Range
				0800-0859
				1700-1759
				1600-1659
				1800-1859
				1100-1159
				0800-0859
				1300-1359
				1400-1459
				1900-1959
				1600-1659
				2300-2359
				0800-0859
				1100-1159
				0900-0959
				1500-1559
				1900-1959
				1100-1159
				2000-2059
				0800-0859
				1700-1759
				1500-1559
				1500-1559
				1600-1659
				1500-1559
				1100-1159
				1600-1659
				1300-1359
				1400-1459
				1000-1059
				1300-1359
				1200-1259
				1200-1259
				0600-0659
				0800-0859
				1700-1759
				1500-1559
				0800-

				1500-1559
				1600-1659
				1600-1659
				1900-1959
				0800-0859
				1500-1559
				1600-1659
				2000-2059
				1000-1059
				1700-1759
				1000-1059
				2100-2159
				0700-0759
				0800-0859
				1500-1559
				1600-1659
				2000-2059
				1800-1859
				1700-1759
				0500-0559
				1000-1059
				1800-1859
				0900-0959
				1800-1859
				1400-1459
				1100-1159
				1500-1559
				1800-1859
				1100-1159
				1200-1259
				1800-1859
				0600-0659
				0700-0759
				1300-1359
				1600-1659
				1900-1959
				1600-1659
				1300-1359
				1800-1859
				0800-0859
				1300-1359
				1600-1659
				1000-1059
				1000-1059
				1700-1759
				0800-0859

				1900-1959
				1100-1159
				1600-1659
				1600-1659
				1000-1059
				1600-1659
				2200-2259
				0800-0859
				1500-1559
				1600-1659
				1100-1159
				2000-2059
				1500-1559
				1300-1359
				0700-0759
				2300-2359
				1800-1859
				1000-1059
				2100-2159
				2200-2259
				1500-1559
				0700-0759
				0700-0759
				0800-0859
				1800-1859
				1600-1659
				0700-0759
				1100-1159
				1600-1659
				0800-0859
				0900-0959
				1500-1559
				1600-1659
				2200-2259
				1800-1859
				2300-2359
				1700-1759
				1400-1459
				1100-1159
				0800-0859

				1700-1759
				0700-0759
				0700-0759
				1600-1659
				1600-1659
				2300-2359
				2000-2059
				1500-1559
				0800-0859
				1300-1359
				2000-2059
				1000-1059
				1100-1159
				0700-0759
				1200-1259
				1700-1759
				1800-1859
				0700-0759
				1700-1759
				1000-1059
				1500-1559
				0900-0959
				0600-0659
				1000-1059
				0000-0059
				1700-1759
				1900-1959
				1900-1959
				2100-2159
				0700-0759
				0600-0659
				1700-1759
				1200-1259
				1600-1659
				1000-1059
				1200-1259
				1800-1859
				1300-1359
				0600-0659
				0900-0959
				1300-1359
				1700-1759
				0800-0859
				1100-1159

				0600-0659
				1300-1359
				1600-1659
				2100-2159
				0900-0959
				0000-0059
				1100-1159
				1100-1159
				0000-0059
				1700-1759
				1900-1959
				0800-0859
				1700-1759
				1600-1659
				1700-1759
				1600-1659
				0800-0859
				0700-0759
				1100-1159
				1400-1459
				0900-0959
				0800-0859
				0800-0859
				1400-1459
				0800-0859
				1300-1359
				2300-2359
				1700-1759
				1700-1759
				2300-2359
				1600-1659
				1800-1859
				0200-0259
				1500-1559
				1700-1759
				1600-1659
				2200-2259
				1800-1859
				0800-0859
				0900-0959
				0700-0759
				1700-1759
				0700-0759
				1700-1759
				0800-0859
				1900-1959
				1300-1359
				1300-1359
				1800-1859
				1700-1759
				1500-1559

				2100-2159
				1300-1359
				1600-1659
				1800-1859
				1100-1159
				1700-1759
				0700-0759
				1600-1659
				1300-1359
				0800-0859
				2100-2159
				0600-0659
				1600-1659
				0500-0559
				1500-1559
				1500-1559
				0700-0759
				0900-0959
				1200-1259
				1600-
				0800-0859
				0800-0859
				1200-1259
				0700-0759
				0900-0959
				1900-1959
				0700-0759
				2300-2359
				0900-0959
				1400-1459
				0400-0459
				1200-1259
				2100-2159
				1900-1959
				1200-1259
				2000-2059
				1700-1759
				1800-1859
				1900-1959
				1300-
				1900-1959
				1200-1259
				1200-1259
				1900-1959
				1900-1959
				1800-1859
				1400-1459
				1900-1959
				1800-1859
				0900-0959
				1600-1659
				0800-0859
				1400-1459
				2000-
				1300-1359
				0800-0859

				1400-1459
				1700-1759
				0800-0859
				1900-1959
				1300-1359
				1400-1459
				0800-0859
				0800-0859
				0700-0759
				0800-0859
				1100-1159
				1400-1459
				2300-2359
				1500-1559
				1100-1159
				1200-1259
				1500-1559
				0700-0759
				1600-1659
				1900-1959
				1200-1259
				1300-1359
				0800-0859
				1800-1859
				1700-1759
				1100-1159
				0800-0859
				1500-1559
				0500-0559
				2000-2059
				1000-1059
				1300-1359
				1000-1059
				1400-1459
				1300-
				1700-1759
				0700-0759
				1800-1859
				1600-1659
				0800-0859
				1700-1759
				1200-1259
				2000-2059
				2000-2059
				1900-1959
				1400-1459
				1400-1459
				0900-0959
				0900-0959
				2200-2259
				1600-1659
				0600-0659
				1200-1259
				1400-1459
				1700-1759

				1200-1259
				0800-0859
				2000-2059
				0800-0859
				1600-1659
				2200-2259
				1600-1659
				1500-1559
				1700-1759
				1100-1159
				1700-1759
				1800-1859
				1900-1959
				0800-0859

Appendix F – OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.2 Framework Construction Traffic Management Plan

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Document Ref : 6.3.22.2

PINS Ref. : EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.2 – Framework Construction Traffic Management Plan

PINS REF.: EN020022

DOCUMENT: 6.3.22.2

DATE: 14 NOVEMBER 2019

WSP

WSP House

70 Chancery Lane

London

WC2A 1AF

+44 20 7314 5000

www.wsp.com

DOCUMENT

Document	6.3.22.2 Framework Construction Traffic Management Plan
Revision	001
Document Owner	WSP UK Limited
Prepared By	M. Battle and S. Grant
Date	31 October 2019
Approved By	C. Williams
Date	14 November 2019

CONTENTS

TABLES

PLATES

APPENDICES

1. INTRODUCTION

1.1. OVERVIEW

1.1.1.1. This document sets out the proposed construction traffic arrangements and mitigation measures associated with the Onshore Components of the AQUIND Interconnector project. The terminology used in this document is consistent with that used in the Glossary (document reference 1.7) submitted alongside this Construction Traffic Management Plan ('CTMP'). For ease of reference, the Glossary terms relevant to this document are repeated below.

Table 1 - CTMP Glossary

Term	Definition
Abnormal Indivisible Load	An Abnormal Indivisible Load ('AIL') is a vehicle that has any of the following: a mass of more than 44,000 kilograms ('kg'), an axle load of more than 10,000 kg for a single non-driving axle and 11,500 kg for a single driving axle, a width of more than 2.9 m ('m'), a rigid length of more than 18.65 m.
HVAC Cable	The Cable designed to transfer power using High Voltage Alternating Current (HVAC) at a nominal voltage of 400 kV, which will connect Lovedean Substation to the Converter Station.
HVAC Cable Route	The final refined route for the HVAC Cable that lies within the HVAC Cable Corridor.
HVAC Cable Corridor	The area within which the HVAC Cable Route and all associated Temporary Works will be located.
Access Road	The permanent road that will be constructed to facilitate vehicular access to the Converter Station from the existing highway network.
AQUIND Interconnector	The Project.
Cable Joint	The components required to connect together two sections of Cable.
Cables	Insulated metallic electrical conductors used for the transfer of power.

Construction Environmental Management Plan (CEMP)	Document setting out methods to avoid, minimise and mitigate Impact on the environment and surrounding area and the protocols to be followed in implementing these measures in accordance with environmental commitments during the Construction Stage.
Converter Station	The fenced compound, adjacent to Lovedean Substation, comprising the necessary equipment to convert AC to Direct Current ('DC') and vice versa.
Converter Station Area	This is the area of land identified to accommodate: • the Converter Station and associated equipment; • the connection between the AC Cables and the National Electricity Transmission System ('NETS') at Lovedean Substation; • the AC Cable Corridor to accommodate the AC Cables and Fibre Optic Cable ('FOC') between the Converter Station and Lovedean Substation; • the High Voltage Direct Current ('HVDC') Cables and FOC corridor from the Converter Station southwards; • a Works Compound and Laydown Area; Access Road and associated haul roads; • surface water drainage and associated attenuation ponds; • landscape and ecology measures; • utilities such as potable water, electricity and telecom; • the compound comprising the Telecommunications Building(s) and associated equipment.
Development Consent Order (DCO)	A Development Consent Order ('DCO') is a statutory instrument made by the Secretary of State ('SoS')

	pursuant to the Planning Act 2008 (as amended) ('PA 2008')
Direct Current (DC)	A flow of continuous electrical current which flows in one direction.
Ducted Installation	An installation method where ducts are installed in the ground and cables are subsequently pulled into them.
Fibre Optic Cable	A telecommunications cable made from thin strands of glass fibre, which uses pulses of light to transfer data. Each Pole will have a FOC, which will be used to provide a dedicated communications link between the UK and French converter stations for the purposes of control, protection and monitoring of the Project. Capacity provided by strands that are not utilised for these functions will be available for third parties to purchase for other telecommunication purposes.
Fibre Optic Cable (FOC) Infrastructure	The physical infrastructure associated with the fibre optic telecommunication system. This includes: • Fibre Optic Cables; • up to two Optical Regeneration Stations (ORS) at the Landfall; • up to two Telecommunications Buildings in the vicinity of the Converter Station; • auxiliary power supply and fuel supply to buildings; • securely fenced compounds around buildings; access and parking to buildings.
Haul Road	A temporary road constructed for use during the Construction Stage.
Highway Boundary	The area which is adopted road, maintained at public expense.
Horizontal Directional Drilling (HDD)	A trenchless technology that involves drilling into the ground to create a bore with a generally horizontal profile, along a planned pathway.
HVDC Cable	The Cable designed to transfer power using High Voltage Direct Current (HVDC) at a nominal voltage

	of 320 kV. For the purpose of the Proposed Development, this comprises the Onshore Cable and the Marine Cable.
HVDC Cable Corridor	Comprises the Onshore Cable Corridor and the Marine Cable Corridor.
HVAC Cable Route	The final refined route for the HVAC Cable that lies within the HVAC Cable Corridor.
HVDC Circuit	One of two pairs of HVDC Cables, an associated Fibre Optic Cable (FOC), and any ancillaries, each of which will carry half of the specified rating.
Interconnector	An electrical system which provides the connection between electricity transmission systems, usually between areas over long distances or different frequencies.
Joint Bay (JB)	The location where sections of Cable are connected together. Each Joint Bay will be an excavation containing two joints for the HVDC Cables that form a HVDC Circuit and, at some locations, a joint for the Fibre Optic Cable (FOC) and / or equipment for testing the cable sheaths, to ensure the performance of the Cables.
Landfall	The Landfall is the area where the Onshore Cable Corridor and Marine Cable Corridor meet and includes the Transition Joint Bay (TJB), HDD compound and works where the Marine Cables come ashore, and the Optical Regenerations Stations (s) including their compounds and mitigations.
Laydown Area	Temporary area required during the Construction Stage of the Proposed Development for short-term storage of materials, which will be reinstated to its original state following demobilisation.
Lovedean Substation	The existing National Grid electrical substation located at Lovedean, Hampshire.
Marine Components	The Marine Components of the Proposed Development are all of that part below the Mean High Water Springs (MHWS).

Micro-Tunnelling	Driving tunnel sections, usually steel tubes or reinforced concrete section, in a straight line, between pits excavated on either side of the obstruction to be crossed. Hydraulic rams are used to drive the tunnel sections.
Mitigation Measures	Actions proposed to prevent, reduce and where possible, offset significant adverse Effects arising from the whole or specific elements of the Proposed Development.
Onshore Cable	The part of the HVDC Cable installed inland from the Mean High Water Springs (MHWS).
Onshore Cable Corridor	The area within which the Onshore Cable Route and all associated Temporary Works will be located. This runs landward from the Mean Low Water Springs (MLWS).
Onshore Cable Route	The final refined route for the Onshore Cable that lies within the Onshore Cable Corridor.
Onshore Components	The Onshore Components of the Proposed Development are all of that part landward from the Mean Low Water Springs (MLWS).
Operational Stage	The stage after which the Proposed Development is handed over by the relevant contractor and signed off as operational. It would remain in its Operational Stage until it is decommissioned.
Optical Regeneration Station(s) (ORS)	Structural unit housing telecommunication equipment for the Proposed Development and responsible for optical signal amplification purposes.
Order Limits	The limits shown on the Works Plans (document reference 2.4) within which the Authorised Development may be carried out.
Project	The Project comprises the Proposed Development, as well as the development proposed within French borders and the French Exclusive Economic Zone (EEZ) which do not fall within the remit of the Application.

Proposed Development	The development for which a Development Consent Order (DCO) is sought. This is equivalent to the Authorised Development that is set out in Schedule 1 of the draft Development Consent Order (dDCO) submitted with the Application (document reference 3.1).
Site	The land within the Order Limits that is shown on the Works Plans (document reference 2.4).
Telecommunications Building(s)	A building or buildings housing telecommunication equipment. For the Proposed Development, this / these will be contained within (a) dedicated building(s) within its / their own perimeter adjacent to the Converter Station perimeter.
Temporary Works	Those parts of the works that allow or enable construction of the Proposed Development and which do not remain in place at the completion of the works.
Transition Joint Bay (TJB)	The underground onshore point at which the HVDC Cable is jointed at the Landfall.
Trenching	The excavation and reinstatement of a narrow trench, typically 700 – 1,000 mm wide and 1,200 mm deep, into which the Cable ducts will be placed. The trench may be internally supported, and will be reinstated as per the original construction.
Trenchless	Any techniques for installing the HVDC Cable ducts and Fibre Optic Cable (FOC) ducts that does not require the excavation of a trench, enabling infrastructure and sensitive locations to be crossed with limited disruption. Examples include Horizontal Directional Drilling (HDD), whereby a hole is bored from, and exits at, ground level, and Micro-Tunnelling, auger boring and thrust boring, whereby a bore is drilled to and from excavated pits, using hydraulic ramming equipment.

1.2. BACKGROUND

1.2.1.1. AQUIND Interconnector is a proposed electricity interconnector between France and

the UK. The Project includes a new marine and onshore High Voltage Direct Current ('HVDC') power cable transmission link between Normandy in France and the south coast of England, converter stations in both England and France, and fibre optic data transmission cables.

1.2.1.2. With a net capacity of 2000 megawatts ('MW'), it will significantly increase the cross-border capacity between the UK and France, increasing competition and security of the electricity supply in each of the respective countries. To enhance the security of supply and availability of its power transfer capability, it is being designed as two independent pairs of cables, each with the net capacity of 1000 MW and a total transmission capacity of up to 2000 MW.

1.2.1.3. To date extensive consultation has been undertaken with the Highway Authorities and Highways England to mitigate concerns ahead of the submission of the Draft Development Consent Order ('dDCO') which this Framework CTMP (herein referred to as the CTMP) is part. For this reason, this document should be read in conjunction with the following documents:

- Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3);
- Appendix 22.1 (Transport Assessment) of the ES Volume 3 (document reference 6.3.22.1);
- Onshore Outline Construction Environmental Management Plan ('CEMP') (document reference 6.9);
- Appendix 6 (Traffic Management Strategy) of Appendix 22.1 (Transport Assessment); and
- Environmental Impact Assessment (document references 6.1 – 6.4).

1.3. SCOPE OF CTMP

1.3.1.1. This CTMP provides an overarching plan as to how the construction traffic and site operations will be managed across the extent of the Onshore Components of the Project. Individual CTMP documents will be provided to each contractor with further detail relating to their relevant work site locations. These will be prepared and agreed with the relevant Local Highway Authority ahead of works commencing. The Onshore Cable Corridor passes through a number of administrative boundaries which include Hampshire District Council ('EHDC'), Winchester City Council ('WCC'), Havant Borough Council ('HBC'), Hampshire County Council ('HCC') and Portsmouth City Council ('PCC'). HCC is the highways authority for the roads within the WCC, HBC and EHDC administrative areas and PCC, as a unitary authority, is highway authority for Portsmouth. The Onshore Cable Corridor crosses or runs adjacent to the A3(M) and the A27 which fall under Highways England's jurisdiction.

1.3.1.2. The CTMP sets out the parameters within which contractors will be required to work, including hours of operation, traffic routing, safe vehicular access and manoeuvring and minimising traffic impacts.

1.3.1.3. The individual CTMPs must contain details of:

- Vehicle routing plans;
- Proposed programme and duration;
- Number of construction personnel including travel arrangements and mitigation;
- Alterations to the highway to enable construction including temporary and permanent;
- Details of the number of construction and delivery vehicles using the public highway including abnormal and indivisible loads;
- Traffic management details;
- Compounds and laydown area details; and
- Highway condition surveys.

1.4. OBJECTIVES OF CTMP

1.4.1.1. The CTMP sets out the detailed measures that can be implemented to provide mitigation for the construction traffic associated with the Project. The CTMP has the primary objective of minimising impact and disruption to existing users of the public highway network and the surrounding community, forming the framework within which all contractors are expected to work. This can be achieved by:

- Minimising the number of vehicular trips required for the movement of material and people;
- Ensuring construction traffic trips and routes used are planned to be safe, efficient and timely;
- Ensuring the impact to residents, local sensitive receptors and the travelling public are minimised; and
- That the CTMP and the individual CTMPs are continuity monitored, reviewed and updated as necessary and improvements incorporated.

1.5. REPORT STRUCTURE

1.5.1.1. The following sections are included in this CTMP and will form, in part, the basis of the individual CTMPs submitted by contractors;

- Section 1 – Introduction – this section including scope and objectives;
- Section 2 – The Proposed Development – Onshore Cable Corridor, site

compounds and laydown areas, typical constriction vehicles, AILs and construction activities;

- Section 3 – Vehicular Movement Management – vehicle routing strategy, timing of movements, sensitive receptors, reducing impacts of Heavy Goods Vehicle ('HGVs'), local highway issues and constraints and section specific constraints, management of abnormal loads and construction HGV routes;
- Section 4 – Construction Workforce – descriptions of controls to mitigate the impact of construction staff traffic;
- Section 5 – Site Accesses/Haul Road – design, management and mitigation of permanent and temporary accesses points;
- Section 6 – Highway/Railway Crossings –agreement, management and advance notification of diversions and public rights of way;
- Section 7 – Required Highway Interventions – Interventions identified.
- Section 8 – Management of Road Safety – Existing collision records, highway condition and construction traffic assumptions; and
- Section 9 – Implementation and Monitoring – Implementation of the final CTMPs and Compliance and monitoring.

2. THE PROPOSED DEVELOPMENT

2.1. OVERVIEW

2.1.1.1. This section summarises the Onshore Components of the Construction Stage, construction techniques and indicative construction programme. The main construction activities for the Onshore Component includes the following:

- Landfall works including Optical Regeneration Station ('ORS') at Eastney;
- Onshore Cable Corridor approximate length of 120 km;
- Lovedean Converter Station Area;
- Horizontal Directional Drilling ('HDD') at;
  - Landfall UK-HDD-1;
  - Milton and Eastney Allotments UK-HDD-2;
  - Langstone Harbour UK-HDD-3;
  - Farlington Railway Crossing (Trenchless) UK-HDD-4;
  - Kings Pond UK-HDD-5; and
  - Milton Common UK-HDD-6.
- Substation works at Lovedean Substation;
- Cable jointing bays at intervals on the Onshore Cable Route;
- Permanent highway interventions;
- Permanent access from the highway; and
- Temporary construction haul roads and accesses from public highway.

2.1.1.2. These construction activities and the Order Limits for the Onshore Components of the Proposed Development are shown in Appendix 1.

2.2. CABLE CORRIDOR SECTIONS

2.2.1.1. The Onshore Cable Corridor has been sub divided into ten sections for ease of understanding, planning and consultation. The sections are as follows from the north at the site of the Converter Station in Lovedean to south where the cables make Landfall at Eastney;

- Section 1 – Lovedean (Converter Station Area);
- Section 2 – Anmore;

- Section 3 – Denmead/Kings Pond Meadow;
- Section 4 – Hambledon Road to Farlington Avenue;
- Section 5 – Farlington;
- Section 6 – Zetland Field & Sainsbury's Car Park;
- Section 7 – Farlington Junction to Airport Service Road;
- Section 8 – Eastern Road (adjacent to Great Salterns Golf Course) to Moorings Way;
- Section 9 – Moorings Way to Bransbury Road; and
- Section 10 – Eastney (Landfall).

2.2.1.2. Please refer to Figure 3.9 of the ES Volume 2 (document reference 6.2.3.9) for a plan of the cable corridor sections.

2.2.1.3. Below are brief descriptions of the works associated within the Onshore Cable Corridor (heading south from the Lovedean (Converter Station Area)), divided into appropriate sections, with details of the affected highway links.

2.2.2. SECTION 1 – LOVEDEAN (CONVERTER STATION AREA)

2.2.2.1. The existing Lovedean substation to the west of the village of Lovedean is to be extended for the siting of the new Converter Station. A new Access Road, proposed to act as the construction and permanent access, will be built from Broadway Lane across farmland to access the new Converter Station Area from the south. This road will also serve as the new permanent access to the Converter Station. The Onshore Cable Corridor will head south through farm land for approximately 800 m crossing the unnamed single-track road west of Denmead Farm and east of Edney's Lane (The Crossways) through to the next section.

2.2.3. SECTION 2 – ANMORE

2.2.3.1. This 1.2 km section of Onshore Cable Corridor will cross agricultural farm land between Broadway Lane in Section 1 to Anmore Road in the land bound by Edney's Lane in the west and Anmore Lane in the east. The Onshore Cable Corridor then crosses Anmore Road.

2.2.4. SECTION 3 – DENMEAD/ KINGS POND MEADOW

2.2.4.1. This section covers the Onshore Cable Corridor from Anmore Road east of Denmead to Hambledon Road via an off-road route via land known as Kings Pond Meadows. The section length is approximately 760 m.

2.2.5. SECTION 4 – HAMBLEDON ROAD TO FARLINGTON AVENUE

2.2.5.1. This section of the Onshore Cable Corridor passes from HCC into PCC. The Onshore Cable Corridor heads south for approximately 5.4 km through the HCC area following the B2150 Hambledon Road from Waterlooville and the A3 Maurepas Way/London Road through Purbrook and Widley to the highway boundary of HCC and PCC, which is north of B2177 Portsdown Hill Road.

2.2.5.2. The Onshore Cable Corridor within the PCC area is 1.2 km long and continues east along Portsdown Hill Road to Farlington Avenue as far as the junction with Burnham Road to contain a contractor lay-down area on land to the west of London Road north of Ladybridge Road.

2.2.6. SECTION 5 – FARLINGTON

2.2.6.1. This 1 km section leads the Onshore Cable Corridor south from the junction of Burhham Road on Farlington Road, to the junction with A2030 Havant Road and turning east to the A2030 Eastern Road and continuing south until Zetland Field.

2.2.7. SECTION 6 – ZETLAND FIELD & SAINSBURY'S CAR PARK

2.2.7.1. This 600 m section will leave the carriageway of Eastern Road and use Zetland Field to continue south to Fitzherbert Road which it will cross and enter the car park of the retail park and Sainsbury's supermarket. Following the western side of the car park, it will reach the south coast railway. A trenchless solution will be utilised for the Onshore Cable Route to pass under the railway embankment. This will require a compound for the launch/reception pit.

2.2.8. SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

2.2.8.1. After passing under the south coast railway into Farlington Playing Fields, the Onshore Cable Corridor will follow the eastern boundary of the Farlington Playing Fields where it will be required to pass under the A27 Havant Bypass (maintained by Highways England) where HDD will be utilised. South of the A27, the Onshore Cable Corridor will cross the mud flats of Langstone Harbour to reach Portsea Island re-joining the A2030 Eastern Road at the Kendall's Wharf opposite Anchorage Road where it will proceed south to Airport Service Road junction, a total section distance of approximately 2.3 km. There will be a contractor lay-down area for materials within this section.

2.2.9. SECTION 8 – EASTERN ROAD (ADJACENT TO GREAT SALTERNS GOLF COURSE) TO MOORINGS WAY

2.2.9.1. This section has three potential routes for the Onshore Cable Corridor based on the possible connection points in section 9. The first route utilises the A2030 Eastern Road and the residential street of Eastern Avenue. The second crosses the western boundary of Milton Common from Eastern Road to Moorings Way. The third follows

the eastern boundary of Milton Common to reach Moorings Way. Milton Common is a former landfill site.

2.2.10. SECTION 9 – MOORINGS WAY TO BRANSBURY ROAD

2.2.10.1. From Moorings Way the Onshore Cable Corridor will lead from Moorings Way to head south through Furze Lane or through the sports grounds of University of Portsmouth where it will cross Locksway Road into the Thatched House public house car park and pass under the Milton and Eastney Allotments (through use of HDD). It will then enter Kingsley Road and passing into Bransbury Park via Yeo Court or via the access opposite Ironbridge Lane. The route will continue across Bransbury Park to join Henderson Road.

2.2.11. SECTION 10 – EASTNEY (LANDFALL)

2.2.11.1. This 650 m section of the Onshore Cable Corridor leads to the Landfall Temporary Joint Bays (TJB) and Optical Regeneration Station (ORS) building. After exiting Bransbury Park the Onshore Cable Corridor will travel east along Bransbury Road to Fort Cumberland Road and Henderson Road to the Fraser Range access road to the Landfall site, which is currently a car park with unmade ground. The car park will serve as a contractors compound and lay-down area for the construction of the optical regeneration station(s).

2.3. PERMANENT ACCESS POINTS

2.3.1.1. There will be two permanent accesses delivered by the completion of the Proposed Development The first will be at the Lovedean Converter Station from Broadway Lane in Denmead and the second to the ORS off Fort Cumberland Road.

2.3.2. SECTION 1 – LOVEDEAN (CONVERTER STATION AREA) ACCESS

2.3.2.1. A new junction will be created from Broadway Lane just south of junction with Day Lane as shown in Appendix 2. To facilitate construction there will be an upgrade of Broadway Lane and Day Lane junction including a construction of a haul road and temporary holding area. temporary holding area will be removed, and the land reinstated at the end of construction.

2.3.3. SECTION 10 – EASTNEY (LANDFALL)

2.3.3.1. A new formal access arrangement will be required for the ORS Building located in the public car park south of Fort Cumberland Road, and will be designed to appropriate standards and will follow all relevant visibility splay and tracking requirements and subject to a full Road Safety Audit prior to approval with PCC.

2.4. COMPOUND AND LAYDOWN AREAS

2.4.1.1. The primary contractor compound will be located at the Lovedean Converter Station Area. This compound will be accessed from Broadway Lane via a new junction to the Access Road which will also serve as a haul road during construction but becomes a permanent access to the Converter Station once construction is complete.

2.4.1.2. There will be satellite contractor's compounds along the Onshore Cable Corridor. These will be mainly utilised as laydown areas for materials and include staff welfare facilities and will be located at:

- Land adjacent to Kendall's Wharf and/or land south of the Langstone Harbour viewing car park; and
- The car park of Fort Cumberland Road (the site of the Landfall and the ORS).

2.4.1.3. To facilitate construction, laydown areas will be created to store materials such as cable ducting and arisings from the current work site. This will prevent double handling and additional vehicular trips. A generic layout for laydown areas is shown in Plate 1 below. The areas will be fenced from the public and vehicular access to them will be managed with arrangements detailed further in Section 5.

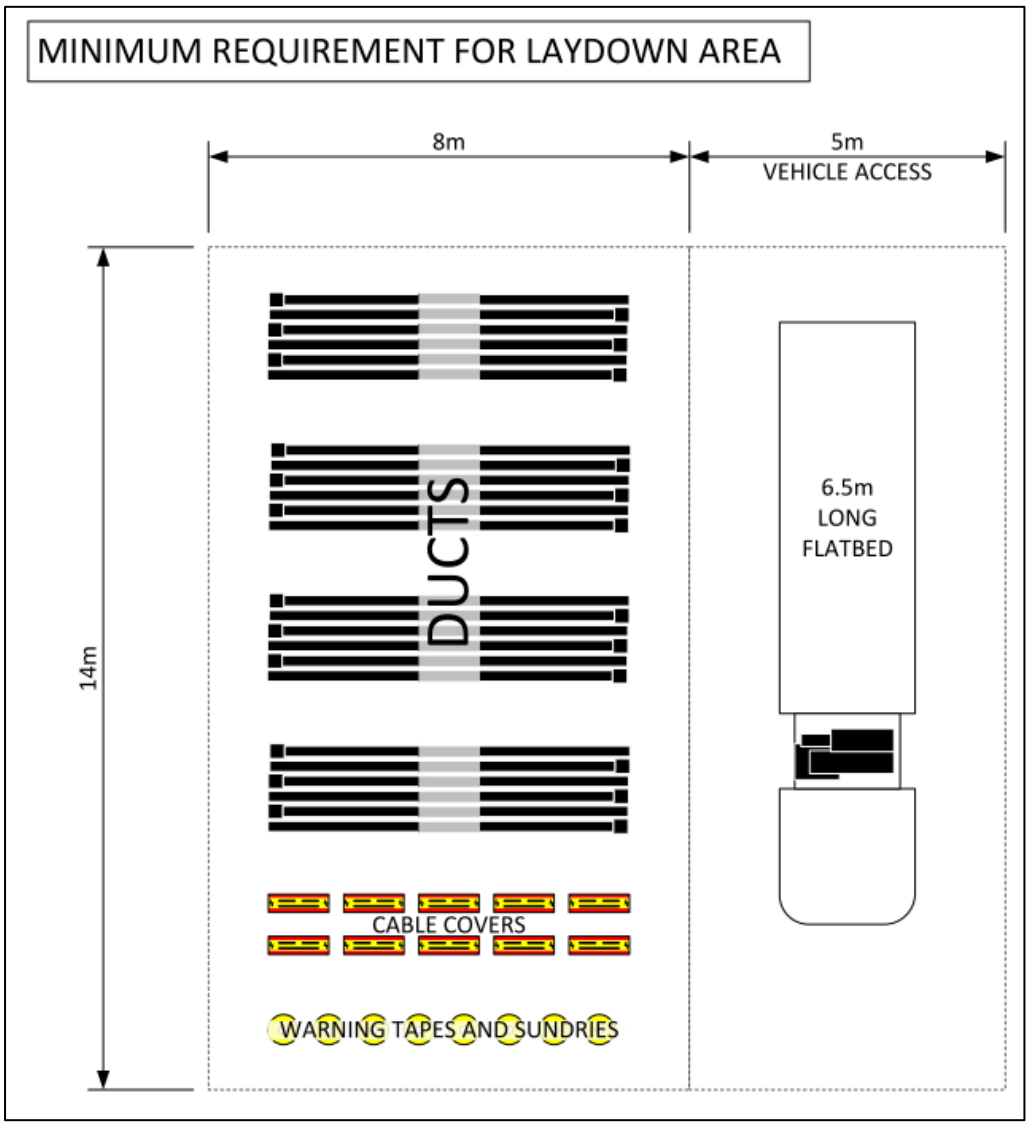


Plate 1 - Typical Laydown Area Dimensions

2.4.1.4. Welfare facilities, usually in the form of a mobile welfare unit, will be provided with each individual works area and therefore no additional facilities will be provided at laydown areas.

2.4.1.5. At JBs, a compound area of 20 m by 6 m will be required, which will include space of welfare facilities within the areas identified for winch/drum land-take shown in Plate 2.

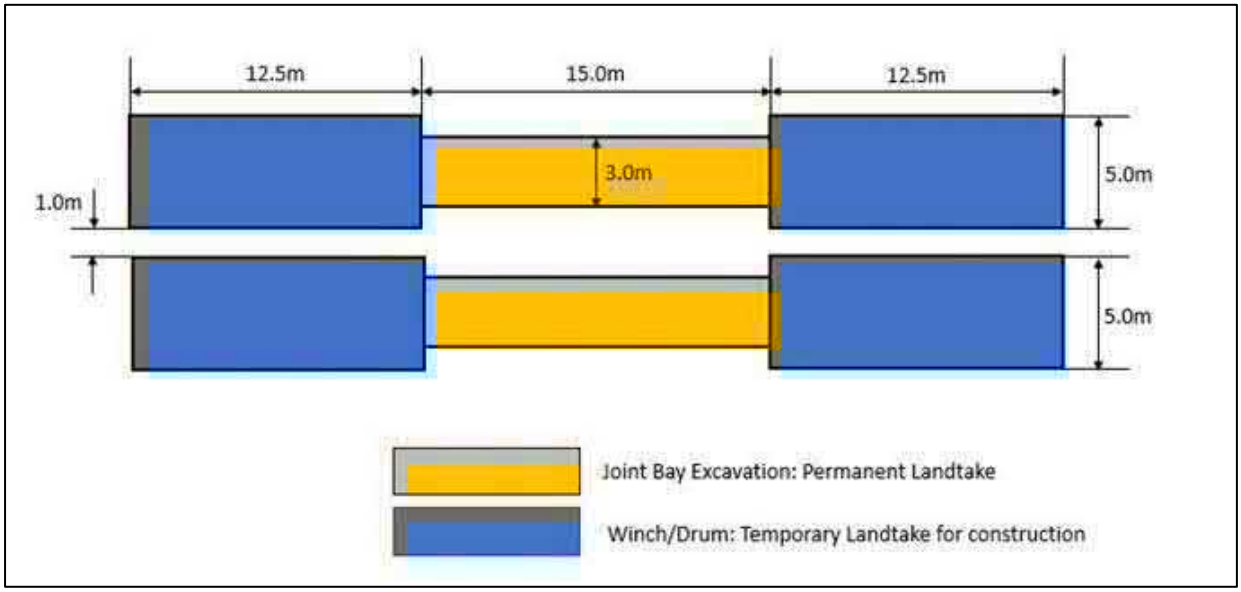


Plate 2 – Typical Compound Area for Joint Bay

2.5. INDICATIVE PROGRAMME

2.5.1.1. The indicative construction programme is anticipated to extend over three years, with further information provided within Chapter 3 (Description of the Proposed Development) of the Environmental Statement Volume 1 (document reference 6.1.3). This indicative programme is as shown in the table below. These timescales are subject to cable production, installation rates and environmental consideration. A Gantt chart of the proposed programme is provided in Appendix 3.

Table 2 - Indicative Construction Programme – Converter Station & Onshore Cable Corridor

Activity	Anticipated working hours per day	Anticipated working days per week
Converter Station Area Construction	10 hour shifts, 08:00 – 18:00	6 days*
Marine Cable Installation	24 hour shifts	7 days
Onshore Cable Installation ***(including HDD-2, HDD-5 and HDD-6)***	10 hour shifts, 07:00 – 17:00	6 days*
Landfall Installation ***(including HDD-1, TJB and ORS)***	12 hour shifts	7 days
HDD-3 and HDD-4 Installation	12 to 24 hour shifts	7 days

**Day 6 is Saturday working which is typically a 5-hour shift 08:00 to 13:00.*

2.5.1.2. Enabling works are indicatively anticipated to take place in quarter three of 2021 and last approximately 12 months through to the middle of 2022. These works would include site clearance, such as tree and hedge pruning and clearance, modifications to junctions and roads to accommodate construction activities and vehicles.

2.5.1.3. The construction of the Converter Station at Lovedean is anticipated to take approximately two and a half years from Q3 2021. The construction of the Landfall for the TJB, HDD works and ORS building is anticipated to last up to 18 months.

2.5.1.4. The installation of the Onshore Cable Route is anticipated to start in the third quarter of 2021 and continue for 27 months to Q3 2023.

2.5.1.5. The following wildlife events are to be taken into consideration in the phasing of enabling and construction works for the Converter Station Area and Onshore Cable Route:

- [redacted]
- Bird breeding and nesting season from March to August;
- Plant growing season and winter wet season from August to November, at Kings Pond Meadow SINC and Denmead in Section 3; and
- Wintering bird season, from October to March.

2.5.1.6. Public activities and events that the Applicant has been aware of which are planned in proximity to the Converter Station Area and Onshore Cable Corridor, including but not limited to the following:

- School term times (as required);
- Football season;

- Coastal Waterside Marathon;
- Cowes Week;
- Great South Run;
- South Central Festival; and
- Victorious Festival.

2.5.1.7. Further to this indicative programme, consideration has been given with the Traffic Management Strategy to the construction programme or each individual section of the Onshore Cable Corridor. This considers the constraints listed above and links between nearby sections of the Onshore Cable Corridor, where for example multiple construction zones in the same area should be avoided.

2.5.1.8. This programme will help mitigate the impacts of the construction works on the highway network.

2.6. SENSITIVE RECEPTORS

2.6.1.1. Identification of local sensitive receptors that would be negatively impacted by the construction of the Onshore Cable Route is a consideration of this Outline CTMP. Further mitigation measures may be developed in the detailed CTMPs in terms construction requirements and programme constraints. The identified sensitive receptors include:

- Schools, nurseries and places of learning;
- Hospitals, medical centres and doctor surgeries;
- Places of worship; and
- Leisure facilities.

2.6.1.2. The following table represents the first-pass at identifying the main receptors per section. Additional receptors may be identified by the construction contractors when further consultation with stakeholders and HCC and PCC is undertaken. A plan locating all the identified sensitive receptors is contained within Appendix 4.

Table 3– Identified Sensitive Receptors

Section	Location	Receptor
1	Broadway Lane, Day Lane	Campsite, pub
2	Broadway Lane	B&B
3	Anmore Road, Hambledon Road, Soake Road	Retail, pub, community centre, infant and junior school, care home

4	Hambledon Road, London Road, Portsdown Hill Road	Retail, industrial estates, pubs, schools, places of worship, care home, medical centre, guest house
5	Farlington Avenue, Solent Road, Evelegh Road	Pub, infant and junior school, Scout hut
6	Eastern Road	Retail
7	Eastern Road	Hotel, sports ground, retail, football club, sailing club, Victorious Music Festival (Farlington Playing Fields)
8	Eastern Road, Tangier Road, Burrfields Road, Moorings Way	Golf club, pub/restaurant, caravan park, hotel, retail, college, infant school, places of worship, cemetery
9	Milton Road, Bransbury Road, Longshore Way	Places of worship, community centre, park, retail, nurseries, junior schools, museum, adult day care, medical centre, university campus, pub/restaurants, sailing club, hospital
10	Henderson Road, Fort Cumberland Road, Ferry road	Museum, adult day care, holiday park, playground, marina, lifeboat station

2.7. CONSTRUCTION VEHICLES

2.7.1.1. The following section provides details of typical vehicles which are expected to be used during the construction of the Onshore Cable Route, Converter Station and Landfall works.

2.7.2. HEAVY GOODS VEHICLES FOR CONVERTER STATION WORKS

2.7.2.1. These are vehicles that will be utilised for the delivery of materials and equipment and removal of waste. These vehicles will be in the form of articulated and rigid vehicles. All vehicles will have engines with the minimum standard of Euro 6 for diesel and Euro 4 for petrol. This will ensure that vehicular emissions are minimised as much as possible during construction. These vehicles could include;

- Six axle articulated tractor and trailer units including low-loader trailers for the delivery of materials and plant with gross weights up to 44 tonnes;
- Ready-mix concrete in the form of four axle rigid vehicles up to 32 tonnes in gross weight
- Rigid four axle tipper trucks with and without loader cranes for delivery of bulk aggregates and waste removal. Lorries will be of low and high visibility cabs for cyclist safety;
- Six axle articulate tractor and modified trailer for cable drum delivery to jointing bays; and
- Rigid flatbed trucks for delivery of construction materials for offloading with loader crane or forklift truck.

2.7.3. LIGHT GOODS VEHICLES AND CARS FOR CONVERTER STATION WORKS

2.7.3.1. Vehicles such as cars, vans and Light Goods Vehicles ('LGVs') under 7.5 tonne in gross weight will be used during the construction process for the movement of staff, equipment and deliveries. The individual CTMPs will propose measures to reduce the number of movements as much as possible. Further details of possible measures to reduce movements are provided later in the report in Section 4.

2.7.4. CONSTRUCTION VEHICLES FOR DUCT INSTALLATION, JOINT-BAY CONSTRUCTION/BACK FILL & REINSTATEMENT

2.7.4.1. The following vehicles will be used for duct installation, joint bay construction and reinstatement works:

- Low loader for plant deliveries;
- Grab wagon for muck away/stone & deliveries;
- HGV with loader crane for material deliveries;

- Vacuum tanker for dewatering excessive amounts of ground water;
- Tarmac lorries; and
- Welfare vehicle.

2.7.5. CONSTRUCTION VEHICLES FOR CABLE INSTALLATION AND CABLE JOINTING

2.7.5.1. The following vehicles will be used for cable installation and cable jointing works:

- HGV with loader crane /low loader for plant deliveries;
- Low loader for cable deliveries;
- Welfare vehicle;
- Light vehicles, including security vehicle; and
- Vacuum tanker for dewatering excessive amounts of ground water.

2.7.6. CONSTRUCTION VEHICLES FOR HORIZONTAL DIRECTIONAL DRILLING

2.7.6.1. The following vehicles will be used for HDD works:

- Low loader for plant deliveries;
- HGV's for material deliveries, including water, fuel, bentonite etc;
- HGV with loader crane for moving equipment from pipe side to rig side, delivery of cabins, storage and welfare;
- Vacuum tanker for mud return;
- Water tankers;
- Grab wagon for muck away;
- 20t tipper for stone deliveries; and
- Light vehicles.

2.7.7. ABNORMAL INDIVISIBLE LOADS

2.7.7.1. The construction of cable route is likely to result in a number of abnormal loads, technically known as an AIL. A vehicle is considered abnormal when;

- It is over 2.9 m wide or the payload projects over 0.306 m from the vehicle side;
- If it is over 18.65 m rigid length or the payload projects over the rear by 0.305 m; or
- It if the gross weight is over 80 tonnes.

2.7.7.2. It is expected the number of AILs will be low and most construction activities will take place with standard vehicles. The AILs will be to the Lovedean Converter Station site

for the Converter Station Area works in this area.

2.7.7.3. Management of AILs will be the responsibility of the contractor appointed to undertake the works. The will comply with the statutory regulations in terms of consulting with the relevant highway authority, police and other stakeholders. The routing and timing of the AILs will be agreed and communicated to minimise impact to residents and other road users as appropriate.

2.7.7.4. Given the anticipated size of the AIL deliveries and the traffic management consequently required, it is expected that the deliveries would be undertaken overnight, require road closures, temporary adjustment of highway geometry and temporary removal of street furniture

2.7.7.5. The specialist abnormal load contractor, Collett, has developed the study titled Route Access Survey contained within Appendix 5. This addresses the requirements for the delivery of a large transformers to the Lovedean sub-station.

2.8. CONSTRUCTION ACTIVITIES

2.8.1.1. This section provides further detail on the different construction methods to be currently employed along the Onshore Cable Corridor. These methods are determined according to the complexity and constraints of the surrounding environment, and the type of infrastructure being installed.

2.8.2. OPEN CUT TRENCH

2.8.2.1. The majority of the Onshore Cable Route will be constructed utilising an open cut trench method. The cable ducts will be installed, and the trenches reinstated before the cables are pulled through the ducts and connected at jointing bays. The installation of ducts minimises the duration of trenching operations and allows highways to be reinstated more quickly. Plate 3 provides a typical cross-section of the works. The trenches will be in the region of 700 mm wide and be a minimum of five metres apart

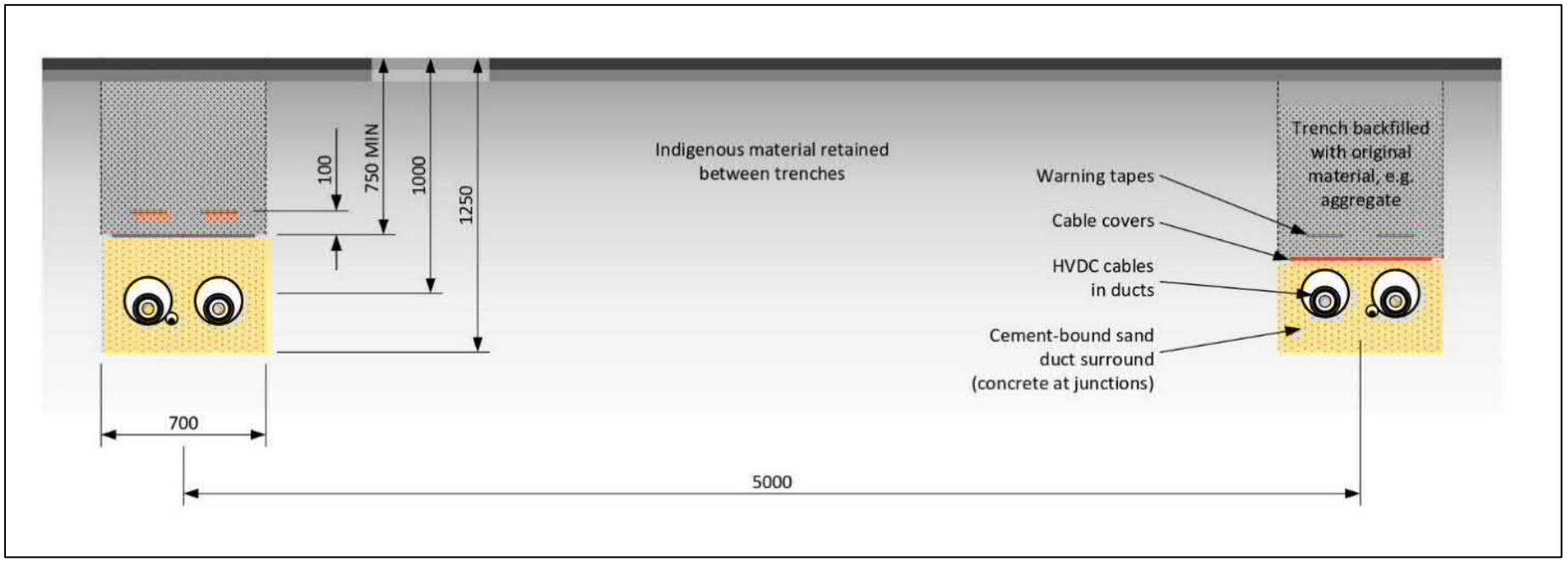


Plate 3 - Typical arrangement of HVDC and FOC cables in roads, verges and footpaths (all measurements in mm)

2.8.2.2. A significant proportion of the Onshore Cable Route will be within the public highway and typically one trench will be opened and reinstated before the second trench is opened in any particular section. In some locations the Onshore Cable Corridor may cross fields or open land. The width of the temporary construction corridor within these locations will include land necessary for temporary access and construction works. Typically, the width of the temporary construction corridor required through fields/open land is approximately 23 m (this includes a five metre haul road and safety clearance distance of one metre either side of this haul road) between safety barriers. This is shown in Plate 4.

2.8.2.3. The installation rate for cable ducts is approximately 18 m to 30 m per 10-hour day shift, on average, within urban areas and approximately 50 m per day in open country. These typical installation rates are per gang, per shift and are highly dependent upon the level of obstacles and utility services encountered within the road or constraints that need to be observed to minimise the impacts during the construction stage.

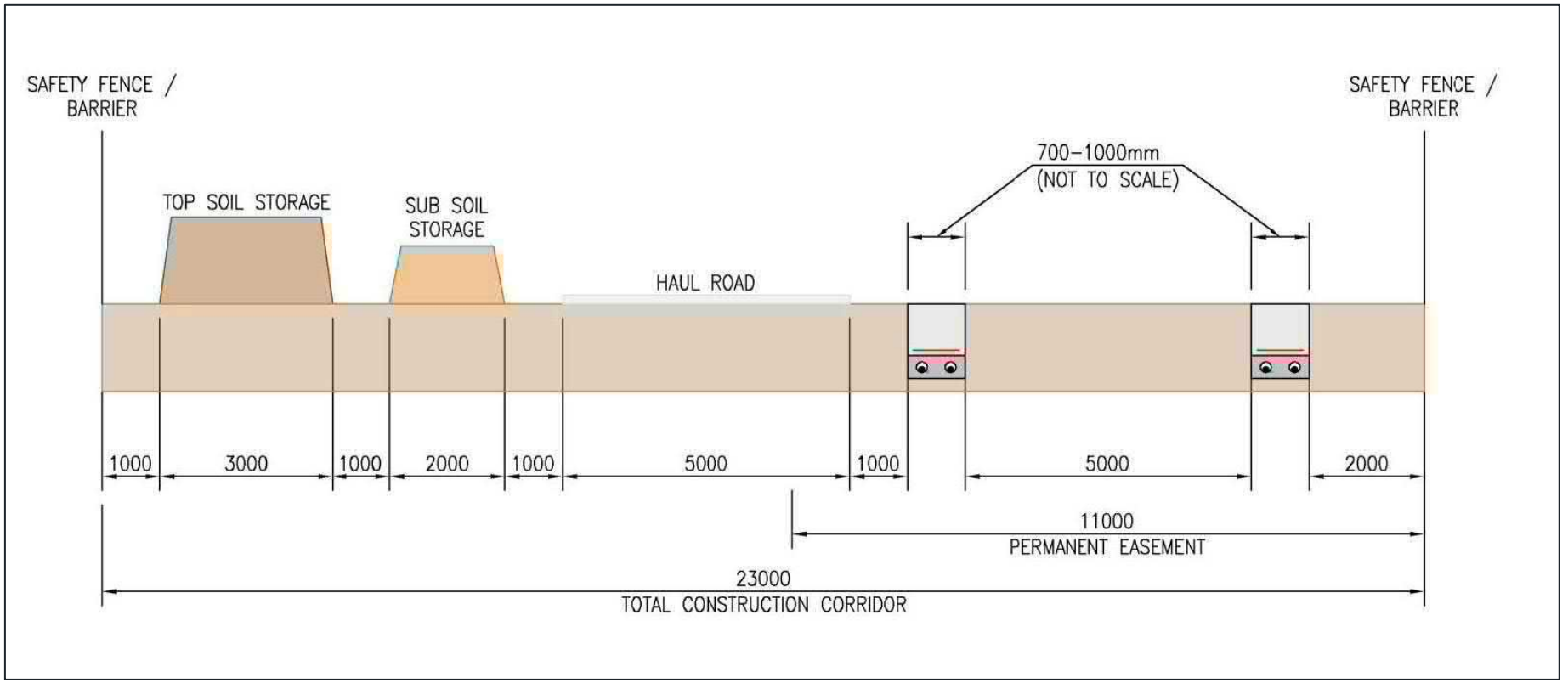


Plate 4 - Typical Onshore Cable Route Cross-Section within Fields or Open Land (all measurements in millimetres)

2.8.3. HORIZONTAL DIRECTIONAL DRILLING/TRENCHLESS

2.8.3.1. There are up to 6 locations along the Onshore Cable Corridor where the ducts will be installed by HDD or a similar Trenchless Technique. It allows cables to cross under certain constraints along the route namely water ways and environmentally sensitive areas. The method will also be used to bring the Marine Cables to the Landfall. It limits disturbance to the environment when compared with open trenching techniques. These locations are:

- HDD-1: Landfall at Eastney;
- HDD-2: Milton and Eastney Allotments (between north-east of Bransbury Park and Thatched House public house car park);
- HDD-3: Langstone Harbour crossing (between Kendall's Wharf and Farlington Playing Fields);
- HDD-4: Farlington Railway Crossing (between Farlington Playing Fields and southern extent of Sainsbury's car park);
- HDD-5: Kings Pond near Anmore (between Kings Pond Field and field north of Anmore Road); and
- HDD-6: Milton Common, crossing under the sea defence.

2.8.3.2. The HDD operations require a suitable space for the temporary construction area (including temporary access/egress routes), which will vary depending on the length and size of the HDD works. The HDD operations require a working area at the start and finish point to locate the drilling rig, water bowser/pump, generator, layout of ducts/pipes and other construction equipment. Adjacent land within the Order Limits (e.g. car parks, fields etc.) is proposed to be utilised to facilitate the HDD construction works.

2.8.3.3. For HDD-4, the expected Trenchless methodology is similar to the HDD and has been selected for the installation of the cable route under the railway north of Farlington Railway Crossing (HDD-4) from the playing fields. An alternative method of trenchless installation such as Micro-Tunnelling enables cables to be installed within ducts or pipes under a feature such as a railway with minimal impact on that feature, and is the preferred method of crossing railway infrastructure.

2.8.4. JOINT BAYS

2.8.4.1. At specifically intervals along the Onshore Cable Route JBs will be situated from which the operation of pulling the Cables and jointing of the Cables will take place. Plate 5 shows a typical schematic of a joint bay which will be in the region of 15 m by 3 m excavation per joint bay plus compound requirements. The operation will require a compound and laydown area for material and parking to be created and these have

typically been situated out of the public highway and will require temporary access from the highway. The completed JB will be 6 m by 3 m and be 1.85 m in depth.

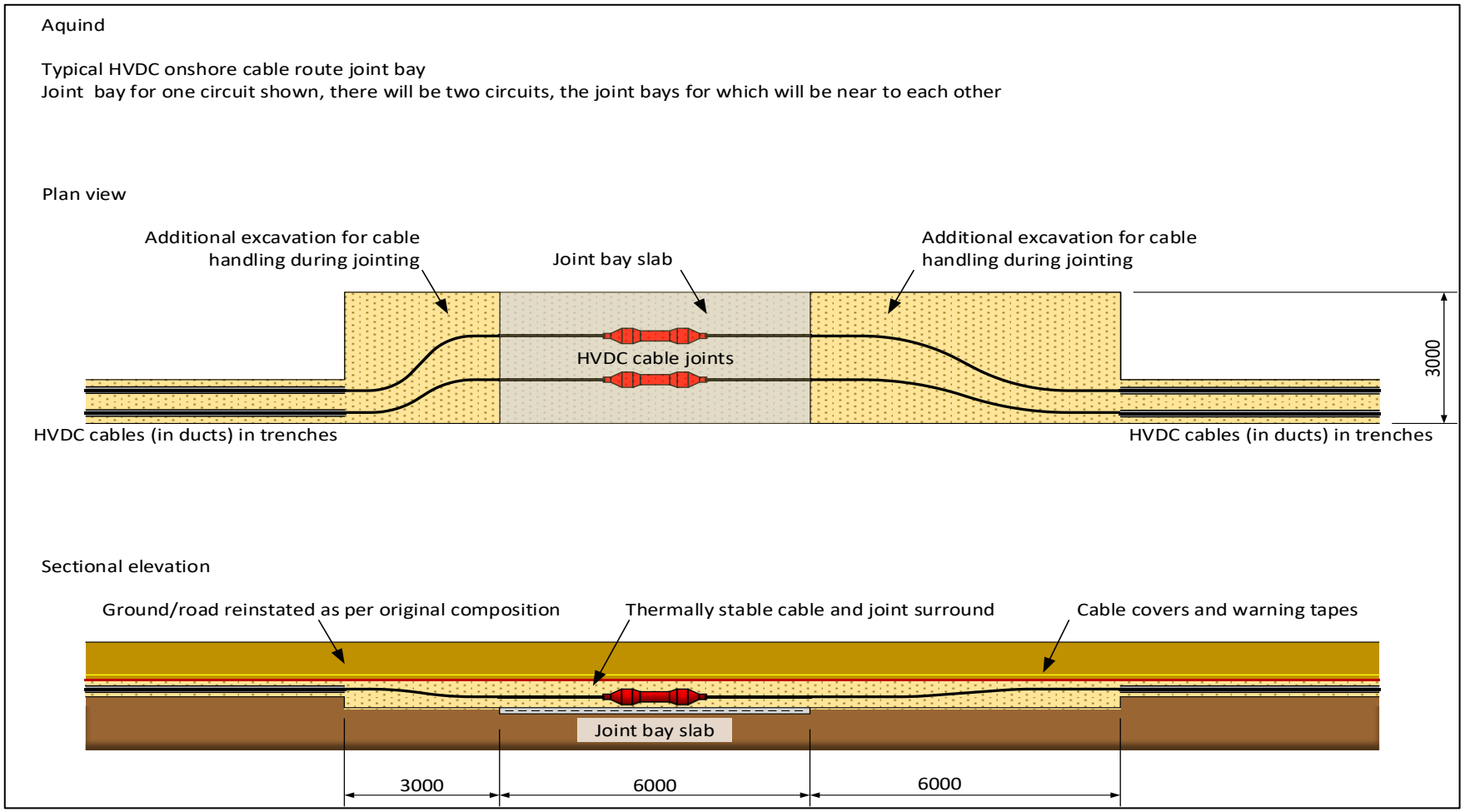


Plate 5 – Typical Schematic of Joint Bay (distances in millimetres)

3. VEHICULAR MOVEMENT MANAGEMENT

3.1. OVERVIEW

3.1.1.1. The CTMP purpose is to consider the construction phase only. This section discusses the vehicular access and route strategy for construction. The vehicular movement strategy for construction is based on a number of core principles:

- Ensuring a safe and efficient use of road space to provide access to the construction site;
- Minimising the number of vehicle movements and reducing impact as far as practical by proposing mitigation measures as required;
- Use the shortest routes to the construction sites as practical; and
- Avoiding residential areas and those near sensitive receptors such as schools etc.

3.1.1.2. The CTMP should also be ready in conjunction with the following transport reports completed for the Project:

- Appendix 6 (Framework Traffic Management Strategy) of Appendix 22.1 (Transport Assessment): This document provides details of the traffic management required to facilitate construction of the Onshore Cable Route within or adjacent to public highway. The Framework Traffic Management Strategy sets out the overarching principles and methodology to be used during the construction stage and will be developed by the contractor prior to commencement of each individual element of street works.
- Appendix 22.1 (Transport Assessment): This document provides an assessment of the impacts of the construction phase, both in relation to the Converter Station and Onshore Cable Route. It also provides details of proposed mitigation measures that will be provided as part of the Proposed Development.

3.2. VEHICLE ROUTING STRATEGY

3.2.1.1. Vehicular access to the construction works will follow three levels of road hierarchy.

- Level 1 Strategic Road Network – These are roads managed by Highways England being motorways and trunk roads which provide access to the construction sites from a wide catchment area to be distributed by the lower levels of road.
- Level 2 Primary and Local Road Networks – These being roads under the authority of Hampshire County Council and Portsmouth City Council, which provide access to most of the cable corridor.
- Level 3 Access Road – These will be temporary haul roads created by the construction contractors linking back to the Level 2 road network. These also may be existing privately owned roads utilised for the construction purposes.

3.3. WORKING HOURS

3.3.1.1. The working hours could be as shown in Table 4.

3.3.2. TIMING OF MOVEMENTS

3.3.2.1. HGV movements to the works sites will be as restricted as follows to reduce impact to the surrounding road network. The main compound for all construction works will be at the Converter Station.

3.3.2.2. For all sections of the Onshore Cable Corridor and all construction methods, additional restrictions on HGV movements will be considered to suit local sensitive receptors, such as schools.

3.3.2.3. The Contractor shall arrange for Vehicle Marshalls to direct construction traffic/HGV movements at the site entrances through to site compound areas. Flash cards should be issued to all HGV drivers and visitors entering the site and vehicles/deliveries will be provided with escorts through the site where required.

LOVEDEAN (CONVERTER STATION AREA)

3.3.2.4. General HGV movements will take place between 09:00 and 17:00 for HGVs relating to construction of the Converter Station, therefore avoiding the AM and PM peaks of 08:00-09:00 and 17:00-18:00. In addition, HGV trips will occur in relation to construction of the Onshore Cable Route to deliver equipment to each location, leaving the compound between 06:00 and 07:00 and arriving at the compound between 17:00 and 18:00.

3.3.3. EASTNEY (LANDFALL)

3.3.3.1. General HGV movements will take place between 09:00 and 17:00 for HGVs relating to construction of the ORS and Landfall, therefore avoiding the AM and PM peaks of 08:00-09:00 and 17:00-18:00

3.3.3.2. With regards to the HDD, once drilling plant and cabins have been delivered (a 2-3 day process) the Landfall construction site will only generate HGV movements associated with water, bentonite, fuel and removal of spoil. These movements however will be restricted to outside of the 08:00-09:00 and 17:00-18:00 peak traffic hours and 19:00-07:00 to avoid disturbance to nearby residential properties.

3.3.4. ONSHORE CABLE ROUTE

3.3.4.1. HGVs carrying equipment and material will arrive on-site at 07:00 to coincide with the start of the working day. General HGV movements will take place between 09:00-17:00 to avoid the peak traffic hours and 19:00 to 07:00 to avoid disturbance to nearby residential properties where the cable route corridor passes close to ones. However, equipment/material may also be transported away from each site at 17:00. HGV movements outside the normal hours may be required where 24-hour or weekend Onshore Cable Route works are undertaken.

3.3.5. HORIZONTAL DIRECTION DRILLING WORKS

3.3.5.1. These movements however will be restricted to outside of the 08:00-09:00 and 17:00-18:00 peak traffic hours and 19:00-07:00 to avoid disturbance to nearby residential properties. However, in areas that are not in close proximity to residential properties may require working between 10:00 and 7:00.

3.3.6. TRENCHLESS SOLUTION UNDER SOUTH COAST RAILWAY

3.3.6.1. The majority of HGV movements will occur Monday to Friday 09:00 to 17:00, avoiding the peak traffic hours of 08:00-09:00 and 17:00-18:00. There may be a requirement for some HGV movements outside of the time periods presented above to support 24 hour working. However, all endeavour will be made to avoid the hours of 19:00 to 07:00 to avoid disturbance to nearby residential properties

3.3.7. ISSUES AND CONSTRAINTS IDENTIFIED

3.3.7.1. There are a number of common issues that extend over the Onshore Cable Corridor and construction routes. Table 5 lists the common issues and constraints with the proposed mitigation, which have been mitigated as far as reasonably practicable through the planning and design process.

Table 4 - Common Issues and Constraints – Whole cable route

Issue/constraint	Mitigation stage	Proposed Mitigations
Narrow rural roads/no pedestrian footways/ unrestricted speed limit	Route planning	Routing strategy and signage to be agreed with HCC and PCC

Narrow residential streets with on-street parking	Route planning	Parking suspension, HGV routing strategy
Congestion and impact on strategic roads	Route planning, Framework Traffic Management Strategy and Construction Traffic Management Plan	Traffic capacity assessments. Vehicle movements restricted.
Geometry of junctions and roads not suitable and visibility constrained for proposed construction vehicles	Route planning and design stage	Interventions proposed and agreed with highway authority

Long diversion routes for closed roads	Route planning and design stage	Construction techniques to avoid road closures if possible. Advanced signage/warning

3.4. HGV ROUTES

3.4.1.1. An assessment has been made of potential vehicular routes to access the cable route and is detailed in the following sections below. These routes will be communicated to all hauliers and managed/enforced by the contractor. Drivers will be required to adhere to all existing restrictions such as weight and height restrictions. Temporary signage will be utilised by the contractor to direct construction traffic to compounds and site accesses. These will be agreed with the highway authorities.

3.4.1.2. A plan highlighting the construction access points is presented in Appendix 4.

3.4.2. SECTION 1 – LOVEDEAN (CONVERTER STATION AREA)

3.4.2.1. Construction traffic will use junction 2 of A3(M), B2149, A3 Portsmouth Road, Lovedean Lane and Day Lane.

3.4.2.2. No construction traffic (HGVs and constructions workers) will use the route from the south from Hambledon Road via Soake Road, Anmore Road and Anmore Lane.

3.4.2.3. There are no vehicular restrictions in this section other than geometric constraints along Day Lane and Broadway Lane. Day Lane and Broadway Lane are rural country lanes with a general width of 6.0 m or less. Each are bordered by hedgerow/grass verges without footways. Given its existing width, Day Lane will not be able to accommodate two-way HGV traffic and therefore vehicles exiting the Converter Station Area will be controlled to avoid meeting a vehicle travelling along Day Lane towards the site. This could be done using a combination of temporary traffic signals (near the access to the solar farm) and banksmen on either end. In some limited locations, the width of Day Lane may make it difficult for a car and HGV to pass. These locations are primarily where there is good forward visibility, while there is also an informal layby located within highway land adjacent to the Solar Farm access that will facilitate two-way flow of traffic.

3.4.3. SECTION 2 – ANMORE

3.4.3.1. Construction traffic within section 2 will travel directly from the Converter Station compound via the internal haul road and therefore HGV movements on highway will be limited to the assigned route to from the A3(M).

3.4.3.2. No construction traffic will use the route from the south from Hambledon Road via Soake Road, Anmore Road and Anmore Lane.

3.4.3.3. There are no vehicular restrictions in this section other than those mentioned in Section 1.

3.4.4. SECTION 3 – DENMEAD/KINGS POND MEADOWS

3.4.4.1. Construction traffic to/from Anmore Road will be routed either via the Converter Station compound and Broadway Lane/Anmore Lane or directly from junction 3 A3(M), Hulbert Road, A3 London Road, B2150 Hambledon Road and Mill Road.

3.4.4.2. No construction traffic will use routes along Soake Road. This will be managed and enforced by provision of route planning information by the contractor.

3.4.4.3. There are no vehicular restrictions in this section and no other geometric constraints have been identified beyond those discussed in Section 1.

3.4.5. SECTION 4 – HAMBLEDON ROAD TO FARLINGTON AVENUE

3.4.5.1. Given the length of this section, construction traffic will use different routes depending upon the location of the Onshore Cable Corridor construction works unless it is travelling to /from the Converter Station Area/Works Compound. All HGVs using the Converter Station Area/Works Compound will use Day Lane, Lovedean Lane, Milton Road and B2150 Hambledon Road to reach the relevant construction location.

3.4.5.2. Construction traffic not travelling via the Converter Station Area/Works Compound will use the following routes:

- B2150 Hambledon Road: Junction 3 A3(M), Hulbert Road and A3 London Road;
- A3 Maurepas Way/London Road north of Ladybridge Roundabout: Hambledon Road: Junction 3 A3(M), Hulbert Road and A3 London Road;
- A3 London Road south of Ladybridge roundabout: Junction 3 A3(M) Hulbert Road (eastern), Purbrook Way, Stake Road, Ladybridge Road and A3 London Road; and
- Portsdown Hill Road/Farlington Avenue: Junction 5 A3(M), Bedhampton Hill, B2177 Portsdown Hill Road, Farlington Avenue.

3.4.5.3. No construction traffic will use Frendstaple Road, Stakes Hill Road and Crookhorn Lane. This will be managed and enforced by provision of route planning information by the contractor.

3.4.5.4. Restrictions in this section include the ‘Access Only’ 7.5 tonne weight restriction on Farlington Avenue which will be required to be rescinded for the duration of the works on Farlington Avenue. This weight restriction has been implemented in conjunction with the existing traffic calming measures to reduce use of Farlington Avenue as a through-route.

3.4.6. SECTION 5 – FARLINGTON

3.4.6.1. Generally, construction traffic will use junction 5 A3(M), A2030 Havant Road, Farlington Road and A2030 Eastern Road or A27 junction with A2030 Eastern Road. Due to the carriageway width and central islands at the A2030 Havant Road/Farlington Avenue junction it may be necessary for low loader HGVs with cable drums to access Farlington Avenue from the northern end, using the A27 Portsbridge Roundabout, A397 Northern Road, A3 London Road and Portsdown Hill Road to gain access.

3.4.6.2. No construction traffic will use any surrounding residential roads. This will be managed and enforced by provision of route planning information by the contractor.

3.4.6.3. Restrictions in this section include the 'Access Only' 7.5 tonne weight restriction on Farlington Avenue which will be required to be rescinded for the duration of the works on Farlington Avenue.

3.4.7. SECTION 6 – ZETLAND FIELD & SAINSBURY'S CAR PARK

3.4.7.1. Construction traffic will use junction 5 A3(M), A2030 Havant Road, and A2030 Eastern Road or A27 junction with A2030 Eastern Road.

3.4.7.2. No construction traffic will use Lower Farlington Road or Fitzherbert Road. This will be managed and enforced by provision of route planning information by the contractor.

3.4.7.3. There are no vehicular restrictions in this section and no geometric constraints have been identified.

3.4.8. SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

3.4.8.1. Construction traffic will use the A27 junction with the A2030 Eastern Road northbound for the Farlington Playing Fields works and southbound for Portsea Island works.

3.4.8.2. No construction traffic will use the London Road, Copnor Road and Norway Road. This will be managed and enforced by provision of route planning information by the contractor.

3.4.8.3. There are no vehicular restrictions in this section and no geometric constraints have been identified.

3.4.9. SECTION 8 – EASTERN ROAD (ADJACENT TO GREAT SALTERNS GOLF COURSE) TO MOORINGS WAY

3.4.9.1. Construction traffic will use the A27 junction with A2030 Eastern Road for access.

3.4.9.2. No construction traffic will use the section from Copnor Road to Milton Road. This will be managed by provision of route planning information by the contractor.

3.4.9.3. Restrictions in this section include the 5 tonne weight restriction on Eastern Avenue and Moorings Way which will be required to be rescinded for the duration of the works. This is an environmental weight restriction which restricts access between midnight and 07:00 and 19:00 to midnight Monday to Saturday and all day on Sunday. The impacts of lifting this restriction can therefore be mitigated by ensuring that access by construction vehicles follows these restrictions through the contractors CTMP

3.4.10. SECTION 9 – MOORINGS WAY TO BRANSBURY ROAD

3.4.10.1. Construction traffic will use A27 junction with A2030 Eastern Road, A288 Eastney Road, Milton Avenue, Moorings Way, Locksway Road, Kingsley Road, and Bransbury Road

3.4.10.2. No construction traffic will enter the 5 tonne restricted zone of Salterns Avenue residential area. Traffic will not use other residential side streets to travel north or south but will return to A88 Eastney Road or A2030 Milton Road. Construction traffic will leave Portsea Island via A2030 Eastern Road only.

3.4.10.3. There are no vehicular restrictions in this section other than geometric constraints associated with use of residential roads such as Locksway Road, Kingsley Road and Bransbury Road. These are generally 6.0-7.0 m in width with on-street parking on at least one-side of the carriageway. Taking this into account, the contractor will be required to use smaller construction vehicles and plant when accessing these roads.

3.4.11. SECTION 10 – EASTNEY (LANDFALL)

3.4.11.1. Construction traffic will use the A27 junction with A2030 Eastern Road, A288 Eastney Road and Bransbury Road, Henderson Road and Fort Cumberland Road

3.4.11.2. No construction traffic will use the section of Henderson Road to the roundabout with A288 Cromwell Road. This will be managed and enforced by provision of route planning information by the contractor.

3.4.11.3. There are no vehicular restrictions in this section, no geometric constraints have been identified other than removal of the existing height restriction gate at the existing public car park.

3.5. SECTION SPECIFIC CONSTRAINTS AND ISSUES

3.5.1.1. Table 6 details the specific constraints and issues identified at this stage of the project. The individual CTMPs will feature specific detailed including further mitigation that will be agreed with the highway authorities.

Table 5 - Cable Route Section Specific Issues and Constraints

Section	Description	Mitigation stage	Proposed mitigation
1	Geometry of Broadway Lane junction Day Lane	Design	Junction modification
2	Anmore Road open cut trench crossing	Design	Traffic management/diversions
2	Anmore Road access to haul roads narrow carriageway width	Design	Temporary junction design/traffic management/construction traffic marshalling
5	Farlington Road 7.5 tonne weight restriction	Construction	Suspension of weight restriction
6	Eastern Road Zetland Field access	Design	Left turn in left turn out junction
7	Eastern Road access Farlington sports fields	Design	No right turn out from car park to Eastern Road
8	Eastern Avenue 5 tonne vehicular weight restriction	Construction	Suspension of weight restriction
8	Furze Lane bus only road narrow carriageway	Construction	Bus route diversion
8	Ironbridge Lane/Tideway Gardens too narrow for rigid HGVs	Construction	Hand carting of materials from laydown area.

3.6. HGV IMPACT REDUCTION

3.6.1.1. The programme is being developed to minimise the overall impact on the road network, by taking account of seasonal peak traffic, events, the impact of reassigned traffic as a result of concurrent works as far as is practicable. The contractors will be required to minimise the impact of HGV construction traffic on the local community. Mitigation could include, where practicable, maximising loads to reduce vehicular trips, using local suppliers to reduce vehicular mileage, reusing bulk aggregate deliveries HGVs for waste spoil removal, consolidation of deliveries, smaller plant to minimise working widths.

3.6.1.2. Where sections of the highway have an insufficient width for construction, HGVs should pass without reversing or overrunning the verge or footways especially on the narrow rural roads and residential roads. HGV movements will be controlled and managed (e.g. one-way traffic routing) to ensure conflicts do not arise or are minimised wherever possible. Special measures will be detailed in the individual CTMPs to mitigate the impact to pedestrians on roads that do not have footways, especially the rural roads.

3.6.1.3. Wheel washing facilities will be provided where appropriate and the contractors will be required to ensure the public roads in the vicinity are monitored to ensure that they are not contaminated with debris that could become a hazard, and will be required to have road sweeping arrangements on call. Contractors will also be required to provide dust suppression from the works and movement of vehicles.

3.7. COMMUNICATION OF CONSTRUCTION TRAFFIC MOVEMENTS

3.7.1.1. A targeted strategy may be developed to inform the community and road users of up and coming works which could be undertaken through newsletters, road signage and websites (including providing updates to various travel apps/websites). Information could include;

- Duration of works;
- Timing of the works;
- Number of construction movements; and
- Complaint procedure.

3.8. CONSTRUCTION WORK SIGNAGE

3.8.1.1. A works signage strategy (including wayfinding across the project for staff) will be agreed by the construction contractors and the relevant authorities to communicate the construction vehicle routes to access the temporary accesses, laydown areas and compounds. The use of communications technology to ensure efficient staff movements will be explored.

4. CONSTRUCTION WORKFORCE

4.1. OVERVIEW

4.1.1.1. The Proposed Development is expected to have a maximum of 150 construction workers for Converter Station plus 50-60 construction workers for construction of the Onshore Cable Corridor at the peak construction year. It is anticipated that up to six construction gangs will be working concurrently along sections of the Onshore Cable Route, plus a construction gang a Landfall. Mitigating the number of vehicular trips generated by construction staff travelling to and from their place of work and between work site locations is a key objective of the CTMPs.

4.2. CONSTRUCTION WORKERS

4.2.1.1. It is anticipated that there will be six construction worker gangs working on the Onshore Cable Route at any one time, in addition to those at the Converter Station Area and Landfall.

4.2.1.2. Working hours for the installation of the Onshore Cable installation are Monday to Friday, 07.00-17.00 and Saturday typically 08:00 to 13:00; and for the construction of the Converter Station are 08.00 -18.00 Monday to Friday and Saturday morning typically between 08.00-13.00. There will be some working outside these hours, for example to undertake trenchless techniques on the Onshore Cable Route (12 to 24 hour shifts), reduce duration of works in some locations; accommodate delivery of abnormal loads and minimise traffic impacts or overnight to limit daytime disruption. Working hours for the Marine Cable installation will be 24 hours

4.2.1.3. The final working hours and associated traffic movements will be agreed with the planning authorities.

4.3. STAFF TRAVEL PLANNING STRATEGY

4.3.1.1. This CTMP provides a guide to enable the production of the individual CTMPs by the contractors. Measures to encourage the use of sustainable modes will be encouraged and promoted by the contractor in their individual CTMPs. Examples of potential mitigation and management measures;

- Minibuses could be provided to transport staff to sites as required from the main construction compound and collection from transport hubs (railways stations and bus terminals). Consolidating all trips to one location will aid the promotion of travel to work by sustainable models;

- Parking can be controlled and prevented at construction sites to ensure construction workers do not park inappropriately on surrounding roads causing nuisance to residents. This will be managed by the contractor;
- Information boards could be used at the construction compounds detailing public transport information to encourage travel and to hubs where collection by minibuses is possible;
- Provision could be proposed for secure cycle parking at construction compounds;
- Welfare facilities at work sites such as canteens will prevent the need to travel during the working day; and
- Measures to encourage sustainable travel should be used including car sharing/a specific ride share app for staff to use on the project.

4.3.1.2. A Framework Construction Worker Travel Plan is contained within Appendix 6.

4.4. STAFF COMMUNICATION STRATEGY

4.4.1. STAFF INDUCTION

4.4.1.1. The contractors will be encouraged to provide a comprehensive staff induction for staff associated with each phase of the works.

4.4.1.2. Development of an information pack that will be distributed to all contractors, sub-contractors, hauliers and any staff associated with the project will be promoted. This would provide key information including;

- Permitted construction vehicle routes;
- Site rule and site traffic management;
- Location of holding areas; and
- Contact information.

4.4.1.3. Construction vehicle recognition through the use of unique identification plates could be implemented. This could allow vehicles for the construction works to be more easily identified by site staff and members of the public to aid complaints procedure.

5. TEMPORARY SITE ACCESSES

5.1. OVERVIEW

5.1.1.1. Locations for site access to haul roads and compounds from the public highway are required. These will be designed to ensure they are safe and delay and impact to the public is minimised.

5.2. DESIGN, MANAGEMENT AND MITIGATION

5.2.1.1. Any site access will be designed based around the existing constraints including speed limit, highway width, restrictions, traffic flows and visibilities. In some cases where geometry and sight lines are limited it may be necessary to temporarily reduce the speed limit with a traffic regulation order. Each access will be designed to the appropriate design guidelines (DMRB, HCC/PCC design standards).

5.2.1.2. A general principle will be to ensure that all vehicles entering and exiting do so in forward gear, other than in exceptional circumstances, in which case any reversing required will only be undertaken with the aid of a banksman and vehicle warning equipment. Layouts will ensure that vehicles can be checked and rejected if necessary off the public highway or in an area that is demarcated from the public highway. All site accesses will be laid out to avoid vehicles queuing back on to the highway.

5.2.1.3. Some site accesses will segregate construction traffic while other, particularly, the main compounds, will allow access for private vehicles of the construction work force.

5.2.1.4. All designs and locations of site access will be agreed with the appropriate highway authority and a plan of the anticipated access is contained within Appendix 4.

5.3. SITE ACCESS LOCATIONS

5.3.1.1. The following site accesses have been identified through the proposed design for the onshore cable route.

5.3.2. SECTION 1 LOVEDEAN (CONVERTER STATION)

5.3.2.1. A site access which will become a permanent access with be situated on Broadway Lane just south of the junction with Day Lane. This will provide access to the Converter Station and the fields between the Converter Station and Anmore Lane (as shown in Appendix 2)

5.3.3. SECTION 2 – ANMORE

5.3.3.1. The site access in Section 1 will be utilised as the access point. There will be a required crossing of the unnamed road between Anmore Lane and Edney's Lane. However, construction traffic will not be allowed to use this road owing to its narrow nature and geometry which is only suitable for small vehicles.

5.3.4. SECTION 3 – DENMEAD/KINGS ROAD MEADOW

5.3.4.1. An access will be required from Anmore Road south into Kings Pond Meadow via an existing gate. This access will be utilised as an exit for the HDD compound.

5.3.5. SECTION 4 - HAMBLEDON ROAD TO FARLINGTON AVENUE

5.3.5.1. An access will be made from Hambedon Road north-west of the junction with Soake Road in the Kings Pond Meadow and will be used as an entry point for the HDD compound.

5.3.5.2. An access will be required to the triangular plot of land that will serve as a laydown area on A3 London Road opposite No. 200 and 208 London Road, Waterloovile.

5.3.5.3. The car park on the southside of Portsdown Hill Road near Hilltop Crescent will be utilised for construction purposes and will require the height restriction barrier to be removed.

5.3.6. SECTION 5 – FARLINGTON

5.3.6.1. No accesses are proposed on this section.

5.3.7. SECTION 6 – ZETLAND FIELD & SAINSBURY'S CAR PARK

5.3.7.1. An access to the works in Zetland Field will be required. Due to the central reservation on A2030 Eastern Road, this access will be left-turn-in and left-turn-out.

5.3.7.2. There will be a construction compound in the Sainsbury's car park for the reception pit of Trenchless solution under the south coast railway embankment from Farlington Playing Fields. However, this access will be made from within the Sainsbury's car park (private).

5.3.8. SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

5.3.8.1. The Farlington Playing Fields construction works will be assessed from its access road which is privately owned and not public highway.

5.3.8.2. The HDD compound at the land adjacent to Kendall's Wharf will utilise the existing access to the land.

5.3.9. SECTION 8 – EASTERN ROAD (ADJACENT TO GREAT SALTERNS GOLF COURSE) TO MOORINGS WAY

5.3.9.1. To access the northern section of Milton Common, it is intended to use the East Solent Coastal Partnership compound. This will be accessed from the A2030 Eastern Road south of the Langston Harbour viewing car park once their works are completed in October 2022.

5.3.10. SECTION 9 – MOORINGS WAY TO BRANSBURY ROAD

5.3.10.1. If the option to follow the route through the University of Portsmouth playing fields to Longshore Way is utilised, then the turning head and pedestrian gate access to the playing field will be utilised as a construction access point.

5.3.10.2. The rear of the Thatched House public house from Locksway Road will be utilised for construction access.

5.3.10.3. A construction access from Kingsley Road to the common land south of the allotments will be required for the horizontal directional drilling works.

5.3.10.4. The car park access from Bransbury Park from Bransbury Road will be utilised and require the height restriction barrier to be removed.

5.3.11. SECTION 10 – EASTNEY (LANDFALL)

5.3.11.1. The existing car park off Fort Cumberland Road, which is the Landfall and ORS will be utilised for construction access.

6. REQUIRED HIGHWAY INTERVENTIONS

6.1. OVERVIEW

6.1.1.1. The planning stage has identified interventions in Section 1 at the Converter Station and Day Lane that will be required to facilitate the construction of the Onshore Cable Route. The individual CTMPs may identify further interventions that alleviate narrow/constrained roads and junction which geometry cannot accommodate the manoeuvring of larger vehicles. These will also seek to allay safety concerns regarding visibility and sight lines. Traffic management measures will be implemented to ensure general traffic can continue to flow safely and effectively around the construction sites for the Interconnector, as well as ensuring construction vehicles can access the relevant worksites safely and with limited delay.

6.1.1.2. This Framework CTMP provides an overview of the interventions that have been identified at this stage. The individual CTMPs to be prepared by the construction contractors will include detail design and independent safety auditing. All will require approval by the appropriate Highway Authority.

6.2. INTERVENTIONS IDENTIFIED

6.2.1.1. The following measures will be required.

6.2.2. SECTION 1 – LOVEDEAN (CONVERTER STATION AREA)

6.2.2.1. The geometry of the Broadway Lane/Day Lane junction has been identified as a constraint by the design team, third parties during consultation and the abnormal load contractor (as shown in Appendix 5). The geometry of the junction cannot be eased owing to the location of existing electrical cable jointing. Therefore, a new construction access road is proposed to 'smooth' the corner. It will also serve as a construction traffic holding area as shown on the construction access drawing included in Appendix 2. It is intended that the infrastructure other than the permanent site access will be removed when construction is complete.

6.2.2.2. The effective carriageway width of Day Lane between Lovedean Lane and Broadway Lane has been identified that in places it may not be wide enough for two HGVs to pass, as shown on swept path analysis included in Appendix 6. This will be mitigated with a combination of regular maintenance and traffic management. Regular 'siding' will take place to clear the earth that has fallen on to the carriageway edges from the unrestrained verges to ensure maximum carriageway width is maintained. This will include regular cutting back of the verge vegetation. Traffic management can also be utilised for sections where the width remains a concern. At this stage, this has been identified as the 270m section located between east of the proposed construction traffic link road (before the s-bends) and the eastern end of the row of residential properties. Shuttle working traffic signals are proposed. The shuttle working traffic signals would only need to be operational during permitted times when HGVs travel to/from the Converter Station.

6.2.2.3. A section of approximately 50 metres length of Lovedean Lane between the junction with Day Lane and New Road has also been identified as an area that may not be wide enough for two HGVs to pass as shown on swept path analysis included in Appendix 6. In this location the road has no defined edge and the verges are earth and unrestrained. A centre line has not been provided. South of New Road, Lovedean Lane enters the residential conurbation and has a hard kerb edge increasing the effective width and a centre line is provided. For the identified narrower section, similarly as described above for Day Lane, regular 'siding' will take place and cutting back of the verge to ensure the maximum carriageway width is available. The section is short and straight and drivers could be expected to priority work as they would on any narrow road or when an obstruction is met.

6.3. TRAFFIC MANAGEMENT

6.3.1.1. Traffic management will be required for the construction of the entire Onshore Cable Route on the highway network and this will be laid out to the requirements of the TSRGD 2016 Chapter 8. A separate report (Appendix 6 (Framework Traffic Management Strategy) of Appendix 22.1 (Transport Assessment) has been prepared that details the requirements.

7. MANAGEMENT OF ROAD SAFETY

7.1. OVERVIEW

7.1.1.1. This section details strategy and measures that will be taken to ensure road safety is maintained during the construction. Highway condition is related to road safety and therefore included in this section.

7.2. EXISTING COLLISION RECORD

7.2.1.1. The existing collision record has been assessed in Appendix 22.1 (Transport Assessment). Roads that had a higher than average collision rate were assessed in more detail to understand if the road infrastructure was contributing. If the collision rate 25% higher than the national average injury collision rate further analysis was undertaken. If areas of concern were highlighted then further analysis was undertaken. No issues in relation to the existing highway layout or geometries were identified.

7.3. LIAISON, MONITORING AND MITIGATION

7.3.1.1. Near misses or collisions resulting in personal injury from traffic associated with the cable route construction traffic will be monitored throughout the programme to identify areas for improvements. A road safety and liaison officer will be appointed and be responsible for continuous monitoring of traffic management and signage. They will make improvements where necessary within the confines of the temporary Traffic Regulation Orders ('TRO's) and liaise with the highway authorities. They will also respond to public concerns and contact details will be provided.

7.3.1.2. The road safety liaison officer will be responsible for the continual monitoring of the road works for the Onshore Cable Route to ensure the proactive management of road safety. It will be ensured there is sufficient road signage to warn the public and inform construction related traffic to ensure compliance and route choice. There will also be contact telephone numbers for public to raise concerns as well as the provision of a website will be explored. Receptors that attract vulnerable people will be updated on a regular basis (e.g. schools) as necessary.

7.3.1.3. If during the construction localised mitigation measures are required these will be agreed with the relevant highway authorities and incorporated in to the individual CTMPs.

7.4. HIGHWAY CONDITION

7.4.1.1. Highway condition is closely related to road safety and construction traffic, particularly HGVs can have a negative impact to road condition. Therefore, it is proposed before and after construction pavement condition surveys are undertaken and to assess whether construction activities have resulted in worsening road conditions.

7.4.1.2. Weekly conditions surveys will be produced during the works programme to identify areas that are worsening and will become a hazard to other road users that require immediate action.

8. IMPLEMENTATION AND MONITORING

8.1. OVERVIEW

8.1.1.1. For a CTMP to be affective a robust monitoring process is required to ensure compliance.

8.2. DETAILED CTMPS

8.2.1.1. This Outline CTMP will form the framework for individual CTMPs to be produced by the contractors once they are appointed. These will then be approved by the relevant Highway Authority. These individual CTMPs will provide details of;

- Construction vehicle routing;
- A highway condition survey of all routes proposed and accesses;
- Road closures;
- Specific details regarding abnormal loads if any;
- Details of the interventions to the highway that are required to enable construction works (permanent or temporary) and reinstatements;
- Specific details regarding traffic management and construction management such as temporary signage, requirements for banksman or escort vehicles, wheel washing, shuttle buses etc.; and
- Details of construction staff travel arrangements/travel plan.

8.2.1.2. The works will be broken down into a number of sections which may result in multiple contractors being appointed. This will result in a number of individual CTMPs being prepared to cover different sections and stage of works which could include;

- Enabling and permanent works; and
- Specific works including Landfall, landfall head house, the Onshore Cable Route, construction compounds, HDD, Trenchless Solutions at the south coast railway, and the Converter Station works.

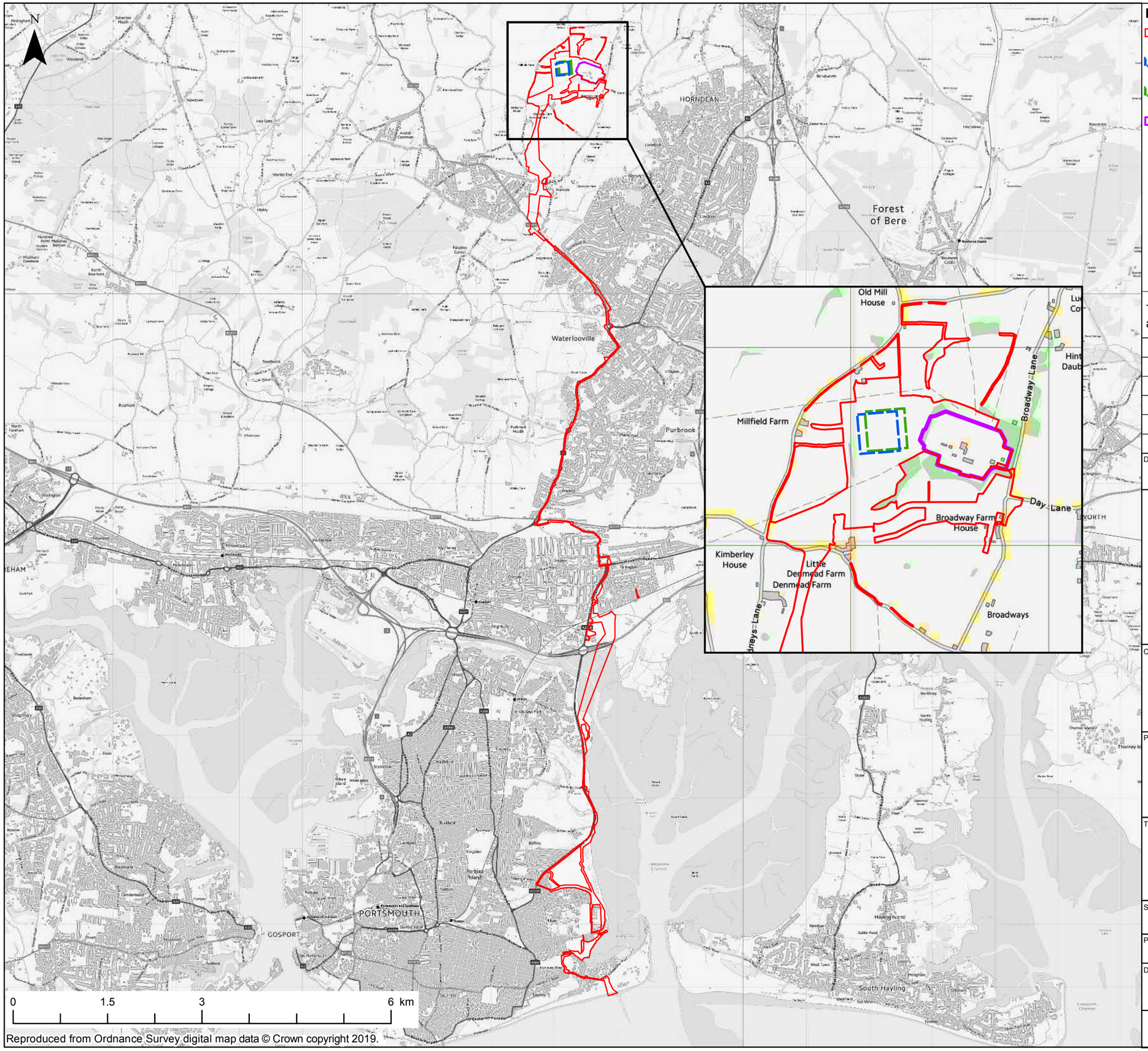
8.3. COMPLIANCE AND MONITORING

8.3.1.1. Responsibility for monitoring and compliance will lie with the Applicant. They will ensure that the construction contractors produce final CTMPs that are compliant and ensure their obligation to monitor is understood.

8.3.1.2. Several key points of contact will be made for the project who will liaise with relevant planning/highway authority and ensure coordination between contractors for all the section of works during the entire construction programme. This will facilitate a clear communication channel to ensure compliance.

8.3.1.3. The individual CTMPs will provide details of the monitoring process and who is responsible with contact details. These will be developed and agreed with the relevant planning authority.

Appendix 1 – Order Limits



Key

- Order Limits
- Converter Station Perimeter Option B (i)
- Converter Station Perimeter Option B (ii)
- Existing Substation Boundary

The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2017 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	29/10/2019	JT	Final	GI	MMcG

DRAWING STATUS: Final

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Figure 3.2
Order Limits (Onshore)

SCALE AT A3	CHECKED:		APPROVED:
1:59,806	GI		MMcG
PROJECT NO: EN020022	DESIGNED: JT	DRAWN: JT	DATE: 29/10/2019

DRAWING NO: EN020022-ES-3.2 REV.NO. 01

Appendix 2 – Converter Station Access Drawing

N

LOVEDEAN SUBSTATION ACCESS

BROADWAY LANE

132kV POWER CABLES

EXISTING JUNCTION TO BE RETAINED
23m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 22mph (MfS2)

9.6m

OVERHEAD POWER LINE. TO BE UNDERGROUNDED

SSE UNDERGROUND INFRASTRUCTURE TO BE AVOIDED. EXACT LOCATION TO BE CONFIRMED IN SURVEY

AREA WITHIN VISIBILITY SPLAYS TO BE CLEARED OF VEGETATION AND DEDICATED AS HIGHWAY

7.3m

R30

GATES TO CONTROL ACCESS TO LINK

PROPOSED OFF HIGHWAY LINK TO PROVIDE SITE ACCESS FOR CONSTRUCTION AND FUTURE LARGE/OVERSIZED VEHICLES. TO BE CLOSED OFF FROM GENERAL TRAFFIC

DAY LANE

LOVEDEAN LANE (SITE ACCESS ROUTE)

5.8m

70m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 39mph (MfS2)

PROPOSED PERMANENT SITE ACCESS JUNCTION

R10

7.3m

R10

R30

TREE TO BE REMOVED

GATES TO CONTROL ACCESS TO LINK

TREES/LARGE HEDGEROW TO BE REMOVED

ROOT PROTECTION AREA WITH ASSUMED 3m DIAMETER TREE

BROADWAY LANE

7.0m

50m CURVE RADIUS SHOULD LIMIT VEHICLE SPEEDS TO APPROXIMATELY 33mph (MfS2)

UTILITY RECORDS OVERLAY

KEY TO HEALTH AND SAFETY SYMBOLS

SERVICES SHOWN ON RECORD MAPPING WITHIN PROPOSED WORKS:
-132kV POWER CABLES
-11kV OVERHEAD POWER LINES
-GAS
-POTABLE WATER
-TELECOM SERVICES

NOTES

1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
2. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE.
3. MANUAL FOR STREETS (MfS) STANDARDS HAVE BEEN ADOPTED TO EVALUATE APPROPRIATE VISIBILITY AND SPEEDS. THIS STANDARD IS TYPICALLY APPLIED TO URBAN AREAS BUT FOR THESE ELEMENTS IS MORE SUITABLE FOR MINOR RURAL ROADS THAN DMRB STANDARDS.
4. 85TH PERCENTILE SPEEDS OF 31mph MEASURED SOUTHBOUND JUST BEFORE BEND TO NORTH OF ACCESS, AND 41mph MEASURED NORTHBOUND WELL SOUTH OF THE ACCESS. 50m RADIUS BEND TO SOUTH OF ACCESS SHOULD LIMIT SPEEDS TO 33mph (MfS2 PARA 8.3.5). THEREFORE A 31mph/50kph DESIGN SPEED HAS BEEN ADOPTED.
5. 45m SSD BASED ON MfS TABLE 7.1
6. ARTICULATED LORRY / LOW LOADER VEHICLE MOVEMENTS INTO ACCESS JUNCTION AND EXISTING SUBSTATION JUNCTION WILL TAKE UP WIDTH OF CARRIAGEWAY SO WILL REQUIRE CONTROL.

KEY

- DEVELOPMENT CONSENT ORDER BOUNDARY
- HIGHWAY BOUNDARY / ASSUMED HIGHWAY BOUNDARY
- 45m FORWARD VISIBILITY
- 2.4m x 45m VISIBILITY SPLAY
- 2.4m x OUTSIDE OF BEND VISIBILITY SPLAY
- ROOT PROTECTION AREA

SERVICES KEY

DISCLAIMER NOTE

INFORMATION ON THE LOCATION AND SIZE FOR EACH SERVICE HAS BEEN BASED ON RECORD INFORMATION PROVIDED BY THE RELEVANT SERVICE COMPANIES. THE POSITIONS SHOWN ARE INDICATIVE ONLY AND MAY NOT BE COMPLETE. THE PRESENCE OF SERVICES ON SITE SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION WORK OR INTRUSIVE INVESTIGATIONS.

- EXISTING GAS PIPE
- EXISTING HIGH VOLTAGE (OVERHEAD)
- EXISTING EXTRA HIGH VOLTAGE (U/G)
- EXISTING VODAFONE CABLE
- EXISTING BRITISH TELECOM (U/G)
- EXISTING POTABLE WATER PIPE

Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
02	31/10/2019	MFB	UPDATED DRG FRAME & ADDED TREE LOCATIONS	CW	CW
01	19/09/2019	MFB	FIRST ISSUE	CW	CW

DRAWING STATUS: SUBMISSION FOR APPROVAL

wsp
Regus House, Southampton Int. Bus. Park, George Curl Way, Southampton, SO18 2RZ, UK
T+ 44 (0) 2380 302 529, F+ 44 (0) 2380 302 001
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: BROADWAY LANE
SITE ACCESS JUNCTION - OPTION B
GENERAL ARRANGEMENT

SCALE AT A1:	CHECKED:		APPROVED:
1:500	CW		CW
PROJECT No: 62100616	DESIGNED: MFB	DRAWN: MFB	DATE: 19/09/2019

DRAWING No: AQD-WSP-UK-OS-DR-Z-200215 REV: 02

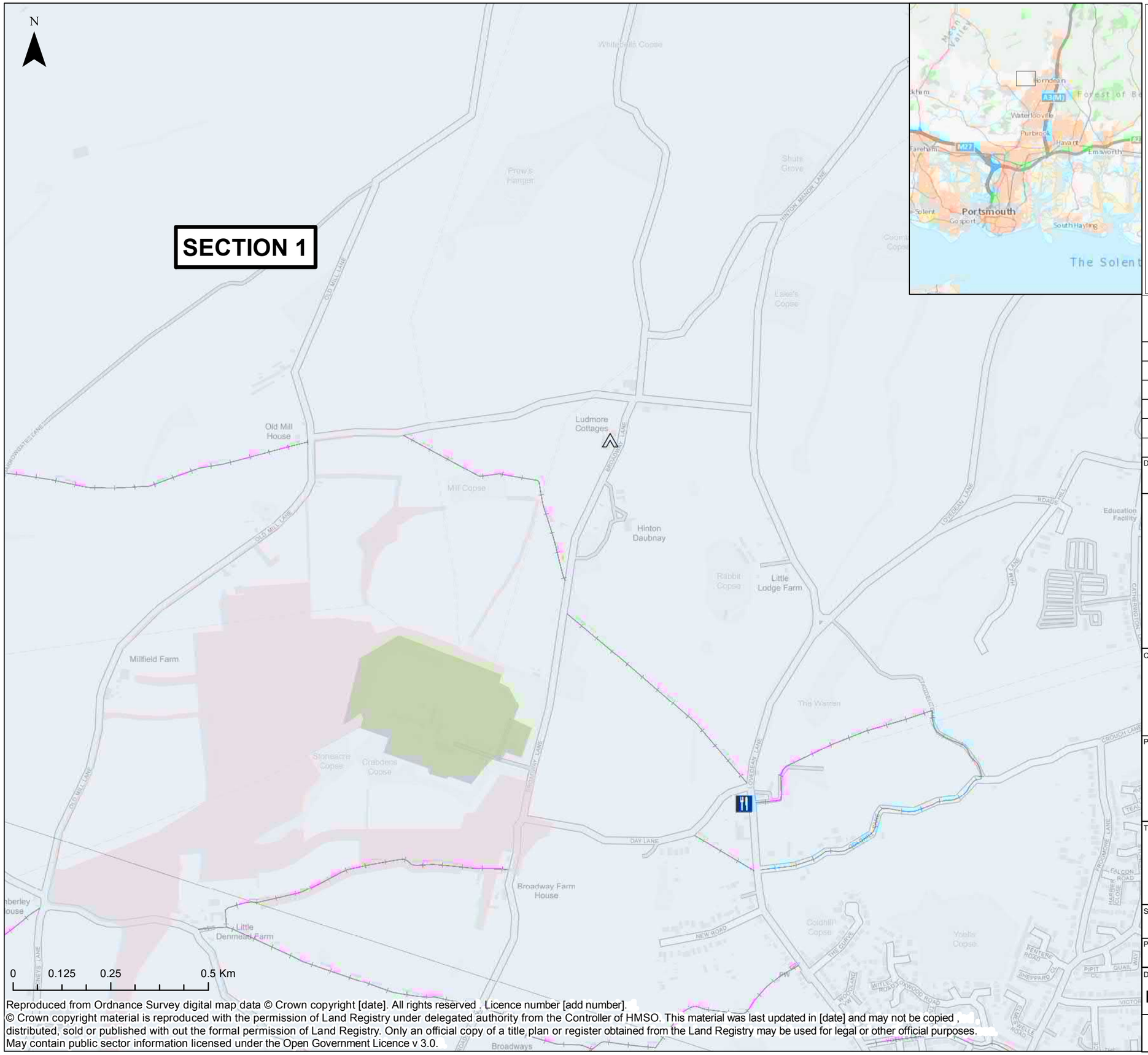
File name: \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\62100\X06\100616 - AQUIND VO HO3\E MODELS AND DRAWINGS\300 - SITES\20 - TASK 7 UK ROUTE\HIGHWAY ARRANGEMENTS\AQD-WSP-UK-OS-DR-Z-200215.DWG

Appendix 3 – Construction Programme

			2021		2022				2023				2024			
Key Task	Related Activities	Indicative Duration (Weeks)	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Landfall Installation	**All activities**															
	Preparation, drilling and duct installation	44														
	Transition Joint Bay															
	ORS															
Onshore Cable Installation (UK)	All activities															
	Route construction															
	Cable pulling															
	Jointing and terminating															

			2021		2022				2023				2024			
Key Task	Related Activities	Indicative Duration (Weeks)	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
Converter Station Construction	All activities, including reinstatement															
	Enabling /Diversion Works															
	Main Civils Construction works															
	Mechanical and Electrical Work															

Appendix 4 – Sensitive Receptors and Temporary Access Locations



AQUIND Interconnector

TYPE

Campsite

Pub

Education

School Type

Other Educational Facility

Order Limits

Sections

Public Rights of Way

BOAT

Footpath

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

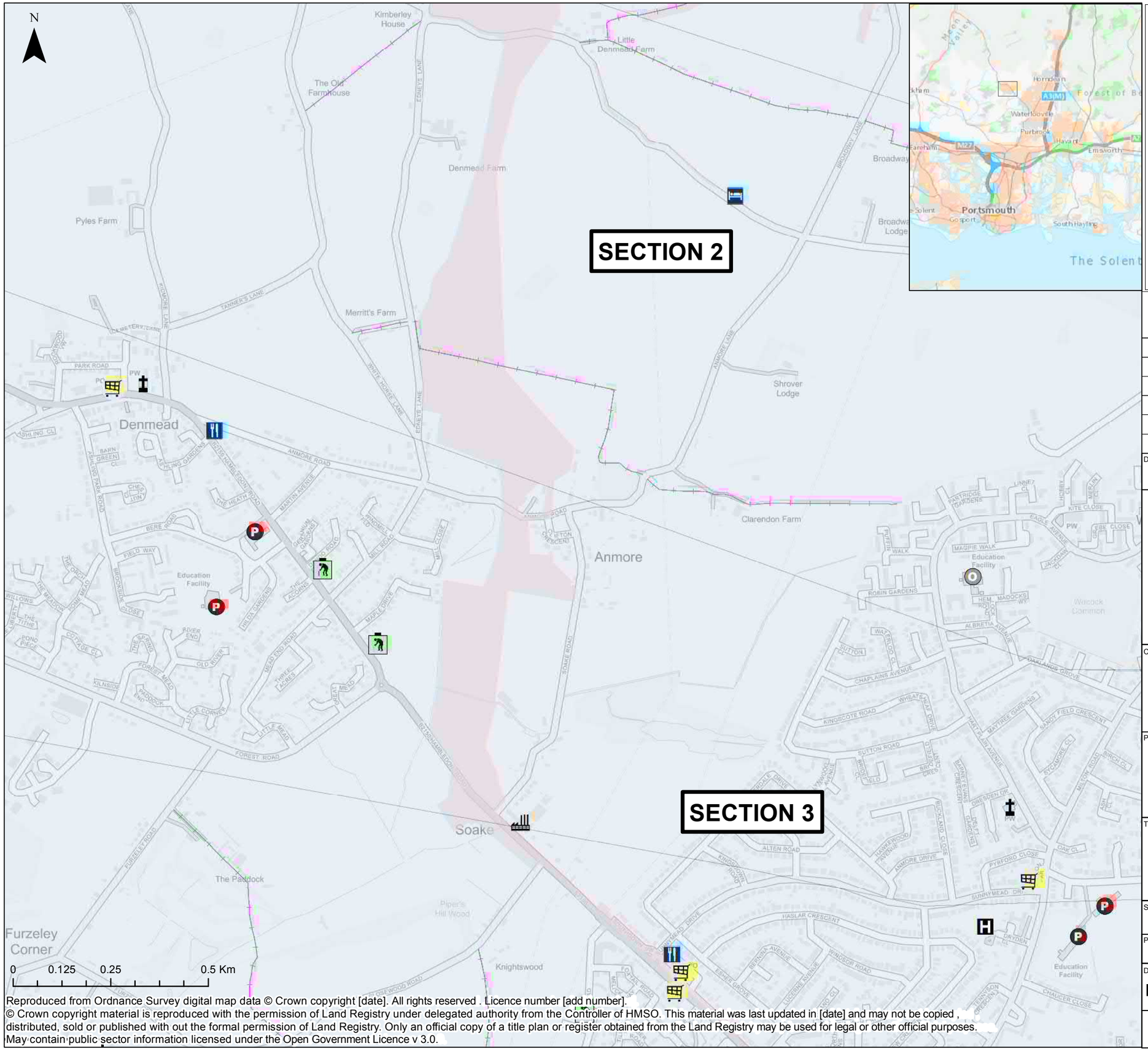
PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 1

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.1

REV.NO. 01



AQUIND Interconnector

TYPE

- B&B
- Campsite
- Caravan Park
- Care Home
- Church
- Community Centre
- Education
- Guesthouse
- Industrial Estate
- Leisure
- Lifeboat Station
- Marina
- Medical Group
- Pub
- Retail
- Scout Hut
- Order Limits

Public Rights of Way

- Bridleway
- Footpath
- Sections

School Type

- Primary
- Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

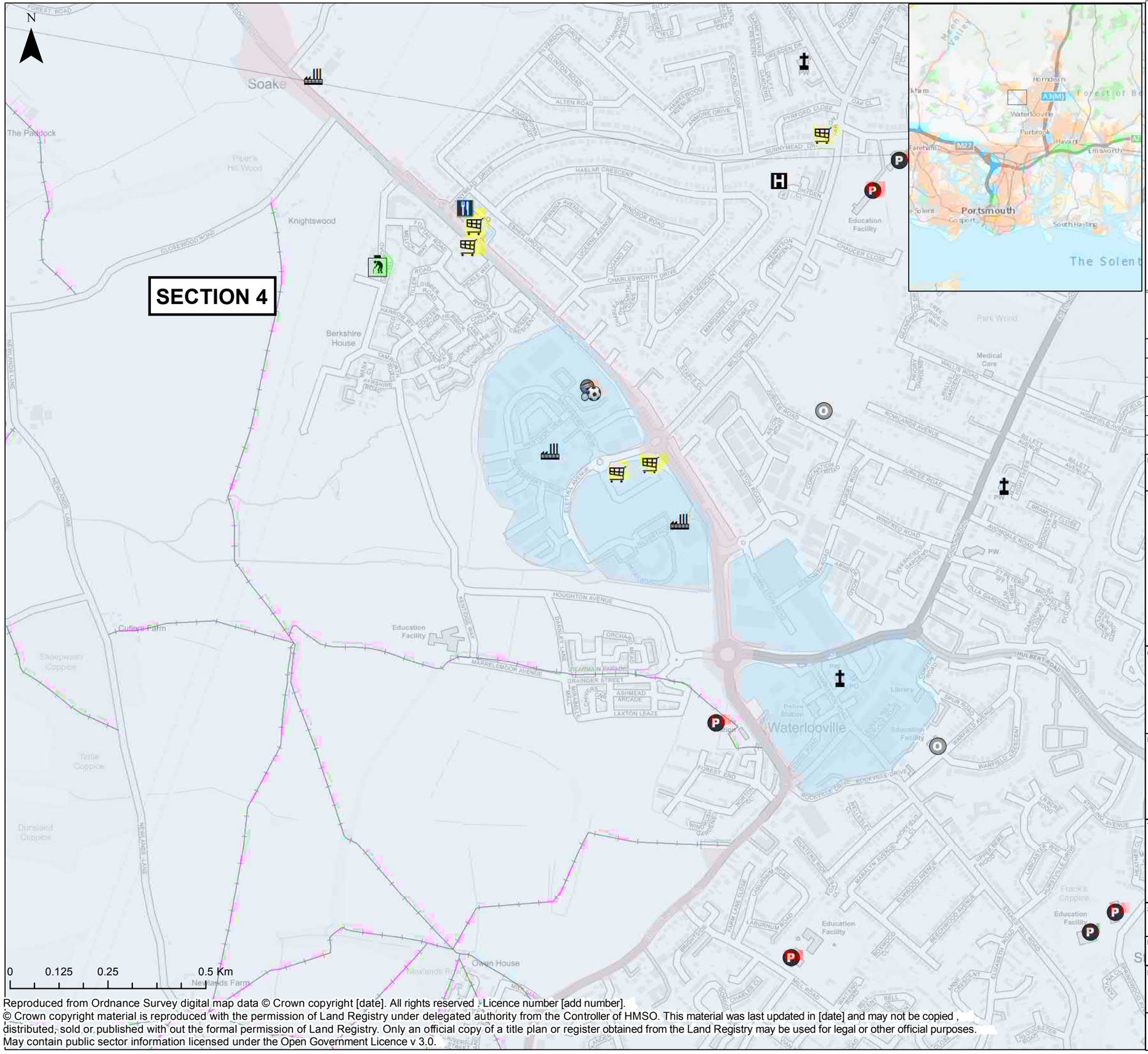
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 2/3

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.2 REV.NO. 01



TYPE

- Care Home
- Church
- Industrial Estate
- Leisure
- Medical Group
- Pub
- Retail
- Order Limits

Public Rights of Way

- Bridleway
- Footpath
- Restricted Byway
- Sections
- Existing

- Primary
- Secondary
- Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

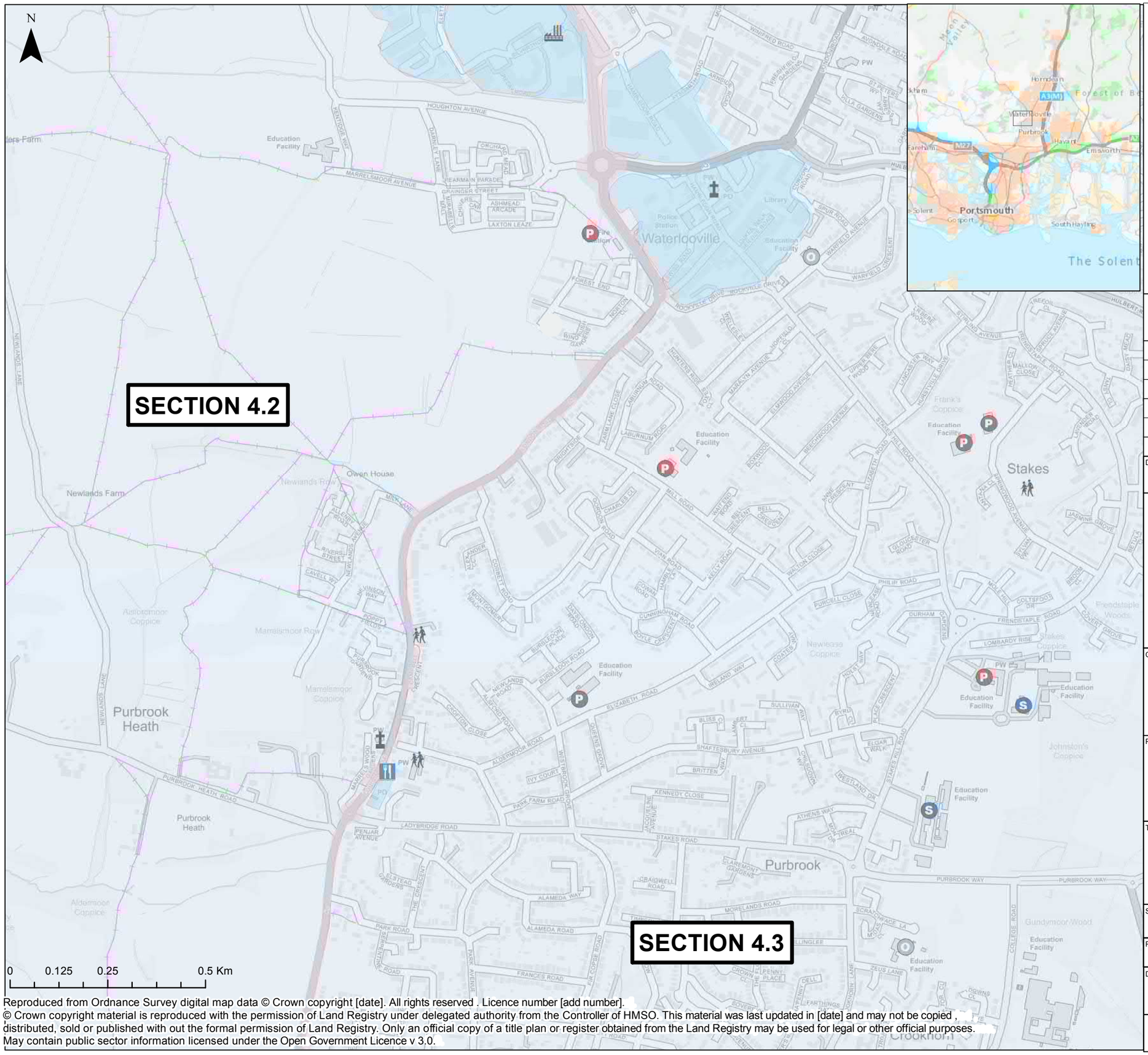
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 4.1

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.3 REV.NO. 01



AQUIND Interconnector

Sections

TYPE

- Church
- Community Centre
- Industrial Estate
- Pub
- Existing

School Type

- Primary
- Secondary
- Other Educational Facility

Public Rights of Way

- BOAT
- Bridleway
- Footpath
- Restricted Byway
- Order Limits

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

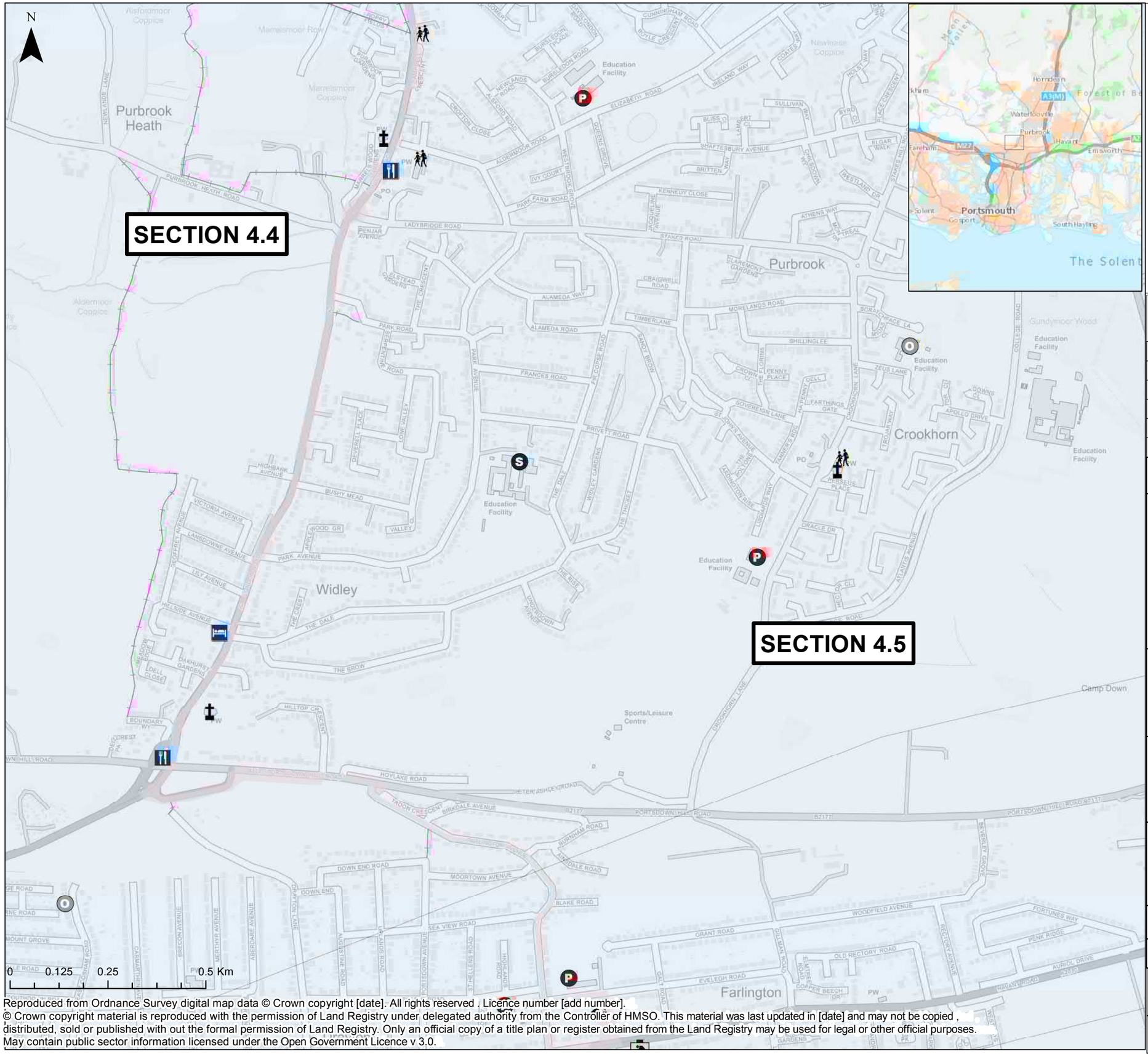
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 4.2 / 4.3

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO:	REV.NO.
EN020022-ESAPPENDIX-22.1.F.4	01



AQUIND Interconnector

TYPE

- Care Home
- Church
- Community Centre
- Guesthouse
- Pub
- Scout Hut
- Red Line Boundary

School Type

- Primary
- Secondary
- Other Educational Facility
- Sections

Public Rights of Way

- Footpath

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST DRAFT	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

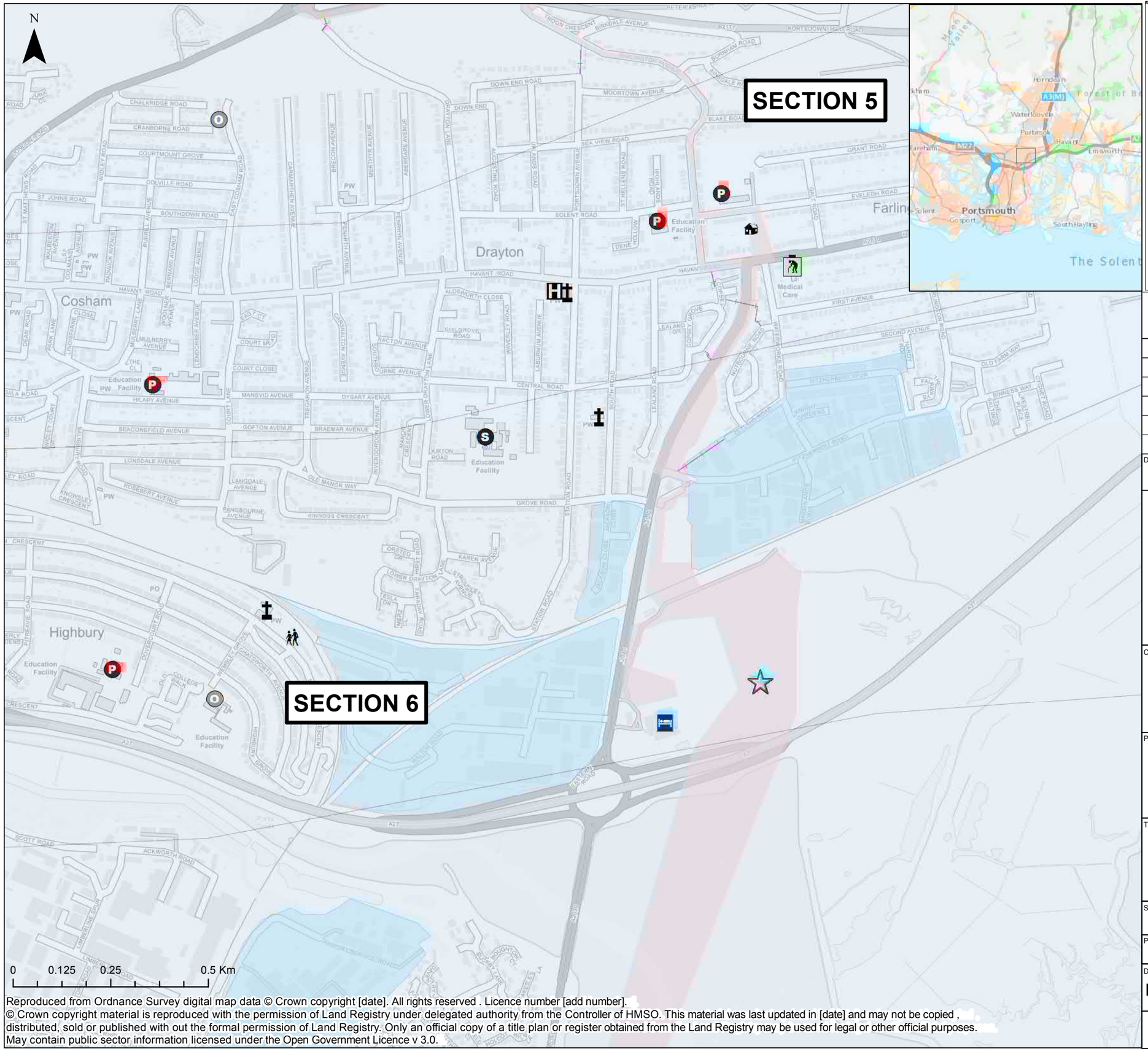
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 4.4 / 4.5

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.5 REV.NO. 01



TYPE

- Care Home
- Church
- Community Centre
- Guesthouse
- Medical Group
- Scout Hut
- Victorious Music Festival
- Order Limits

Public Rights of Way

- Footpath
- Sections
- Existing

School Type

- Primary
- Secondary
- Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

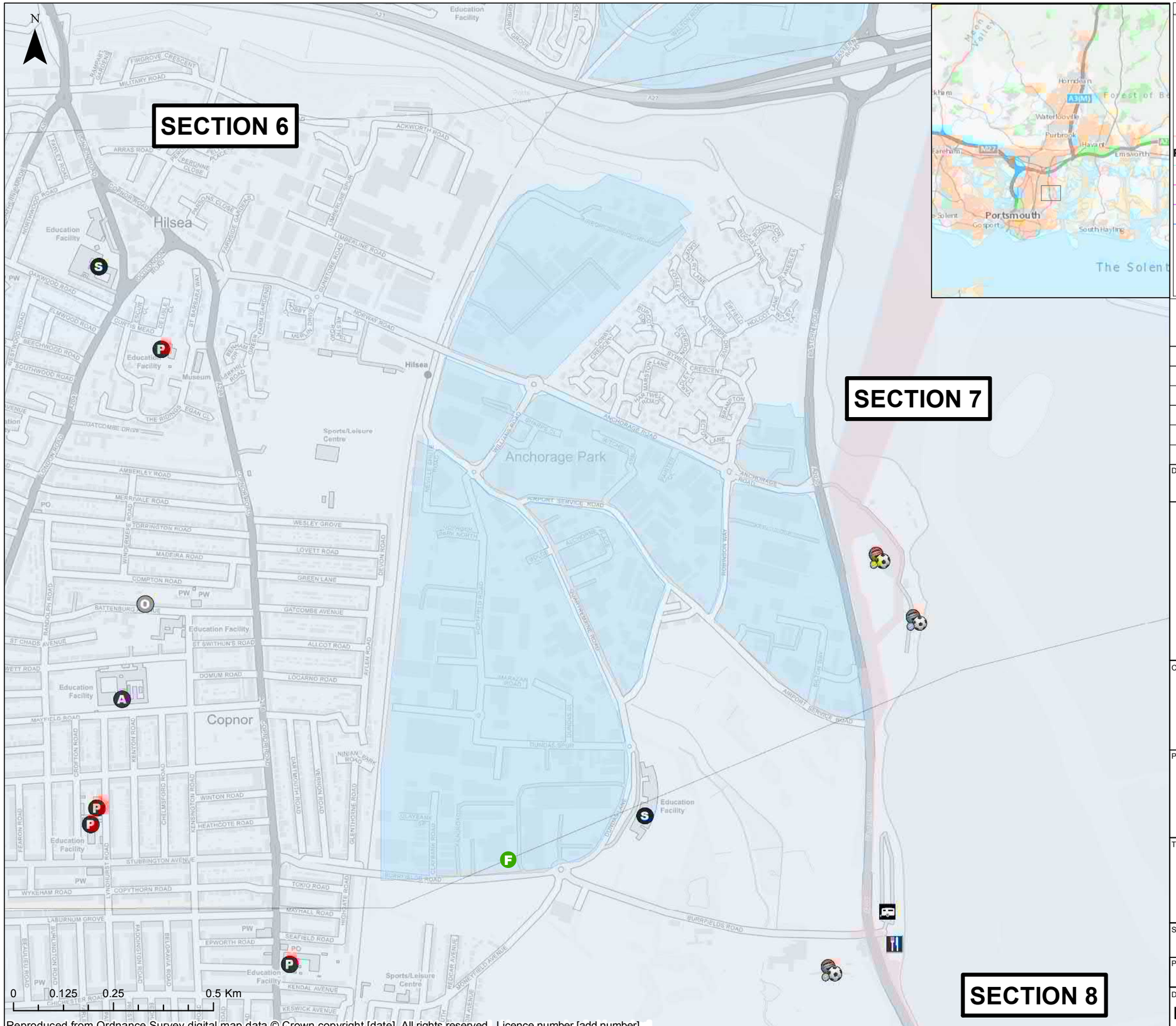
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 5.1 / 5.2 / 6

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.6 REV.NO. 01



TYPE

- Caravan Park
- Leisure
- Pub
- Order Limits

Public Rights of Way

- BOAT
- Bridleway
- Footpath
- Restricted Byway

School Type

- Nursery
- Primary
- Middle Deemed Primary
- Secondary
- Middle Deemed Secondary
- Further Education
- All Through
- Other Educational Facility

- Sections
- Existing

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

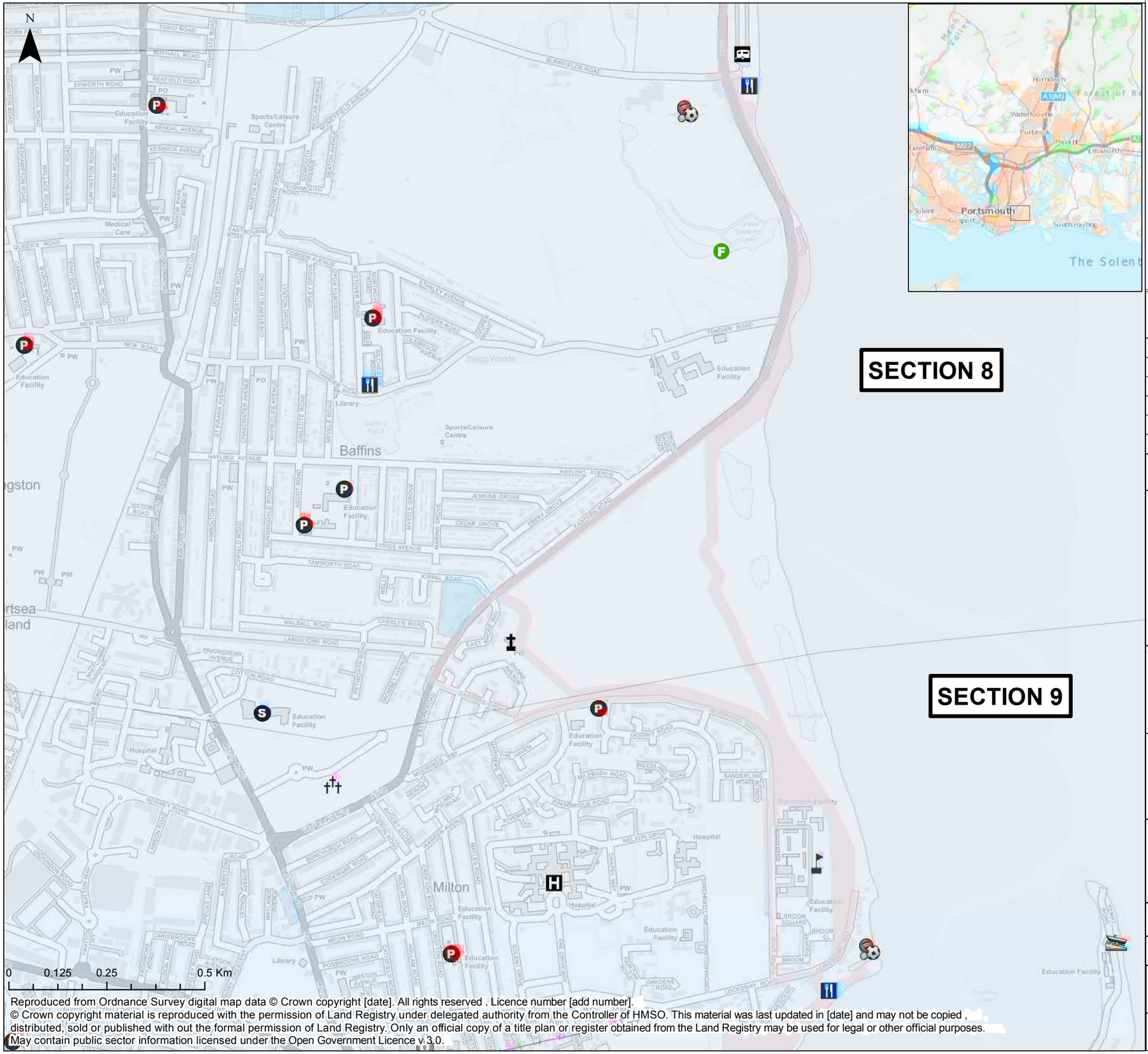
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 7 / 8.1

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.F.7 REV.NO. 01



TYPE

- Caravan Park
- Cemetery
- Church
- Education
- Leisure
- Lifeboat Station
- Medical Group
- Pub

- Order Limits

Public Rights of Way

- Footpath
- Sections
- Existing

School Type

- Primary
- Secondary
- Other Educational Facility
- Further Education

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

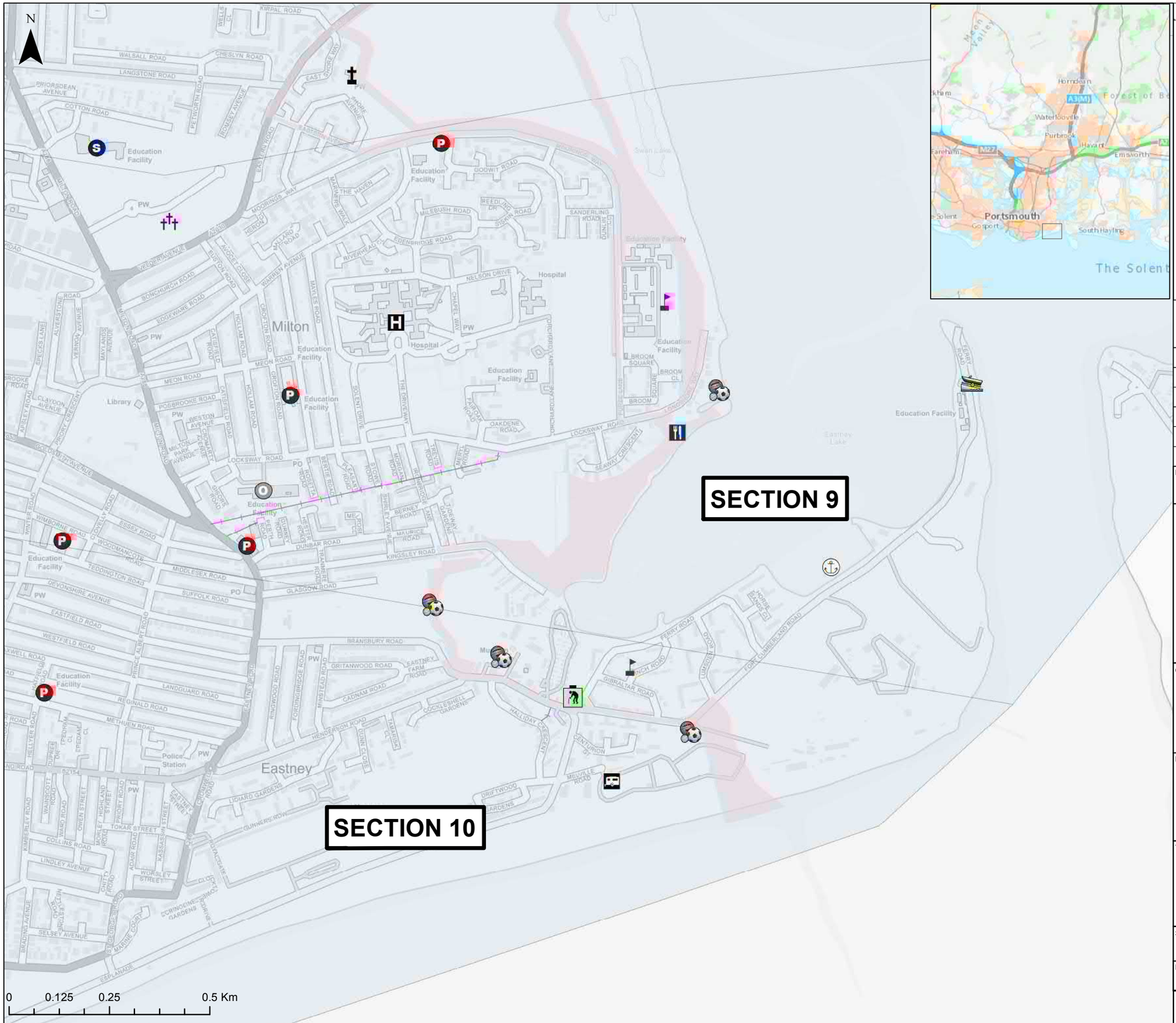
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: CTMP Sensitive Receptors - Section 8.2 / 9

SCALE AT A3	CHECKED:		APPROVED:
1:9,651	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO:	REV.NO.
EN020022-ESAPPENDIX-22.1.F.8	01



TYPE

- Caravan Park
- Care Home
- Cemetery
- Church
- Education
- Leisure
- Lifeboat Station
- Marina
- Medical Group
- Pub

Public Rights of Way

- Footpath
- Order Limits

School Type

- Primary
- Secondary
- Other Educational Facility
- Sections

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Outline Traffic Management Proposals - Section 10

SCALE AT A3	CHECKED:	APPROVED:
1:9,651	CW	CW

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO:	REV.NO.
EN020022-ESAPPENDIX-22.1.F.9	01

Appendix 5 – Abnormal Indivisible Load Study

COLLETT

EXPERTS IN MOTION

Route Access Survey
333100

A3(M) J2 to AQUIND Lovedean

WSP
September 2019

COLLETT
EXPERTS IN MOTION

Victoria Terminal
Albert Road
HALIFAX
West Yorkshire
HX2 0DF

Mistral Point
AW Nielsen Road
GOOLE
East Yorkshire
DN14 6UE

Baltic House
Central Dock Road
GRANGEMOUTH
Central Scotland
FK3 8TY

Tel. +44 (0) 8456 255 233
Fax +44 (0) 8456 255 244
Email info@collett.co.uk

www.collett.co.uk

Contents

Report Details

Report for
Stewart Urquhart
WSP
Three White Rose Office Park
Millshaw Park Lane
Leeds
LS11 0DL

Attendees of Survey
Steven Mangham

Time / Date of Survey: 2nd July 2019

General weather conditions: Mixed

Issued by
Steven Mangham

Approved by
Steven Mangham

Collett & Sons Ltd
Victoria Terminal
Albert Road
Halifax
West Yorkshire
HX2 0DF
Tel: +44 (0) 8456 255288
Fax: +44 (0) 8456 255244

Document Revisions

No	Date	Details
1	04/11/2019	Updated to client comments
2	08/11/2019	Updated to client comments

Non-Disclosure Notice

The methodology contained in this report is provided to you in confidence and must not be disclosed or copied to third parties without the prior written agreement of Collett & Sons Limited. Disclosure of that information may constitute an actionable breach of confidence or may otherwise prejudice our commercial interests. Any third party who obtains access to this report by any means will, in any event, be subject to the Third Party Disclaimer set out below.

Third Party Disclaimer

Any disclosure of this report to a third party is subject to this disclaimer. The report was prepared by Collett & Sons Limited at the instruction of, and for use by, our client named on the front of the report. It does not in any way constitute advice to any third party who is able to access it by any means. Collett & Sons Limited excludes to the fullest extent lawfully permitted all liability whatsoever for any loss or damage howsoever arising from reliance on the contents of this report. We do not however exclude our liability (if any) for personal injury or death resulting from our negligence, for fraud or any other matter in relation to which we cannot legally exclude liability.

Company Profile

Collett & Sons Ltd established in Halifax over 45 years ago specialise in the multimodal logistics throughout the UK, Europe and Worldwide.

Our Company owns a modern fleet of over 60 vehicles and over 100 trailers, operating from 3 depots located in Halifax, Goole and Grangemouth.

The depots situated in Google and Grangemouth offer strategically located sites suitable to provide central hubs for distribution throughout the UK. Each facility is complete with up to 110 tonnes lifting capacity in order to be able to handle all various abnormal load types. As logistical partners, the company is able to offer the complete transport solution from point of manufacture through to job site.

Collett & Sons Limited operate an in-house consultancy that deals with transport feasibility, route and site access surveys, Swept Path Analysis, Traffic Management Plans, Test Drives and Environment Statements.

In addition to consulting services, Collett & Sons Limited delivers the following services;

Marine
Port Operation
Heavy Lift Storage
Heavy Transport
Project Management
Freight Forwarding
Heavy Lift
General Haulage
Warehousing
Test Station (DVSA-authorised)
SHEQ Training





Collett & Sons Ltd
Victoria Terminal
Albert Road
Halifax
West Yorkshire
HX2 0DF

+44 (0) 8456 255288
renewables@collett.co.uk
www.collett.co.uk

1. Executive Summary

1.1. This report comprises of a study of the road route as detailed here in for the road transport of a transformer to the proposed AQUIND Lovedean site, Lovedean, Hampshire.

1.2. One route has been assessed from the A3(M) Junction 2 to the Day Lane/Broadway Lane junction, Lovedean.

1.3. Due to the height of the proposed transformer and subsequent vehicle configuration, a suitable high load route is required from Port to start of the route detailed in this report body.

Third party land

1.4. Third party land is required that the Day Lane/Broadway Lane junction if Option 2 is selected as the preferred method of navigating that junction.

Road widening

1.5. Road widening within highways owned land is required at the A3/Lovedean Lane junction on the nearside footpath. Area to be made suitable to withstand axle loadings.

Modifications to street furniture

1.6. Modifications to street furniture will be required along the route at a number of locations. The locations where street furniture removal is required are: B2149/A3 Junction, A3/Lovedean Lane Junction, Right bend on Lovedean Lane, Lovedean Lane/Day Lane Junction and Day Lane/Broadway Lane Junction.

Vertical Alignment and Height Clearances

1.7. Due to the length and nature of the route there are a high number of overhead utility lines. The heights of these lines have not been assessed as part of this survey and further investigation is required with the utility companies, once the final load dimensions are determined, to establish their cable heights and any remedial measures that may be required.

1.8. There are no overhead structures on the routes.

1.9. On Day Lane, there is an incline gradient which will require the loaded vehicle to be towed. Towing vehicles will be required for deliveries.

Structural Assessment

1.10. Consultation with the relevant authorities has not been undertaken as part of this assessment due to the high G.V.W of the loaded configuration.

1.11. For loads of this nature, it is usually expected/recommended that full structural surveys are undertaken of any structures on the route. Once the exact load dimensions are established, consultation with the relevant authorities is required to determine the structural suitability of the route.

1.12. It should be noted that this route has been used for delivery of transformers to the Lovedean facility although that does not necessarily mean that this route is suitable for loads of this nature.

Other areas of note

1.13. Tree pruning will be required at numerous locations to ensure that a clear envelope is present for the vehicle.

1.14. As part of the delivery convoy, tree surgeons and utility companies will be required to accompany the loads to make any necessary amendments.

Unloading on site to Bund/Plinth

1.15. Once the loaded vehicle arrives at the proposed site, the load will require unloading to the bund/plinth.

1.16. It is recommended that the proposed site is designed to allow the loaded girder set to navigate alongside the plinth, where the transformer can then be unloaded from the Girder set and then moved into position using the Jack and Skate method.

1.17. If this site cannot be designed to achieve the above, transhipment on site to a SPMT vehicle will be required to move then transformer to the plinth for Jacking and Skating.

2. Introduction

2.1 Collett & Sons Ltd. were commissioned by WSP to undertake an abnormal loads route access study to assess the transportation of a transformer components to the proposed AQUIND Lovedean Facility at Lovedean, Hampshire.

2.2 The road routes as detailed herein are for the road transport of the transformer component identified in Section 4.

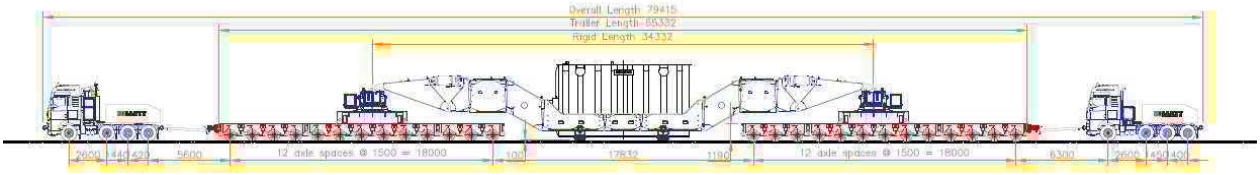
2.3 The purpose of this report is to detail access from Junction 2 of the A3(M).

3. Candidate Abnormal Loads

3.1. WSP have requested that the assessment on which this report is compiled be based on the following Cargo Details: Length 10200mm, depth 4100mm, height 5100mm.

4. Abnormal Indivisible Load Profiles

4.1. The abnormal load components are assessed based on weight, length, width and height and loaded to the most appropriate vehicle the weights and dimensions of these are detailed below. The loading diagrams are detailed in Appendix 1.

4.2.	COL-D-333100-1-1
LIN STORAGE TANK	
	
	Loaded vehicle dimensions
Overall vehicle Length	79.415m
Rigid Length	34.332m
Width	6.20m
Height	5.452m
Gross Vehicle Weight exc. Tractor Units	492.82Te
Maximum axle line weight	15.275Te

5. Responses from Statutory Consultees (Structures Suitability)

Summary of Structural Issues

5.1. Consultation with the relevant authorities has not been undertaken as part of this assessment due to the high G.V.W of the loaded configuration.

5.2. For loads of this nature, it is usually expected/recommended that full structural surveys are undertaken of any structures on the route. Once the exact load dimensions are established, consultation with the relevant authorities is required to determine the structural suitability of the route.

5.3. It should be noted that this route has been used for delivery of transformers to the Lovedean facility although that does not necessarily mean that this route is suitable for loads of this nature.

6. Route Assessment Overview

6.1. This section of the report illustrates the route assessed for the delivery of the storage tank components from Ellesmere Port to Air Liquide Facility at Coleshill.

6.2. For the purpose of this report, one route to the site was surveyed. All the routes surveyed in this report have been identified by Collett Consulting.

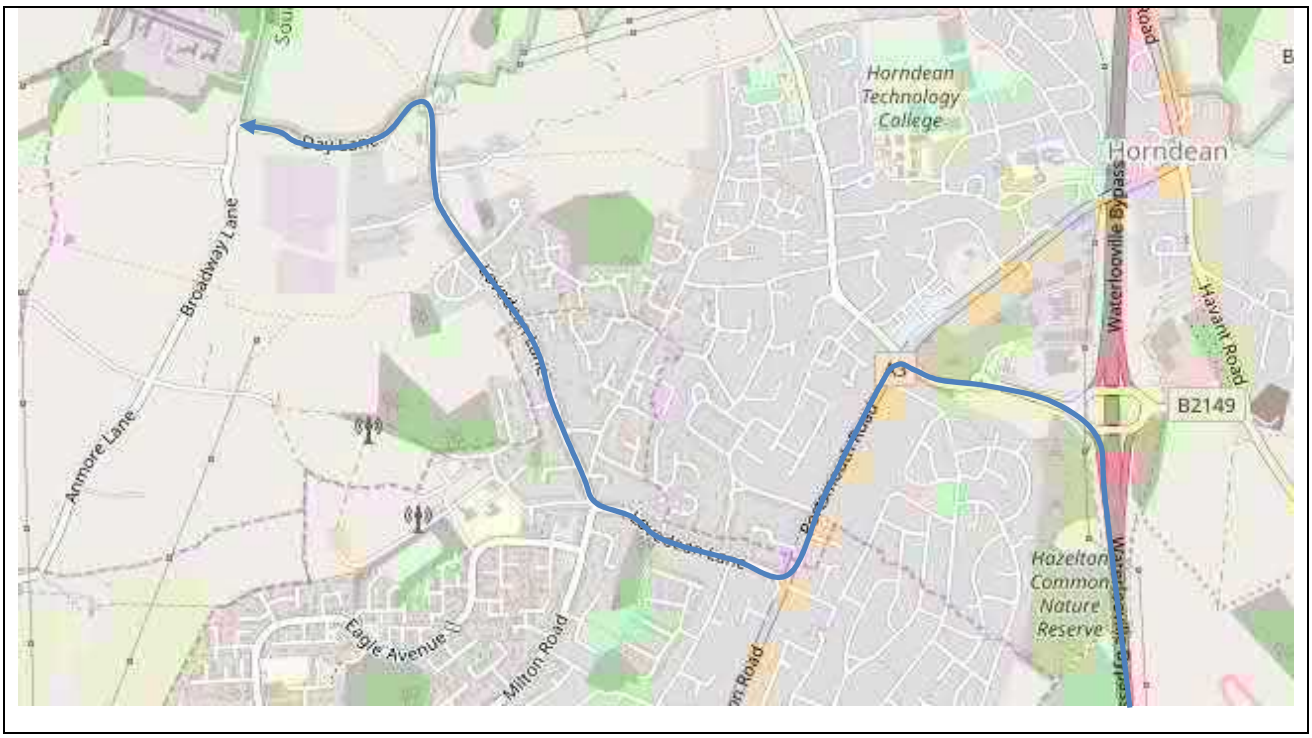
6.3.

Route A

Start Location	M3 Junction 2	Distance of Route	Km	Miles
Via:	B2149/A3/Lovedean Ln		4.1	2.5

- Exit M3 Northbound at Junction 2
- At roundabout, turn left onto B2149
- At roundabout, continue straight on B2149
- Turn left onto A3
- Turn right onto Lovedean Lane
- Turn left onto Day Lane
- At junction with Broadway Lane, continue onto new access road.

6.4. Map Overview



6.5. Amendment Categorisation

For the purposes of this report, the route amendments have been identified into 3 categories.

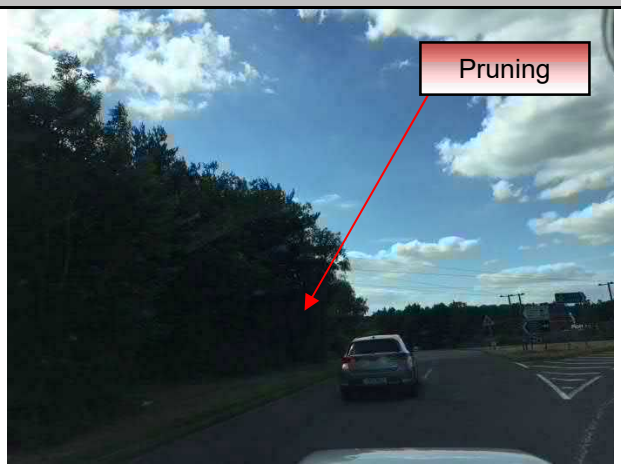
Major Amendments – Third Party Land, Road Widening
Minor Amendments – Modifications to Street Furniture, Pruning, Contraflow Manoeuvre, Manual Steering
No Amendments - Location is suitable as assessed during this survey

The categories have been colour coded for each report item as per the below key.

KEY					
	Major Amendments		Minor Amendments		No Amendments

6.6. Map extract of survey locations

ITEM NUMBER	6.6.1	LOCATION	A3(M) JUNCTION 2/B2149 ROUNDABOUT
DIRECTION	Take 1st Exit at the roundabout		
GRID REFERENCE	SU 70411 12347		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Swept path analysis indicates that pruning of vegetation on the nearside will need to be made in order for the vehicle to pass through this section of the route.	 View of exiting the roundabout
	 Vehicle Direction

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	Swept Path Analysis
RELATED DOCUMENT NUMBERS	COL-D-333100-10-2		

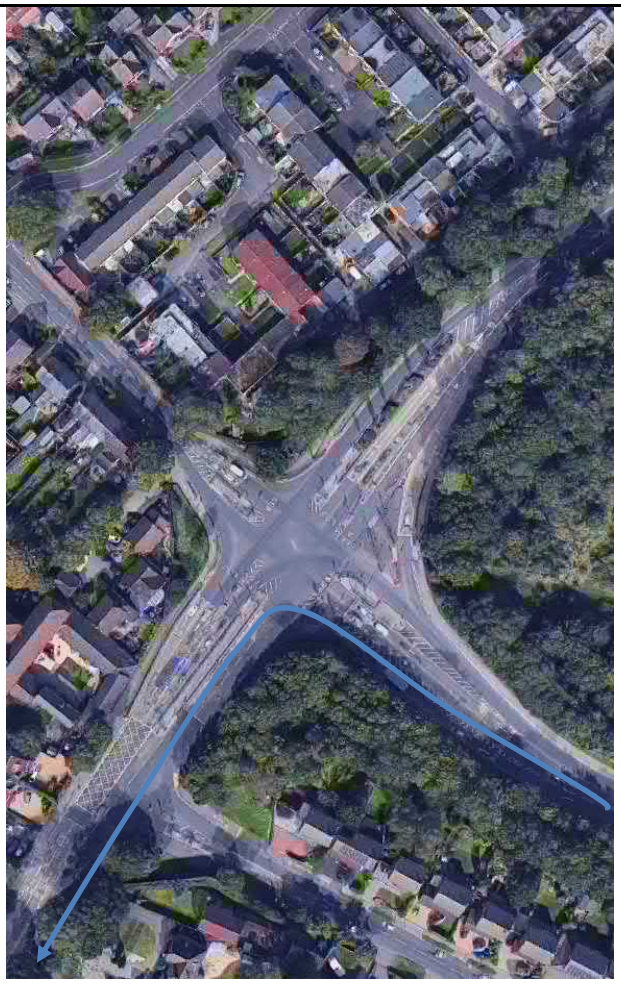
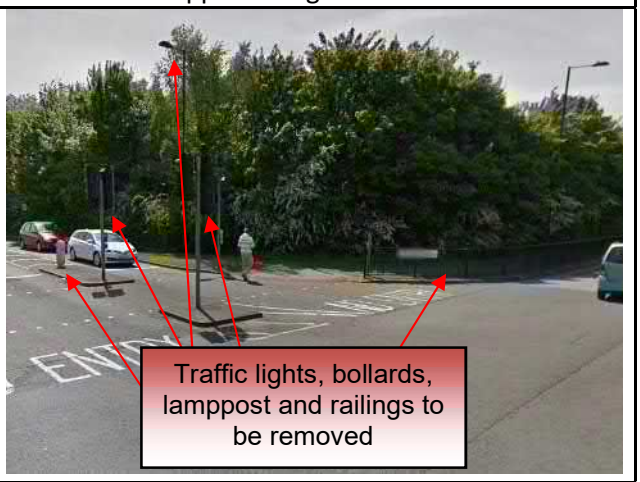
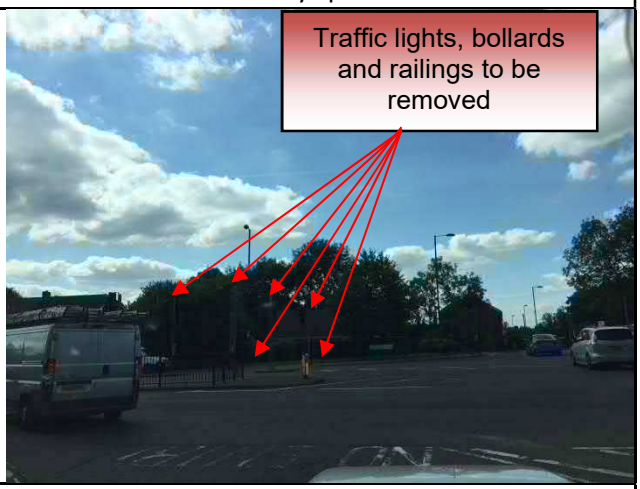
ITEM NUMBER	6.6.2	LOCATION	B2149 ROUNDABOUT
DIRECTION	Take 1st Exit at the roundabout		
GRID REFERENCE	SU 70065 12480		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Visual inspection indicates that the vehicle will have no issues at this location.	
	Entry to roundabout
	
	Vehicle Direction

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	NO	TYPE	N/A
RELATED DOCUMENT NUMBERS	N/A		

ITEM NUMBER	6.6.3	LOCATION	B2149/A3 JUNCTION
DIRECTION	Turn left at this junction		
GRID REFERENCE	SU 69831 12559		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Swept path analysis indicates that modifications to street furniture are required at this location. The filter splitter lane, traffic lights and bollards to be removed. The central reservation needs to be cleared to allow over sail, removal of traffic lights and barriers on the offside are also required. Loaded vehicle will contraflow the central reservation on the A3.	 Approaching Crossroads
 Aerial View of Location	 View of entry splitter island  View of spliter island

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	Swept Path Analysis
RELATED DOCUMENT NUMBERS	COL-D-333100-10-3		

ITEM NUMBER	6.6.4	LOCATION	SPLITTER ISLAND ON A3
DIRECTION	Continue straight at this location		
GRID REFERENCE	SU 69566 12079		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Visual inspection indicates that pruning of vegetation will be requried at this location. Tree on nearside to be pruned to provide a clear envelope.	
	View of splitter island

Vehicle Direction

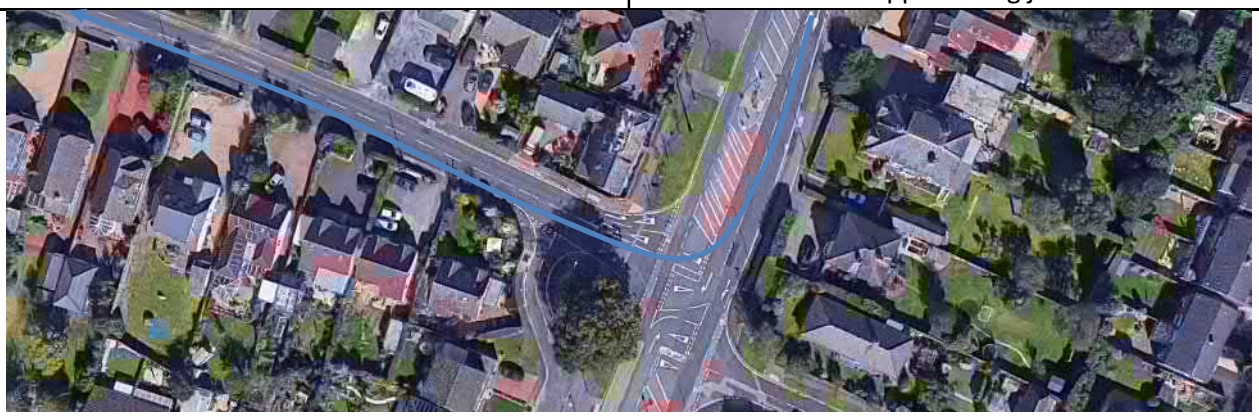
View of splitter island

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	NO	TYPE	N/A
RELATED DOCUMENT NUMBERS	N/A		

ITEM NUMBER	6.6.5	LOCATION	A3/LOVEDEAN LANE JUNCTION
DIRECTION	Turn right at this junction		
GRID REFERENCE	SU 69483 11884		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Swept path analysis indicates that road widening is required on the nearside of the A3 to allow axles to run on the footpath area. Area to be made suitable to withstand axle loadings. Swept path analysis indicates that modifications to street furniture are required on the nearside at this location. Road signs to be removed in order for the trailer to oversail the grass patch.	 Reverse view of junction  View of approaching junction



Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	Swept Path Analysis
RELATED DOCUMENT NUMBERS	COL-D-333100-10-4		

ITEM NUMBER	6.6.6	LOCATION	RIGHT BEND ON LOVEDEAN LANE
DIRECTION	Continue straight at this location		
GRID REFERENCE	SU 68900 12105		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Swept path analysis indicates that modifications to street furniture will be required at this location. Bollards on the splitter island to be removed to allow trailer oversail.	
	Approaching right bend
	
	Reverse view of vehicle direction

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	Swept Path Analysis
RELATED DOCUMENT NUMBERS	COL-D-333100-10-5		

6.7. Map extract of survey locations

ITEM NUMBER	6.7.1	LOCATION	LOVEDEAN LANE/DAY LANE JUNCTION
DIRECTION	Turn left at this junction		
GRID REFERENCE	SU 68375 13325		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Swept path analysis indicates that modifications to street furniture on the nearside will be needed at this location, Road sign to be removed to allow the vehicle to oversail land on the nearside of the bend. Trailer to be raised to oversail area. **NOTE** From this junction to the junction with Broadway Lane, there is an incline in the road levels. It is anticipated that a towing vehicle(s) will be required on this stretch of road.	 Vehicle Direction  Reverse view of junction

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	Swept Path Analysis
RELATED DOCUMENT NUMBERS	COL-D-333100-10-6		

ITEM NUMBER	6.7.2	LOCATION	RIGHT BEND ON DAY LANE
DIRECTION	Continue straight at this location		
GRID REFERENCE	SU 68227 13211		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Visual inspection indicates that pruning will be required on both sides of the road.	
	View of approaching right bend

Pruning of trees before right bend

Vehicle Direction

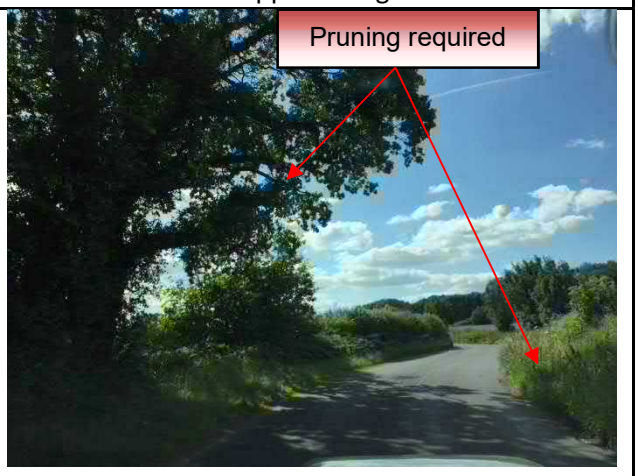
Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	NO	TYPE	N/A
RELATED DOCUMENT NUMBERS	N/A		

ITEM NUMBER	6.7.3	LOCATION	S-BEND ON DAY LANE
DIRECTION	Continue straight at this location		
GRID REFERENCE	SU 67975 13207		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
Visual inspection indicates that pruning will be required on both sides of the road at this location.	
	View of approaching S-Bend

Vehicle Direction

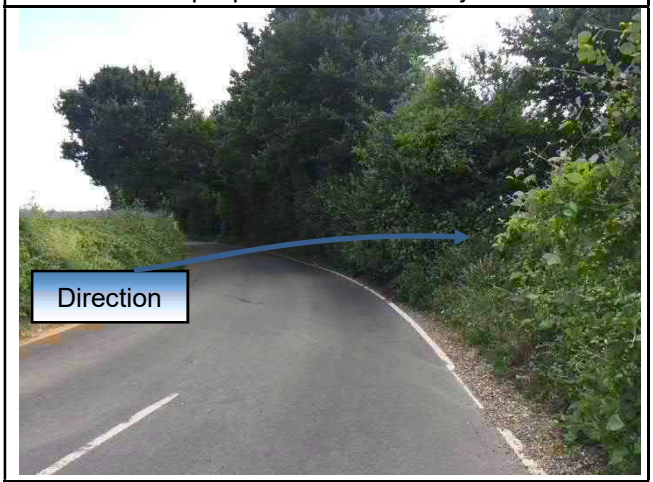


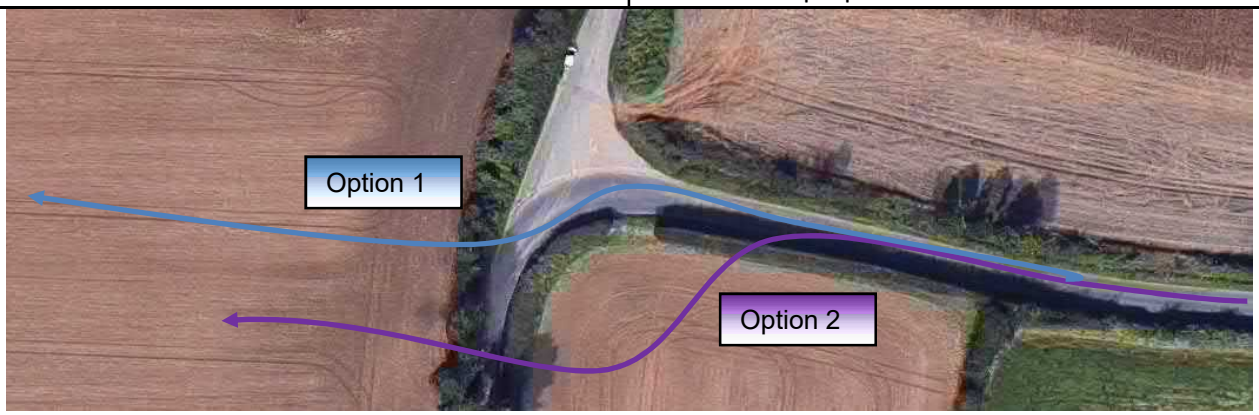
View of S-Bend

Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	NO	TYPE	N/A
RELATED DOCUMENT NUMBERS	N/A		

ITEM NUMBER	6.7.4	LOCATION	DAY LANE/PROPOSED ACCESS TRACK JUNCTION
DIRECTION	Continue straight at this location		
GRID REFERENCE	SU 67788 13245		

MODIFICATION AND DESCRIPTION	PHOTOGRAPH OF LOCATION
OPTION 1 – COL-D-333100-10-7 Swept path analysis indicates that hedgerow on the nearside to be removed and cleared to allow the girder set to navigate onto the road. New access as per drawing required and modifications undertaken to accommodate this. OPTION 2 – COL-D-333100-10-8 Swept path analysis indicates that new track to be constructed through third party land on the nearside. Hedgerow to be removed to allow new track to be constructed. New access as per drawing required and modifications undertaken to accommodate this. GENERAL Both these options are considered to be more cost effective and less disruptive than creating a transhipment area in land on the nearside at the Solar frame. Both these options allow for the load to be transported to the final destination without the need to tranship to a SPMT vehicle or similar.	 View of proposed access track junction  View of proposed access track enterance



Aerial View of Location

FURTHER INVESTIGATION UNDERTAKEN?	YES	TYPE	SWEPT PATH ANALYSIS
RELATED DOCUMENT NUMBERS	COL-D-333100-10-7/8		

7. Important Notes

7.1. The recommendations in this report are made from a purely transport orientated view, and do not consider any political issues in terms of land ownership, or any other precincts raised that may otherwise be restrictive.

7.2. The information contained in this report is privileged and confidential and is for the exclusive use of the client nominated herein.

7.3. A Police escort or pilot car will be required in order to assist with traffic control for the entire route surveyed.

7.4. Permits will be required for the movement of all loads. These permits are at the discretion of the Highways Agency (H.A). Therefore, approval of these permits by the H.A is a major consideration before any movements can be undertaken.

7.5. It is recommended to have adequate warning signs implemented to warn other road users at critical points.

7.6. All hedges, shrubs, bushes, trees and overhanging branches along the nominated routes must be trimmed to allow a suitable minimum envelope.

7.7. All street furniture, signage etc. along the nominated route must be removed to allow a suitable minimum envelope on the road. Other specific street furniture has been nominated in this report to facilitate over-sailed and swept areas.

7.8. Overhead utility cables have not been measured as part of this survey and correspondence with the utility companies regarding cable heights and possible remedial solutions should be undertaken prior to any delivery.

7.9. It should be noted that all assessments and inspections have been done so with the intention of producing information to highlight anticipated problems. This includes highlighting of potential land take requirements, possible street furniture implications, and highway alignment issues.

7.10. Land take is usually referred to when land is required from private land owners; road widening is usually referred to when land is required within highways boundaries. However the details of the nominated land take and road widening contained in this report are highlighting the expected areas of concern, and can only be confirmed by swept path analysis. The boundaries between private land and highways property are assumed by using obvious demarcation such as fence lines/hedges etc. It should be noted that actual boundaries between highways and private land are not substantiated in this report and can only be authenticated by carrying out land searches.

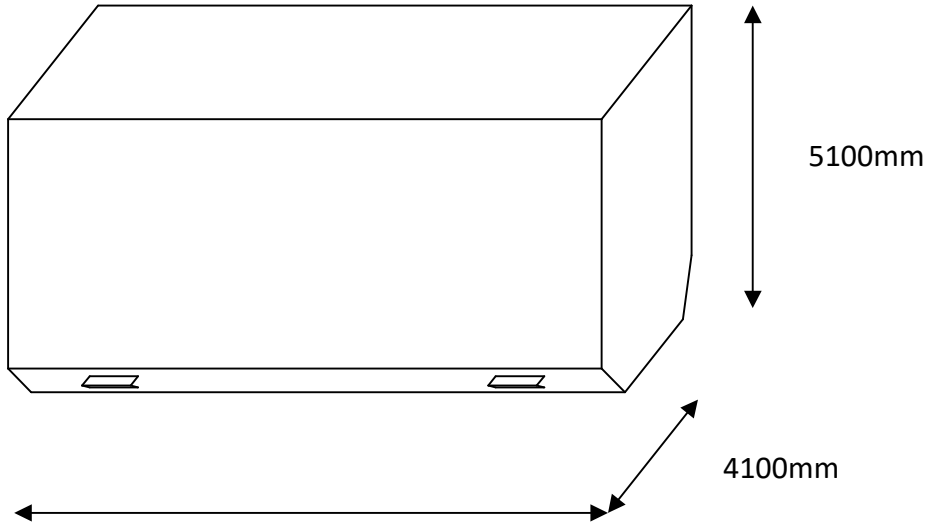
7.11. All inspections and assessments are made for the road movement of loaded trailer equipment carrying specific storage tank components. These dimensions are based on the turning circles and specification of Collett & Sons trailer equipment.

7.12. All route inspections and assessments, and subsequent conclusions and recommendations are deemed accurate by Collett & Sons Limited at the date that this report is created. We cannot be held responsible for the development of future road schemes or alterations to the routes surveyed that may leave this report inaccurate.

7.13. This report is based solely on a preliminary visual inspection. Nothing in this report shall be construed in any way as committing Collett & Sons Limited to being able to deliver to site using this route before further structural analysis has been undertaken, and any accommodation/remedial works undertaken which are to Collett & Sons satisfaction.

APPENDIX 1
TRANSFORMER DRAWING

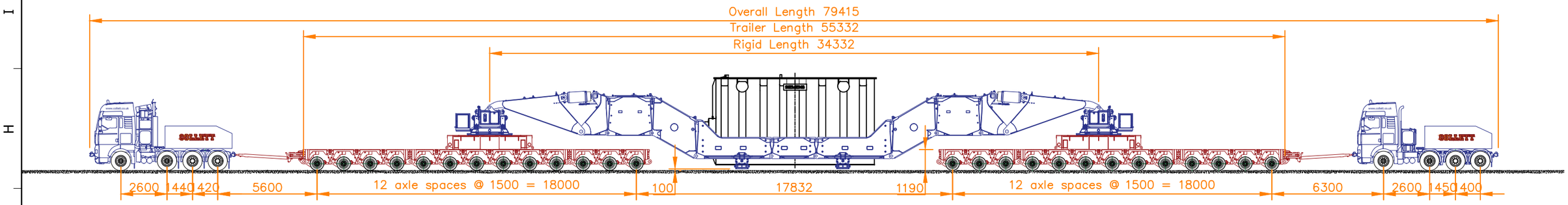
Estimated Transformer Dimensions



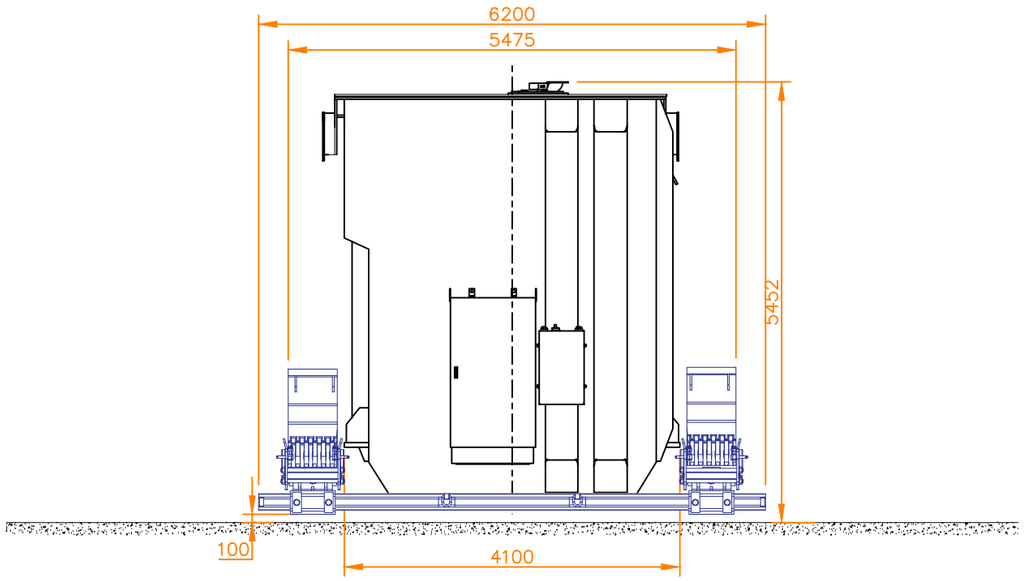
Shipping mass 332000 Kg

APPENDIX 2
LOADED CONFIGURATION DRAWING

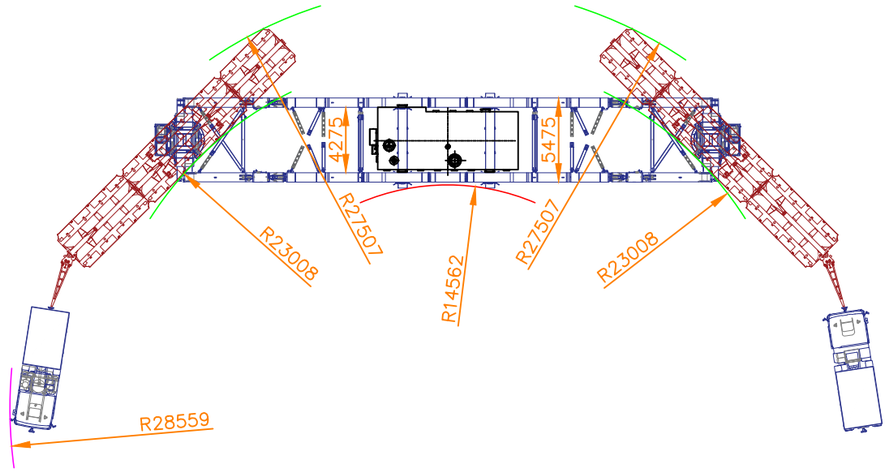
SIDE ELEVATION VIEW. SCALE 1:225



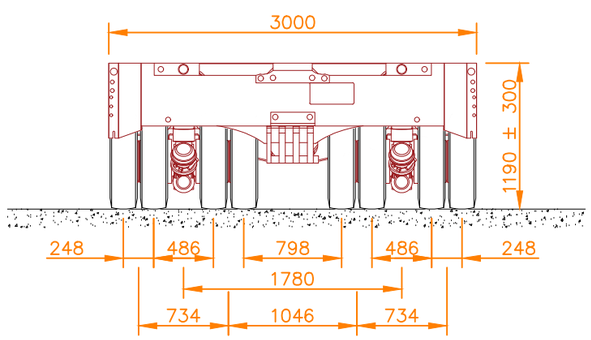
TRAFO ON BEAMS REAR ELEVATION VIEW. SCALE 1:75



TURNING PLAN VIEW. SCALE 1:400



END ELEVATION VIEW OF MODULAR AXLES. SCALE 1:50



Weights Table		
Type	Description	Weight
Type of Trailer	13 Axle Girder Set 13 Axle	160.820 t
Type of Load	Transformer	332.000 t
	Total loaded weight excluding tractor units	492.820 t
	Load per axle line on trailer	15.275 t
	Load per axle per file	7.638 t
	Load per wheel on trailer	1.909 t
Abnormal Load Classification: **Special Order (BE16)**		

For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
5.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
6.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
7.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	E.Crosby	27/08/2019

Description: First issue.

Client: **WSP**

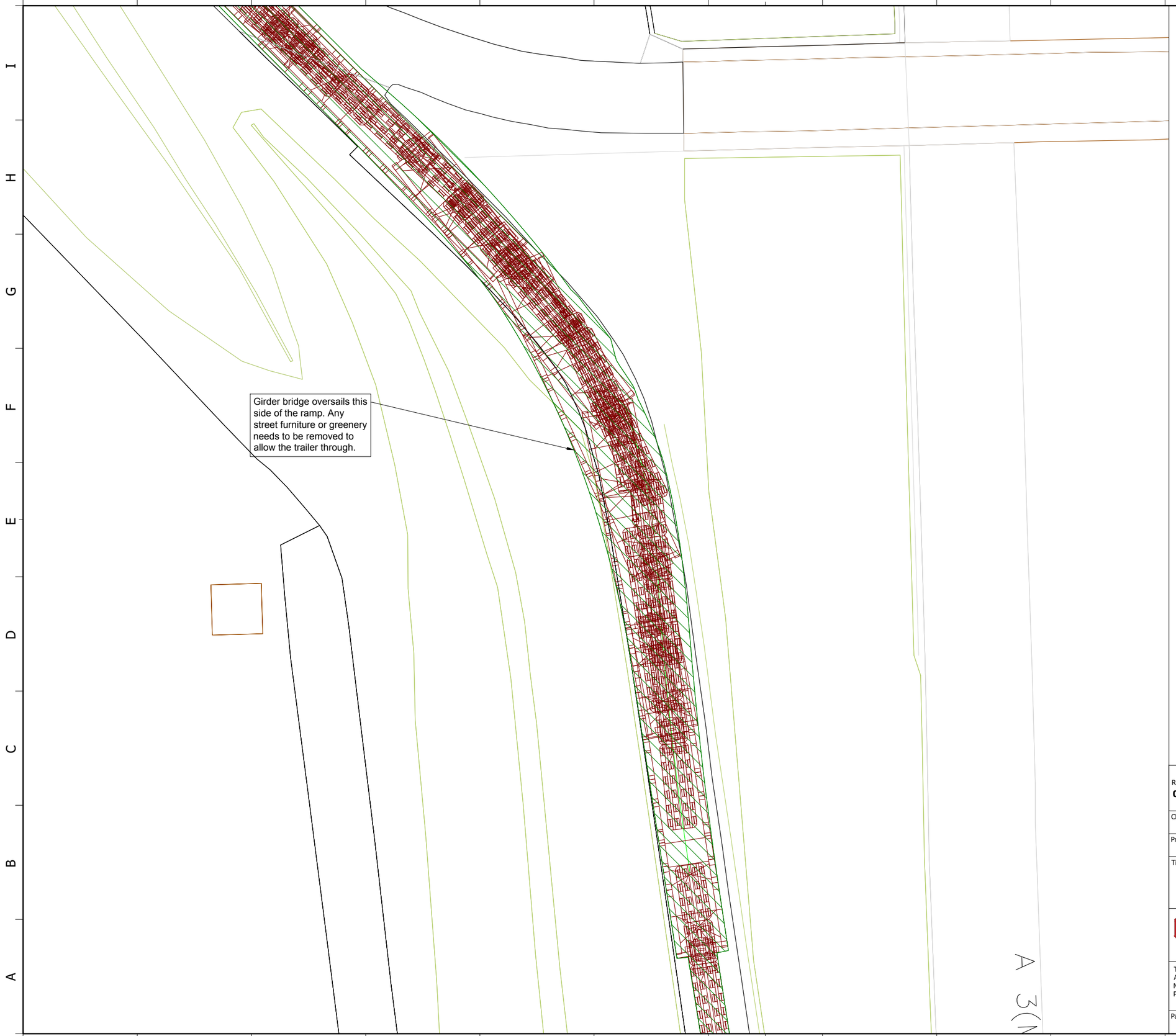
Project: **AQUIND**

Title: **Transformer Transport Arrangement**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	As Noted	333100	COL-D-333100-1-1	1 of 1

APPENDIX 3
SWEPT PATH ANALYSIS DRAWINGS



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

Client: **WSP**

Project: **AQUIND**

Title: **A3 (M) Jct. 2 SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:400	333100	COL-D-333100-10-2	1 of 1

Two filter lane splitters island needs to be cleared and mounted by the trailer.

Central reservation needs to be cleared for oversail of the girder.

Filter lane splitter needs to be cleared for oversail of the girder.

For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

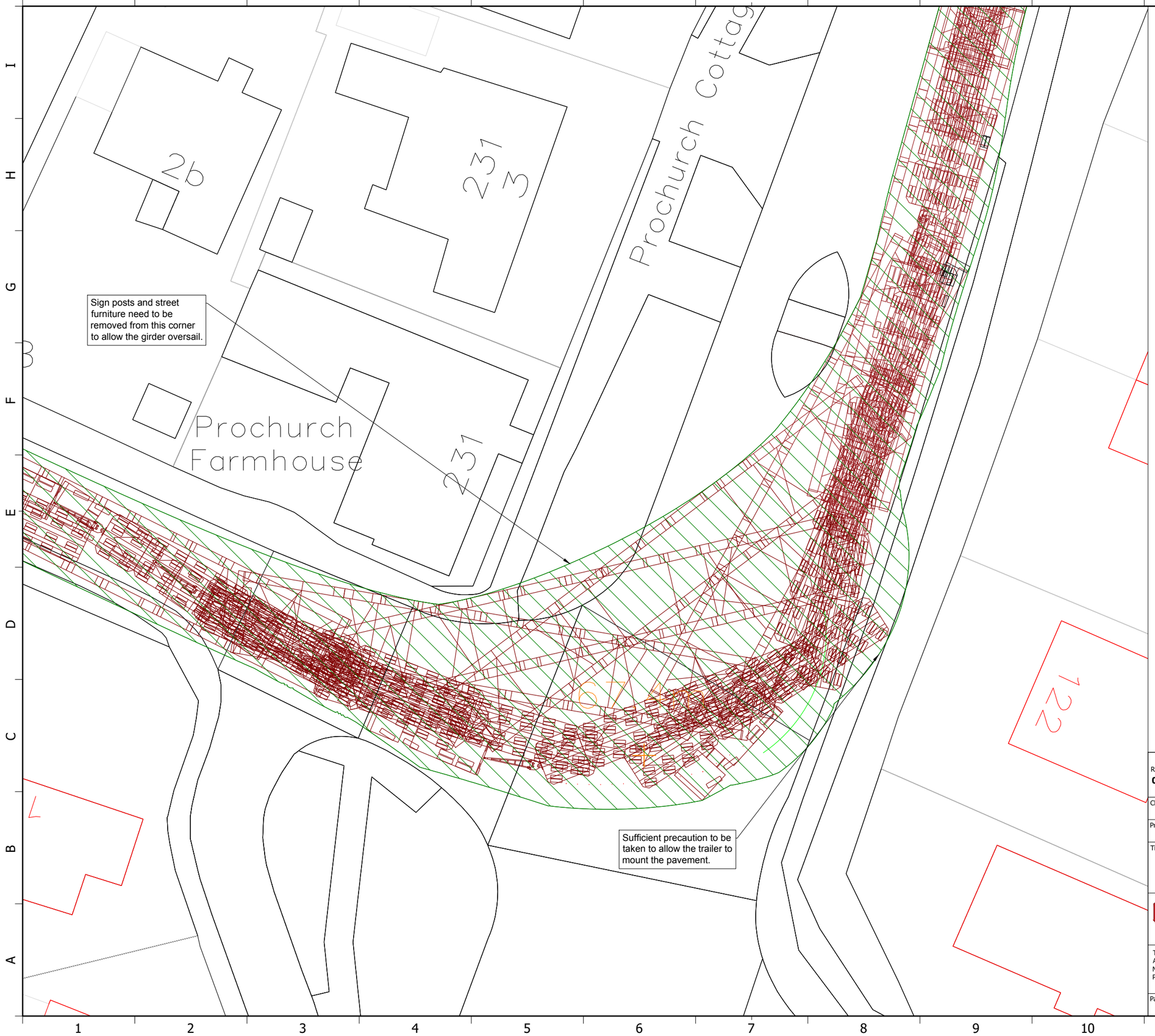
Client: **WSP**

Project: **AQUIND**

Title: **Portsmouth Road Jct. SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:250	333100	COL-D-333100-10-3	1 of 1



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

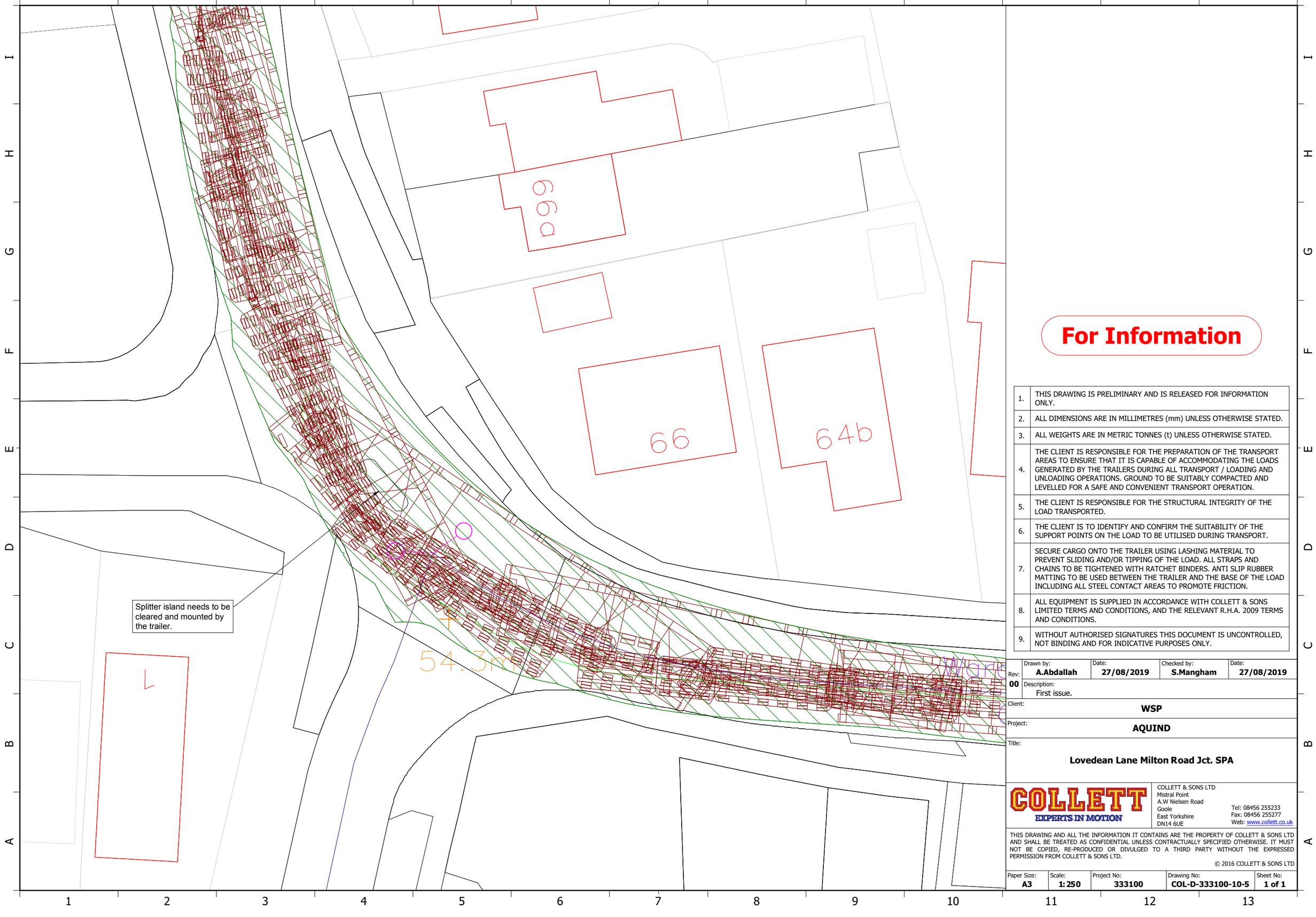
Client: **WSP**

Project: **AQUIND**

Title: **Lovedean Lane Jct. SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:250	333100	COL-D-333100-10-4	1 of 1



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

Client: **WSP**

Project: **AQUIND**

Title: **Lovedean Lane Milton Road Jct. SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:250	333100	COL-D-333100-10-5	1 of 1

For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

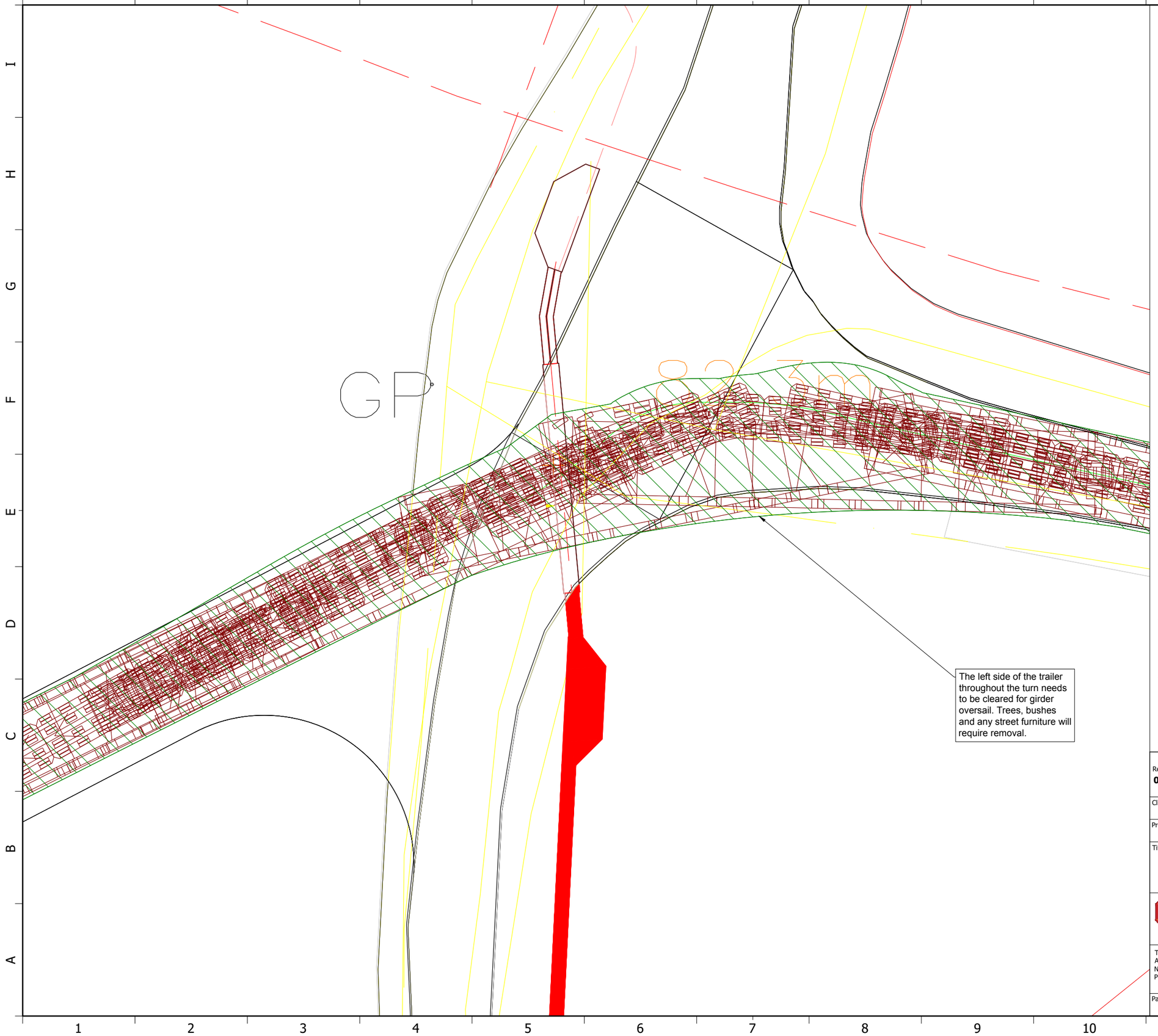
Client: **WSP**

Project: **AQUIND**

Title: **Day Lane Jct. SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:250	333100	COL-D-333100-10-6	1 of 1



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

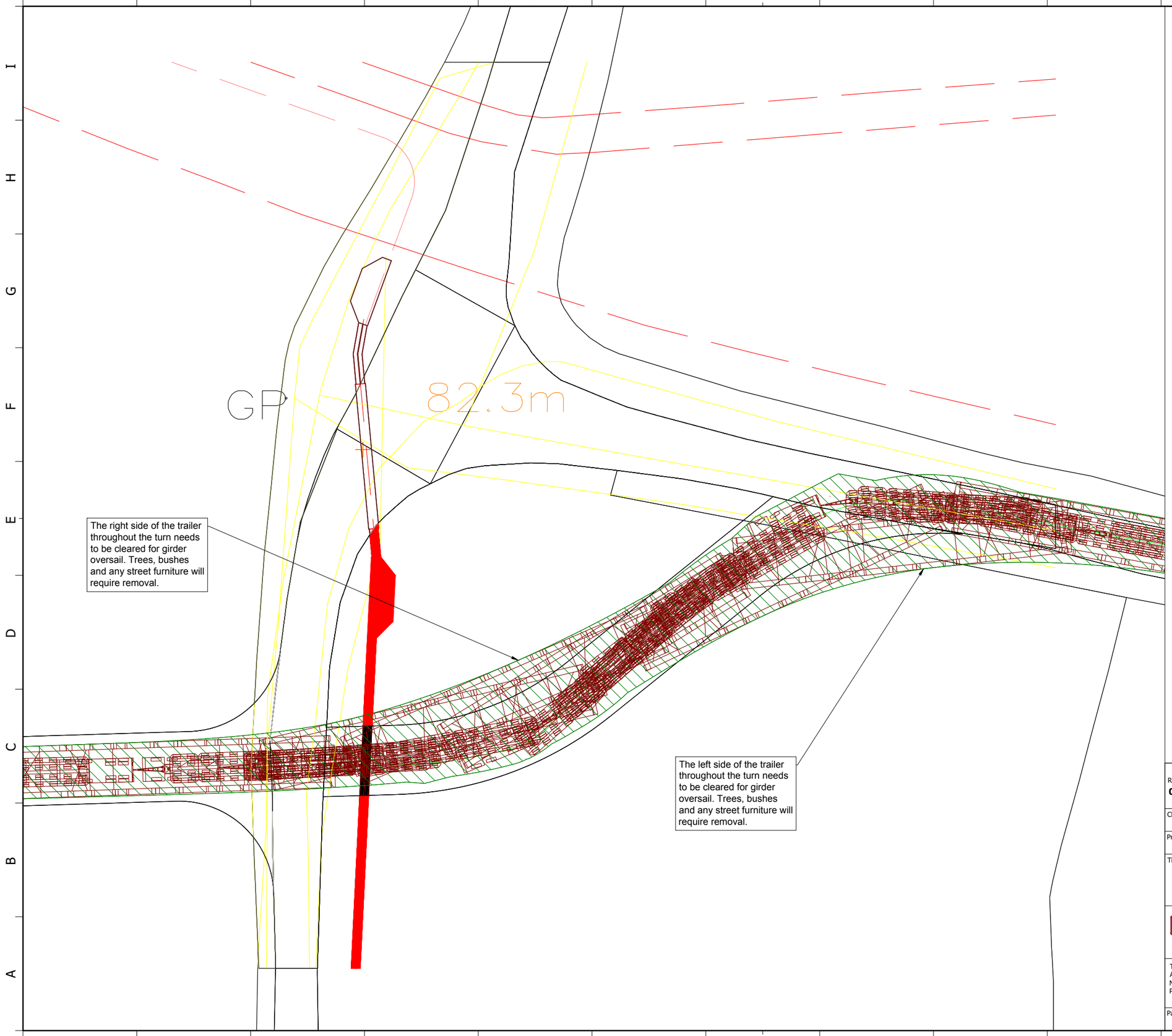
Client: **WSP**

Project: **AQUIND**

Title: **Site Entrance Option 1 SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:250	333100	COL-D-333100-10-7	1 of 1



For Information

1.	THIS DRAWING IS PRELIMINARY AND IS RELEASED FOR INFORMATION ONLY.
2.	ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE STATED.
3.	ALL WEIGHTS ARE IN METRIC TONNES (t) UNLESS OTHERWISE STATED.
4.	THE CLIENT IS RESPONSIBLE FOR THE PREPARATION OF THE TRANSPORT AREAS TO ENSURE THAT IT IS CAPABLE OF ACCOMMODATING THE LOADS GENERATED BY THE TRAILERS DURING ALL TRANSPORT / LOADING AND UNLOADING OPERATIONS. GROUND TO BE SUITABLY COMPACTED AND LEVELLED FOR A SAFE AND CONVENIENT TRANSPORT OPERATION.
5.	THE CLIENT IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE LOAD TRANSPORTED.
6.	THE CLIENT IS TO IDENTIFY AND CONFIRM THE SUITABILITY OF THE SUPPORT POINTS ON THE LOAD TO BE UTILISED DURING TRANSPORT.
7.	SECURE CARGO ONTO THE TRAILER USING LASHING MATERIAL TO PREVENT SLIDING AND/OR TIPPING OF THE LOAD. ALL STRAPS AND CHAINS TO BE TIGHTENED WITH RATCHET BINDERS. ANTI SLIP RUBBER MATTING TO BE USED BETWEEN THE TRAILER AND THE BASE OF THE LOAD INCLUDING ALL STEEL CONTACT AREAS TO PROMOTE FRICTION.
8.	ALL EQUIPMENT IS SUPPLIED IN ACCORDANCE WITH COLLETT & SONS LIMITED TERMS AND CONDITIONS, AND THE RELEVANT R.H.A. 2009 TERMS AND CONDITIONS.
9.	WITHOUT AUTHORISED SIGNATURES THIS DOCUMENT IS UNCONTROLLED, NOT BINDING AND FOR INDICATIVE PURPOSES ONLY.

Rev:	Drawn by:	Date:	Checked by:	Date:
00	A.Abdallah	27/08/2019	S.Mangham	27/08/2019

Description: First issue.

Client: **WSP**

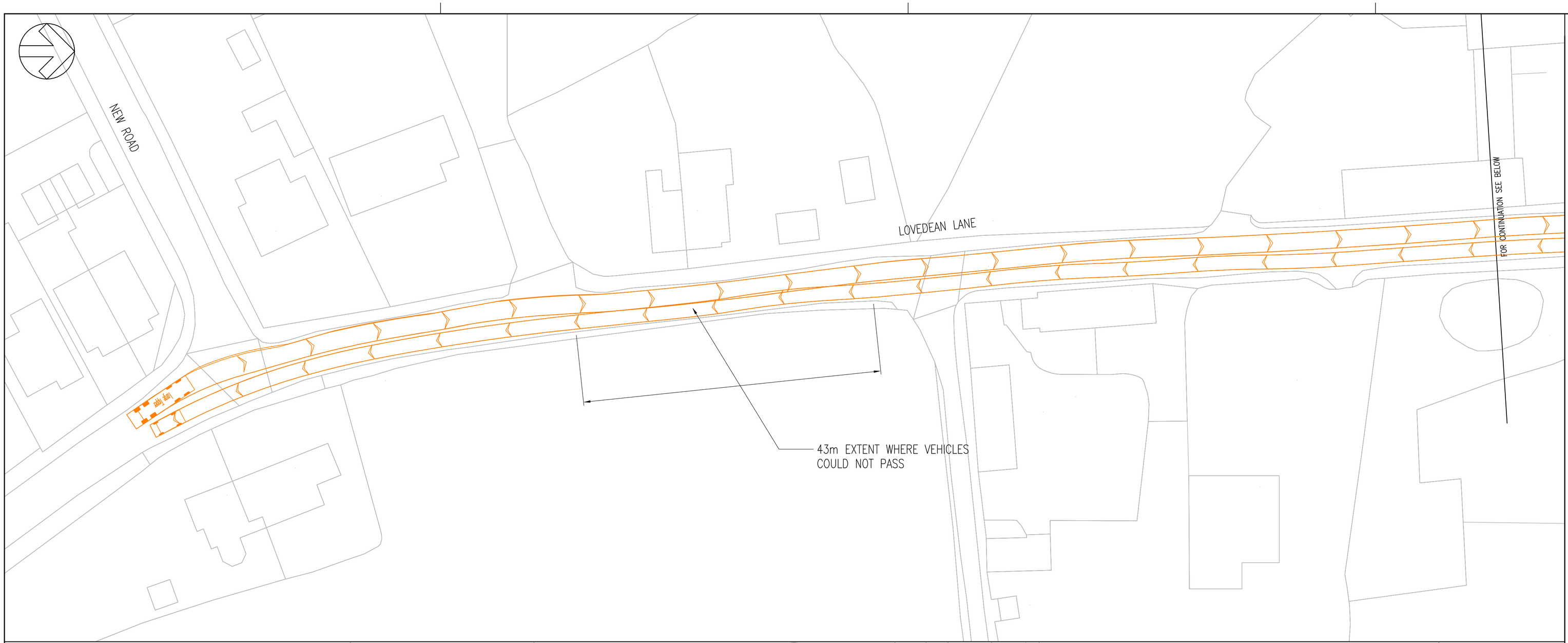
Project: **AQUIND**

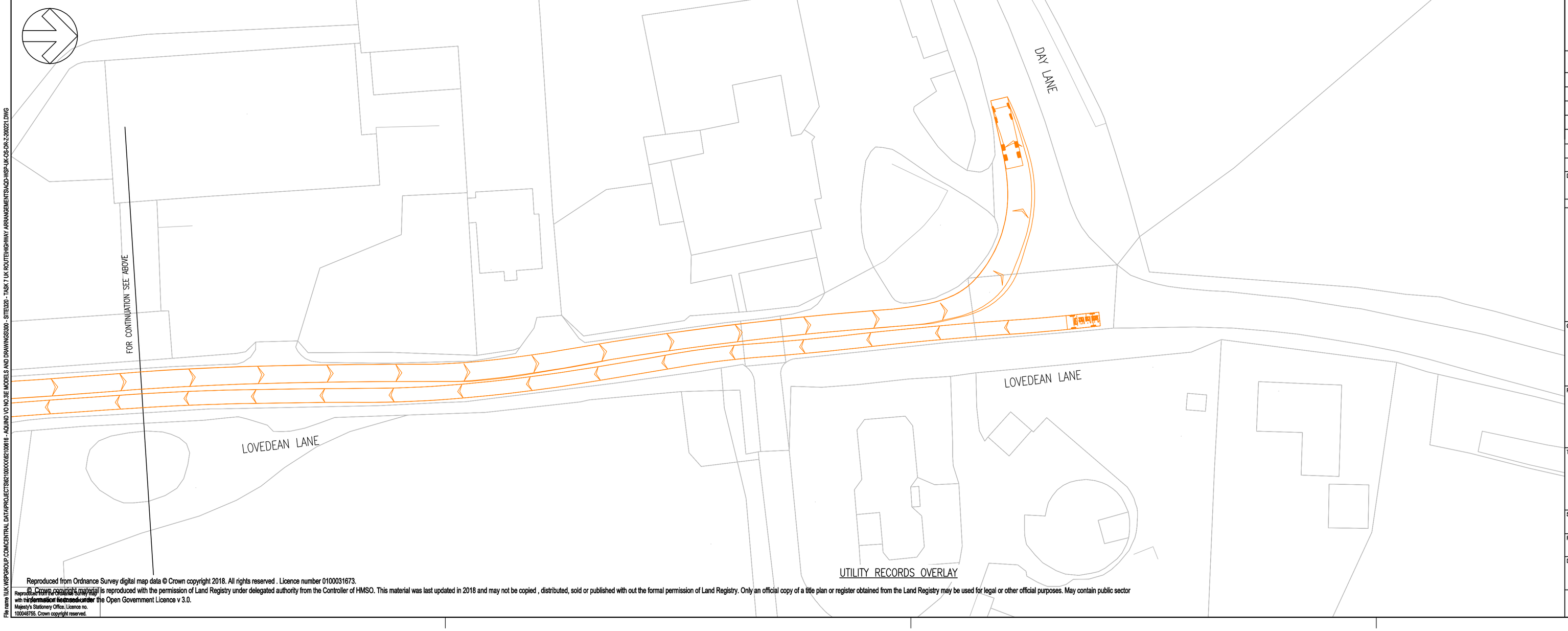
Title: **Site Entrance Option 2 SPA**

COLLETT & SONS LTD
Mistral Point
A.W Nielsen Road
Goole
East Yorkshire
DN14 6UE
Tel: 08456 255233
Fax: 08456 255277
Web: www.collett.co.uk

Paper Size:	Scale:	Project No:	Drawing No:	Sheet No:
A3	1:400	333100	COL-D-333100-10-8	1 of 1

Appendix 6 – Swept Path Analysis



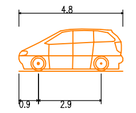


NOTES

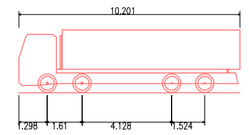
1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
2. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE.
3. VEHICLES TRACKED AT 10mph.
4. TRACKING IS BASED ON OS MAPPING DATA. THIS MAY BE INACCURATE AND THE AVAILABLE CARRIAGEWAY MAY BE WIDER OR NARROWER THAN INDICATED.

KEY

DEVELOPMENT CONSENT ORDER BOUNDARY



STANDARD DESIGN VEHICLE (SDV)	
OVERALL LENGTH	4.800m
OVERALL WIDTH	2.000m
OVERALL BODY HEIGHT	1.950m
MIN BODY GROUND CLEARANCE	0.100m
TRACK WIDTH	2.000m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	6.000m



LARGE TIPPER	
OVERALL LENGTH	10.201m
OVERALL WIDTH	2.495m
OVERALL BODY HEIGHT	2.890m
MIN BODY GROUND CLEARANCE	0.341m
TRACK WIDTH	2.471m
LOCK TO LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	11.550m

UTILITY RECORDS OVERLAY

Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	25/10/2019	MB	FIRST ISSUE	DP	CW

DRAWING STATUS:
SUBMISSION FOR APPROVAL

wsp
Grosvenor House, 2 Grosvenor Square, Southampton, SO15 2BE, UK
T+ 44 (0) 2380 101 700
wsp.com

CLIENT:
AQUIND

PROJECT:
AQUIND Interconnector

TITLE:
LOVEDEAN LANE
FOUR AXLE TIPPER TRACKING
SHEET 1 OF 1

SCALE AT A1:	CHECKED:		APPROVED:
1:500	DP		DP
PROJECT No:	DESIGNED:	DRAWN:	DATE:
62100616	MB	MB	25/10/2019

DRAWING No: AQD-WSP-UK-OS-DR-Z-200215 REV: 01

File name: \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\62100XX\62100616 - AQUIND VO HO.3E.MODELS AND DRAWINGS\300 - SITES\300 - TASK 7 UK ROUTE\HIGHWAY ARRANGEMENTS\AQD-WSP-UK-OS-DR-Z-200221.DWG

NEW ROAD

LOVEDEAN LANE

FOR CONTINUATION SEE BELOW

43m EXTENT WHERE VEHICLES COULD NOT PASS

FOR CONTINUATION SEE ABOVE

DAY LANE

LOVEDEAN LANE

LOVEDEAN LANE

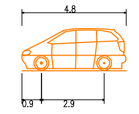
UTILITY RECORDS OVERLAY

NOTES

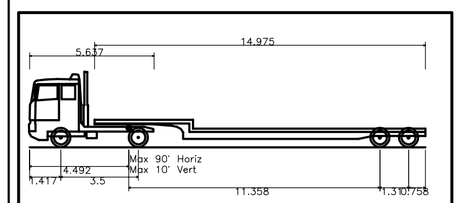
1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
2. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE.
3. VEHICLES TRACKED AT 10mph.
4. TRACKING IS BASED ON OS MAPPING DATA. THIS MAY BE INACCURATE AND THE AVAILABLE CARRIAGEWAY MAY BE WIDER OR NARROWER THAN INDICATED.

KEY

DEVELOPMENT CONSENT ORDER BOUNDARY



STANDARD DESIGN VEHICLE (SDV)	
OVERALL LENGTH	4.800m
OVERALL WIDTH	2.000m
OVERALL BODY HEIGHT	1.950m
MIN BODY GROUND CLEARANCE	0.100m
TRACK WIDTH	2.000m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	6.000m



Generic Low Loader with Trailer Steering (18.0m	
Overall Length	17.918m
Overall Width	2.540m
Overall Body Height	3.408m
Min Body Ground Clearance	0.332m
Max Track Width	2.520m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.350m

Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	25/10/2019	MB	FIRST ISSUE	DP	CW

DRAWING STATUS: SUBMISSION FOR APPROVAL

wsp

Grosvenor House, 2 Grosvenor Square, Southampton, SO15 2BE, UK
T+ 44 (0) 2380 101 700
wsp.com

CLIENT: AQUIND

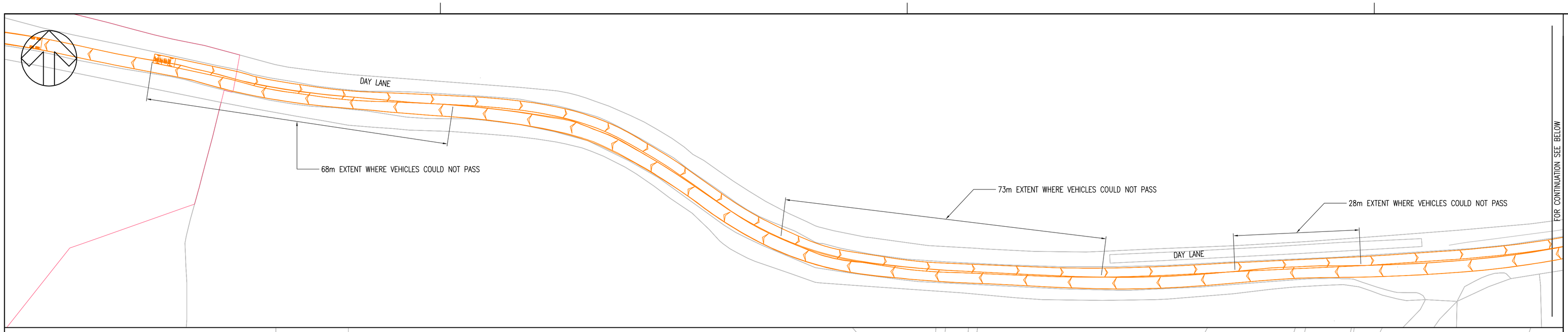
PROJECT: AQUIND Interconnector

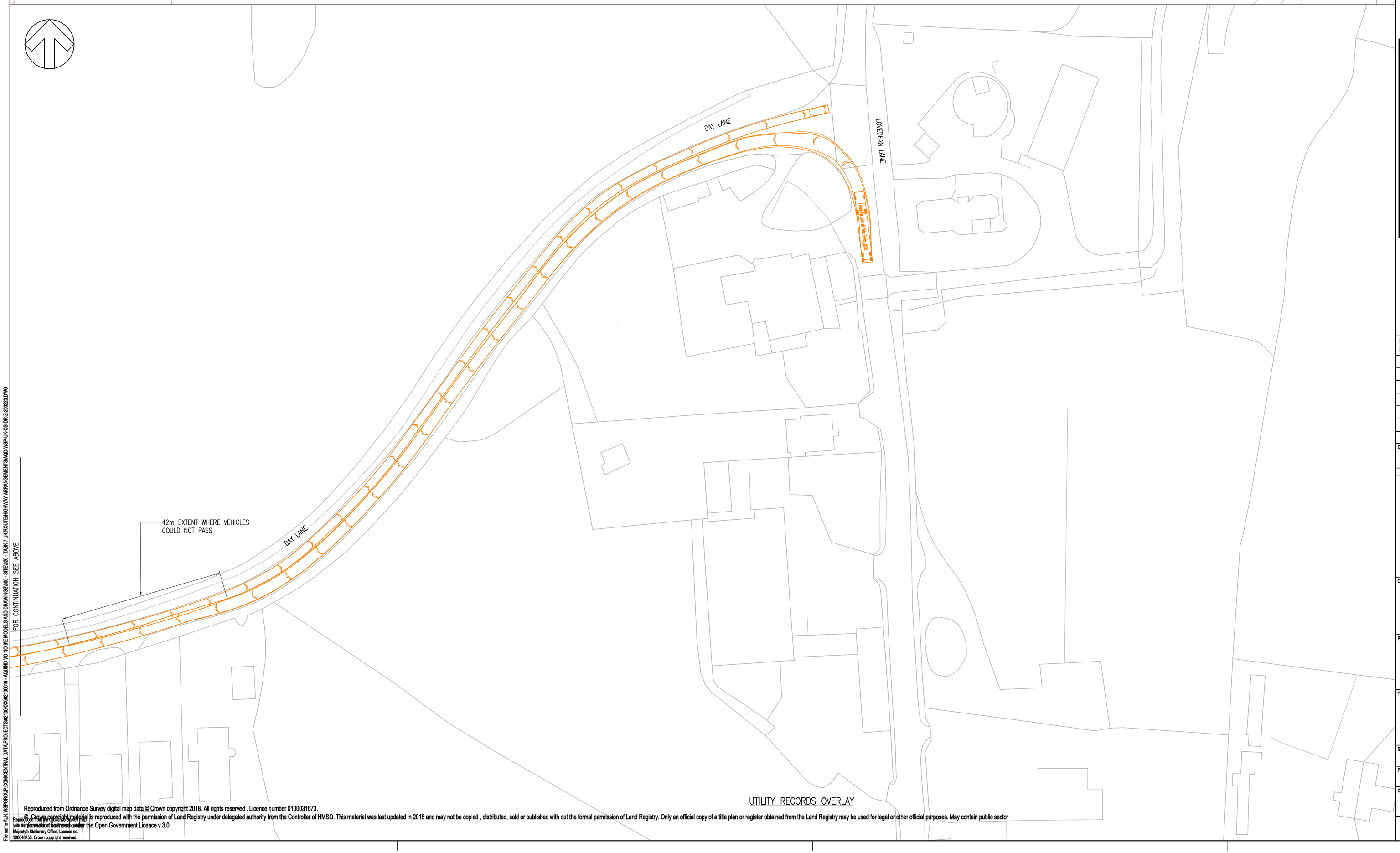
TITLE: LOVEDEAN LANE
LOW LOADER TRACKING
SHEET 1 OF 1

SCALE AT A1:	CHECKED:		APPROVED:
1:500	DP		DP
PROJECT No:	DESIGNED:	DRAWN:	DATE:
62100616	MB	MB	25/10/2019

DRAWING No: AQD-WSP-UK-OS-DR-Z-200215 REV: 01

File name = \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\62100XX\62100616 - AQUIND VO NO.3\E MODELS AND DRAWINGS\03XX - SITES\20 - TASK 7 UK ROUTE\HIGHWAY ARRANGEMENTS\AQD-WSP-UK-OS-DR-Z-200222.DWG





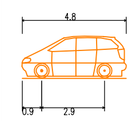
UTILITY RECORDS OVERLAY

NOTES

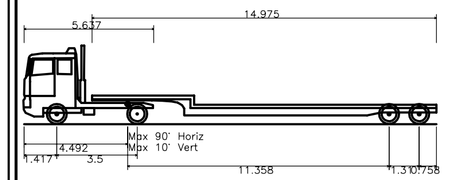
1. ALL DIMENSIONS SHOWN ARE IN METRES UNLESS OTHERWISE STATED.
2. CONFLICTING INFORMATION SHOWN ON THE ENGINEER'S DRAWINGS OR DISCREPANCIES BETWEEN THE INFORMATION GIVEN BY THE ENGINEER AND THAT PROVIDED BY OTHERS MUST BE REFERRED TO THE ENGINEER BEFORE THE WORKS COMMENCE.
3. VEHICLES TRACKED AT 10mph.
4. TRACKING IS BASED ON OS MAPPING DATA. THIS MAY BE INACCURATE AND THE AVAILABLE CARRIAGEWAY MAY BE WIDER OR NARROWER THAN INDICATED.

KEY

DEVELOPMENT CONSENT ORDER BOUNDARY



STANDARD DESIGN VEHICLE (SDV)	
OVERALL LENGTH	4.800m
OVERALL WIDTH	2.000m
OVERALL BODY HEIGHT	1.950m
MIN BODY GROUND CLEARANCE	0.100m
TRACK WIDTH	2.000m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	6.000m



Generic Low Loader with Trailer Steering (18.0m)	
Overall Length	17.918m
Overall Width	2.540m
Overall Body Height	3.408m
Min Body Ground Clearance	0.332m
Max Track Width	2.520m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.350m

Infrastructure Planning (Applications: Prescribed Forms & Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	25/10/2019	MB	FIRST ISSUE	DP	CW

DRAWING STATUS: SUBMISSION FOR APPROVAL

wsp
Grosvenor House, 2 Grosvenor Square, Southampton, SO15 2BE, UK
T+ 44 (0) 2380 101 700
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: DAY LANE
LOW LOADER TRACKING
SHEET 1 OF 1

SCALE AT A1:	CHECKED:	APPROVED:
1:500	DP	DP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
62100616	MB	MB	25/10/2019

DRAWING No: AQD-WSP-UK-OS-DR-Z-200215 REV: 01

File name: U:\K:\WSPGROUP.COM\CENTRAL DATA\PROJECTS\62100XX\62100616 - AQUIND VO NO.3\E MODELS AND DRAWINGS\300 - SITE\320 - TASK 1 UK ROUTE\HIGHWAY ARRANGEMENTS\AQD-WSP-UK-OS-DR-Z-200220.DWG

Appendix 7 – Framework Construction Worker Travel Plan

AQUIND Limited

AQUIND INTERCONNECTOR

Construction Worker Travel Plan

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Document Ref: 6.3.22.2

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Construction Worker Travel Plan

PINS REF.: EN020022

DOCUMENT: 6.3.22.2

DATE: 14 NOVEMBER 2019

WSP

4th Floor

6 Devonshire Square

London

EC2M 4YE

+44 20 7337 1700
+44 20 7337 1701

www.wsp.com

DOCUMENT

Document	Construction Worker Travel Plan
Revision	001
Document Owner	WSP UK Limited
Prepared By	O. Thompson
Date	27 October 2019
Approved By	C Williams
Date	30 October 2019

CONTENTS

TABLES

PLATES

1. INTRODUCTION

1.1. INTRODUCTION

1.1.1..1.1 This Framework Construction Worker Travel Plan (CWTP) has been prepared by WSP on behalf of AQUIND Limited in support of Development Consent Order (DCO) to construct and operate an electricity interconnector between France and UK, known as AQUIND Interconnector.

1.1.1..1.2 The Framework CWTP relates to construction stage of the Onshore components of the Proposed Development and specifically the following:

- The Onshore Cable consisting of two HVDC Circuits between Landfall in Eastney and Lovedean Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure in Lovedean; and
- HVAC Cables, and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the National Grid, at Lovedean Substation.

1.1.1..1.3 The Framework CWTP applies to the construction workforce for each of the Onshore components of the Proposed Development, nothing that the Converter Station will form the main compound for all construction works. This means that all construction workers will start and end their working day at the Converter Station.

1.1.1..1.4 The Framework CWTP details the tasks involved in developing initiatives for the Travel Plan, including management and co-ordination, which are set in the context of clear objectives to increase use of sustainable travel options and reduce single-occupancy car trips to and from the Proposed Development.

1.2. BENEFITS OF A WORKPLACE TRAVEL PLAN

1.2.1..1.1 This CWTP is a requirement of the planning application process, to support the aims of sustainable development and to help mitigate the transport demands and potential traffic impacts of the construction of the converter station.

1.2.1..1.2 Travel Plans establish a number of key benefits that extend to employees and the broader local area. These key benefits include:

- Improved quality of life for employees - through adopting healthier lifestyles e.g. replacing short car journeys with walking and cycling;
- Improved local air quality- through reduced traffic congestion in the local community, as a result of the use of alternative modes of the private car for many local journeys;

- Less vehicle congestion on local roads - as a result of fewer cars attempting to depart and access the construction site; and
- Cost savings for car sharers -by sharing journeys with colleagues, employees can benefit from sharing the financial and time cost of making these journeys.

1.2.1..1.3 By identifying an appropriate package of measures and ensuring a consistent approach and ensuring a consistent approach to delivering a WTP, a number of stakeholders will experience the benefits.

1.3. TRAVEL PLAN DOCUMENT STRUCTURE

1.3.1..1.1 This Travel Plan is set out in a further seven chapters:

- **Chapter 2** outlines the site access opportunities including current walking, cycling and public transport links, and the development proposals;
- **Chapter 3** sets out the Travel Plan vision and objectives;
- **Chapter 4** sets out the Travel Plan management strategy;
- **Chapter 5** outlines the Travel Plan measures;
- **Chapter 6** details the Travel Plan implementation action plan;
- **Chapter 7** presents targets and monitoring; and
- **Chapter 8** concludes the Travel Plan.

2. DEVELOPMENT PROPOSALS AND ACCESSIBILITY

2.1. INTRODUCTION

2.1.1..1.1 This chapter outlines the development proposals and reviews the existing transport conditions near the proposed construction site. Details of the existing walking and cycling networks, and public transport services are presented, along with a brief description of the local highway network.

2.2. SITE LOCATION

2.2.1..1.1 The proposed site location for the construction of the Interconnector Electricity Converter is located within agricultural land on the edge of the village of Lovedean, Hampshire. Lovedean is located approximately 13.5km to the north of Portsmouth city centre.

Figure 2.1 – Site location

2.2.1..1.2 The Converter Station area spans a number of small fields divided by hedgerows.

2.2.1..1.3 Individual farm properties are situated to the north, west and south of the Converter Station Area, connected by rural lanes. The existing Lovedean substation, associated pylons and overhead lines are dominant elements in the landscape of the proposed location and immediate surrounding area. It is located approximately 180m – 200m from the South Downs National Park boundary at its closest point, to the north and west.

2.3. PROPOSED DEVELOPMENT

2.3.1..1.1 The Applicant is proposing to construct and operate an electricity interconnector between France and the UK known as AQUIND Interconnector ('the Project').

2.3.1..1.2 The Project comprises a new marine and onshore High Voltage Direct Current ('HVDC') power cable transmission link between Normandy in France and Eastney, Hampshire, converter stations in both England and France and infrastructure necessary to facilitate the import and export of electricity between the high voltage alternating current ("HVAC") electricity transmission networks both countries.

2.3.1..1.3 The Onshore Components of the Proposed Development comprise the Converter Station, the Onshore Cable Corridor and the Landfall.

2.3.1..1.4 The UK Converter Station is proposed to be located adjacent to the existing National Grid Electricity Transmission ('NGET') substation, north-west of the village of Lovedean within the administrative boundary of Winchester City Council ('WCC').

2.3.1..1.5 The proposed Onshore Cable Route will travel through the administrative boundaries of WCC, Havant Borough Council ('HBC') and PCC, reaching the proposed Landfall location at Eastney, a district in the south-east of Portsmouth.

2.3.1..1.6 The Converter Station will act as the main construction compound for all Onshore components during the construction stage, meaning all construction workers will start and end their day at this location. Car parking for 150-200 vehicles will be provided at the Converter Station during the construction period.

2.4. PROPOSED CONSTRUCTION ACCESS TO THE CONVERTER STATION SITE

2.4.1..1.1 The proposed access to the Converter Station for Construction and Operational Stages will be taken from Broadway Lane.

2.4.1..1.2 The proposed access junction will implement a gated highway link between Day Lane, east of the existing bend, and at Broadway Lane, south of the existing bend. This will provide a managed facility for vehicles entering the site during the construction period with vehicle movements across Broadway Lane able to be marshalled. This link also provides for abnormal load movements and would be retained as a permanent feature (unadopted) to allow future access with such vehicles should it be required. General verge / vegetation clearance will be required on all sides of Broadway Lane to ensure that adequate visibility splay requirements are met, with all required land falling within the proposed Order Limit.

2.4.1..1.3 Construction worker trips by car to and from the Converter Station will all be required to us the follow permitted route:

- A3(M) Junction 2 – B2149 Dell Piece West – A3 Portsmouth Road – Lovedean Lane – Day Lane – Broadway Lane.

2.4.1..1.4 These routes are described briefly in the following paragraphs.

A3(M)

2.4.1..1.5 The A3(M) is a dual carriageway subject to national speed limit which routes to the east of the study area, it merges with the A27 at Havant and continues onto Guildford and London. Converter Station traffic will exit the A3(M) at Junction 2 (Horndean).

B2149 DELL PIECE WEST

2.4.1..1.6 Dell Piece West is a section of road between A3 (M) Junction 2 and Lakesmere Road. The route is subject to national speed limit and has narrow footway provision on its northern carriageway. After passing the Morrisons roundabout the speed limit reduces to 40 mph and a wide shared use footway/cycleway is provided on the northern carriageway.

A3 PORTSMOUTH ROAD

2.4.1..1.7 A3 Portsmouth Road routes for approximately 2.6km from A3 London Road to the junction with B2149 Dell Piece West. The road is subject to a 30mph speed limit and has footway provision on both sides of the carriageway. Residential properties are located on both sides of the carriageway but are separated from traffic by wide footways / shared-use paths.

2.4.1..1.8 There are bus stops located on either side of the road however only 4 bus stops are located along the construction traffic section of the road. Two bus stops are located on either side of the road approximately 100m from the junction with B2149 Dell Piece West and two bus stops are located either side of the road outside the junction with Keydell Avenue.

LOVEDEAN LANE

2.4.1..1.9 Lovedean Lane routes from A3 (Cowplain) to Downhouse Road for approximately 4.3km, providing access mainly to residential properties. Footways are provided up until the route leaves Lovedean and Coldhill Lane. The speed limit along this route is 30mph until Lovedean Lane passes Day Lane, here the speed limit is extended to 60mph. No bus stops are located along this route.

DAY LANE

2.4.1..1.10 Day Lane is a rural lane with a length of approximately 630 metres and connects Lovedean Lane to Broadway Lane. The lane is subject to a 60mph speed limit and has no footway provision or bus stops.

2.5. PUBLIC TRANSPORT

BUS

2.5.1..1.1 The nearest bus stops that serves services that fir with the proposed working hours or 07:00 to 19:00 is on A3 Portsmouth Road (at the junction with Lovedean Lane), which is a 33-minute walk from the Converter Station. This serves the Number 8 service to Clanfield, Waterlooville, Cosham Portsmouth City Centre and Southsea. In addition, bus services can be accessed from Eagle Avenue in Wecock Farm approximately 2.6km from the site location. This stop is served by First Bus route Number 7 and Stagecoach bus route Number 8, although neither provide a suitable arrival times to be used at the start of the day. At a typical walking speed of 4.8km/h, the stop will comprise of a 30-minute journey by foot from the site, via Day Lane, Lovedean Lane and Day Lane.

2.5.1..1.2 A summary of all bus routes accessible from the Converter station are shown in Table 1 below.

Table 1 - Local Bus Services

Service No.	Route	Start / Finish Times	Nearest bus stop from Converter Station
7 / 7C	City Centre – Cosham – Waterlooville – Wecock Farm	Bus arrival time at start of day : 06:39 Bus departure times at end of day: 19:44	Eagle Avenue, 30-minute walk
8	Clarence Pier – City Centre – Cosham – Waterlooville - Clanfield	Bus arrival time at start of day : 05:56, 06:30 Bus departure times at end of day: 20:05	A3 Portsmouth Road, 33-minute walk
37	Havant – Waterlooville – Cowplain – Clanfield - Petersfield	Bus arrival time at start of day : 06:07 Bus departure times at end of day: 19:58	A3 Portsmouth Road, 33-minute walk
39	Havant – Purbrook – Waterlooville – Wecock Farm	Bus arrival time at start of day : 06:37 Bus departure times at end of day: 19:11	Eagle Avenue, 30-minute walk

RAIL

2.5.1..1.3 Bedhampton Railway station is located approximately 10.4km south-east from the construction site but has no direct bus route from the station to the site or a cycle route.

2.5.1..1.4 Havant Railway station is also located approximately 12.3km south-east from the construction site. This could be accessed using bus service 37, which starts and ends at Havant bus station which is a six minute walk from the railway station. A summary of destinations that can be reached from Havant railway station are shown in Table 2.

Table 2 - Destination available from Havant Railway Station

Destination	Frequency	Travel Time
Portsmouth	5-6 per hour	12-18 minutes
Southampton	3-4 per hour	41-59 minutes
Chichester	3-4 per hour	11-21 minutes
Brighton	3-4 per hour	60-81 minutes
Guildford	4 per hour	46-56 minutes
London Waterloo	4 per hour	85-120 minutes

2.6. CYCLE ACCESS

2.6.1..1.1 The closest Sustrans route in proximity to the site is National Cycle Network (NCN) Route 222, which is approximately 24km long and provides a connection between Portsmouth and Petersfield. The route is located approximately 2.8km to the south-east of the construction site on A3 Portsmouth Road, connecting into Petersfield in the north and Waterlooville and Portsmouth tot the south.

2.6.1..1.2 In addition to the NCN 222, other roads around the Converter Station are suitable for cycling, including Lovedean lane, Milton Road, Day Lane and Broadway Lane.

3. TRAVEL PLAN VISION AND OBJECTIVES

3.1. TRAVEL PLAN VISION

3.1.1..1.1 The overarching vision for the development and implementation of the CWTP is outlined below:

"The proposed construction of the Proposed Development will accommodate employees and visitor journeys through a variety of integrated and sustainable transport options, with people able to access travel information on demand to make informed travel choices."

3.1.1..1.2 This vision will assist in guiding the development, implementation and evolution of this CWTP helping to ensure visitor journeys can be undertaken through a variety of integrated and sustainable travel options and thereby minimising the volume of single-occupancy car trips to and from the site. As a result, this will reduce traffic impacts on the surrounding highway network, reduce traffic congestion, improve air quality and enhance the operational road safety of the surrounding highway network.

3.2. TRAVEL PLAN OBJECTIVES

3.2.1..1.1 In pursuit of the vison set out above, the CWTP will be guided by specific objectives as outlined below:

- To manage the volume of single-occupancy car travel and the impact on local roads and communities;
- To ensure the site is accessible by sustainable transport options; and
- To facilitate informed travel choices, by ensuring both employees and visitors have access to real-time on demands travel information.

3.2.1..1.2 These objectives will help define and shape the package of measures to be introduced, collectively helping to achieve the vision statement.

4. TRAVEL PLAN MANAGEMENT

4.1.1..1.1 A Travel Plan Co-ordinator (TPC) will be identified who is responsible for implementing and promoting the CWTP.

4.1.1..1.2 The role will initially mean planning for all agreed deliverables to be established, integrated and available for use by employees and visitors as intended. More generally the role of TPC will encompass:

- Maintaining day-to-day responsibility for delivering the plan, including the agreed programme of measures;
- Acting as the main point of contact for queries relating to visitor and employee travel and liaising with transport service providers as required;
- Monitoring the plan to determine progress against the objectives, and preparing a concise annual monitoring report summarising modal outcomes for employee and visitor travel; and
- Working in partnership with AQUIND and other local employers to explore area-wide travel planning opportunities

4.1.1..1.3 The TPC will be a part-time position and will be appointed by AQUIND prior to occupation of the construction site.

5. TRAVEL PLAN MEASURES

5.1. INTRODUCTION

5.1.1..1.1 This CWTP has been developed to provide a range of measures to facilitate and encourage sustainable travel at the development.

5.1.1..1.2 Promoting car sharing, public transport and cycling will play a vital role in achieving a desirable outcome. Whilst many employees and visitors are likely to access the site using their own private vehicles, there remains opportunities to support car sharing.

5.1.1..1.3 The section presents travel planning measures proposed for the site, in four specific areas, and concludes by summarising how each element directly support the CWTP objectives. The four areas are summarised in Figure 5-1, and presented in further detail throughout this section.

Figure 5-1- Travel planning approach

5.2. TRAVEL INFORMATION AND ADVICE

TRAVEL INFORMATION NOTICE BOARD

5.2.1.1.1 A travel information board will be created for the site that draws together multi-modal travel information into a single place for employees and visitors to view. The notice board will be placed in an area visible to employees, and will be regularly updated by the TPC. The notice board will include bus service and rail connections, car sharing opportunities and parking information.

5.2.1.1.2 This will represent a primary means of promoting sustainable travel options to all site users at an early stage. The notice board will also promote information relating to new travel initiatives that may be introduced, transport service improvements and timetable where appropriate.

PROMOTION EVENTS

5.2.1.1.3 The promotion of sustainable travel throughout the year will be undertaken through involvement in national activities such as 'Ride to Work Week' and car sharing awareness events. These events will be advertised on the travel information notice board to actively encourage uptake. The coordination of these events will be facilitated by the TPC.

5.3. MANAGING CAR BASED TRAVEL

CAR SHARING

5.3.1.1.1 Promoting and managing shared car journeys can be facilitated through advertising opportunities to partake in the car share scheme on the travel information board and promoted to staff by the TPC. A car-sharing mobile app could also be developed to assist within this initiative.

PROMTOTING ACTIVE TRAVEL

5.3.1.1.2 Information on local walking and cycling routes will be promoted to staff via the travel information notice board. Secure cycle parking facilities will also be provided at the Converter Station compound.

CYCLE TO WORK SCHEME

5.3.1.1.3 Cycle to work schemes are a popular initiative for employees to source a bicycle and cycling equipment as a tax-free benefit. Cyclescheme is one such provider in the UK. The scheme is based on a tax-efficient salary-sacrifice arrangement and allows employees to be loaned bikes and accessories through their employer, with costs typically over 12-18 months, before purchasing the bike for a small sum at the end of the hire period. The scheme allows employees to spend up to £1,000 on bikes and equipment, tax-free, potentially saving a significant proportion of the overall value. The TPC will notify employee of cycle to work schemes available to them.

5.4. PROMOTING PUBLIC TRANSPORT

5.4.1..1.1 Timetabling information for local bus and rail services will be included on the travel information notice board, and will be regularly updated by the TPC.

5.4.1..1.2 Given the distance from the nearest train station to the construction site, it is anticipated that rail will not be a chosen mode of travel. A potential mitigation measure that could be considered is the provision a shuttle bus from the Havant Railway station to the site to promote a genuine modal shift towards rail.

5.5. SUMMARY

5.5.1..1.1 This chapter has highlighted a variety of travel planning measures to be introduced at the proposed development to encourage the use of sustainable transport options by employees and visitors. Some measures focus on raising awareness and providing travel information and advice so individuals can make informed choices on how to access the site and not otherwise assume car-based travel is the only viable option.

5.5.1..1.2 Other measures are designed to then actively encourage individuals to use these modes, ensuring the CWTP remains proactive in achieving its stated objectives over time. This includes investing in supporting infrastructure and services and rewarding sustainable travel patterns.

5.5.1..1.3 The TPC will provide a focal point for overseeing delivery and responding to changing travel demands over time with either revised or additional measures where benefits become apparent, and where investment can be focussed to achieve the most benefit.

6. IMPLEMENTATION ACTION PLAN

6.1.1..1.1 The site management will ultimately be responsible for implementing the measures set out within this Travel Plan. The measures will be implemented by the appointed TPC, who will assume day-to-day responsibility.

Table. 6-1. Implementation Action Plans

Travel Plan Measures	Delivery Trigger / Time	Delivery Responsibility
Appointment of TPC	Prior to initial occupation	Site Management
Full Travel Survey Undertaken	6 months post occupation	TPC
Travel Information Notice Board	From occupation, and to be regularly up-dated through-out occupancy	TPC
Promotional events	One month after occupation, and at regular intervals through-out occupancy	TPC
Promotion of car sharing	From occupation, and at regular intervals through-out occupancy	TPC
Provision of timetabling information	From occupation, to be updated when appropriate	TPC
'Cycle2work' scheme	From Occupation	Employer

7. TARGETS AND MONITORING

7.1. TRAVEL PLAN TARGET

7.1.1..1.1 The measures presented by this CWTP will ensure both employees and visitors are made aware of different travel options to access the construction site, and that sustainable travel options are actively promoted. The success of the measures set out in this CWTP will be assessed through a series of specific, measurable, achievable, realistic and time-bound (SMART) targets.

7.1.1..1.2 When considering the targets set out for the proposed development, and the subsequent monitoring of these targets, it is important to note the temporary nature of the construction site. As the proposed construction of the convertor will only be short term, it is not feasible to implement the type of long-term targets that would be typically included in a workplace travel plan. Therefore, all included targets are intended for short-term implementation and monitoring.

7.1.1..1.3 Due to the nature of the specialist construction skills workers required for the project, it is determined that these workers will travel from further afield than typical construction workers. Therefore, it has been determined the use of Census Data relating to the method of travel to work will not be a representative example of workers modal share. To provide a robust and representative method of determining initial travel modal shares it is assumed that all workers will drive to the site with a private car occupancy rate of 1.0

7.1.1..1.4 Therefore, due to the limited public transport opportunities close to the site and the distance travelled by the workers, the most appropriate measures for reducing trip generation are promotion of car sharing and provision of a shuttle bus service to / from Havant railway station. As such, the following framework targets are considered appropriate for the Proposed Development:

- 5% of construction workers participating; and
- 5% of construction workers traveling to the site by train and shuttle bus.

7.1.1..1.5 These targets, can be adjusted dependent on the results from the Full Travel Survey undertaken 6 months post occupation of the construction site.

7.2. MONITORING

7.2.1..1.1 The CWTP target, and construction workers modal travel splits will be monitored by the TPC through the undertaking of travel surveys at 6 months, 1 year and 2 years into the construction stage. This will enable monitoring/ potential adjustments to be made to the CWTP to reduce single occupancy vehicle travel to/from the site.

8. CONCLUSION

8.1. SUMMARY

8.1.1..1.1 This Framework CWTP has been prepared by WSP on behalf of AQUIND Limited in support of DCO to construct and operate an electricity interconnector between France and UK, known as AQUIND Interconnector. The Framework CWTP relates to construction stage of the Onshore components of the Proposed Development and specifically the following:

- The Onshore Cable consisting of two HVDC Circuits between Landfall in Eastney and Lovedean Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure in Lovedean; and
- HVAC Cables, and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the National Grid, at Lovedean Substation.

8.1.1..1.2 The Framework CWTP applies to the construction workforce for each of the Onshore components of the Proposed Development, nothing that the Converter Station will form the main compound for all construction works. This means that all construction workers will start and end their working day at the Converter Station.

8.1.1..1.3 The CWTP will be an iterative document, managed and implemented by a Travel Plan Co-ordinator (TPC), to provide relevant information relating to initiatives and measures aimed to reduce single occupancy car trips generated by the construction site.

8.1.1..1.4 Due to the nature of the specialist construction skills workers required for the project, it is determined that these workers will travel from further afield than typical construction workers. Therefore, due to the limited public transport opportunities close to the site and the distance travelled by the workers, the most appropriate measures for reducing trip generation are promotion of car sharing and provision of a shuttle bus service to / from Havant railway station.

8.2. CONCLUSION

8.2.1..1.1 The CWTP has considered the sustainable transport initiatives and measures that can be implemented to promote a reduction in single occupancy car use to the proposed Converter Station during the construction stage. Having regard to the nature of the proposals, and the specialist workers required for construction, a target of a 5% shift towards car sharing and 5% shift towards train travel has been proposed for the site. The WTP will be actively managed and monitored by a TPC.

8.2.1..1.2 It is therefore concluded that the WTP provides a sustainable access strategy for the proposed development.

Appendix G – FRAMEWORK TRAFFIC MANAGEMENT STRATEGY

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Appendix 22.1A
Framework Traffic Management Strategy

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

Document Ref: 6.3.22.1A

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Appendix X.X Appendix Name

PINS REF.: EN020022

DOCUMENT: 6.3.22.1A

DATE: 14 NOVEMBER 2019

WSP

WSP House

70 Chancery Lane

London

WC2A 1AF

+44 20 7314 5000

www.wsp.com

DOCUMENT

Document	INSERT
Revision	001
Document Owner	WSP UK Limited
Prepared By	S. Gander
Date	11 November 2019
Approved By	C. Williams
Date	13 November 2019

CONTENTS

TABLES

PLATES

APPENDICES

FRAMEWORK TRAFFIC MANAGEMENT STRATEGY

1.1. INTRODUCTION

1.1.1.1. This document provides details of the Framework Traffic Management Strategy ('FTMS') required in connection with the construction of the Onshore Cable which forms part of the Proposed Development, running from the proposed Converter Station in Lovedean, Hampshire to the Landfall at Eastney, Portsmouth. This FTMS sets out the overarching principles and methodology to be used during the construction of the Proposed Development and will be developed in further detail, as required by the Development Consent Order ('DCO'), by appointed contractors prior to commencement of each phase of the works.

1.1.1.2. The FTMS should be read in conjunction with Appendix 22.1 (Transport Assessment) ('TA') of the Environmental Statement ('ES') Volume 3 (document reference 6.3.22.1), which details the anticipated impact on all forms of traffic and travel as a consequence of the construction of the Proposed Development and which in turn has informed the traffic management requirements to mitigate those anticipated impacts. Further details on construction traffic can be found within Appendix 22.2 (Outline Construction Traffic Management Plan) ('CTMP') of the ES Volume 3 (document reference 6.3.22.2), which covers the construction of the Converter Station and Onshore Cable Route.

1.1.1.3. A key aspect of the FTMS is the proposed programme for constructing the Onshore Cable, which aims to mitigate the impacts of the works by taking account of key constraints and sensitive locations along the route. In relation to this, the FTMS provides an indicative programme for construction that considers environmental constraints, major events, school terms and interaction between adjacent or nearby locations to minimise the impact where possible.

2. OVERARCHING TRAFFIC MANAGEMENT PRINCIPLES

2.1. INTRODUCTION

2.1.1.1. The FTMS has been developed with the aim of minimising disruption to all road-users, including pedestrians, cyclists, public transport users and car drivers. This section sets out the principles that will be followed by contractors during the construction of the Onshore Cable. These principles will be included within the Technical Specification issued to contractors as part of the construction tender process, along with specific details of traffic management requirements at key sections of the Onshore Cable Corridor as described within this document.

2.2. DESCRIPTION OF UK ONSHORE CABLE CORRIDOR

2.2.1.1. The Onshore Components of the Proposed Development comprise the Converter Station, the Onshore Cable and the Landfall. Four High Voltage Direct Current ('HVDC') Cables (two circuits) are proposed to be installed in the Onshore Cable Corridor between the Converter Station and the Landfall. The Onshore Cables will be installed in two ducts per circuit, mostly in trenches or in certain specific locations via trenchless installation methods (e.g. Horizontal Directional Drilling ('HDD')). The proposed Onshore Cable passes through the urban areas of Waterlooville, Purbrook, Drayton and Portsmouth, with the Landfall located at Eastney.

2.2.1.2. A typical cross-section of the cable trench arrangement in the highway is shown in Plate 1 showing each pair of Direct Current ('DC') Cables in its own trench. Each excavated trench would be approximately 0.7 m in width but could increase to 1 m in order to facilitate the cables being installed deeper, when navigating existing utility services. In the majority of cases, parallel trenches will be excavated at separate times for each circuit.

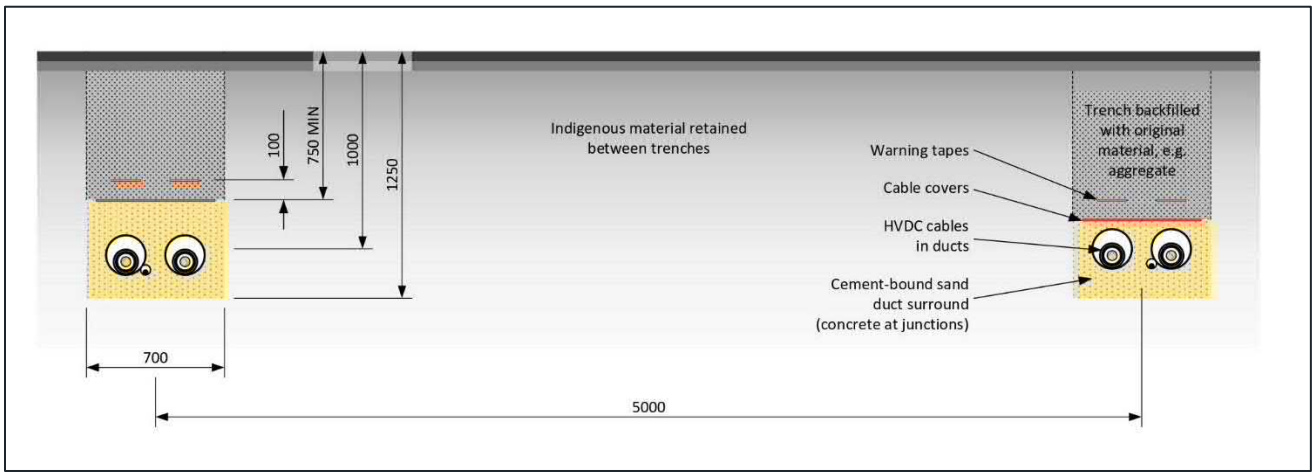


Plate 1 - Typical Arrangement of HVDC Cable in Road, Verges and Footpath

2.2.1.3. The Onshore Components of the Proposed Development have been split into 10 sections for ease of description as follows:

- Onshore Cable Corridor Section 1 – Lovedean (Converter Station Area)
- Onshore Cable Corridor Section 2 – Anmore
- Onshore Cable Corridor Section 3 – Denmead/Kings Pond Meadow
- Onshore Cable Corridor Section 4 – Hambledon Road to Farlington Avenue
- Onshore Cable Corridor Section 5 – Farlington
- Onshore Cable Corridor Section 6 – Zetland Field and Sainsbury's Car Park
- Onshore Cable Corridor Section 7 – Farlington Junction to Airport Service Road
- Onshore Cable Corridor Section 8 – Eastern Road (adjacent to Great Salterns Golf Course) to Moorings Way
- Onshore Cable Corridor Section 9 –Moorings Way to Bransbury Road
- Onshore Cable Corridor Section 10 – Eastney (Landfall)

2.2.1.4. A plan showing these sections can be found in Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3). For the purposes of this study these Sections have also where appropriate been divided into shorter sub-sections as described in Section 2 to 10 of this report.

2.2.1.5. In some locations the Onshore Cable Corridor includes a number of route options. Where a number of options are present, these represent alternate routes which are still being considered due to constraints affecting the cable installation.

2.3. CONSTRUCTION METHODOLOGY OF ONSHORE CABLE ROUTE

2.3.1.1. During construction there will be a number of locations along the route at which construction work will be performed simultaneously, all of which will require traffic management measures when being completed in or immediately adjacent to roads. For the purposes of the FTMS, each location is referred to as a 'construction zone.' The stages of construction for the Onshore Cables are as follows:

- Excavation of the trench, installation of the cable ducts and reinstatement of the final grade;
- Excavation of Joint Bays;
- Provision for cable pulling, requiring space for cable drums and winches;
- Cable jointing work; and
- Filling of ducts, if necessary to maintain thermal performance e.g. at locations of unexpected service congestion.

2.3.1.2. A conservative estimate of the installation rate for cable ducts is approximately 18 m – 30 m per 10-hour day shift per circuit, on average, within urban areas and approximately 50 m per day in open country. These typical installation rates are per gang per shift and are dependent upon the level of obstacles and utility services encountered within the road or constraints that need to be observed to minimise impacts. At this stage however it is estimated that construction of the Onshore Cable within the public highway will progress at a rate of 100 m per week per circuit, which is at the lower end of the 18 m – 30 m installation rate per day. All part weeks (e.g. 2 days) have also been rounded-up to the next full week. Accordingly the assumptions regarding the rate of installation represent a robust and worst-case analysis of construction periods on each section.

2.3.1.3. The locations of the ducts within the road will be dictated by, amongst other factors, existing services. Where it is necessary to increase installation depth to clear existing services it may be necessary to increase the distance between ducts to avoid de-rating the circuits (i.e. when the cables operate at the maximum temperature and do not achieve the maximum required current carrying capacity).

2.3.1.4. Joint Bays will be positioned off of the highway (in highway verges, fields or other land) where possible, to limit the need for road closures associated with their installation, but the final location will be by selected by the contractor(s). It is preferable to avoid the need for the Onshore Cables to cross the highway to access a Joint Bay location. Typically, it would take approximately 20 working days to complete one joint bay location. This timescale includes the excavation, set-up, cable pulling, jointing, bonding connections, testing and reinstatement (i.e. site cleared and reinstated to its original state). Each excavation will be approximately 15 m x 3 m, with additional space required at ground level for construction, cable installation, jointing and reinstatement, including a 20 m x 6 m 'compound' during jointing (for approximately one week).

2.3.1.5. There are up to six locations along the Onshore Cable Route where the ducts will be installed by trenchless installation methods. These locations will not require traffic management measures.

2.4. NEW ROADS AND STREETS WORKS ACTS 1991

2.4.1.1. All works in the highway to be carried out as part of the construction of the Proposed Development will observe requirements of the New Roads and Street Works Act ('NRSWA') (HM Government, 1991). The DCO replicates relevant sections of the NRSWA to provide powers to carry out the following within the Order Limits:

- Break up or open the street, or any sewer, drain or tunnel under it;
- Tunnel or bore under the street or carry out works to strengthen or repair the carriageway;
- Place or keep apparatus in, or under the street;
- Maintain, renew or alter apparatus in, or under the street or change its position;
- Execute and maintain any works to provide hard and soft landscaping;
- Carry out re-lining and placement of road markings;
- Removal and Installation of temporary and permanent signage;
- Removal, replace and relocate and street furniture; and
- Execute any works required for or incidental to any works related to the above tasks.

2.4.1.2. Prior to commencement of works in the highway, detailed designs for the works and the traffic management measures will be submitted for approval to the relevant Highway Authority.

2.5. TRAFFIC MANAGEMENT METHODOLOGY OF ONSHORE CABLE ROUTE

2.5.1.1. In all cases the traffic management requirements will be based upon guidance included within the following documents to ensure the safety of all road-users and construction workers:

- Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Roadworks and Temporary Situations (Department for Transport, 2009);
- Safety at Streetworks and Roadworks: A Code of Practice (Department for Transport, 2013); and
- New Roads and Street Works Act 1991: Code of Practice of Co-ordination of Street Works and Works for Road Purposes and Related Matters (Fourth Edition) (Department for Transport, 2012).

2.5.1.2. Using this Guidance, the following assumptions have been used to inform the traffic management requirements of the construction process:

- It is anticipated that the cable duct installation will take place in 100 m sections, taking approximately five working days to complete each section including reinstatement of the highway;
- The Onshore Cable Route will include two circuits (as described in Section 2.2), with trench excavation and cable duct installation taking place at separate times for all parallel sections or circuit except where road closures are required;
- The construction corridor will generally be 4.0-6.0 m and 100-150 m long, although can be reduced by use of smaller plant to 2.0-3.0 m at local pinch points if required to avoid road closures; and
- Construction on footway will require 2.0 m on footway / verge and 3.0 m on carriageway to allow for construction vehicle access if no other parallel routes are available.

2.5.1.3. Taking account of these assumptions the following overall principles have been applied to the traffic management requirements for the Onshore Cable:

- Two-way traffic flow should be maintained wherever possible, albeit this may need to be facilitated by shuttle working temporary traffic signals and lane closures;
- Full road closures should only be considered as a last resort and where required pedestrian access should be maintained at all times. Where a full road closure is required, the programming of works should aim to minimise disruption where possible and provide for non-car modes, ensuring that safe and convenient routes are provided for pedestrians, cyclists and public transport users;

- Traffic management measures should provide for non-car modes, ensuring that safe and convenient routes are provided for pedestrians, cyclists and public transport users. Removal of such provision should only be considered as a last resort and where required must accompanied by suitable diversion routes.

2.5.1.4. Where the carriageway width past the construction zone is 6.75 m or wider, two-way traffic flow will be maintained without traffic control.

2.5.2. TYPES OF TRAFFIC MANAGEMENT

2.5.2.1. Construction of the majority of the Onshore Cable Route will be facilitated through temporary lane closures, which will require different types of traffic management depending on the location of the trench within the highway and remaining carriageway width while the construction zone is in place. The main types of traffic management measures to be implemented are described below.

Two-Way Shuttle Working with Temporary Traffic Signals

2.5.2.2. This type of traffic management will be employed along sections of the Onshore Cable Corridor that are single-carriageway two-lane (one in each direction) sections of highway and allows two-way traffic flow to be maintained past the construction zone. A diagram showing a typical layout of shuttle-working traffic signals is shown in Plate 2, which will follow standard Chapter 8 of the Traffic Signs Manual (DfT, 2009).

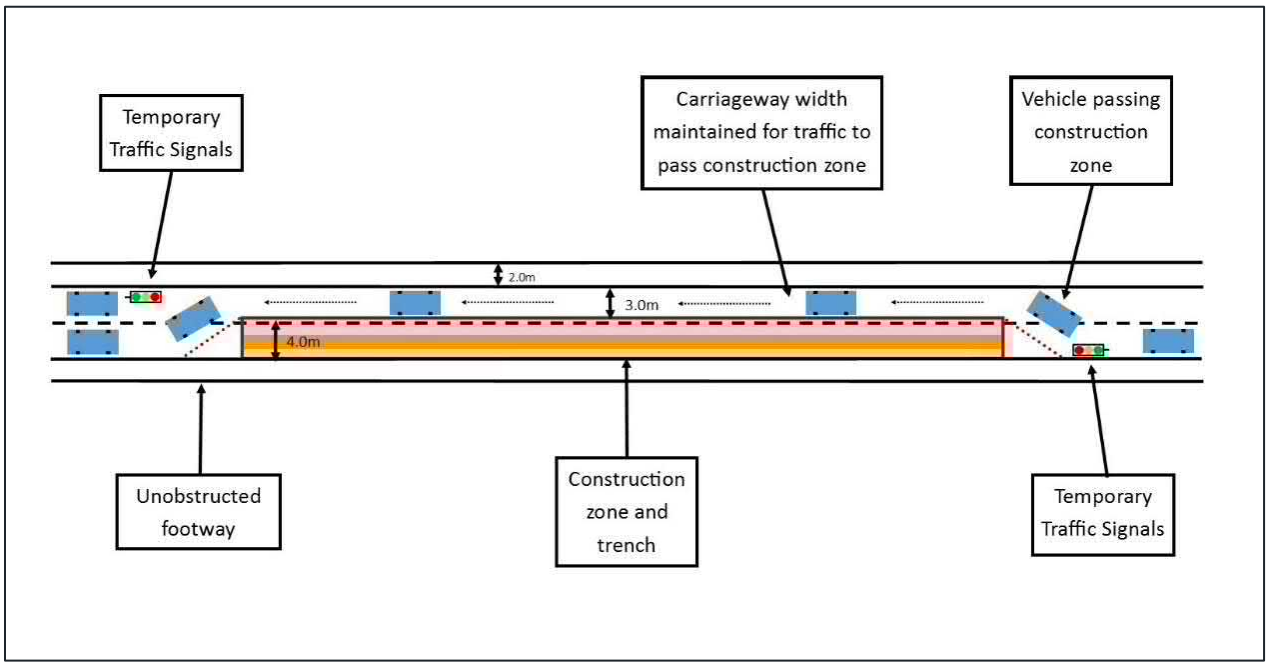


Plate 2 - Shuttle Working with Temporary Traffic Signals

2.5.2.3. Where two-way shuttle-working is installed the minimum lane width past the construction zone will be 3.0m on routes used by buses / Heavy Goods Vehicles

('HGVs') and ideally 3.25-3.7 m. Where a route is used only by cars and Light Goods Vehicles ('LGVs') the lane width may be reduced to 2.5 m. This follows guidance contained within Chapter 8 of the Traffic Signs Manual (DfT, 2009) and reflects the different road types that form part of the Onshore Cable Corridor. This means that the lane widths used will be defined by existing land-uses on any given street (e.g. residential or commercial) and access arrangements.

2.5.2.4. All shuttle-working traffic signals will run in Vehicle Actuated ('VA') mode during the off-peak period but be manually controlled during peak periods. With VA mode, detectors are used to monitor traffic flows and use this information to adjust the length of green-time to reduce delays. Manual operation during peak hours will allow traffic flow and queue lengths to be monitored, therefore giving the ability to mitigate blocking back of queues to adjacent or sensitive junctions.

Lane Closures without Shuttle Working Traffic Signals

2.5.2.5. On wider single carriageway roads and dual carriageways, it may be possible for lane closure to be implemented without the need for traffic signal control. At these locations either the carriageway will be wide enough to accommodate two-way traffic and the construction zone through lane realignment, or a single lane closure will be required where there are two or more lanes in each direction

2.5.2.6. Plate 3 shows a diagram of single lane closure on a dual carriageway link, with the same setup also appropriate for single carriageway roads where there is more than one lane in each direction. An example of this is A3 London Road, where the majority of its length has two-general traffic lanes and at least one bus lane. This will follow the requirements of Chapter 8 of the Traffic Signs Manual (DfT, 2009)

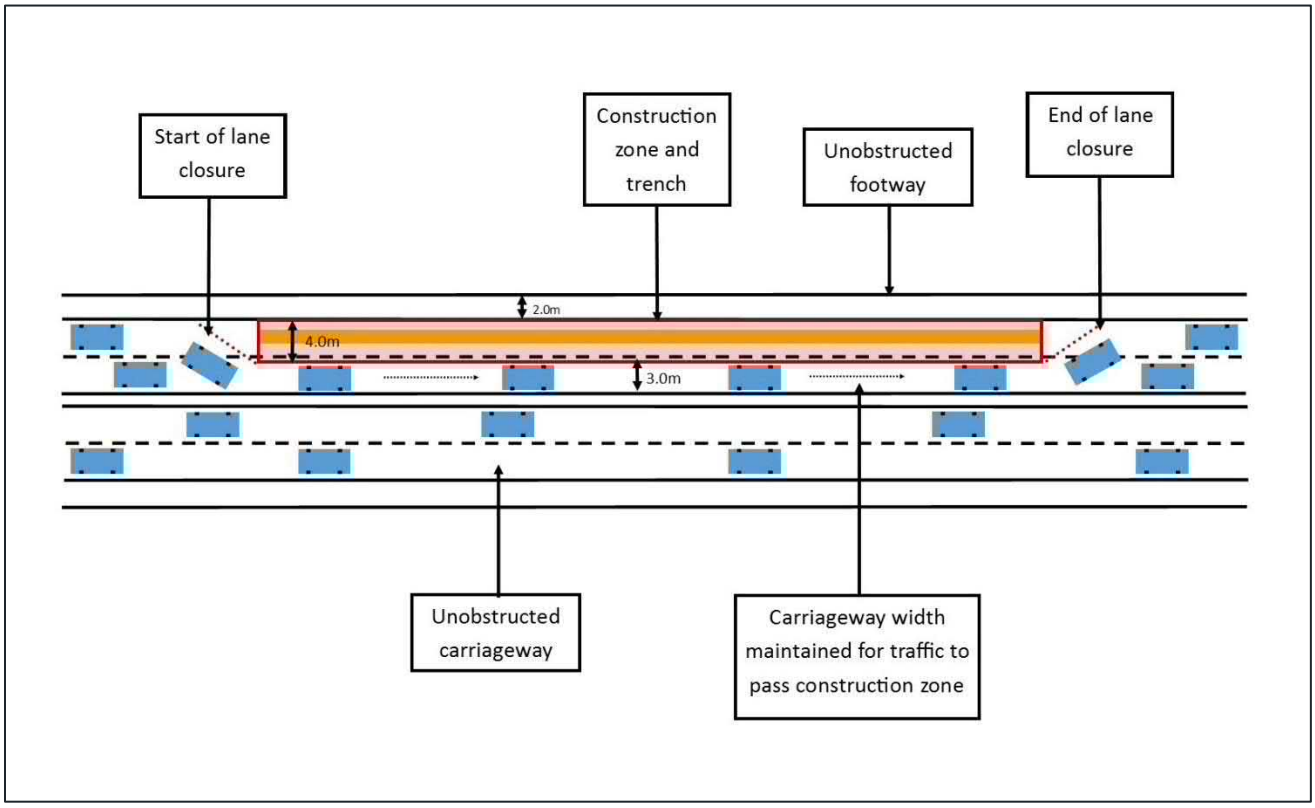


Plate 3 - Lane Closure without Shuttle Working Traffic Signals

2.5.2.7. As with the shuttle-working the minimum lane width past the construction zone will be 3.0 m on routes used by buses / HGVs and ideally 3.25-3.7 m.

2.5.3. RESIDENTIAL AND BUSINESS ACCESS

2.5.3.1. Residential and business access comes in two forms along the Onshore Cable Corridor:

- As direct access, through access junctions or driveways directly onto residential

or business premises; and

- Via side-road junctions that adjoin the Onshore Cable Corridor.

2.5.3.2. Residential and business access will be maintained wherever possible, albeit with different traffic management approaches applied depending upon the circumstances as described below. It should be noted that the required traffic management will only be in place for 1-2 weeks for each individual side-road due to the way in which the construction corridor will progress in sections.

2.5.3.3. The type of traffic management is dependent on the location of the construction zone within the carriageway, which cannot yet be defined as detailed design of the traffic management will only be completed once a contractor is appointed. For example, side-roads on the northern side of the carriageway may not require temporary closure or traffic signal control when the construction zone is on the southern side of the carriageway. This will also apply to dual-carriageway and wide single-carriageway sections, where construction works on one side of the carriageway are unlikely to impact on the other side.

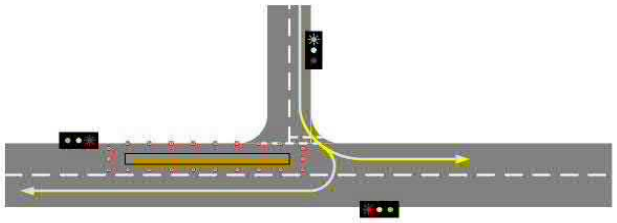
Residential Driveway Access

2.5.3.4. While residents will be informed about the construction works and encouraged to make alternative arrangements where possible, such as parking on-street, steel plating over the trench will be available during working hours (see Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3)) and in the case of emergencies. Where practicable, road plates may be installed outside of these times and construction fences removed to allow access over the construction zone.

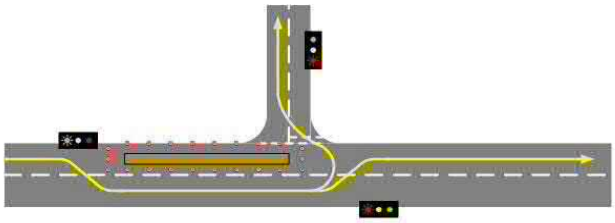
2.5.3.5. Where the construction zone falls on the opposite side of the carriageway to driveways access will be maintained at all times, but drivers will be made aware of construction works/ traffic signal control as appropriate.

Business Access

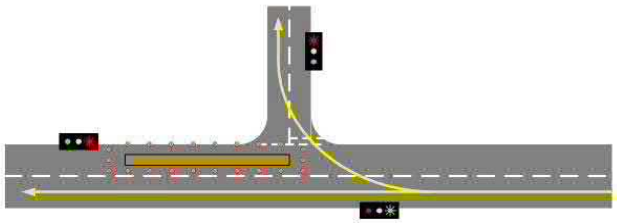
2.5.3.6. Access to business premises will be maintained using either three-way traffic signals, with excavation of the trench taking place in two phases to allow a 3.0 m access to be maintained at all times, or through use of road plates This strategy is shown in Plate 4 below.



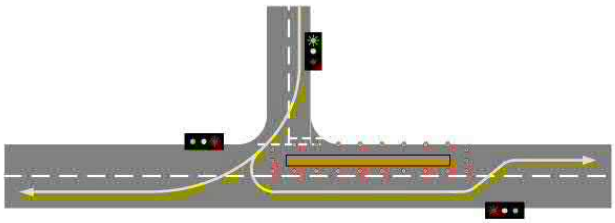
Construction zone approaching junction. Green signal on side-road / access allows vehicles to turn left and right along main road.



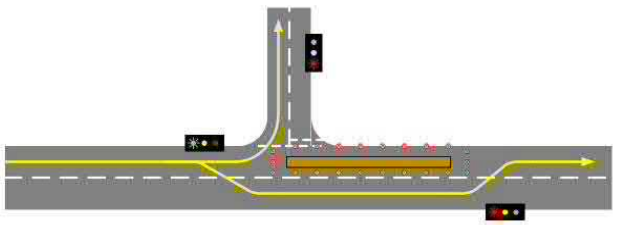
Construction zone approaching junction. Green signal on main road allows vehicles to pass construction zone and turn left into side-road / access.



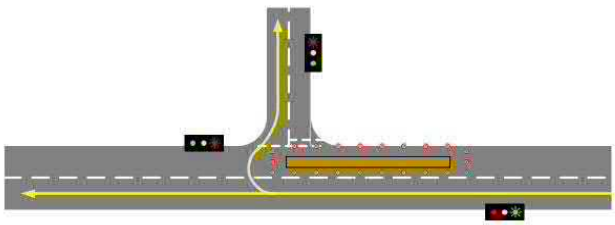
Construction zone approaching junction. Green signal on main road allows vehicles to turn right into side-road / access and pass construction zone.



Construction zone exiting junction. Green signal on side-road / access allows vehicles to turn left and right along main road.



Construction zone exiting junction. Green signal on main road allows vehicles to turn left into side-road / access and pass construction zone.



Construction zone exiting junction. Green signal on main road allows vehicles to pass construction zone and turn right into side-road / access.

Plate 4 - Access to Business / Side-Roads

2.5.3.7. This will be considered on an individual basis and will depend on the business and access arrangements.

Side-Road Access

2.5.3.8. Side-road access adjacent to the cable route will be considered on an individual basis with the traffic management used dependent on the characteristics of the road and junction. The strategy at this stage can be summarised as follows:

- For residential cul-de-sacs, side-road access will be maintained via either road plate or three-way traffic signals. The decision to use traffic signals will depend on the level of traffic flow and visibility from the side-road to the main road traffic signal approaches. Where visibility is poor, traffic signal control is likely to be required, although in all cases this will depend on the exact location of the construction zone;
- For side-roads that act as through-roads, temporary closure of the access will be considered but this depends on the category of road, what the side road provides access to and the suitability of diversion routes. Where closure is not an option, three-way traffic signals will be used if the location of the construction zone requires it.
- Where the side-road junction is controlled by traffic signals with the main road and where there is more than one approach lane at each entry, it may be possible to continue operating the existing signals through closure of a single lane on each entry. Where this is not possible, temporary traffic signals will be used instead of the existing control.

2.5.3.9. The exact traffic management strategy for side-road access will be agreed with the Highway Authority through submission of detailed designs and traffic management measures prior to commencement of works. It should be reiterated however that such traffic management will only be in place for a maximum of 1-2 weeks for each individual side-road and will be fully dependent upon the location of the Construction Zone.

2.6. NOTICE PERIODS FOR CONSTRUCTION WORKS

2.6.1.1. It is intended that submission of detailed designs and traffic management measures for approval will be required not less than three months before the intended comments of works on that part of the highway, with notice of the date on which the works are to start being provided not less than 14 days before those works commence. The application for approval to relevant Highway Authority will include the following information:

- Description of proposed construction works;

- Details of location, including information on construction zone such as working areas, safety zones and storage requirements;
- Timing and duration of works, including working hours and proposals for night working or weekend working where applicable;
- An illustration of the construction works;
- The technique to be used for underground works and depth of excavation;
- Traffic management, parking and Temporary Traffic Regulation Measures (for which statutory approval will be secured by the DCO) that will be required to facilitate the works. This will include full details of footway / carriageway use where required;
- Details of highway reinstatement, including whether interim or permanent and where interim when a permanent reinstatement is proposed to be carried out;
- Contract details for the person appointed by the contractor to deal with any issues that may occur during the construction activity.

2.6.1.2. The construction methodology will require the work to be completed in a number of phases as the installation of the Onshore Cable progresses along a section of highway. Where possible, an application for approval will be submitted for multiple phases (such as whole cable sections between Joint Bays), albeit noting that individual approvals may be required for each phase of work.

2.7. CONSTRUCTION PROGRAMME

2.7.1.1. An indicative onshore construction programme has been developed for construction works associated with the Proposed Development, taking account of factors such as environmental constraints, public events, school terms and public holidays.

2.7.1.2. The following wildlife events are taken into consideration and will be built into the phasing of enabling and construction works for the Converter Station and Onshore Cable:

- [redacted]
- Bird breeding and nesting season from March to August;
- Plant growing season and winter wet season from August to November, at Kings Pond Meadow SINC and Denmead in Section 3; and
- Wintering bird season, from October to March.

2.7.1.3. Public activities and events that are planned in proximity to the Converter Station Area and Onshore Cable Corridor, including but not limited to the following are also taken into consideration:

- School term time;
- Football season;
- Coastal Waterside Marathon;
- Great South Run;
- South Central Festival; and
- Victorious Festival.

2.7.1.4. An indicative onshore construction programme for the Onshore Cable is as follows:

- HDD and Landfall installation: Q3 2021 – Q1 2024
- Onshore HVDC Route Construction / Installation: Q3 2021 – Q4 2023

2.7.1.5. Further to this indicative programme, consideration has been given with the FTMS to the construction programme for each individual section of the Onshore Cable . This considers the constraints listed above and links between nearby sections of the Onshore Cable Corridor, where for example multiple construction zones in the same area should be avoided. The programme for each sub-section is presented as a month-by-month calendar year with the following categories:

- Green – construction may be completed at any time within the month;
- Amber – construction may take place during part of the month only;
- Red – construction should be avoided during this month.

2.7.1.6. This programme will help mitigate the impacts of the construction works on the highway network.

2.8. COMMUNICATION STRATEGY

2.8.1.1. The communication strategy is recognised as a vital aspect of the construction phase. The communication strategy will allow key stakeholders (including the public), in addition to Hampshire County Council (HCC) and Portsmouth City Council (PCC), to be kept up-to-date with the programme and progress of the construction works. To facilitate this, a dedicated contact for dealing with all matters relating to the construction programme and traffic management strategy will be provided.

2.8.1.2. The key stakeholders for the project in this regard in addition to HCC and PCC are as follows:

- Local residents and road users;
- Local businesses;
- Parish Councils and neighbourhood groups;
- Schools and colleges and University of Portsmouth;

- Portsmouth Football Club;
- Pedestrian and cycle groups;
- East Coast Solent Partnership;
- Highways England ('HE');
- Network Rail;
- Emergency services;
- Utility companies;
- First Group and Stagecoach bus companies
- Local Media (Portsmouth News and Petersfield Post)

2.8.1.3. Communication with these stakeholders will be completed through the following channels:

2.8.2. MEDIA

2.8.2.1. Regular news releases will be issued to Portsmouth News, Horndean Post and Hampshire Chronicle to publicise planned works along key sections of the Onshore Cable Corridor (e.g. B2150 Hambledon Road through Waterlooville, A3 London Road, Havant Road and A2030 Eastern Road).

2.8.2.2. In addition to press releases, engagement will also be completed with local radio stations to publicise the construction programme as part of their traffic bulletins.

2.8.3. AQUIND INTERCONNECTOR CONSULTATION WEBSITE

2.8.3.1. The existing AQUIND Interconnector consultation website will be updated throughout the construction period with details of current and programmed construction works.

2.8.4. ROADWORKS.ORG

2.8.4.1. Through liaison with HCC / PCC through the streetworks process, all construction works will be added to the roadworks.org website as programmed. This will allow the public to keep up-to-date on current and programmed works;

2.8.5. MEMBER / PARISH COUNCIL BRIEFINGS:

2.8.5.1. Where appropriate, local members and parish councils will be briefed on upcoming works as a means of distributing information to the local community. This will also be key to managing expectations of disruption at key locations along the Onshore Cable Corridor.

2.8.6. LETTER / LEAFLET DROPS WITH RESIDENTS AND BUSINESSES

2.8.6.1. Letter drops will be completed to residential and business properties directly affected by the proposed construction works. This will allow residents and businesses to

change travel plans where appropriate and help minimise disruption.

2.8.7. FACE-TO-FACE CONTACT WITH RESIDENTS AND BUSINESSES

2.8.7.1. In some cases, it may be appropriate to meet with residents and businesses to discuss the construction works in more detail and respond to any specific access requirements.

2.8.8. SIGNAGE

2.8.8.1. On the highway network itself, the provision and location of signage will be an important factor in notifying road users of programmed construction works. While there will be 'Advanced Warning' signs placed on the highway before the works detailing start-date and periods of works, it is also intended that Variable Message Signs ('VMS') are provided at key locations along the Onshore Cable Corridor. These will be installed at least one week prior to commencement of the construction works along each section of highway

2.8.8.2. The use of VMS signs is proposed as these are considered more conspicuous than standard Advance Warning' signs and can be easily updated to reflect the intended programme of works. At this stage it is recommended that VMS signs are installed at the following locations:

- At the A3 London Road / Hulbert Road roundabout to warn road users of construction works on either B2150 Hambledon Road or A3 London Road;
- At the A3 London Road / Southampton Road / Spur Road roundabout in Cosham to warn road users of construction works on A3 London Road;
- At the A27 / A2030 Eastern Road roundabout in Farlington and A2030 Velder Avenue / Milton Road traffic signal junction in Fratton to warn road users of construction works on Eastern Road; and
- On Havant Road east and west of the junction with Farlington Avenue and Eastern Road to warn road users of construction works through this junction.

2.8.8.3. The location and full details of these signs will be agreed with each Highway Authority prior their implementation. It is noted that HCC used these at the A3 London Road / Hulbert Road roundabout prior to resurfacing of the A3 London Road in 2018.

2.9. PEDESTRIANS AND CYCLISTS

2.9.1.1. Pedestrian and cycle routes along the Onshore Cable Corridor will be maintained wherever possible, with full closure considered as the last resort, such as where it would prevent full closure of a major road. In all cases the construction works will ensure that pedestrians and cyclists can pass in a safe manner, with suitable barriers between the construction works. Particular attention will also be paid to the needs of people with mobility and visual impairments to ensure that their safety and free

movement is retained. All layouts will follow protocol defined by Chapter 8 of the Traffic Signs Manual (DfT, 2009).

2.9.2. PEDESTRIANS

2.9.2.1. Where construction works do obstruct a footway a minimum unobstructed width of 1.0 m will be provided alongside the construction corridor and where this is not possible a safe alternative route will be provided. This will include provision of suitable crossing facilities where required, including temporary replacement of existing pedestrian crossings that may need to be closed to facilitate construction.

2.9.2.2. In some locations, a footway closure may be required without a suitable alternative route being available nearby or on the opposite side of the carriageway. In these instances, a pedestrian route will be provided within the carriageway with a minimum unobstructed width of 1.0 m, albeit this will be wider where it does not impact on traffic flow. Suitable barriers will be provided, along with ramps and footway boards where these are required.

2.9.2.3. Some temporary footway closures may be required to facilitate delivery and collection of materials. In the majority of cases this will be mitigated through alternative footway links being available but where this is not possible, the following will apply:

- The footway be closed for no longer than 15 minutes in every one-hour period;
- Construction operatives will be made available to assist users past the works;
- Pedestrians with impaired mobility will need to wait no longer than 5 minutes; and
- Temporary footway closure signs are provided in place of the works.

2.9.3. CYCLISTS

2.9.3.1. Where there are shared-use paths or cycleways impacted by the works these will be kept open if possible, or a suitable diversion route provided.

2.9.3.2. Where full closure of cycle route is necessary and diversion routes are unsuitable temporary cycle facilities will be provided past the construction corridor where possible, such as on the Eastern Road shared-use path. This could be completed as part of a full lane closure or through provision of a temporary off-road route. The width of these temporary routes will be 2.5 m where possible, with a minimum of 1.5 m. If the temporary route is provided over unmade ground, then footway boards will be used to provide a formal surface.

2.9.3.3. In some cases it may be required to narrow a shared-use path past the construction corridor to a width that is not suitable for cycle use (I.e. 1.0 m). In these circumstances 'Cyclists dismount and use footway' signs will be used as a last resort, noting that his would only be completed for one 100 m section at a time.

2.9.3.4. Where road closures are required for construction of the Onshore Cable Route cycle

access will be maintained at all times.

2.10. PUBLIC TRANSPORT

2.10.1.1. During construction of the Onshore Cable Route some existing bus stops may need to be closed depending upon the exact location within the carriageway or footway. Where this is required, a temporary bus stop will be provided as close as possible to the original location, taking into account highway safety of all road users.

2.10.1.2. Construction of the Onshore Cable Route within the A3 London Road will require works within the existing bus lane or suspension of the bus lane to mitigate the impact on general traffic flow. As with the rest of the Onshore Cable Corridor this will be completed in 100 m sections and therefore bus priority will be maintained where the bus lane is suspended through provision of temporary bus priority traffic signals.

2.11. SCHOOL ACCESS

2.11.1.1. Construction of the Onshore Cable Route will take place during school holidays on links that contain schools or where they are located directly adjacent to the Onshore Cable Corridor. This includes the following links and schools:

- Solent Junior School on Solent Road and Solent Infant School on Evelegh Road, adjacent to Farlington Avenue; and
- Mooring Way Infant School, Moorings Way.

2.11.1.2. Consideration will also be given to schools located close to the Onshore Cable Corridor, given the potential impact of the construction works.

2.12. RESPONSIVE TRAFFIC MANAGEMENT PROTOCOL

2.12.1.1. It is proposed that the FTMS required to support the Proposed Development operates as a 'live' and responsive strategy. This means that, in continuous liaison with HCC / PCC, an approved TMS will be amended where required to reflect traffic conditions and events that may impact upon the construction works or capacity of the highway network surrounding the Onshore Cable Corridor. Examples of this can include:

- a protocol to temporarily suspend and remove works if a road traffic accident or other emergency event on either the Onshore Cable Corridor or surrounding network requires road closures and diversion of traffic;
- where the construction zone is at key junctions within the network, management of traffic signals adjacent to the Onshore Cable Corridor during peak hours to ensure signal timings reflect additional traffic flows;
- Management of traffic signal junctions along diversion routes associated with road closures;
- Provision of traffic marshalling around schools adjacent to the Onshore Cable

Corridor to mitigate the impact of traffic redistribution onto such links.

2.12.1.2. The ability of the FTMS to respond to events away from the Onshore Cable Corridor itself will mitigate impact of the works should these events occur. This is particularly important for the A3 London Road and A2030 Eastern Road, both of which experience a significant increase in traffic flow when there are road traffic accidents on either the A3(M) or M275.

2.12.1.3. In addition to this, the CTMP includes provision for a road safety officer, who will be responsible for the continual monitoring of the road works for the Onshore Cable Route to ensure the proactive management of road safety. They will ensure there is sufficient road signage to warn the public and inform construction related traffic to ensure compliance and route choice. There will also be contact telephone numbers for public to raise concerns as well as the provision of a website. Receptors that attract vulnerable people will be updated on a regular basis with visits (e.g. schools) as necessary.

2.13. EMERGENCY SERVICES

2.13.1.1. The Onshore Cable Corridor runs past a number of emergency services locations therefore meaning that access by emergency vehicles will need to be actively managed where possible to minimise delays. The Onshore Cable Corridor runs nearby or adjacent to the following bases:

- Waterlooville Fire Station - A3 Maurepas Way;
- Eastern Road Ambulance Station, albeit this does not provide emergency response; and
- Eastney Lifeboat Station – Ferry Road.

2.13.1.2. At Waterlooville Fire Station access will be maintained at all times by excavation of the trench taking place in two phases to allow a suitable width access between works or through use of road plates.

2.13.1.3. In proximity to Eastney Lifeboat Station, the works along Fort Cumberland Road will be facilitated by shuttle working traffic signals. This will maintain access to Ferry Road and the Lifeboat Station at all times.

2.13.1.4. Along the remainder of the Onshore Cable Corridor each construction location zone will be setup to ensure access by emergency vehicles is achievable. To facilitate access and minimise delay through the works, a protocol will be setup for management of temporary signals. This could include implementation of an 'all red' phase to clear the construction zone of traffic or extended green times to give priority to an approaching vehicle.

2.13.1.5. Under the responsive traffic management protocol described in Section 2.12 there will also be an option to temporarily suspend works if required to mitigate the impacts

of the road traffic accident or other emergency event in proximity to the Onshore Cable Corridor.

3. SECTION 1 – LOVEDEAN (CONVERTOR STATION AREA)

3.1.1.1. The Onshore Cable Route will not be constructed within public highway within Section 1 but some traffic management will be required to facilitate construction of the temporary and permanent access junction for the Converter Station. This is described below and shown on Drawing EN02022-TMS-1 included in Appendix 1 to this FTMS.

3.1.1.2. Broadway Lane and Day Lane within the vicinity of the Converter Station Area are rural lanes without street lightning of footways and are subject to a national speed limit (60 mph).

3.2. CONVERTER STATION ACCESS JUNCTION

3.2.1.1. Construction of the Converter Station access junction / access road will be primarily constructed 'off-line' in order to avoid impacting upon traffic flow along Broadway Lane and Day Lane. However, it is likely that construction work on each access junction bellmouth will require some limited narrowing of the existing carriageway, which will only accommodate one-way traffic flow. This will be accommodated by the implementation of three-way temporary traffic signals to control traffic flow in the vicinity of the access. The exact location of the temporary traffic signals will be determined by the contractor(s), however, it is envisaged that these would be located as follows to provide adequate visibility for approaching traffic:

- Adjacent to Broadway Cottages on Broadway Lane south of the proposed access junction;
- 20 m north of the give-way line on Broadway Lane north of the proposed access junction (at the junction with Day Lane); and
- 75 m east of the junction of the Broadway Lane / Day Lane junction on Day Lane.

3.2.1.2. To reduce traffic speeds within the vicinity of the access works it is also proposed that a temporary 30 mph speed limit is implemented.

3.2.1.3. The timeframe for this traffic management to be in place will be dependent upon the construction schedule of the access junction. Currently, the anticipated programme for these works suggests that traffic management will need to be in place for 8-12 weeks to facilitate construction of the access junction.

3.2.1.4. Table 1 shows a breakdown of the calendar year, showing availability for the construction of the access works to take place within this Section.

Table 1 - Section 1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
1	Converter Station Access	TBC	Shuttle Working	8-12 weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: N/A

Other Restrictions	
Sections	Total Availability
None	52 Weeks

3.2.1.5. This shows that construction can take place during any month of the year. It is also considered that there are no constraints on the construction programme presented by works on adjacent sections of the Onshore Cable Corridor.

4. SECTION 2 ANMORE

4.1.1.1. The Onshore Cable Route will run north to south through Section 2. The Onshore Cable Corridor in this Section is primarily within agricultural fields. The only impacted public highways in this Section will be at the intersection of the Onshore Cable Corridor and Broadway Lane. The Onshore Cable Corridor crosses Broadway Lane at approximately 200 m east of the junction with Edney's Lane.

4.1.1.2. Below is a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Corridor to take place within this Section.

Table 2 - Section 2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
2	Broadway Lane	6	Road Closure	1 Day
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: N/A											
Other Restrictions											
Sections						Total Availability					
Section 3.1 – 2 weeks						50					

4.1.1.3. Programming of these works at separate times to Section 3.1 will minimise the impact resulting from the proposed traffic management strategy for Broadway Lane and Anmore Road.

4.2. DESCRIPTION OF TRAFFIC MANAGEMENT

4.2.1.1. It is likely that a full road closure will be required to allow the Onshore Cable to cross Broadway Lane. It is anticipated that this road closure will need to be in place for one

day per circuit. This is described below and shown on Drawing EN02022-TMS-1 and EN02022-TMS-2 included in Appendix 1 to this FTMS.

4.2.1.2. A diversion route will need to be implemented to mitigate the impact of the proposed road closure on Broadway Lane. The diversion route will need to take account of the following:

- The nature of rural lanes within the vicinity of the road closure and their suitability for accommodating diverted traffic; and
- The general origin and destination of traffic using Broadway Lane.

4.2.1.3. Taking account of these factors, it is recommended that diversions be implemented that route traffic via Edney's Lane, Anmore Road, Anmore Lane and Broadway Lane as shown in Drawing EN02022-TMS-11 included in Appendix 2 to this FTMS. Taking into account this proposed diversionary routing, the closure of Broadway Lane should be scheduled so as to not coincide with construction in Anmore Road, a link which is contained within Section 3 of the Onshore Cable Corridor.

4.2.1.4. Appropriate signage will be provided along this diversion at all appropriate junction locations. Broadway Lane to the east of the Onshore Cable Corridor provides the sole vehicular access to several residential properties, as well as to the Lower Chapters Bed and Breakfast. Broadway Lane to the east of the Onshore Cable Corridor will remain open to ensure access to properties and the bed and breakfast is retained throughout the duration of works

5. SECTION 3 – DENMEAD/KINGS POND MEADOW

5.1.1.1. As with Section 2, the Onshore Cable Corridor within Section 3 is contained primarily within agricultural fields. However, there are two limited sections of public highway which are likely to be impacted within this section. The impacted highway includes the following:

- **Sub-Section 3.1**: Anmore Road: up-to 180 m between agricultural fields to the north and south; and
- **Sub-Section 3.2:** B2150 Hambledon Road to Soake Road (180m).

5.1.1.2. Both of these links are likely to require traffic management to facilitate the construction of the Onshore Cable Route. The construction works within this section are likely to take a maximum of 1-2 weeks to complete per circuit.

5.2. SUB-SECTION 3.1 – ANMORE ROAD

5.2.1.1. Table 3 below provides a summary of the traffic management requirements for Section 3.1.

Table 3 – Sub-Section 3.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.1	Anmore Road	160	Road Closure	1 Day to 2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Other Restrictions											
Sections						Total Availability					
Section 2 – 1 week Section 3.2 – 2 weeks						49					

5.2.1.2. Programming of these works at separate times will minimise the impact resulted from the proposed traffic management strategy for Broadway Lane and Anmore Road.

DESCRIPTION OF TRAFFIC MANAGEMENT

5.2.1.3. The Onshore Cable Corridor will cross Anmore Road between agricultural fields to the north and south, requiring a full road closure for the period of the construction works. At this stage, the exact cable alignment has not been determined, and there are two possible route options for each circuit to cross Anmore Road. The proposals are shown on Drawing EN02022-TMS-2 included in Appendix 1 to this FTMS. The possible options for cable routing in this location are as follows:

- The first option is for the Cable to intersect Anmore Road in a north-south orientation, whilst moving from the fields to the immediate north of the carriageway, to those in the south. As this would mean the cable route only impacts a limited section of highway, this option would likely require a one-day road closure per circuit; and
- The second option is for the cable route to run along Anmore Road in an east-west alignment for an up-to 160m section between the northern field (opposite Soake Road / Clifton Crescent) and southern field (west of 142 Anmore Road). This option would likely require a 2 weeks closure per circuit.

5.2.1.4. If the second route option is used, access to residential properties will be restricted for vehicles for the entire period of construction. This will impact up to three residential properties, with alternative on-street parking available on Clifton Crescent.

5.2.1.5. As is stated above, any road closures on Anmore Road should be scheduled to avoid coinciding with any closure of Broadway Lane. The recommended diversion route for the road closure on Anmore Road is via Mill Road, B2150 Hambledon Road and Soake Road as shown in Drawing EN02022-TMS-11 included in Appendix 2 to this FTMS.

5.2.1.6. Taking into account this proposed diversion, it is also recommended that the closure of Anmore Road should not take place at the same time as any works on B2150 Hambledon Road (Section 3.2).

5.3. SUB-SECTION 3.2 - B2150 HAMBLEDON ROAD TO SOAKE ROAD

5.3.1.1. Within Sub-Section 3.2, the Onshore Cable Corridor includes a section of B2150 Hambledon Road between the point from which the cable exits the agricultural fields, to the junction with Soake Road. Table 3 below provides a summary of the traffic management requirements for Section 3.2.

Table 4 – Sub-Section 3.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.2	B2150 Hambledon Road to Soake Road	180	Shuttle working TS	2 weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Other Restrictions	
Sections	Total Availability
Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks	23 weeks

5.3.1.2. Construction along this section of B2150 Hambledon Road will likely require implementation of single lane closure, with shuttle working being implemented through the use of temporary traffic signals to allow for continued two-way traffic flow. Where the cable enters / exits agricultural fields, the construction corridor will be phased / managed in line with the standard protocol set out in the technical specification issued to contractors in order to ensure that a continuous pedestrian link is provided along the northern side of the carriageway.

5.3.1.3. Where the Onshore Cable Corridor intersects the junction with Soake Road, temporary three-way traffic signals may need to be implemented to allow continuous access to the Byng's Business Park and Jewson Builders Merchant at the southern end of Soake Road. This will mitigate the need for HGV's wishing to access these businesses from using the less suitable Anmore Road / northern half of Soake Road as a temporary diversion route.

5.3.1.4. No residential properties are impacted by this section of the Onshore Cable Corridor.

6. SECTION 4 – HAMBLEDON ROAD TO FARLINGTON AVENUE

6.1.1.1. This section provides a summary of the proposed TMS for the longest section the Onshore Cable Corridor, which runs from B2150 Hambledon Road between Denmead and Waterlooville and Burnham Road in Farlington. This section has been split into six sub-sections, based upon similarities in road types and commonalities in traffic management requirements. The total length of this section is 6.7 km, and the sub-sections are as follows:

- **Sub-Section 4.1** – B2150 Hambledon Road between Soake Road and Milton Road;
- **Sub-Section 4.2** – B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road;
- **Sub-Section 4.3** – A3 London Road to Ladybridge Roundabout;
  - **Sub-Section 4.31** – A3 London Road between Forest End Roundabout and south of the junction with Forest End;
  - **Sub-Section 4.32** - A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields);
  - **Sub-Section 4.33** - A3 London Road between south of southern end of bus lanes (in proximity to Poppy Fields) and Post Office Road;
  - **Sub-Section 4.34** - A3 London Road between Post Office Road and Rocking Horse Nursery;
  - **Sub-Section 4.35** - A3 London Road between Rocking Horse Nursery and Ladybridge Roundabout;
- **Sub-Section 4.4** – A3 London Road to Portsdown Hill Road;
  - **Sub-Section 4.41** - A3 London Road between Ladybridge Roundabout and start of bus lane;
  - **Sub-Section 4.42** - A3 London Road between start of bus lane and Lansdowne Avenue;
  - **Sub-Section 4.43** - A3 London Road between Lansdowne Avenue and bus lane (south of The Brow);

- **Sub-Section 4.44** - A3 London Road between bus lane (south of The Brow) and Portsdown Hill Road; and

- **Sub-Section 4.5** – B2177 Portsdown Hill Road.

6.1.1.2. The FTMS proposals for Section 4 are shown on Drawing EN02022-TMS-3, 4 and 5 included in Appendix 1

6.2. SUB-SECTION 4.1 – B2150 HAMBLEDON ROAD BETWEEN SOAKE ROAD AND MILTON ROAD

6.2.1.1. Section 4.1 includes the section of B2150 Hambledon Road between the junction with Soake Road and the roundabout with Milton Road. All of B2150 Hambledon Road in this subsection is single carriageway and is subject to a 30 mph speed limit.

6.2.1.2. Table 5 shows availability for the construction of the Onshore Cable Route to take place within this subsection.

Table 5 – Sub-Section 4.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.1	B2150 Hambledon Road between Soake Road and Milton Road	1300	Shuttle working TS	8-13 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 2 week restriction due to Christmas.

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks	32 weeks

6.2.1.3. December has been categorised as 'Amber' due to the proximity of the southern end

of B2150 Hambledon Road in this sub-section to Wellington Retail Park, Asda Superstore on A3 Maurepas Way and Lidl supermarket on Elettra Avenue. As December is typically be a very busy period in this location, construction should only take place during the first two weeks of the month. In addition to these considerations, construction within Section 4.1 should not take place simultaneously with the following:

- Section 3.2 - B2150 Hambledon Road to Soake Road;
- Section 4.2 - B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road (1.0 km); and
- Section 4.31, 4.33, 4.34 and 4.35 – All sections of A3 London Road between A3 Maurepas Way and Ladybridge Road that require shuttle working traffic signals.

6.2.1.4. This phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. Specifically, it will ensure that there is not more than one location of traffic management that requires shuttle working on B2150 Hambledon Road, A3 Maurepas Way and A3 London Road at any one time.

6.2.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

6.2.2.1. For the majority of this subsection construction will likely be able to be facilitated by shuttle working traffic signals. Opportunities to reduce the length of shuttle working will however be taken where possible and practical, such as at the following:

- By constructing one circuit within Southdown View / Hambledon Road and the Hambledon Road spur that runs parallel to the B2150 Hambledon Road. This is described in further detail in paragraph 6.2.2.3 – 6.2.2.6 and would remove disruption from B2150 Hambledon Road for 450m or 5 weeks for one circuit; and
- Use of lane realignment between the junction with The Hundred and the roundabout junction with Milton Road. The use of right-turn lanes to facilitate construction works will likely enable construction to take place without impacting on two-way traffic flow for 200m or 2 weeks for each circuit.

6.2.2.2. These options will help minimise the length of time shuttle working traffic signals are required on B2150 Hambledon Road.

Southdown View / Hambledon Parade / Hambledon Road

6.2.2.3. Southdown View runs parallel to B2150 Hambledon Road between Darnell Road and Sunnymead Drive and provides access to 13 residential properties (all with off-road parking) and a public car park which serves an area of open space which comprises of approximately 10 acres of woodland. The carriageway width of Southdown View

is less than 6.0 m, so to avoid road closure, the construction corridor will be narrowed through the use of smaller plant. Two-way traffic flow will be facilitated by an informal 'give-and-take' approach which is appropriate for a link with such low traffic flows. Construction along this link is anticipated to take approximately 1-2 weeks per circuit.

6.2.2.4. Construction works through the junction of Southdown View / Sunnymead Drive / Hambledon Parade will be managed through the use of temporary traffic signals, with construction being phased to ensure that the carriageway remains open at all times.

6.2.2.5. Hambledon Parade is approximately 140 m in length and provides access to a number of retail / commercial units on the northern side of the carriageway. On-street parking is provided on either side of Hambledon Parade and provides capacity for 23 cars, with two additional two accessible bays and a loading bay. To accommodate construction, the on-street parking spaces on one side of the carriageway may need to be temporarily suspended to mitigate the need for a full road closure. To further mitigate the impact of construction on retail / commercial units, it is proposed that construction corridor will be split into 70 m sections therefore allowing some on-street parking to remain on both sides of the carriageway throughout the duration of the works. A one-way system will be implemented along Hambledon Parade during construction to minimise traffic congestion. Construction along this link is anticipated to take 2 weeks.

6.2.2.6. The Hambledon Road spur, running parallel to the north of the B2150 is a residential cul-de-sac providing access to 16 residential properties, all of which have dedicated off-road parking. The carriageway is approximately 5.0m wide on this link, with the northern verge / footway providing an additional 4.0m. This total width of 9.0m provides adequate space for construction but will require use of smaller plant in order to avoid a full road closure. Two-way traffic flow will be facilitated by an informal 'give-and-take' approach which is appropriate for a link with such low traffic flows and the majority of residents will continue to be able to park off-road on driveways. It is anticipated that construction along this link will take approximately 1-2 weeks per circuit.

B2150 Hambledon Road

6.2.2.7. Construction of the Onshore Cable Route along B2150 will require shuttle working traffic signals, although opportunities for lane realignment will be take approach to the junctions with Darnel Road and Milton Road to maintain two-way traffic flow. For example, retaining two free-flow traffic lanes for 200 m between The Hundred and Milton Road by use of right-turn lanes and central hatching will remove the requirements for shuttle working traffic signals for 2 weeks per circuit.

6.2.2.8. Several junctions intersect B2150 Hambledon Road in Section 4.1, with the required traffic management at each location dependent upon the exact location of the construction zone within the carriageway, which is not possible to define at this stage.

The following junctions, however, will be subject to traffic signal control due to their existing layout or classification:

- B2150 Hambledon Road / Darnel Road – either lane realignment and use of existing traffic signals or temporary three-way traffic signals;
- B2150 / Hambledon Road / Sunnymead Drive – temporary three-way traffic signals; and
- B2150 / Hambledon Road / Milton Road / Elettra Avenue roundabout – temporary traffic signals.

6.2.2.9. The traffic management required for the following junctions will be determined by the contractor and dependent upon location of the construction zone, albeit with access retained at all times, either directly or my alternative routes:

- B2150 Hambledon Road / Sickle Way;
- B2150 Hambledon Road / Hambledon Parade;
- B2150 Hambledon Road / Charlesworth Drive;
- B2150 Hambledon Road / Petersham Drive; and
- B2150 Hambledon Road / The Hundred.

6.3. SUB-SECTION 4.2 – B2150 HAMBLEDON ROAD AND A3 MAUREPAS WAY BETWEEN MILTON ROAD AND A3 LONDON ROAD

6.3.1.1. Sub-section 4.2 includes B2150 Hambledon Road to the south of the roundabout with Milton Road, as well as A3 Maurepas Way between the roundabout with Houghton Avenue and Forest End Roundabout. Table 6 provides details of programme availability and traffic management proposals for this sub-section.

Table 6 – Sub-Section 4.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.2	B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road	1000	Lane Closure	10 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 4 weeks due to Christmas shopping

Other Restrictions	
Sections	Total Availability
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 2 weeks	24 weeks

6.3.1.2. December has been categorised as 'Red' as this section contains vehicular accesses to Wellington Retail Park, Asda Superstore on A3 Maurepas Way and Lidl supermarket on Elettra Avenue and Waterlooville town centre. As December will be a busy period in this location, construction of this section of the Onshore Cable should not take place during this month. In addition to these considerations, construction within Section 4.2 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2 and 4.1 – B2150 Hambledon Road north-west of this section'
- Section 4.31, 4.33, 4.34, 4.35, 4.41 and 4.43 – All sections of A3 London Road between A3 Maurepas Way and Portsdown Hill Road that require shuttle working traffic signals.

6.3.1.3. Phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. Specifically, it will ensure that construction along Sub-Section 4.2 does not occur at the same time as traffic management that requires shuttle working on B2150 Hambledon Road, A3 Maurepas Way and A3 London Road.

6.3.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

B2150 Hambledon Road

6.3.2.1. Construction along B2150 Hambledon Road in this subsection will require implementation of single lane closures. To facilitate continued access to Wellington Retail Park throughout the duration of works, temporary turning restrictions may need to be implemented at the junction of B2150 Hambledon Road / Aston Road.

Temporary turning restrictions will prohibit right turn movements at this junction, allowing it to remain operational via a left-in, left-out arrangement. These temporary access arrangements are likely to be in place for one week per circuit.

B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue Roundabout

6.3.2.2. Temporary traffic signals may also need to be implemented at the roundabout junction of B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue. Traffic management is likely to be required at this junction for approximately one week.

A3 Maurepas Way

6.3.2.3. Construction within A3 Maurepas Way may require a closure of one lane of the dual carriageway. On the A3 in this section a minimum of three lanes will remain operational, and two-way flow will be maintained at all times. The link provides the entry to the Asda Waterlooville Superstore car park, access to this car park will be retained throughout the duration of works.

6.3.2.4. Waterlooville Fire Station gains vehicular access from A3 Maurepas Way on this link. Vehicular access from the fire station will be retained at all times through-out the duration of works through phased construction maintaining a suitable access width at all times.

Forest End Roundabout

6.3.2.5. Temporary traffic signals may be required at Forest End Roundabout. Construction through this junction is likely to be in place for 2-3 days per circuit.

6.4. SUB-SECTION 4.31 - A3 LONDON ROAD BETWEEN FOREST END ROUNDABOUT AND SOUTH OF THE JUNCTION WITH FOREST END

6.4.1.1. A limited section of shuttle working may be required between Forest End Roundabout and just south of the junction with Forest End, where the central island ends. The programme availability to complete this sub-section is shown in Table 7 below.

Table 7 – Sub-Section 4.31 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.31	A3 London Road between Forest End Roundabout and south of the junction with Forest End	100	Shuttle Working	1 week

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and part of May, June, July, August and part of September (15 weeks) available.

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks **Section 4.1 = 13 weeks** **Section 4.2 = 10 weeks** **Section 4.32 = 10 weeks** **Section 4.33 = 3 weeks** **Section 4.34 = 2 weekends** **Section 4.35 = 2 weeks** **Section 4.41 = 1 week** **Section 4.43 = 2 weeks**	8 Weeks, based on links with similar calendar restrictions

6.4.1.2. Due to the high traffic flows at this location and close proximity to Waterlooville town centre, construction should not take place outside of the summer months, Easter school holidays, May half-term and early September as shown on Table 7. In addition to these considerations, construction within Section 4.3 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2, 4.1 and 4.2 - B2150 Hambledon Road and A3 Maurepas Way;
- Sub-Sections 4.32, 4.33, 4.34, 4.35 - All other parts of Section 4.3 - A3 London Road between A3 Maurepas Way and Ladybridge Road; and
- Sub-sections 4.41 and 4.43 – Parts of A3 London Road between Ladybridge

roundabout and Portsdown Hill road that require shuttle working traffic signals.

6.4.1.3. This phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.2 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.5. SUB-SECTION 4.32 - A3 LONDON ROAD BETWEEN SOUTH OF JUNCTION WITH FOREST END AND SOUTHERN END OF BUS LANES (IN PROXIMITY TO POPPY FIELDS)

6.5.1.1. Construction within this section can be completed through lane realignment, thereby maintaining two-way traffic flow for the entirety of this sub- section. Where the construction zone is located, the bus lanes and general traffic lane will merge from two to one lane. To mitigate the impact on public transport, temporary bus priority traffic signals will be provided where possible to maintain bus priority over general traffic. Table 8 provides details of the available programme for this sub-section.

Table 8 – Sub-Section 4.32 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.32	A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields)	1000	Lane Closure	10 weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No other calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 4.31 = 1 week Section 4.33 = 3 weeks	42 weeks

Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks	

6.5.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;
- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals.

6.6. SUB-SECTION 4.33 - A3 LONDON ROAD BETWEEN SOUTH OF SOUTHERN END OF BUS LANES (IN PROXIMITY TO POPPY FIELDS) AND POST OFFICE ROAD

6.6.1.1. Shuttle working will be required between the junction of A3 London Road / Poppy Fields and the junction of A3 London Road / Post Office Road. The programme availability to complete these works is shown on Table 9 below.

Table 9 – Sub-Section 4.33 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.33	A3 London Road between Poppy Fields and just south of Post Office Road	250	Shuttle Working	3 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and June, July, August (12 weeks) available											
Other Restrictions											
Sections						Total Availability					

Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 2 weeks Section 4.32 = 10 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks	10 weeks, based on links with similar calendar restrictions

6.6.1.2. Due to the high traffic flows at this location, no construction should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 9s. In addition to these considerations, construction within Section 4.3 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2, 4.1 and 4.2 - B2150 Hambledon Road and A3 Maurepas Way;
- Sub-Sections 4.31,4.32, 4.34, 4.35 - All other parts of Section 4.3 - A3 London Road between A3 Maurepas Way and Ladybridge Road; and
- Sub-sections 4.41 and 4.43 – Parts of A3 London Road between Ladybridge roundabout and Portsdown Hill road that require shuttle working traffic signals.

6.6.1.3. As with other sub-sections of A3 London Road, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.33 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.7. SUB-SECTION 4.34 - A3 LONDON ROAD BETWEEN POST OFFICE ROAD AND ROCKING HORSE NURSERY

6.7.1.1. A full road closure may need to be implemented on the section of the A3 London Road between Post Office Road and Rocking Horse Nursery and Pre-School, a distance of approximately 90m. It is anticipated that this closure would take place either:

- Over the course of one weekend per circuit, with construction taking place from Saturday sunrise until Sunday sunset, (including night-working); or
- Over the course of two-weekends per circuit, with construction only taking place during working hours.

6.7.1.2. The programme availability to complete these works is shown on Table 10 below.

Table 10 – Sub-Section 4.34 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.34	A3 London Road between Post Office Road and Rocking Horse Nursery	90	Road Closure	2 weekends

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 4.31 Section 4.41 section 4.43	48 weeks

6.7.1.3. Given off-peak nature of the road closure requirements within sub-section 4.34 there are no calendar restrictions. The will however will most likely be completed at a similar time to sub-section 4.33 and 4.35. During the period of road closure, it will be necessary to provide a diversion route for all traffic, with the following proposed to the east of A3 London Road as shown on Drawing EN02022-TMS-11 included in Appendix 2:

- From Ladybridge roundabout along Ladybridge Road, Stakes Road, Stakes Hill Road, and Rocksville Drive to A3 London Road at Forest End Roundabout.

6.7.1.4. To minimise the impact of the road closure, construction works will not be completed simultaneously with Sections 4.31, 4.41 and 4.43, all of which require shuttle working traffic signals elsewhere on the A3 London Road.

6.8. SUB-SECTION 4.35 - A3 LONDON ROAD BETWEEN ROCKING HORSE NURSERY AND LADYBRIDGE ROUNDABOUT

6.8.1.1. Shuttle working will also be required for this sub-section between Rocking Horse Nursery and Pre-School and Ladybridge Roundabout. Table 11 provides details of the programme availability for completion of construction in this sub-section.

Table 11 - Sub-Section 4.35 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.35	A3 London Road between Rocking Horse Nursery and Ladybridge roundabout	170	Shuttle Working	2 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 3 weeks Section 4.44 = 4 weeks	9 weeks, based on links with similar calendar restrictions

6.8.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 11

6.8.1.3. As with other sub-sections of A3 London Road, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.35 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.8.1.4. Several junctions intersect A3 London Road in Section 4.3. Those junctions which provide connections to the eastern side of the carriageway are, for the most part, accessible by alternate routes on the wider network. While the exact traffic management for each side-road can only be determined once the exact construction zone location is confirmed, at this stage it is proposed that the following are subject to Temporary traffic signals:

- A3 London Road / Mill Road priority junction (due to the proximity of Mill Hill Primary School); and
- A3 London Road / Ladybridge Road / Marrels Wood Garden.

6.8.1.5. As noted, the technical specification issued to contractors will set out the standard protocol for enabling continued access to cul-de-sacs throughout the duration of works.

6.8.1.6. It should be noted that the majority of the side roads to the west of A3 London Road in this section form part of the West of Waterlooville Major Development Area (MDA) which is currently in build out stage. As such, existing cul-de-sacs which currently gain sole vehicular access from A3 London Road which may require temporary traffic signals during construction, may be more suited to temporary suspension of access from the A3 during construction as the wider road network of the MDA develops and the residential streets gain further permeability.

6.9. SUB-SECTION 4.41 - A3 LONDON ROAD BETWEEN LADYBRIDGE ROUNDABOUT AND START OF BUS LANE

6.9.1.1. Immediately south of Ladybridge roundabout the A3 London Road does not include bus lanes, for a distance of approximately 70 m, and will therefore require shuttle working traffic signals to facilitate construction of the Onshore Cable Route. Table 12 provides details of the programme availability for completion of constructions in this

sub-section.

Table 12 - Sub-Section 4.41 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.41	A3 London Road between Ladybridge roundabout and start of bus lane	80	Shuttle Working	1 week

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.42 = 9 weeks Section 4.43 = 3 weeks Section 4.44 = 4 weeks	8 weeks, based on links with similar calendar restrictions

6.9.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 12.

6.9.1.3. As with sub-section 4.35, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.41 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.10. SUB-SECTION 4.42 - A3 LONDON ROAD BETWEEN START OF BUS LANE AND LANSDOWNE AVENUE

6.10.1.1. Construction within this section can be completed through lane realignment, thereby maintaining two-way traffic flow for the entirety of this sub- section. Where the construction zone is located, the bus lanes and general traffic lane will merge from two to one lane. To mitigate the impact on public transport, temporary bus priority traffic signals will be provided where possible to maintain bus priority over general traffic. Table 13 provides details of the available programme for this sub-section.

Table 13 - Sub-Section 4.42 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.42	A3 London Road between start of bus lane and Lansdowne Avenue	850	Lane Closure	9 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No other calendar restrictions identified

Other Restrictions

Sections	Total Availability
Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks Section 4.44 = 4 weeks	39 weeks

6.10.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;

- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals; and
- Sub-Section 4.44 – A3 London Road south of Ladybridge Roundabout where lane closure are required.

6.11. SUB-SECTION 4.43 - A3 LONDON ROAD BETWEEN LANSDOWNE AVENUE AND BUS LANE (SOUTH OF THE BROW)

6.11.1.1. Sub-section 4.43 may require shuttle working traffic signals, although temporary removal of existing pedestrian refuge islands may allow for two-way traffic flow to be maintained due to the wide carriageway width. The worst-case requirement of shuttle working traffic signals has the programme constraints identified in Table 14.

Table 14 - Sub-Section 4.43 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.43	A3 London Road between Lansdown Avenue and start of bus lane (south of The Brow)	250	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 4.33 = 3 weeks **Section 4.34 = 2 weekends** **Section 4.35 = 2 weeks** **Section 4.41 = 1 week** **Section 4.42 = 9 weeks** **Section 4.44 = 4 weeks**	10 weeks, based on links with similar calendar restrictions

6.11.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 14.

6.11.1.3. The phasing of works aims to mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of this sub-section is not completed at the same time as any other works on A3 London Road south of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road north of Ladybridge roundabout.

6.12. SUB-SECTION 4.44 - A3 LONDON ROAD BETWEEN BUS LANE (SOUTH OF THE BROW) AND PORTSDOWN HILL ROAD

6.12.1.1. As with sub-sections 4.32 and 4.42 construction within this sub-section can be accommodated for through the use of either lane realignment as a result of the wide carriageways and bus lanes. This means that overall, 2.25km out of 3.20km construction along A3 London Road can be accommodated while retaining two-way traffic flow and avoiding the need for shuttle working traffic signals. Table 15 shows the programme availability for sub-section 4.44.

Table 15 – Sub-Section 4.44 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.44	A3 London Road start of bus lane (south of The Brow) and Portsdown Hill Road	400	Lane Closure	4 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No other calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 4.31 = 1 week Section 4.33 = 3 weeks						34 weeks					

Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 2 weeks	

6.12.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.34 and 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;
- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals; and
- Sub-Section 4.42 – A3 London Road south of Ladybridge Roundabout where lane closure are required.

6.12.1.3. As with the northern part of A3 London Road, in this Section, the majority of side roads to the east of the construction corridor are accessible via alternate routes on wider road network. While the exact traffic management for each side-road can only be determined once the exact construction zone location is confirmed, at this stage it is proposed that the following are subject to temporary traffic signals:

- A3 London Road / The Brow: The Brow also provides access to multiple residential roads and Purbrook Park school; and
- A3 London Road / A3 southbound slip road: No properties gain access from this link.

6.13. SUB-SECTION 4.5 – B2177 PORTSDOWN HILL ROAD

6.13.1.1. Section 4.5 spans between the priority controlled junction of A3 London Road / southbound slip road and the priority controlled junction of B2177 Portsdown Hill Road / Farlington Avenue. Table 16 below shows the available programme for completion of construction on sub-section 4.5.

Table 16 - Sub-Section 4.5 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.5	Portsdown Hill Road between A3 London Road and Farlington Avenue	600	Shuttle Working	6 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 2 weeks Section 4.44 = 4 weeks Section 5.1 = 7 weeks section 5.2 = 4 weeks						25 weeks					

6.13.1.2. Aside from this however, construction work should not take place on Portsdown Hill Road at the same time as the following:

- Sub-Sections 4.41, 4.42, 4.43 and 4.44 – A3 London Road between Ladybridge Roundabout and Portsdown Hill Road; and
- Section 5.1 and 5.2 – Farlington Avenue.

6.13.1.3. The aim of these restrictions is to mitigate the potential cumulative impacts of multiple construction zones being located within a similar area as the same time. Specifically, it will avoid works on Portsdown Hill Road being completed at the same time as construction on A3 London Road south of Ladybridge Roundabout and Farlington Avenue.

6.13.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

6.13.2.1. It is likely that shuttle working will be required for the entirety of the highway network contained within Section 4.5, should off-road alternatives adjacent to Portsdown Hill Road be considered unsuitable by the contractor. Without the use of off-road alternative construction works on the carriageway will take up to 7 weeks per circuit.

6.13.2.2. Three-way temporary traffic signals will be required at the Portsdown Hill Road priority junction, where the spur road provides a link to / from A3 London Road. Temporary traffic signals or road plating will be required to maintain access may be required at the following junctions whilst the construction corridor intersect the B2177 in these locations:

- Priority junction of B2177 Portsdown Hill Road / Hilltop Crescent: This junction provides the sole vehicular access to approximately 50 private residential properties; and
- Priority junction of B2177 Portsdown Hill Road / Hoylake Road: This junction provides the sole vehicular access point to 16 private residential properties.

6.13.2.3. It should be noted that the Order limits in this Sub-section are inclusive of both the verge to the immediate south of B2177 Portsdown Hill Road, and Portsdown Hill Viewpoint Car Park. This may enable works to be completed with considerably lessened disruption to the operation of B2177 Portsdown Hill. Should works be completed in the section of car park / verge contained within the Order Limit, the section of shuttle working would reduce from approximately 600 m to approximately 400 m. This would consequently reduce the length of time traffic management is required in this Section to approximately 4 weeks.

7. SECTION 5 – FARLINGTON

7.1.1.1. Section 5 spans from the junction of B2177 Hambledon Road / Farlington Avenue in the north to the junction of A2030 Eastern Road / Fitzherbert road in the south. For ease of assessment, Section 5 has been split into two subsections, these subsections are as follows:

- **Sub-Section 5.1** – Farlington Avenue between Portsdown Hill Road and Sea View Road;
- **Sub-Section 5.2** - Farlington Avenue between Sea View Road and Havant Road;
- **Sub-Section 5.3** - Evelegh Road
- **Sub-Section 5.4** – crossing of Havant Road into Farlington Avenue or Portsmouth Water land; and
- **Sub-Section 5.5** – Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road.

7.1.1.2. The FTMS proposals are shown on Drawing EN02022-TMS-5 and 6 included in Appendix 1 to this FTMS.

7.2. SUB-SECTION 5.1 – FARLINGTON AVENUE BETWEEN PORTSDOWN HILL ROAD AND SEA VIEW ROAD

7.2.1.1. Two-way flow is likely to be able to be retained on Farlington Avenue through the use of shuttle working traffic signals between the junction with B2177 Portsdown Hill Road and the junction with Sea View Road. Table 17 shows the programme availability for construction along this sub-section.

Table 17 - Sub-Section 5.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.1	Farlington Avenue between Portsdown Hill Road and Sea View Road	650	Shuttle Working	7 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Assume work between Easter Holidays and end of summer holidays (15 weeks)

Other Restrictions	
Sections	Total Availability
Section 4.5 = 6 weeks Section 5.2 = 4 weeks Section 5.3 = 2 weeks Setion 5.5 = 8 weeks	13 weeks

7.2.1.2. Construction along sub-section 5.1 will take approximately 7 weeks per circuit. In order for the programme to be deliverable in conjunction with Sub-section 5.2 and 5.3 construction will be limited to school holidays where possible and with the exception of June and early July. In addition, construction along this section should not take place simultaneously with the following:

- Section 4.5 – Portsdown Hill Road;
- Section 5.2, 5.3 – Farlington Avenue south of Sea View Road and Evelegh Road; and
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.2.1.3. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.2.1.4. The majority of side roads which have junctions with Farlington Avenue are accessible via more than one junction and therefore alternative access is available implemented. Temporary three-way signals or road plating will be required to provide access to the Blake Road cul-de-sac.

7.3. SUB-SECTION 5.2 FARLINGTON AVENUE BETWEEN SEA VIEW ROAD AND HAVANT ROAD

7.3.1.1. Due to width restrictions on the southern section of Farlington Avenue between the junction with Sea View Road and the junction with Havant Road, a temporary road closure may be required on this link. Table 18 shows the available programme for construction on this sub-section.

Table 18 - Sub-Section 5.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.2	Farlington Avenue between Sea View Road and Havant Road	350	Road Closure	4 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Easter and summer holidays only (8 weeks)

Other Restrictions

Sections	Total Availability
Section 4.5 = 6 weeks Section 5.1 = 7 weeks Section 5.3 = 2 weeks Section 5.5 = 8 weeks	6 weeks

7.3.1.2. Due to the location of Solent Infant School on Evelegh Road and Solent Junior School on Solent Road construction should take place during the school holidays to avoid impacts to school trips. Avoidance of term time for construction is also fundamental to ensure that emergency access is maintained during term time. In addition, construction along this section should not take place simultaneously with the following:

- Section 4.5 – Portsdown Hill Road;
- Section 5.1 and 5.3 Farlington Avenue between Portsdown Hill Road and Sea View Road and Evelegh Road;
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.3.1.3. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.3.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

7.3.2.1. While it is anticipated that a full road closure will be required, a limited section of shuttle working may be able to be implemented on Farlington Avenue between the junction with Sea View Road and the junction with Solent Road. This would allow two-way traffic to be retained on this link for the duration of works. This section is approximately 200 m long and thus it is anticipated that works would be in place on this link for approximately 2 weeks in total per circuit.

7.3.2.2. Access to residential properties which are to be impacted by the proposed road closure will not be possible for the duration of works. The section of Farlington Avenue which may require a temporary road closure to accommodate construction is approximately 350m in length but would be split into construction zones of approximately 100 m in length. As such it is only access to an estimated 10-15 properties which would be impacted at any one time.

7.3.2.3. Where road closures are required, it will not be possible for vehicles to access residential properties expect in an emergency. Access for pedestrians will however be retained at all times. To help minimise disruption to residents during road closures, the existing waiting restrictions on Farlington Avenue will be suspended, if agreed with PCC. This will allow for limited on-street parking on sections of Farlington Avenue north or south of the road closure.

7.4. SUB-SECTION 5.3 - EVELEGH ROAD

7.4.1.1. The Order Limit in this location also includes the section of Evelegh Road which spans from the junction with Farlington Avenue in the west to the 70th Portsmouth Scouts Hut in the east, providing an alternative route for one circuit along the Portsmouth Water land that runs parallel to Farlington Avenue. This section of Evelegh Road is likely to require a temporary road closure to accommodate construction. Use of this route would halve the road closure time required on Farlington Avenue between Solent Road and Havant Road.

7.4.1.3. Table 19 shows the available programme for construction on this sub-section.

Table 19 - Sub-Section 5.3 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.3	Evelegh Road	150	Road Closure	2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: Easter and summer holidays only (8 weeks)											
Other Restrictions											
Sections						Total Availability					
Section 5.1 = 8 weeks Section 5.2 = 4 weeks Section 5.5 = 9 weeks						4 weeks					

7.4.1.4. The part of Evelegh Road also provides the sole vehicular access to Solent Infant School, as stated above, all road closures on this route should be scheduled to avoid term times. Construction should also not take place simultaneously with the following sub-sections:

- Section 5.1 and 5.2 Farlington Avenue between Portsdown Hill Road and Havant Road; and
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.4.1.5. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.4.1.6. Where road closures are required, it will not be possible for vehicles to access residential properties expect in an emergency. Access for pedestrians will however be retained at all times.

7.5. DIVERSION ROUTES FOR ROAD CLOSURES ON FARLINGTON AVENUE AND EVELEGH ROAD

7.5.1.1. Appropriate diversion routes have been identified, as can be seen in Drawing EN02022-TMS-12 included in Appendix 2 to this FTMS. The diversion routes for Farlington Avenue will direct vehicles away from the Solent Road / Sea View Road and Galt Road / Evelegh Road routes which are the shortest alternative routes during road closures for traffic wishing to continue to the northern or southern end of Farlington Avenue. The proposed diversion routes are as follows:

- For traffic left from Havant Road to Farlington Avenue: The diversion will be eastwards along A2030 Havant Road, Bedhampton Road and Portsdown Hill Road with the opposite used for southbound traffic; and
- For traffic turning right from Havant Road to Farlington Avenue: The diversion with westwards along the Havant Road, A3 London Road, Boundary Way and Portsdown Hill Road to reach the northern end of Farlington Avenue with the opposite used for southbound traffic.

7.5.1.2. Should Evelegh Road be used for one circuit, traffic will be diverted along Galt Road to gain access to the eastern end of Evelegh Road.

7.5.1.3. Appropriate signage will be provided along this diversion at all junction locations. To mitigate 'rat-running' on roads adjacent to adjacent to Farlington Avenue 'Access Only' signs will be provided at main junctions.

7.6. SUB-SECTION 5.4 – CROSSING OF HAVANT ROAD INTO FARLINGTON AVENUE OR PORTSMOUTH WATER LAND

7.6.1.1. Where the Onshore Cable Corridor crosses Havant Road it is anticipated that two temporary road closures will also be required. The road closures are anticipated to be required at the following locations, assuming the contractor routes one circuit along Farlington Avenue and one through the parallel Portsmouth Water land:

- On Havant Road directly to the south of the signal-controlled junction with Farlington Avenue; and
- On A2030 Havant Road between the junctions with A2030 Eastern Road and the junction with Waterworks Road.

7.6.1.2. It is anticipated that these road closures will be required to allow the cable to move from across the respective junctions into and out of the main carriageway on Havant Road. Table 20 shows the available programme for construction on this sub-section.

Table 20 - Sub-Section 5.4 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.4	Havant Road	N/A	Road Closure	1-2 Weekends

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 4 weeks Christmas embargo, 2 weeks for South Central / Victorious Festival

Other Restrictions

Sections	Total Availability
Section 5.2 = 4 weeks Section 5.3 = 2 weeks Section 5.5 = 8 weeks	30 weeks

7.6.1.3. It is anticipated that this closure would take place either:

- Over the course of one weekend per circuit, with construction taking place from Saturday sunrise until Sunday sunset, (including night-working); or
- Over the course of two-weekends per circuit, with construction only taking place only during working hours.

7.6.1.4. Given that construction will take place during non-peak periods, there are only limited calendar restriction, relating to only Christmas and the South Central / Victorious Festival weekends. In addition, construction on this link should not coincide with:

- Section 5.2 – Farlington Avenue between Sea View Road and Havant Road;
- Section 5.3 – Evelegh Road; and
- Section 5.5 – Havant Road and Eastern Road.

7.6.1.5. These restrictions will ensure that traffic disruption is not exacerbated within the local

area, particularly given the need for diversion routes.

7.7. DIVERSION ROUTES FOR ROAD CLOSURES ON HAVANT ROAD

7.7.1.1. The proposed weekend road closures on Havant Road will require diversion routes to be implemented as follows, also shown on Drawing EN02022-TMS-13 and 14 included in Appendix 2:

- For traffic turning right from Havant Road to A2030 Eastern Road: The diversion will be eastwards along A2030 Eastern Road, onto the A27 via the J1 of the A3(M)) and back onto the A2030 Eastern Road at the A27 Farlington roundabout; and
- For traffic turning right from Havant Road to Farlington Avenue: The diversion with westwards along the Havant Road, A3 London Road, Boundary Way and Portsdown Hill Road. To reach the northern end of Farlington Avenue.

7.7.1.2. Access to Waterworks Road from Havant Road will be maintained for the duration of the road closure in this location.

7.7.1.3. The entirety of Havant Road / A2030 Havant Road contained within the Order Limit in Section 5.2 also forms part of the Area 3 HE Agreed Diversion Routes for the A27. Due to the designation of this route as an HE Agreed Diversion, any roadworks on this link will be coordinated with HE and scheduled as to not coincide with planned roadworks on the A27.

7.8. SUB-SECTION 5.5 – HAVANT ROAD AND A2030 EASTERN ROAD BETWEEN FARLINGTON AVENUE AND FITZHERBERT ROAD

7.8.1.1. The section of Havant Road / A2030 Havant Road which is included in the Order Limit spans from the signal controlled junction of Farlington Avenue / Havant Road to the priority controlled junction of A2030 Eastern Road / Waterworks Road. The section of A2030 Eastern Road contained within Section 5.5 spans from the signal junction with A2030 Havant Road / Havant Road to the junction with Fitzherbert Road. Table 21 shows the available programme for construction on this sub-section.

Table 21 - Sub-Section 5.5 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.5	Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road	800	Lane Closure	8 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

2 weeks for South Coast / Victorious Festival + 4 weeks at Christmas

Other Restrictions	
Sections	Total Availability
Section 5-2 = 4 weeks Section 5.4 = 2 weekends Section 6 = 1 week	41 weeks

7.8.1.2. As with Section 5.4, construction work should be avoided in December due to Christmas shopping period and proximity to Sainsbury's / B&M Home Store in Farlington. Certain parts of May and August should also be avoided due to the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

7.8.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

Havant Road

7.8.2.1. The Onshore Cable Corridor runs through Farlington Avenue / Havant Road / A2030 Eastern Road traffic signal junction, which is dual carriageway and comprises of four lanes, two in each direction. When the construction zone is running east/west along Havant Road, rather than north/south as described in Sub-section 5.4, single lane closures will be required. As a result it will also be necessary to temporarily restrict right turns between Havant Road and Farlington Avenue and between Havant Road and between Havant Road and A2030 Eastern Road in order to minimise traffic delays at the junction. The single lane closures are anticipated to be in place for

approximately 2 weeks per circuit.

A2030 Eastern Road

7.8.2.2. Construction in A2030 Eastern Road in Sub-Section 5.5 can be accommodated using temporary single lane closures. These lane closures will be in place on only one of the carriageways at any given time to minimise disruption to road users. The part of A2030 Eastern Road contained within Section 5.2 is approximately 600 m in length, and thus it is anticipated that the proposed single lane closures will be in place for approximately 7 weeks per circuit should the Onshore Cable Corridor remain within the carriageway for the entire section. Opportunities to reduce the length of lane closures will however be taken where possible and practical, through the use of Zetland Field on the eastern side of the Eastern Road. If this is used in its entirety, the length of lane closures will be reduced by 250 m and 3 weeks per circuit.

7.8.2.3. Where works are completed off-carriageway, a temporary closure and diversion of the shared-use path will be required that is present on both sides of the Eastern Road. Due the limited options for suitable diversions away from Eastern Road, any temporary closures will be facilitated by a diversion route that runs parallel to the construction zone. As with the overall works, any closure will be limited to 100 m at a time as the construction zone progresses along Eastern Road.

8. SECTION 6 – SAINSBURY'S CAR PARK

8.1.1.1. The highway network in Section 6 is inclusive of Fitzherbert Road between the junction with A2030 Eastern Road and the access to the car park of Sainsbury's Farlington Superstore. Also included in this section is the part of Sainsbury's car park. The FTMS proposals are shown on Drawing EN02022-TMS-6 included in Appendix 1 to this FTMS.

8.1.1.2. Table 22 shows a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Route to take place within this section.

Table 22 - Section 6 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
6	Fitzherbert Road	60	Lane Closure	1 Week
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
											
Notes on Calendar Restrictions: 2 weeks for South Coast / Victorious Festival + December for Christmas											
Other Restrictions											
Sections						Total Availability					
Section 5.5 = 8 weeks						38 weeks					

8.1.1.3. As with Section 5.5 construction work should be avoided in December due to Christmas shopping period and proximity to Sainsbury's and B&M Home Store. Certain parts of May and August should also be avoided due the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

8.1.1.4. Construction within this section should also not take place simultaneously with Section 5.5, to minimise the traffic impact within this area.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

Fitzherbert Road

8.1.1.5. Within Fitzherbert Road, it is anticipated that construction can be accommodated with the use of single lane closures. The part of Fitzherbert Road contained within Section 6 is approximately 60 m long and thus it is anticipated that these single lane closures will be in place for approximately 4-5 days per circuit.

8.1.1.6. It is anticipated that temporary three-way signals may need to be implemented at the junction of Fitzherbert Road and the access to Sainsbury's Car Park. The temporary signals will ensure that access to Sainsbury's Car Park is maintained at all times throughout construction.

Sainsbury's Car Park

8.1.1.7. The Order Limits contain a portion of the car park of Sainsbury's Farlington Superstore. It is anticipated that partial closure of the car park may be required for the duration of works. This partial closure would likely include the temporary suspension of parking spaces on the western side of the Car Park. Construction taking place in Sainsbury's Car Park may require the temporary realignment of the Car Park's internal road, making it one way in the southbound direction on the western side.

9. SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

9.1.1.1. Section 7 is inclusive of the A2030 Eastern Road between the junction with A27 Havant Bypass and the junction with Airport Service Road. It is anticipated that construction in Section 7 will take place entirely off carriageway, and thus no traffic management measures are deemed necessary in this Section.

9.1.1.2. Table 23 shows a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Route to take place within this section. Certain parts of May and August should also be avoided due the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

Table 23 - Section 7 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
7	A2030 Eastern Road north of Airport Service Road	N/A	N/A	N/A
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: 2 weeks for South Coast / Victorious Festival + 4 Weeks in December for Christmas											
Other Restrictions											
Sections						Total Availability					
N/A						46 weeks					

9.1.1.3. As these works are not being completed on carriageway there is no requirement avoid simultaneous construction with other nearby sections

10. SECTION 8 – EASTERN ROAD (ADJACENT TO GREAT SALTERNS GOLF COURSE) TO MOORINGS WAY

10.1.1.1. Section 8 is inclusive of the part of A2030 Eastern Road between the signal controlled junction A2030 Eastern Road / Airport Service Road in the north and the priority controlled junction of A2030 Eastern Road / Eastern Avenue in the south. Also included within Section 8 is the entirety of Eastern Avenue. The FTMS proposals are shown on Drawing EN02022-TMS-7 and 8 included in Appendix 1

10.1.1.2. For the purpose of this assessment, Section 8 has been split into two subsections as follows:

- **Sub-Section 8.1** –A2030 Eastern Road between the junction with Airport Service Road and the junction with Tangier Road;
- **Sub-Section 8.2** –A2030 Eastern Road between the junction Tangier Road and the junction with Eastern Avenue; and
- **Sub-Section 8.3** –Eastern Avenue.

10.1.1.3. Where works are completed off-carriageway on the Eastern side of Eastern Road, a temporary closure and diversion of the shared-use path will be required which forms part of National Cycle Network Route 222. Due the limited options for suitable diversions away from Eastern Road, any temporary closures will be facilitated by a diversion route that runs parallel to the construction zone. As with the overall works, any closure will be limited to 100 m at a time as the construction zone progresses along Eastern Road.

10.2. SUB-SECTION 8.1 – A2030 EASTERN ROAD BETWEEN THE JUNCTION WITH AIRPORT SERVICE ROAD AND TANGIER ROAD

10.2.1.1. Table 24 shows details of the programme availability for Section 8.1. Due the volume of traffic which uses Eastern Road construction works should be limited to Easter holiday, summer holiday periods or June (outside of the football season). During the summer construction will also need to avoid Victorious Festival at the end of August.

Table 24 – Sub-Section 8.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.1	A2030 Eastern Road between Airport Service Road and Tangier Road	1200	Lane Closures	4 Weeks (24hr, 7-Day construction) 9 Weeks (10hr, 7-Day construction)

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and June, July, August (13 weeks) available

Other Restrictions

Sections	Total Availability
Section 8.2 = 1-10 weeks	5-14 weeks depending on option used for Section 8.2

10.2.1.2. Construction within this section should also not take place simultaneously with any other construction works within A2030 Eastern Road contained in Section 8 to mitigate the cumulative impacts of the construction taking place in two sections of the same road.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

10.2.1.3. It is anticipated that the construction corridor on A2030 Eastern Road will require single lane closures on both the southbound and northbound carriageways between

the junction with Airport Service Road and the junction with Tangier Road. These single lane closures will be scheduled as so they do not take place concurrently on the northbound and southbound carriageways as to minimise disruption. This section of Section 8.1 is approximately 1200 m long.

10.2.1.4. Discussions with PCC indicate that due to the heavily trafficked nature of this link, the use of 24-hour, seven-day a week working would be preferable in this section to minimise the period that traffic management is in place. Use of 24-hour working by construction teams on this link would increase the progression rate to approximately 45 m per 24-hour period. At this rate of construction, works on this link are likely to take approximately 4 weeks per circuit.

10.2.1.5. If 24-hour working was employed on a five-day working week the period of construction per circuit would be 6 weeks. If the standard 10-hour day was used across a seven-day period, the construction period would take 9 weeks per circuit. This highlights the mitigation achieved by use of 24-hour, seven-day a week working.

10.2.1.6. It should also be noted that between the junction with Burrfields Road and Tangier Road may be able accommodate installation of at least one circuit off-carriageway, using the verge on the eastern verge of the A2030 Eastern Road. Where on-carriageway works are required, the preferred option would be single lane closures on the southbound carriageway only. This is preferred over use of the northbound carriageway as the two-lane southbound carriageway merges into one lane further downstream, therefore meaning that a single lane closure will have only a minor impact on overall traffic delay.

10.2.1.7. Four junctions intersect the A2030 in Section 8.1, these are as follows:

- Signal controlled junction of A2030 Eastern Road / Airport Service Road;
- Signal controlled junction of A2030 Eastern Road / Burrfields Road;
- Priority controlled access junction, providing access to Langstone Harbour Viewing Car Park; and
- Signal controlled junction of A2030 Eastern Road / Tangier Road.

10.2.1.8. Due to the volume of traffic which travels through the three signal-controlled junctions in Section 8.1, it is not considered appropriate to temporarily suspend side road access throughout construction regardless of which, if any, of the carriageways on this link are impacted. Whilst the roads which gain access from these signal junctions are not cul-de-sacs, and consequently remain accessible via alternate routes on the wider road network, the level of demand on them renders it unfeasible for access to be temporarily suspended via A2030 Eastern Road. Where necessary, temporary lights will instead be implemented, if required, although depending on the location of the Construction Zone it may be possible for each junction to operate under the existing traffic signal control but with single lane closures on entry or exit.

10.2.1.9. A2030 Eastern Road in Section 8.1 grants the sole vehicular access to The Great Salterns Mansion Harvester, and Harbourside Holiday Park, a complex of 69 holiday homes. Both the Harvester and Holiday Park gain access exclusively from the signal-controlled junction of A2030 Eastern Road / Burrfields Road, and thus access will continue to be facilitated through phasing of the construction.

10.2.1.10. The access to Langstone Harbour Viewing Car Park may require temporary suspension throughout the course of construction on the southbound carriageway, although where possible it will be maintained by road plating of the access. This access will only be impacted by the installation of one cable, and the for a period of one week or less.

10.3. SUB-SECTION 8.2 - A2030 EASTERN ROAD BETWEEN TANGIER ROAD AND EASTERN AVENUE

10.3.1.1. Section 8.2 includes the section of A2030 Eastern Road which spans from the junction with Tangier Road to the junction with Eastern Avenue. Table 24 shows details of the programme availability for Section 8.2. Due the volume of traffic which uses Eastern Road construction works should be limited to Easter holiday, summer holiday periods or May / June outside of the football season. During the summer construction will also need to avoid Victorious Festival at the end of August.

Table 25 - Sub-Section 8.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.2	A2030 Eastern Road between Tangier Road and Eastern Avenue	1300	Lane Closures	1 Week (24-hr, 7-Day working and use of Milton Common) 10 Weeks (Eastern Road only, 7-Day working)

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and half of May (outside football

season) June, July, August (15 weeks) available	
Other Restrictions	
Sections	Total Availability
Section 8.1 = 4-9 weeks depending on working hours	8-13 weeks depending on Option used for Section 8.1

10.3.1.2. Construction within this section should also not take place simultaneously with any other construction works within A2030 Eastern Road contained in Section 8 to mitigate the cumulative impacts of the construction taking place in two sections of the same road.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

10.3.1.3. Section 8.2 is inclusive of multiple options for cable routeing, these options are as set out below. Any construction taking place within the carriageway of A2030 Eastern Road will be facilitated by single lane closures.

Option 1 – Both Circuits within Milton Common

10.3.1.4. Both circuits exiting the carriageway at the junction of A2030 Eastern Road at the junction of A2030 Eastern Road / Tangier Road, travelling south through the centre of Milton Common.

10.3.1.5. Should both circuits be accommodated off carriageway Milton Common, then traffic management in the form of single lane closures would only be required for 300m. As with Section 8.1, 24-hour, seven-day a week working would be preferable to minimise the period of disruption, leading to a 1 week construction period.

10.3.1.6. If 24-hour working was employed on a five-day working week the period of construction per circuit would be 2 weeks. If the standard 10-hour day was used across a seven-day period, the construction period would take 3 weeks per circuit. This highlights the mitigation achieved by use of 24-hour, seven-day a week working.

Option 2 – One Circuit within Milton Common

10.3.1.7. Should it only be practicable for one of the construction corridors to be accommodated off-carriageway, one construction corridor may be required to be installed on-carriageway. This would require a single lane closure on the southbound carriageway of A2030 Eastern Road between Tangier Road and Eastern Avenue. For the majority of this section the Eastern Road contains only one southbound lane, the lane closure would be accommodated by lane realignment. This would involve either the existing central hatching or one of the two northbound lanes operating in the southbound direction. It is considered that this will not have a significant impact

on northbound traffic flow, due to this being constrained further south by the Eastern Road / Velder Avenue / Milton Road traffic signal junction.

10.3.1.8. This would involve the same construction period as Option 1 for one circuit but the other would require 10 weeks of single lane closures if standard 10-hour day was used across a seven-day period. 24-hour working is not possible on this link due to proximity of residential properties.

10.3.1.9. There are no junctions which intersect the southbound carriageway of A2030 Eastern Road in the section which would be impacted by this single lane closure. Furthermore, no private properties gain access from the southbound carriageway in this part of A2030 Eastern Road.

Option 3 – Both Circuits within A2030 Eastern Road

10.3.1.10. Should the use of all off-carriageway options be excluded by contractors as unfeasible, both cable circuits will be placed in A2030 Eastern Road in Section 8.2. This would require temporary single lane closures on both the southbound and northbound carriageways, albeit at separate times. Should both cable circuits be placed within the carriageway, traffic management would span between the junctions with Tangier Road and the junction with Eastern Avenue. This section of A2030 Eastern Road is approximately 1.3 km in length and it is anticipated that if required, the traffic management on this link will be in place for 10 weeks per circuit if standard 10-hour day was used across a seven-day

10.3.1.11. It should be noted that 24-hour working is not appropriate on the majority of the section of A2030 Eastern Road contained within Section 8.2, due to its proximity to residential dwellings.

10.3.1.12. Six junctions intersect A2030 Eastern Road between the junction with Tangier Road and the junction with Eastern Avenue, these junctions are as follows:

- A2030 Eastern Road / Sword Sands Road;
- A2030 Eastern Road / Hayling Avenue;
- A2030 Eastern Road / Stride Avenue;
- A2030 Eastern Road / Kirpal Road / East Shore Road;
- A2030 Eastern Road / Langstone Road; and
- A2030 Eastern Road / Eastern Avenue.

10.3.1.13. It is proposed that, should this route be required, a temporary restriction of right turn movements is implemented at the junction with Hayling Avenue, Stride Avenue, Langstone Road and Sword Sands Road throughout the duration of construction on carriageway.

10.4. SUB-SECTION 8.3 - EASTERN AVENUE

10.4.1.1. Eastern Avenue, a residential street off the A2030, which gives access to several side roads and private residential properties. Traffic management on Eastern Avenue will only be required in the eventuality that works cannot be accommodated in Milton Common. Table 26 shows a details of the programme availability for Section 8.3.

Table 26 - Sub-Section 8.3 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.3	Eastern Avenue	220	Road Closure	3 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
section 9.11 = 3 weeks Section 9.12 = 5 weeks						44 weeks					

10.4.1.2. Eastern Avenue is approximately 220 m long and thus it is anticipated that if traffic management measures on this link are required, they will be in place for approximately 3 weeks per circuit. Due to width restrictions on this link, should construction be required in Eastern Avenue, a full road closure will likely be required. Use of the route option that includes Milton Common rather than Eastern Avenue would remove the need for this road closure.

10.4.1.3. Eastern Avenue provides the sole vehicular access to the residential roads of Salterns Avenue, Shore Avenue and Lacey Road. As such, if use of this link is required construction on this link be split into two parts. The first construction zone would span from the junction of A2030 Eastern Road / Eastern Avenue to just north of the junction of Eastern Avenue / Salterns Avenue. This would allow vehicular access to Salterns Avenue, the adjoining roads, and the southern section of Eastern Avenue to be retained via the junction with Moorings Way. The second construction

zone would span the remainder of Eastern Avenue which falls to the south of the junction with Salterns Avenue, this would allow continued access to Salterns Avenue / Shore Avenue and the northern section of Eastern Avenue to be retained.

11. SECTION 9 - MOORINGS WAY TO BRANSBURY ROAD

11.1.1.1. Depending upon the chosen route in Section 8, Section 9 will either start at the Moorings Way to Furze Lane bus link (if the Onshore Cable Route is constructed within the centre of Milton Common) or at the point on Moorings Way adjacent to Eastern Avenue. The FTMS proposals are shown on Drawing EN02022-TMS-8 included in Appendix 1 to this FTMS.

11.1.1.2. Contained within Section 9 are the following eight sub-sections:

- **Sub-Section 9.1** – Moorings Way:
  - **Sub-section 9.11** - Moorings Way between Eastern Avenue and Goodwit Road;
  - **Sub-section 9.12** – Moorings Way between Goodwit Road and the Moorings Way to Furze Lane Bus Link;
- **Sub-Section 9.2** – Furze Lane:
  - **Sub-section 9.21** – Moorings Way to Furze Lane bus link;
  - **Sub-section 9.22** – Furze Lane;
- **Sub-Section 9.3** – Other Roads to Bransbury Park:
  - **Sub-section 9.31** – Locksway Road;
  - **Sub-section 9.32** – Longshore Way;
  - **Sub-section 9.41** – Kingsley Road; and
  - **Sub-section 9.42** - Yeo Court

11.1.1.3. It should be noted that sub-sections 9.11 and 9.12 will only be required if Section 8 of the Onshore Cable Route is constructed along the section of the A2030 Eastern Road between Hayling Avenue and Eastern Avenue or on the western side of Milton Common. Conversely, if the Onshore Cable Route is constructed within the centre of Milton Common, Section 9 will start at sub section 9.21.

11.1.1.4. Additionally, sub-section 9.21 and 9.22 will only be affected if the Onshore Cable is built along the eastern side of the University of Portsmouth Langstone Student Village complex and via Longshore Way. If this option is not taken forward, sub-section 9.32 will not be necessary.

11.2. SUB-SECTION 9.11 – MOORINGS WAY BETWEEN EASTERN AVENUE AND GOODWIT ROAD

11.2.1.1. As with Section 8, the Order Limits with Section 9.11 and 9.12 contains multiple options for cable routeing along Moorings Way. These options are as follows:

- All works accommodated off-carriageway along the southern edge of Milton Common, with the construction corridor re-joining the carriageway at the start of the Moorings Way Furze Lane Bus Link; and
- One circuit to be placed in the carriageway on Moorings Way and one installed within the southern edge of Milton Common.

11.2.1.2. It is not anticipated that there would be any eventuality in which both HVDC Circuits would need to be accommodated within the carriageway on Moorings Way.

11.2.1.1. Table 27 shows the programme availability for Sub-section 9.11, which will require shuttle working traffic signals to facilitate installation of at least one of the HVDC cables. These restrictions would not be required if the Cables were installed within the edge of Milton Common.

Table 27 - Sub-Section 9.11 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.11	Moorings Way between Eastern Avenue and Godwit Road (passes Mooring Way Infant School)	250	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter and Summer holidays = 8 weeks

Other Restrictions

Sections	Total Availability
Section 9.12 = 5 weeks	8 weeks

11.2.1.2. As this sub-section runs past Moorings Way Infant school as restriction has been placed on construction works to during school holidays only. In addition, it is recommended that construction does not take place simultaneously with works in Sub-Section 9.12 (Moorings Ways) when these works are taking place on carriageway. These restriction to minimise disruption to residents and school pick-up / drop-off times.

11.3. SUB-SECTION 9.12 – MOORINGS WAY BETWEEN GOODWIT ROAD AND MOORINGS WAY TO FURZE LANE BUS LINK

11.3.1.1. Table 28 shows the programme availability for Sub-section 9.11, which will require shuttle working traffic signals to facilitate installation of at least one of the cable cicuits. These restrictions would not be required if the Onshore Cables were installed within the edge of Milton Common.

Table 28 - Sub-Section 9.12 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.12	Moorings Way between Goodwit Road and Moorings Way to Furze Lane Bus Link	500	Shuttle Working	5 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar Restrictions identified

Other Restrictions	
Sections	Total Availability
Section 9.11 = 3 weeks	49 weeks

11.3.1.2. As this sub-section runs past Moorings Way Infant school as restriction has been placed on construction works to during school holidays only. In addition, it is recommended that construction does not take place simultaneously with works in Sub-Section 9.12 (Moorings Ways) when these works are taking place on carriageway. These restriction to minimise disruption to residents and school pick-up / drop-off times.

11.3.1.3. To accommodate one circuit on-carriageway, shuttle working would be required on Moorings Way between the cycle connection that links Eastern Avenue with Moorings Way and the junction of Moorings Way / Sanderling Road. This section of Moorings Way is approximately 800 m in length and thus it is anticipated that construction on this link will take approximately 8 weeks to complete.

11.3.1.4. The section of Moorings Way in Section 9 contains junctions with the following side roads:

- Warren Avenue;
- Schooner Way; and
- Sanderling Road.

11.3.1.5. None of the side roads adjoining this link are cul-de-sacs, and therefore all are accessible via alternate routes throughout the duration of works. Where possible, access onto Mooring Way will also be maintained through road plating.

11.4. SECTION 9.21 – MOORINGS WAY TO FURZE LANE BUS LINK

11.4.1.1. Table 29 shows the programme availability for Sub-section 9.21. The Moorings Way to Furze Lane Bus Link is a single lane road for the exclusive use of buses and cyclists. It provides a connection between Moorings Way and Furze Lane.

Table 29 - Sub-Section 9.21 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.21	Moorings Way to Furze Lane bus link	370	Road Closure	3 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar Restrictions identified

Other Restrictions	
Sections	Total Availability
Section 9.22 = 2 weeks	50 weeks

11.4.1.2. Due to width restrictions on this link it is anticipated that a full road closure will be required throughout the duration of works. In order to minimise disruption both circuits should be constructed within the Bus Link at the same time.

11.4.1.3. Throughout the duration of works, the adjoining footway will remain open to allow pedestrians continued passage. It is also anticipated that this footway will be temporarily open up to allow for use by cyclists throughout the duration of the works. Continued access to this link as a through-route for pedestrians and cyclists is required due to the long diversion which would otherwise be required.

11.4.1.4. To mitigate the closure of the Bus Link, a shuttle bus service will be provided for the period of construction works, routing along Moorings Way and Locksway Road and linking Service 13 which will continue along Milton Road. Such a measure will ensure that access to the bus service is retained for all existing passengers.

11.5. SUB-SECTION 9.22 – FURZE LANE

11.5.1.1. Table 30 shows the programme availability for Sub-section 9.22. Furze Lane provides a link between the Furze Lane bus link and Locksway Road.

Table 30 – Sub-Section 9.22 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.22	Furze Lane	150	Shuttle Working	2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 9.21 = 3 weeks						49 weeks					

11.5.1.2. Furze Lane is approximately 150 m long and thus it is anticipated that construction on this link will take 2 weeks per circuit. It is anticipated that on this link, two-way shuttle working facilitated by temporary signals will be required throughout the duration of works.

11.5.1.3. Temporary suspension of access to the junctions with Broom Square may be required during works. Suspension of access to Broom Square will only be implemented at one of the two access junctions at any one time to ensure that access is retained at all times.

11.6. SUB-SECTION 9.31 - LOCKSWAY ROAD

11.6.1.1. Sub-section 9.31 contains the section of Locksway Road between the access road to Milton Piece Allotments and Thatched House Public House. Table 31 shows the programme availability for Sub-section 9.22

Table 31 – Sub-Section 9.31 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.31	Locksway Road between access rod to Milton Piece Allotments and	90	Shuttle Working	1 Week

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: N/A

Other Restrictions	
Sections	Total Availability
Section 9.22 = 2 weeks Section 9.32 = 2 weeks	48 weeks

11.6.1.2. It is anticipated that shuttle working facilitated by temporary traffic signals will be required on the section of Locksway Road between the junction with Furze Lane and the access to Thatched House Public House to accommodate installation of each cable circuit.

11.6.1.3. The remainder of Locksway Road contained within the Order Limits is intended for use for construction access to Milton Piece Allotments only, and as such, it is not anticipated that any traffic management will be required on this link.

11.6.1.4. The part of Locksway Road for which shuttle working is required provides exclusive vehicular access to Locks Sailing Club, Langstone Harbour Fishermen's Association, Thatched House Public House and Old Oyster Public House. Access to all of the aforementioned premises will be retained throughout construction where possible.

11.7. SUB-SECTION 9.32 – LONGSHORE WAY

If the Cable route uses the Portsmouth University playing fields shuttle working traffic signals will be required on Longshore Way for 70-150 or 1-2 weeks per circuit, depending on where the playing fields. Table 32 shows the programme availability for sub-section 9.32.

Table 32 – Sub-Section 9.32 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.32	Longshore Way	150	Shuttle Working	2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 9.31 = 1 week						51 weeks					

11.7.1.1. The only restriction on construction relates to Section 9.31 Locksway Way Road. This will avoid two sets of shuttle working traffic signals within the same vicinity.

11.8. SUB-SECTION 9.41 - KINGSLEY ROAD

11.8.1.1. The section of Kingsley Road contained with Section 9 spans from the junction with Ironbridge Lane to the junction with Yeo Court. The Order Limit allows for two options for the construction corridor in Kingsley Road. These options are as follows:

- The first option is for the Cables to intersect Kingsley Road in a north-south orientation, whilst moving from the fields to the immediate north of the carriageway, to those in the south. As this would mean the cable route only impacts a limited section of highway, this option would likely require shuttle working to be implemented for 1-2 days as the construction corridor passes across the link; and
- The second option is for the cable route to run along Kingsley Road in an east-west alignment for an up-to 150 m section between Yeo Court and Ironbridge Lane.

11.8.1.2. Regardless of which options is used for construction, it is anticipated that shuttle working facilitated by temporary traffic signals will enable two-way flow to be retained on this link throughout the duration of works.

11.8.1.3. Table 33 provides the programme availability for Section 9.41 assuming that the full 150m of Kingsley Road is required.

Table 33 – Sub-Section 9.41 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.41	Kingsley Road between Ironbridge Lane and Yeo Court	150	Shuttle Working	2 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions	
Sections	Total Availability
N/A	52 weeks

11.8.1.4. No calendar restrictions have been identified for Section 9.41 and no restrictions apply due to construction on nearby links.

11.9. SUB-SECTION 9.42 – YEO COURT

11.9.1.1. The entirety of Yeo Court is contained within Section 9. It is anticipated that a full road closure will be required on this link for approximately one week. During this closure, vehicle access will not be possible for the duration of the works but pedestrian access will be retained at all times. Table 34 shows the programme availability for completion of Sub-section 9.42.

Table 34 – Sub-Section 9.42 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.42	Yeo Court	40	Road Closure	1 Week
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
N/A						52 weeks					

12. SECTION 10 - EASTNEY (LANDFALL)

12.1.1.1. Section 10 contains the part of the Onshore Cable Corridor between the junction of Henderson Road / Bransbury Road and Landfall in the car park off Fort Cumberland Road near to Fraser Range. The highway links included in Section 10 are as follows:

- **Sub-section 10.1** Henderson Road – between the junction with Bransbury Road and the junction with Fort Cumberland Road; and
- **Sub-section 10.2** Fort Cumberland Road – between the junction with Henderson Road and the junction with Lumsden Road;

12.1.1.2. The FTMS proposals are shown on Drawing EN02022-TMS-9 included in Appendix 1.

12.2. SUB-SECTION 10.1 – HENDERSON ROAD

12.2.1.1. Table 35 provides the programme availability for Section 10.1 along Henderson Road

Table 35 – Sub-Section 10.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
10.1	Henderson Road	300	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 1 week for Great South Run

Other Restrictions

Sections	Total Availability
Section 10.2 - 4 weeks	47 weeks

12.2.1.2. As the Great South Run route uses Bransbury Road and Henderson Road it is proposed that construction work avoids the month of October, when this event is usually held.

12.2.1.3. Overall, Henderson Road is able to accommodate the construction corridor and retain two-way traffic through the use of single lane closures with shuttle working traffic signals. This would be for approximately 300 m or 3 weeks per circuit.

12.3. SUB-SECTION 10.2 – FORT CUMBERLAND ROAD

12.3.1.1. Table 36 provides the programme availability for Section 10.2 along Fort Cumberland Road.

Table 36 – Sub-Section 10.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
10.2	Fort Cumberland Road	350	Shuttle Working	4 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions:											
Other Restrictions											
Sections						Total Availability					
Section 10.1 - 4 weeks						48 weeks					

12.3.1.2. Fort Cumberland Road is able to accommodate the construction corridor and retain two-way traffic through the use of single lane closures with shuttle working traffic signals. This would be for approximately 300 m or 3 weeks per circuit. Temporary traffic signals / road plating will be required for the following side roads:

- Henderson Road;
- Halliday Crescent;
- Ferry Road;
- Gibralter Road; and
- Lumsden Road.

12.3.1.3. None of these links are cul-de-sacs, and as such the Onshore Cable Corridor in Section 10 does not form the sole access point for any of them. As such, access will be maintained at all times via alternate routes on the wider road network.

12.3.1.4. A temporary suspension of access to the car parks serving the flats on the southern side of the carriageway may be required as works progress.

12.3.1.5. Vehicular access to Eastney lifeboat station will be maintained throughout the duration of construction through the strategic phasing of construction zones in Henderson Road to ensure access to either Ferry Road or Fort Cumberland Road is retained at all times.

13. SUMMARY OF FTMS

13.1.1.1. This document has provided the Framework Traffic Management Strategy for construction of the Proposed Development, based upon the Order Limits, the construction methodology and national guidance regarding the design / implementation of traffic management measures. The Final TMS to be implemented for each phase of the Proposed Development will be dependent upon the detailed design of the Onshore Cable and contractor preferences, noting the requirements contained within this document and the Contractor's Technical Specification. All detailed proposals for TMS will be discussed with HCC / PCC at the earliest opportunity to allow for review and amendment of proposals if required.

13.1.1.2. A summary of the FTMS by section is provided below.

13.1.1.3. Those marked with * represent options for the Onshore Cable Corridor which may not be required due to alternative options being available.

Table 37 – Section 1 – Lovedean (Converter Station Area)

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
1	Converter Station Access	TBC	Shuttle Working	8-12 weeks

Table 38 – Section 2 – Anmore

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
2	Broadway Lane	6	Road Closure	1 Day

Table 39 – Section 3 Denmead/ Kings Pond Meadow

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.1	Anmore Road	160	Road Closure	1 Day to 2 Weeks
3.2	B2150 Hambledon Road to Soake Road	180	Shuttle working TS	2 weeks

Table 40 – Section 4 - B2150 Hambledon Road to Farlington Avenue

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.1	B2150 Hambledon Road between Soake Road and Milton Road	1300	Shuttle working TS	8-13 weeks
4.2	B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road	1000	Lane Closure	10 weeks
4.31	A3 London Road between Forest End Roundabout and south of the junction with Forest End	100	Shuttle Working	1 week
4.32	A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields)	1000	Lane Closure	10 weeks
4.33	A3 London Road between Poppy Fields and just south of Post Office Road	250	Shuttle Working	3 weeks

4.34	A3 London Road between Post Office Road and Rocking Horse Nursery	90	Road Closure	2 weekends
4.35	A3 London Road between Rocking Horse Nursery and Ladybridge roundabout	170	Shuttle Working	2 weeks
4.41	A3 London Road between Ladybridge roundabout and start of bus lane	80	Shuttle Working	1 week
4.42	A3 London Road between start of bus lane and Lansdowne Avenue	850	Lane Closure	9 weeks
4.43	A3 London Road between Lansdown Avenue and start of bus lane (south of The Brow)	250	Shuttle Working	3 Weeks
4.44	A3 London Road start of bus lane (south of The Brow) and Portsdown Hill Road	400	Lane Closure	4 Weeks
4.5	Portsdown Hill Road between A3 London Road and Farlington Avenue	600	Shuttle Working	6 Weeks

Table 41 - Section 5 – Farlington

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.1	Farlington Avenue between Portsdown Hill Road and Sea View Road	650	Shuttle Working	7 Weeks
5.2	Farlington Avenue between Sea View Road and Havant Road	350	Road Closure	4 Weeks
5.3	Evelegh Road	150	Road Closure	2 Weeks
5.4	Havant Road	N/A	Road Closure	1-2 Weekends

5.5	Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road	800	Lane Closure	8 Weeks

Table 42 - Section 6 –Sainsbury's Car Park

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
6	Fitzherbert Road	60	Lane Closure	1 Week

Section 7 – Farlington Junction to Airport Service Road

13.1.1.4. No traffic management is required in Section 7.

Section 8 – A2030 Eastern Road to Moorings Way

Table 43 - Section 8 – A2030 Eastern Road to Moorings Way

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.1	A2030 Eastern Road between Airport Service Road and Tangier Road	1200	Lane Closures	4 Weeks (24hr, 7-Day construction) 9 Weeks (10hr, 7-Day construction)
8.2	A2030 Eastern Road between Tangier Road and Eastern Avenue	1300	Lane Closures	1 Week (24-hr, 7-Day working and use of Milton Common) 10 Weeks (Eastern Road only, 7-Day working)
8.3	Eastern Avenue	220	Road Closure	3 Weeks

Table 44 - Section 9 – Moorings Way to Bransbury Road

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.11	Moorings Way between Eastern Avenue and Godwit Road (passes Mooring Way Infant School)	250	Shuttle Working	3 Weeks
9.12	Moorings Way between Goodwit Road and Moorings Way to Furze Lane Bus Link	500	Shuttle Working	5 Weeks
9.21	Moorings Way to Furze Lane bus link	370	Road Closure	3 Weeks
9.22	Furze Lane	150	Shuttle Working	2 Weeks
9.31	Locksway Road between access rod to Milton Piece Allotments and	90	Shuttle Working	1 Week
9.32	Longshore Way	150	Shuttle Working	2 Weeks
9.41	Kingsley Road between Ironbridge Lane and Yeo Court	150	Shuttle Working	1 Day to 2 Weeks
9.42	Yeo Court	40	Road Closure	1 Week

Table 45 - Section 10 – Eastney (Landfall)

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
10.1	Henderson Road	300	Shuttle Working	3 Weeks
10.2	Fort Cumberland Road	350	Shuttle Working	4 Weeks

REFERENCES

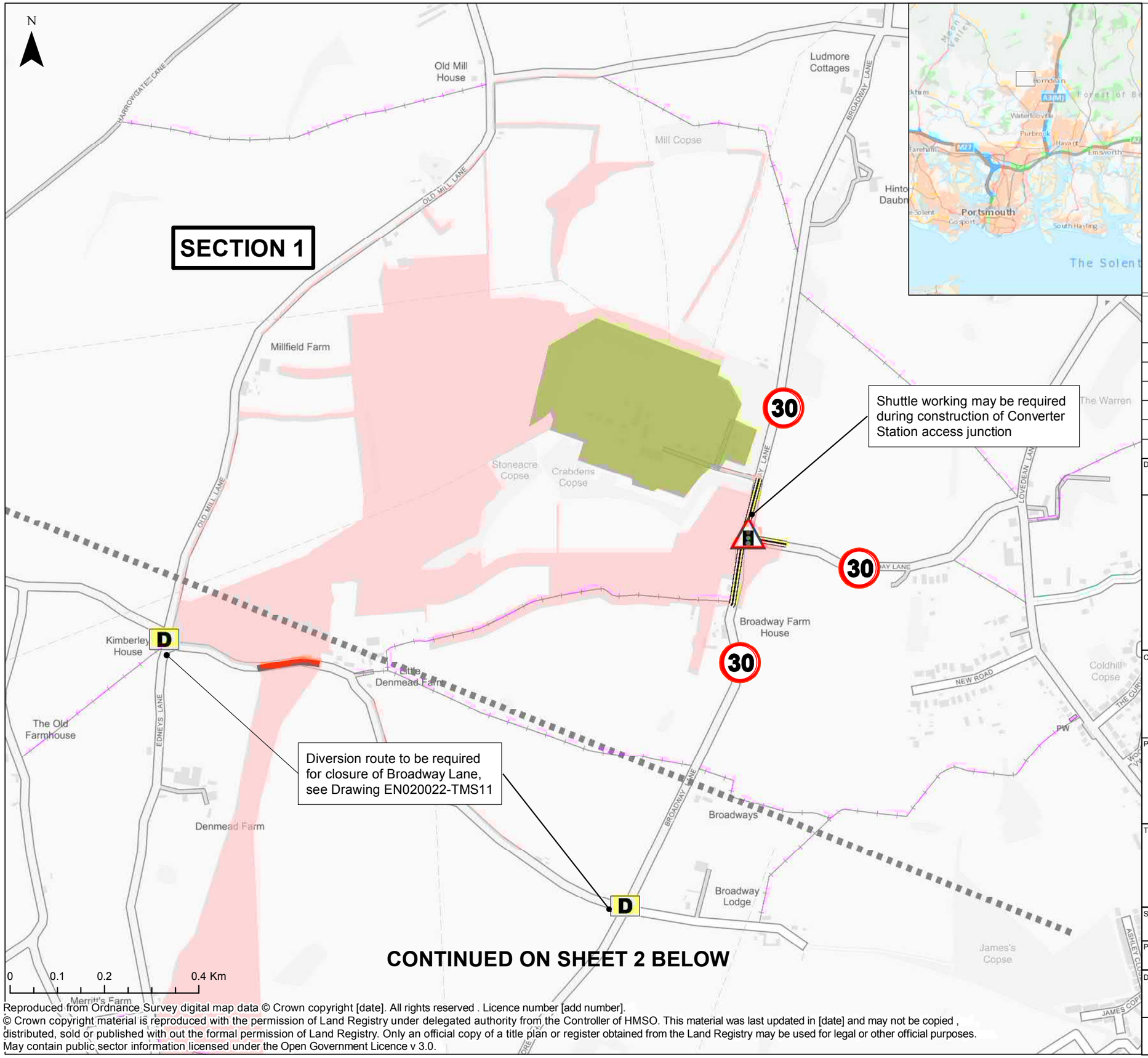
Department for Transport. (2009). Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Roadworks and Temporary Situations.

Department for Transport. (2012). New Roads and Street Works Act 1991: Code of Practice of Co-ordination of Street Works and Works for Road Purposes and Related Matters (Fourth Edition).

Department for Transport. (2013). Safety at Streetworks and Roadworks: A Code of Practice .

HM Government. (1991). New Roads and Street Works Act.

Appendix 1 – FTMS Drawings



Key

- Red Line Boundary
- Section Breaks
- BOAT
- Footpath
- Temporary Road Closure
- Temporary Shuttle Working
- D — Diversion Point
- Temporary signals
- Lovedean Substation
- 30 — Temporary speed limits to be implemented

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

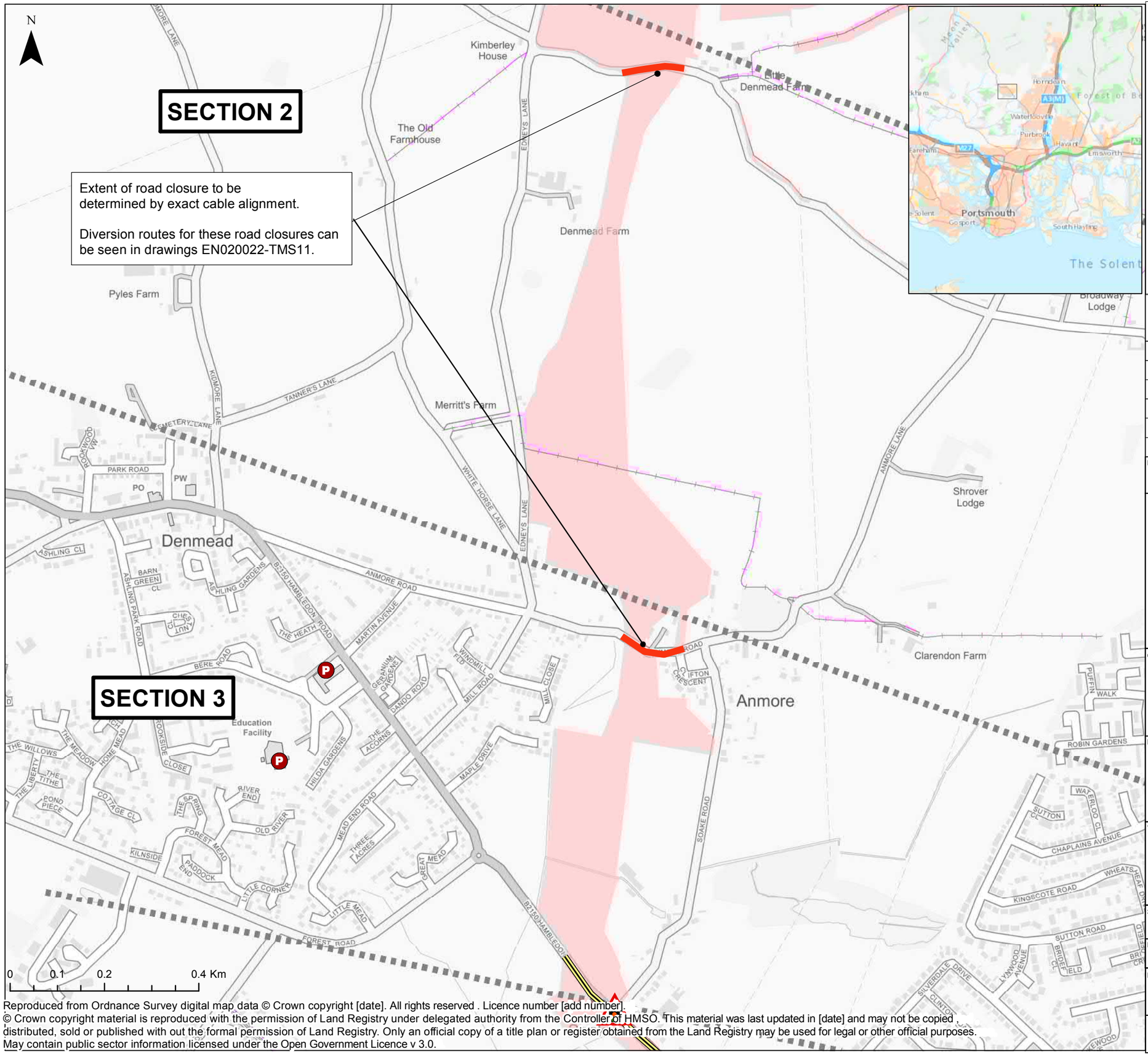
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 1

SCALE AT A3	CHECKED:		APPROVED:
1:8,000	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.1 REV.NO. 01



Key

- Order Limits
- Section Breaks
- Temporary Road Closure
- Temporary Shuttle Working
- Temporary signals may be required

Public Rights of Way

- Bridleway
- Footpath

School Type

- Primary

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

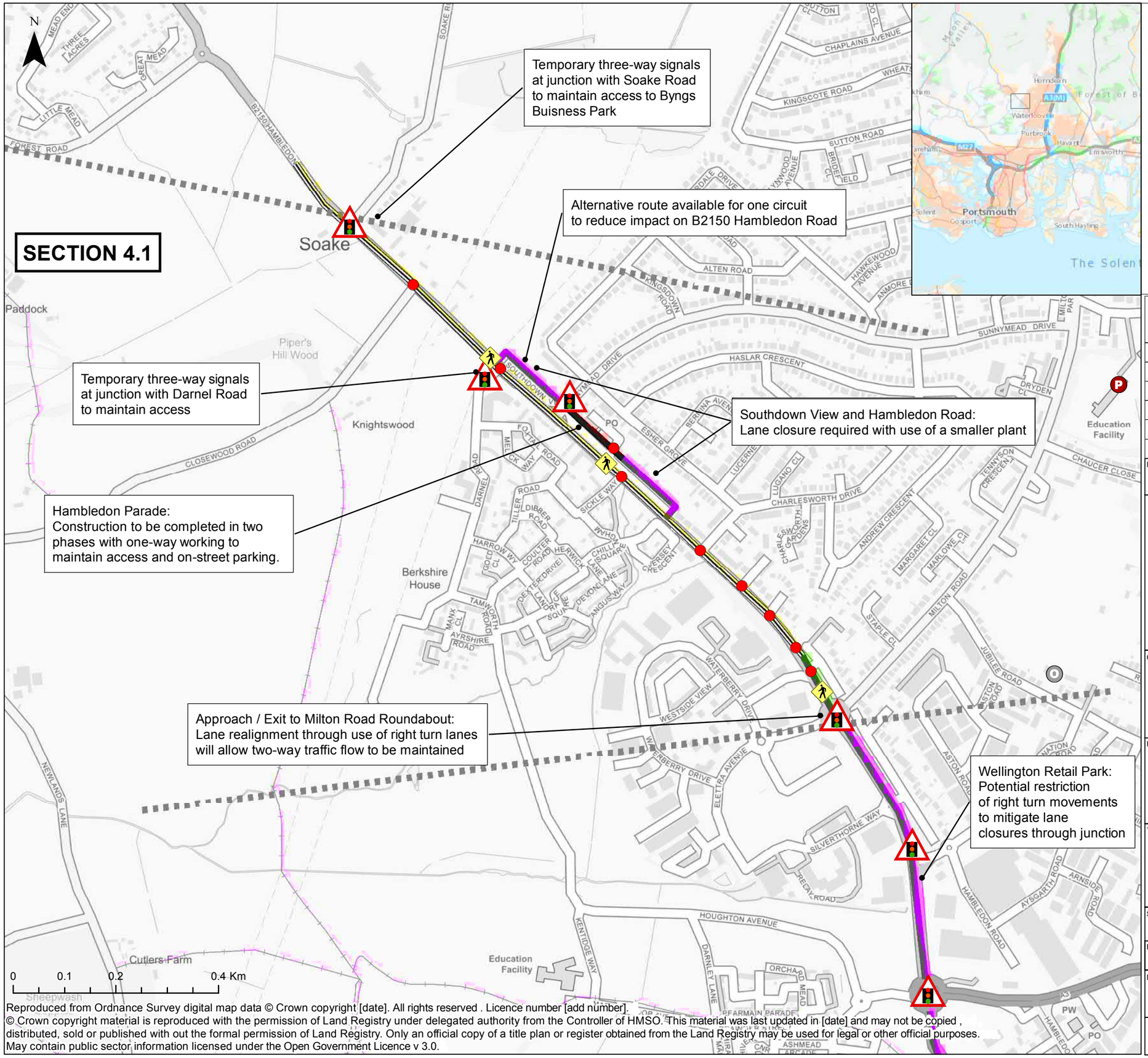
PROJECT: AQUIND Interconnector

TITLE: FrameworkTraffic Management Plan - Section 2/3

SCALE AT A3	CHECKED:	APPROVED:
1:8,000	CW	CW

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.2 REV.NO. 01



Key

- Section Breaks

Public Rights of Way
- Footpath

Traffic Management
- Temporary One-way Working
- Temporary Shuttle Working
- Temporary Single Lane Closure
- Temporary Lane Realignment
- Contractor preference dependent on exact location of construction zone
- Temporary relocation or suspension of multi-user crossing
- Temporary signals may be required
- Primary School
- Other Educational Facility

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

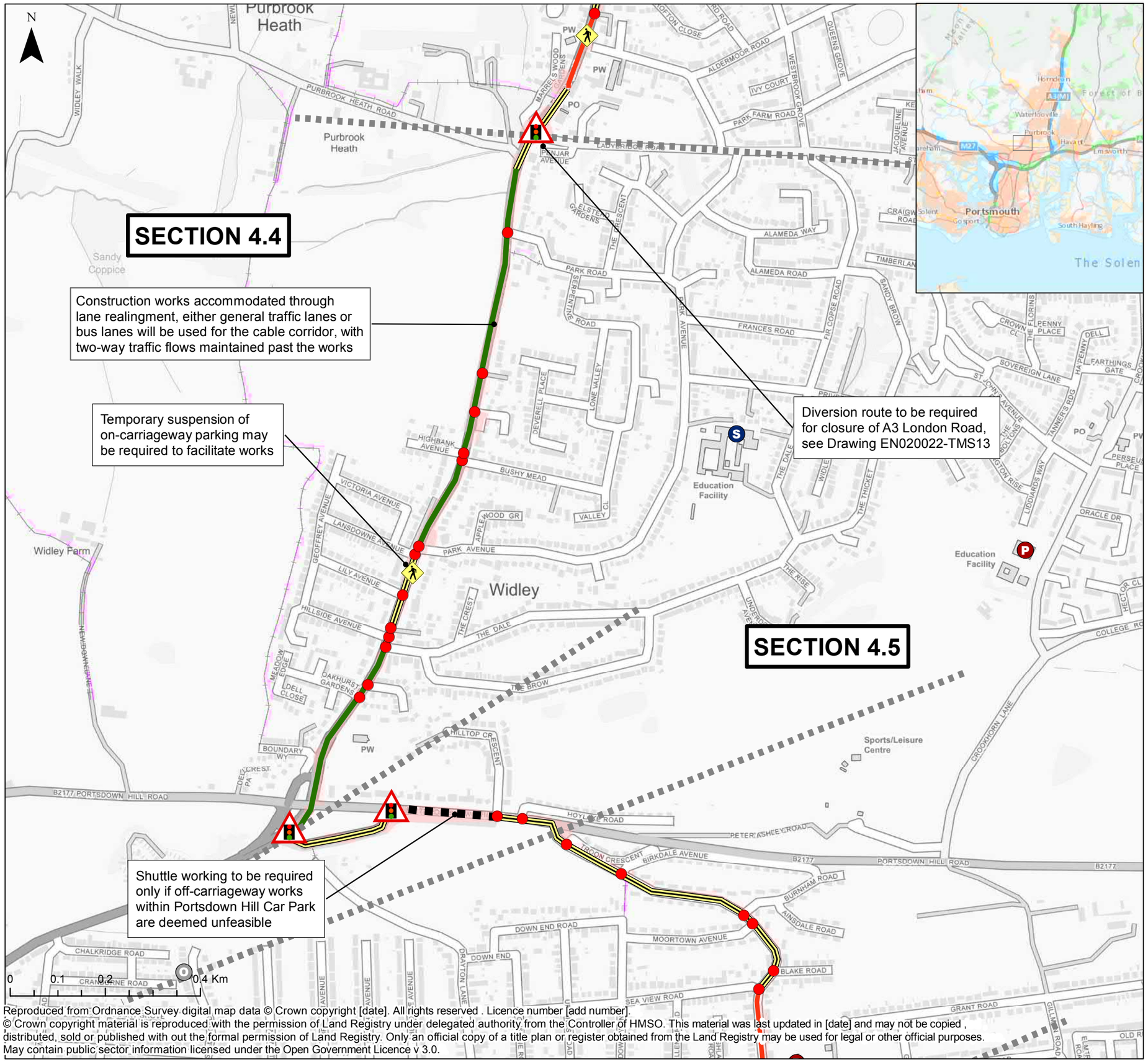
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 4.1

SCALE AT A3	CHECKED:		APPROVED:
1:7,354	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.3 REV.NO. 01



AQUIND Interconnector

- Section Breaks
- Order Limits

School Type

- Primary School
- Secondary School
- Other Educational Facility

- Contractor preference dependent on exact location of construction zone
- Temporary relocation or suspension of multi-user crossing
- Temporary signals may be required

Traffic Management

- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Road Closure
- Temporary Shuttle Working
- Temporary Lane Realingment

Public Rights of Way

- Footpath

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 4.4 / 4.5

SCALE AT A3	CHECKED:		APPROVED:
1:8,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.5 REV.NO. 01

Temporary road closures may be required on Farlington Avenue to facilitate construction works. If required this will impact 10 - 15 properties at a time.

Existing waiting restrictions will be suspended during road closure to allow on-street parking.

Diversion routes for this road closure can be seen in drawing EN020022-TMS12.

Temporary road closure may be required on Evelegh Road if Cable Corridor uses Portsmouth Water Land.

The diversion route for this closure can be seen in EN020022-TMS12

SECTION 5.1

SECTION 5.2

Single lane closures required through Havant Road / Farlington Avenue / A2030 Eastern Road traffic signal junction

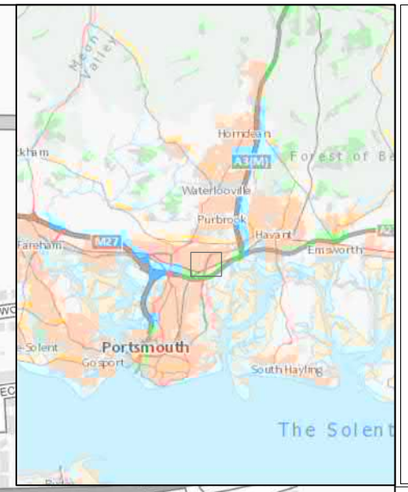
Temporary road closures may be required at the junctions of Farlington Avenue / Havant Road and the junction of A2030 Eastern Road / Havant Road.

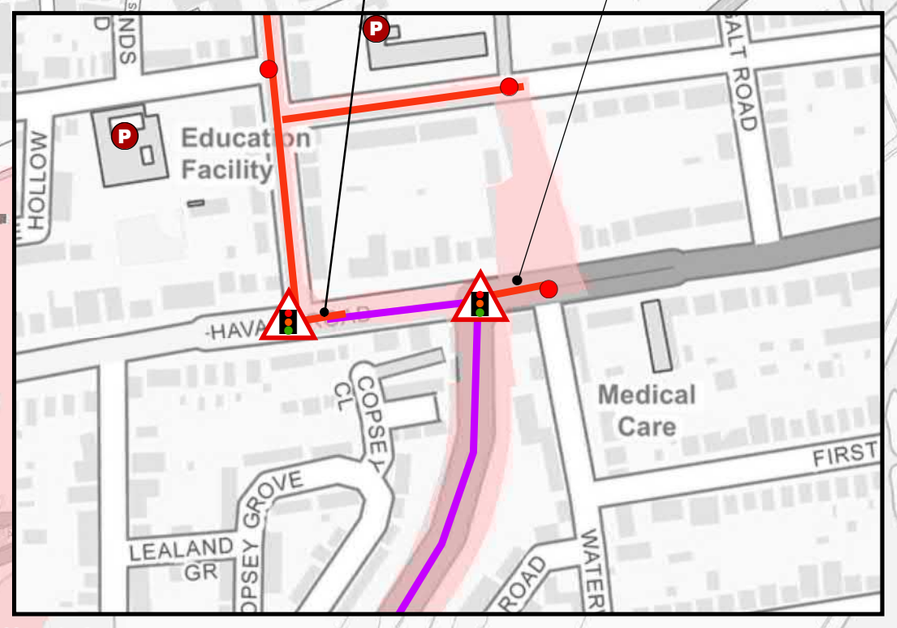
Each of the road closures will be undertaken during the weekend

Diversion routes for these road closures can be seen in drawing EN020022-TMS13 and EN020022-TMS14

Single lane closure to be required only if off-carriageway works through Zetlands Fields are deemed unfeasible

SECTION 6





0 0.1 0.2 0.4 Km

AQUIND Interconnector
Order Limits
Section Breaks

Traffic Management

TM required if off-carriageway routes are considered unsuitable by the contractor
Temporary Road Closure
Temporary Shuttle Working
Temporary Single Lane Closure
Temporary Lane Realignment

Temporary signals may be required
Contractor preference dependent on exact location of construction zone

School Type
Primary School
Secondary School

Public Rights of Way
BOAT
Bridleway
Footpath
Restricted Byway

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

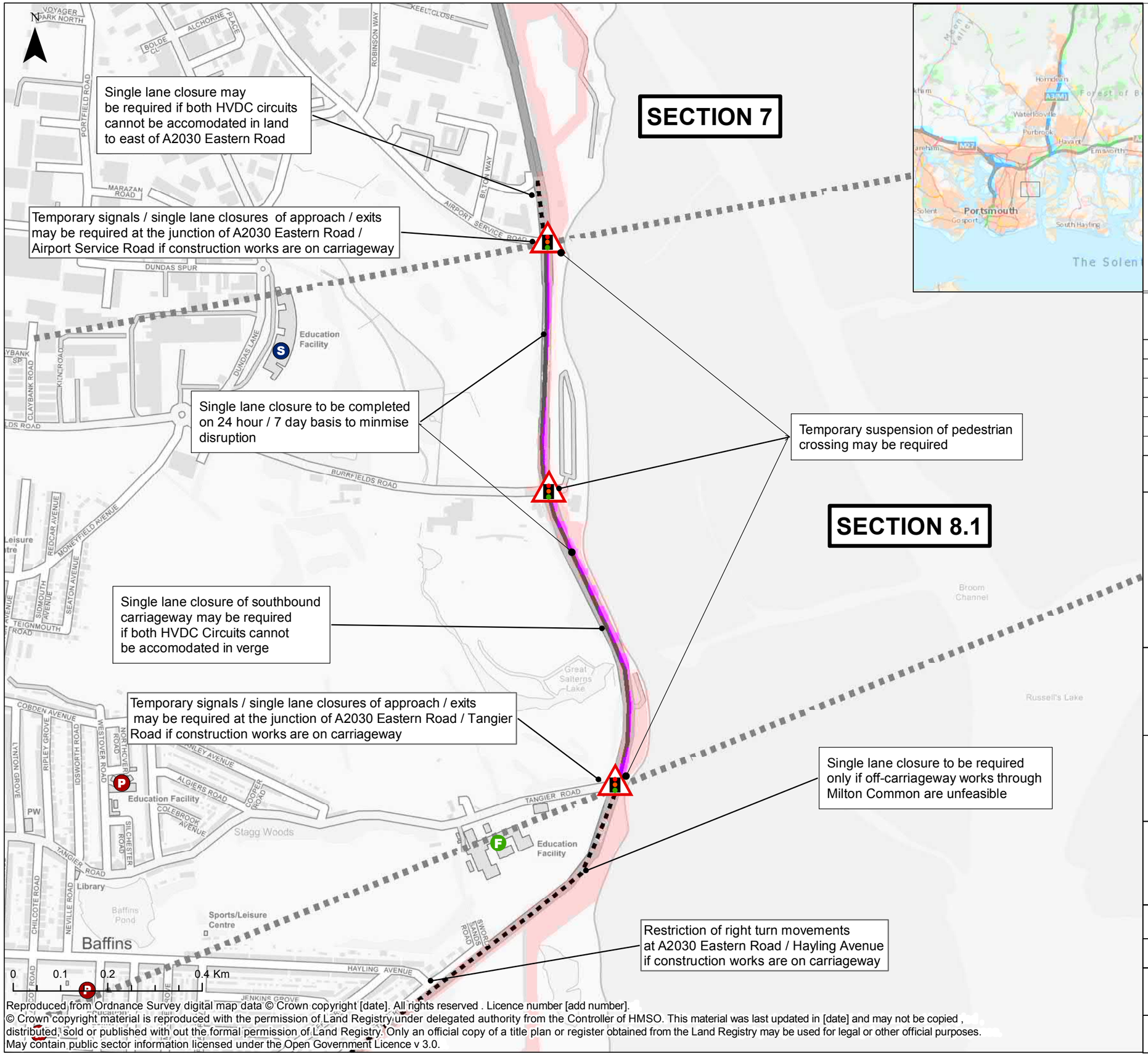
PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 5.1 / 5.2 / 6

SCALE AT A3	CHECKED:	APPROVED:
1:8,000	CW	CW

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.6 REV.NO. 01



AQUIND Interconnector

- Section Breaks
- Order Limits

Temporary signals may be required

Traffic Management

- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Single Lane Closure

School Type

- Primary
- Secondary
- Further Education

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

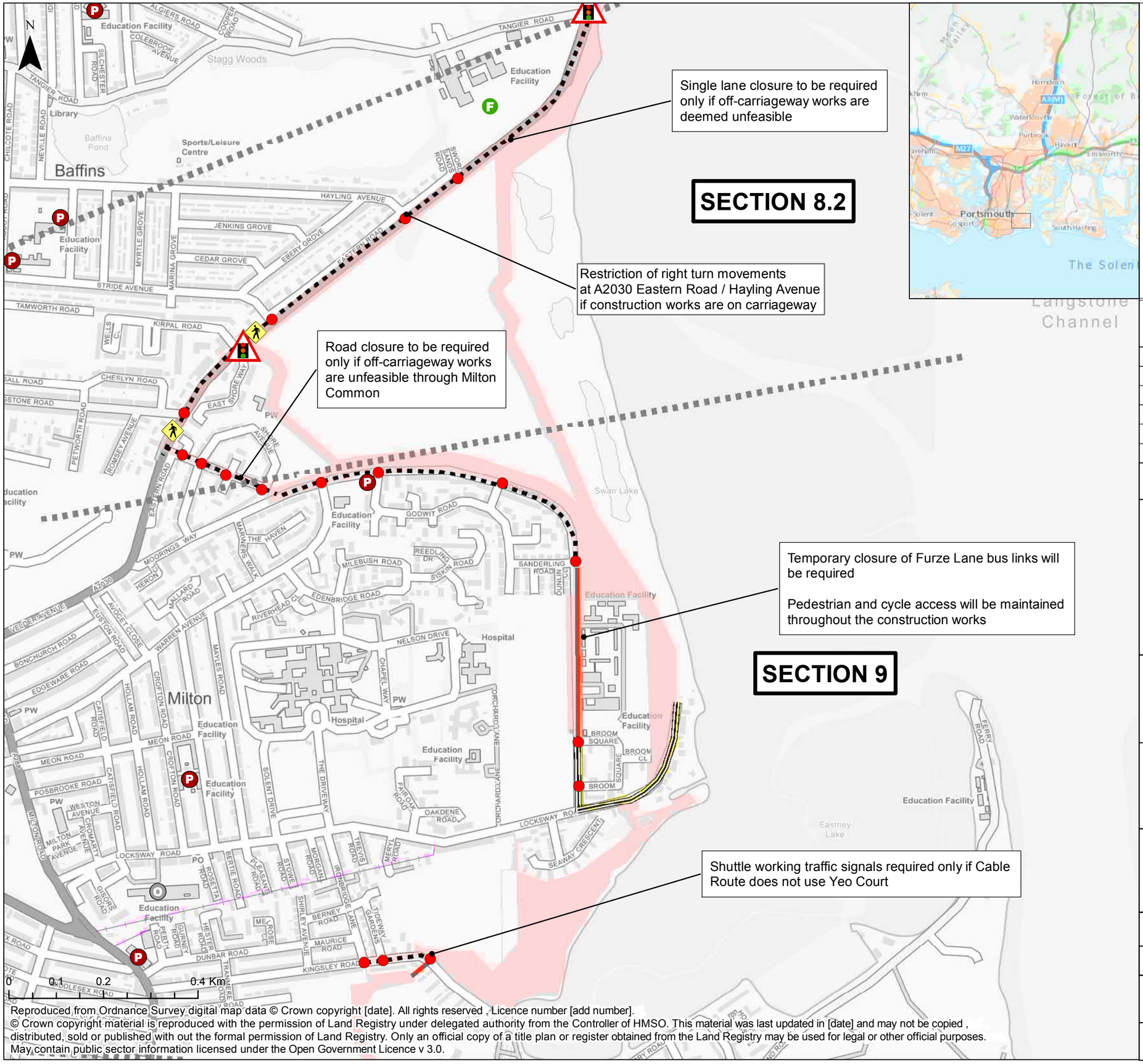
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 7 / 8.1

SCALE AT A3	CHECKED:		APPROVED:
1:8,000	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.7 REV.NO. 01



AQUIND Interconnector
Section Breaks
Order Limits

Traffic Management

TM required if off-carriageway routes are considered unsuitable by the contractor
Temporary Road Closure
Temporary Shuttle Working
Temporary Single Lane Closure

Public Rights of Way
Footpath

Contractor preference dependent on exact location of construction zone
Temporary relocation or suspension of multi-user crossing
Temporary signals may be required

School Type
Primary School
Other Educational Facility
Further Education

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

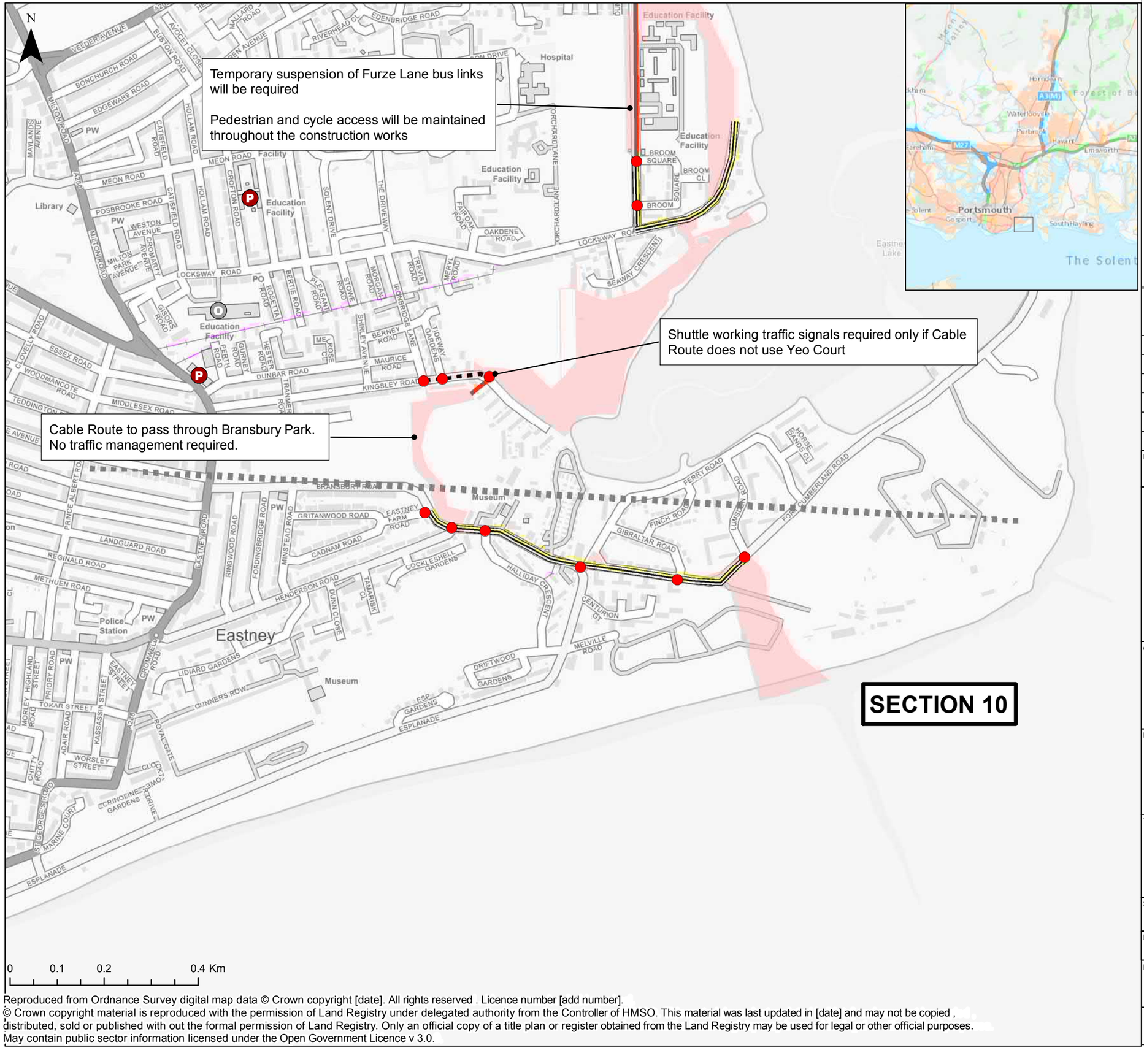
CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 8.2 / 9

SCALE AT A3	CHECKED:		APPROVED:
1:8,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.8
REV.NO. 01



AQUIND Interconnector

- Section Breaks
- Order Limits
- Contractor preference dependent on exact location of construction zone

Public Rights of Way
- Footpath

Traffic Management
- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Road Closure
- Temporary Shuttle Working

School Type
- Primary School
- Other Educational Facility
- Further Education

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

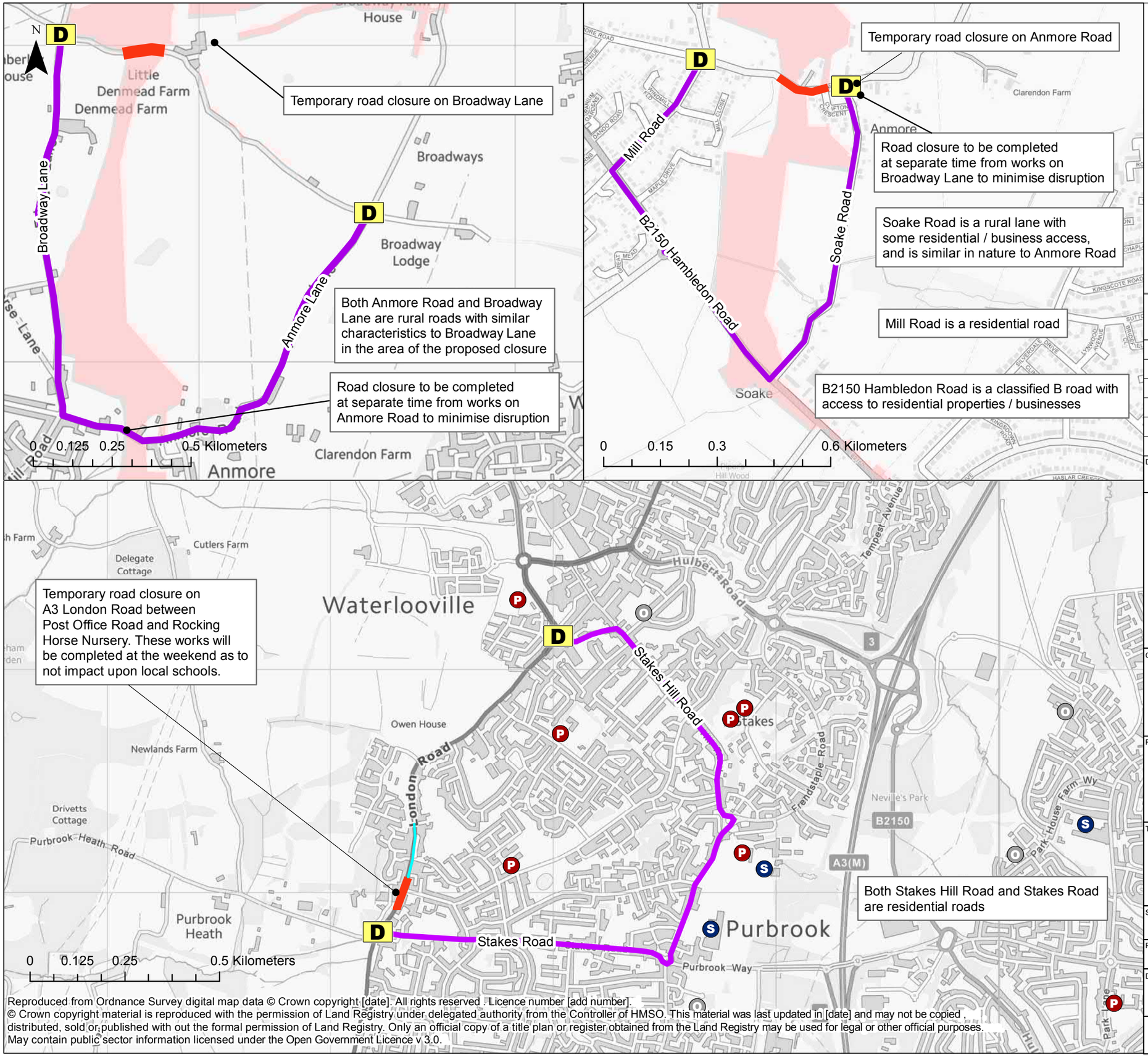
TITLE: Framework Traffic Management Proposals - Section 10

SCALE AT A3	CHECKED:	APPROVED:
1:8,000	CW	CW

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO:	REV.NO.
EN020022-ESAPPENDIX-22.1.G.9	01

Appendix 2 – FTMS Diversion Drawings



AQUIND Interconnector

Order Limits

D Diversion signage to be implemented

Temporary Road Closure

Diversion Route

School Type

P Primary

S Secondary

F Further Education

Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

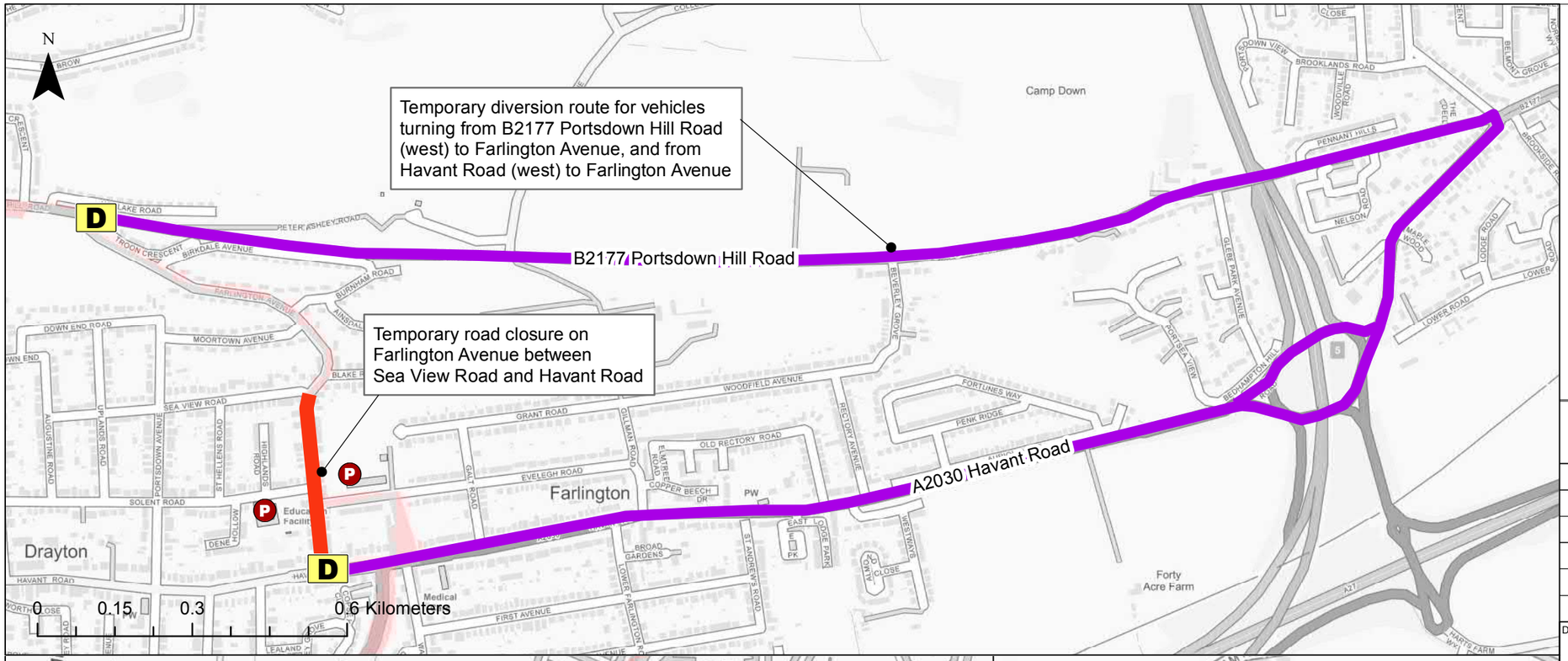
CLIENT: AQUIND

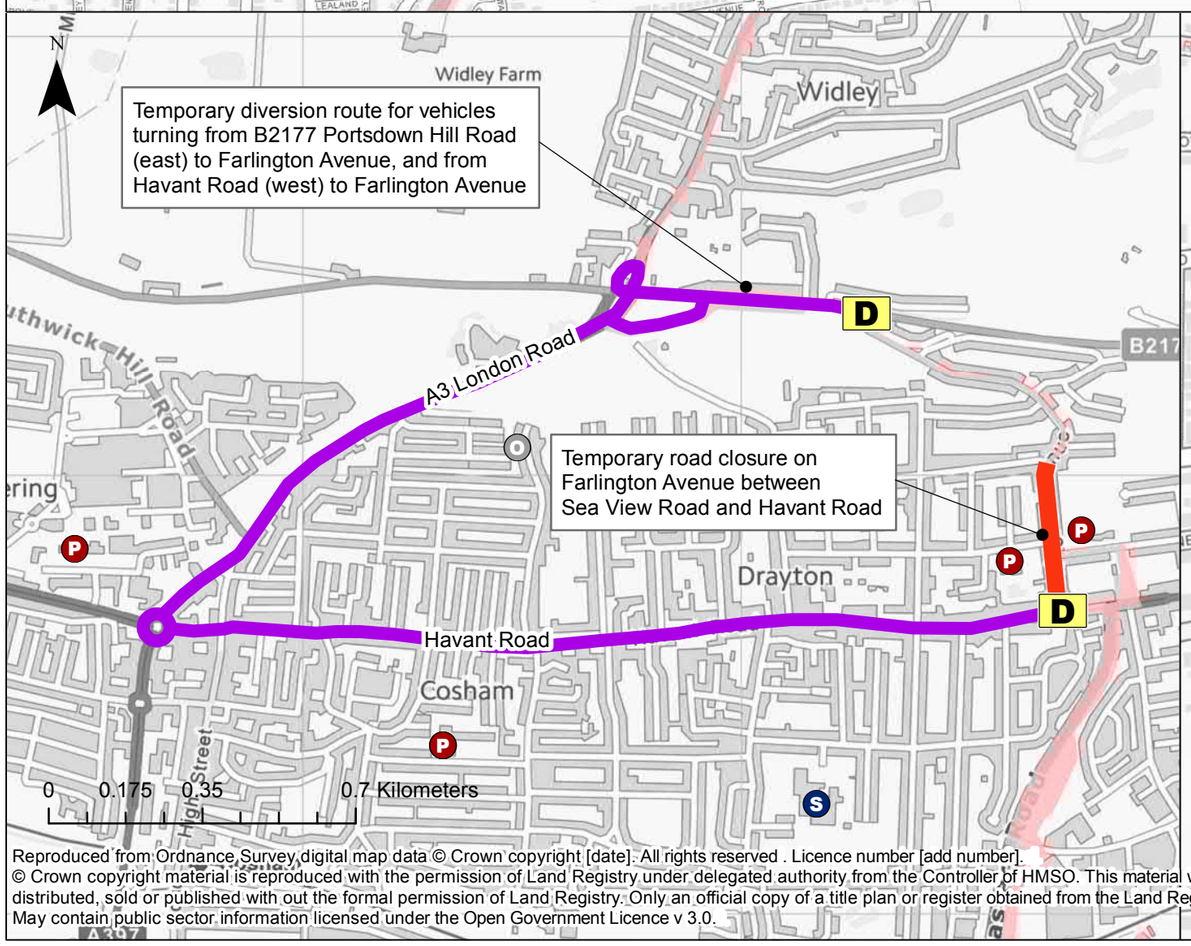
PROJECT: AQUIND Interconnector

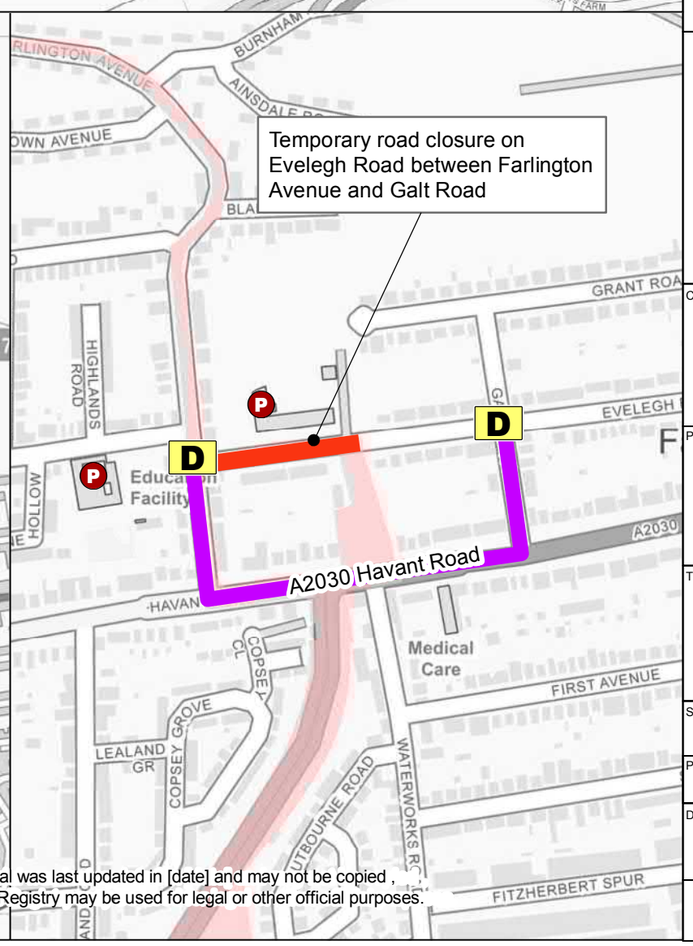
TITLE: Outline Diversion Route Proposals - Broadway Lane, Anmore Road and A3 London Road

SCALE AT A3	CHECKED:		APPROVED:
1:10,000	CW		CW
PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.10 REV.NO. 01







Reproduced from Ordnance Survey digital map data © Crown copyright [date]. All rights reserved . Licence number [add number].
© Crown copyright material is reproduced with the permission of Land Registry under delegated authority from the Controller of HMSO. This material was last updated in [date] and may not be copied , distributed, sold or published with out the formal permission of Land Registry. Only an official copy of a title plan or register obtained from the Land Registry may be used for legal or other official purposes.
May contain public sector information licensed under the Open Government Licence v 3.0.

AQUIND Interconnector

Order Limit

D Diversion signage to be implemented

Temporary Road Closure

Diversion Route

School Type

P Primary

S Secondary

F Further Education

O Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

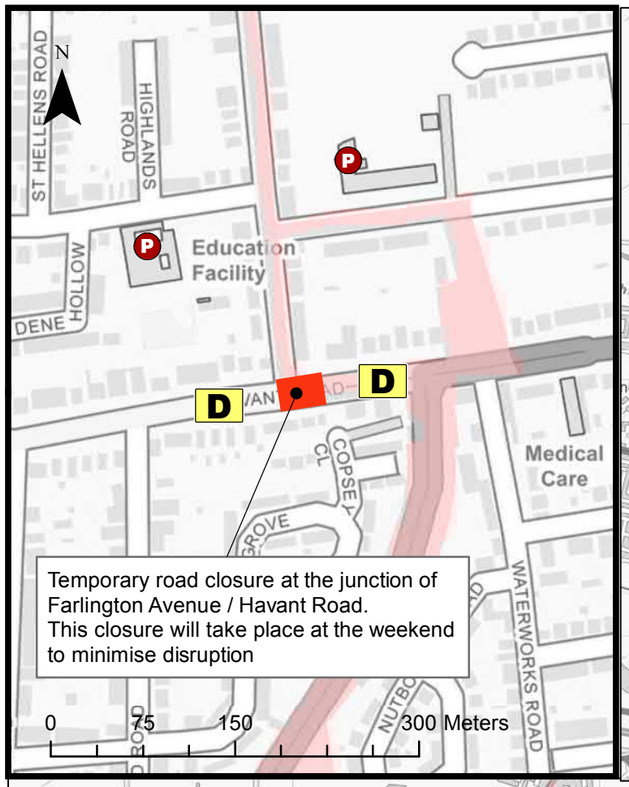
CLIENT: AQUIND

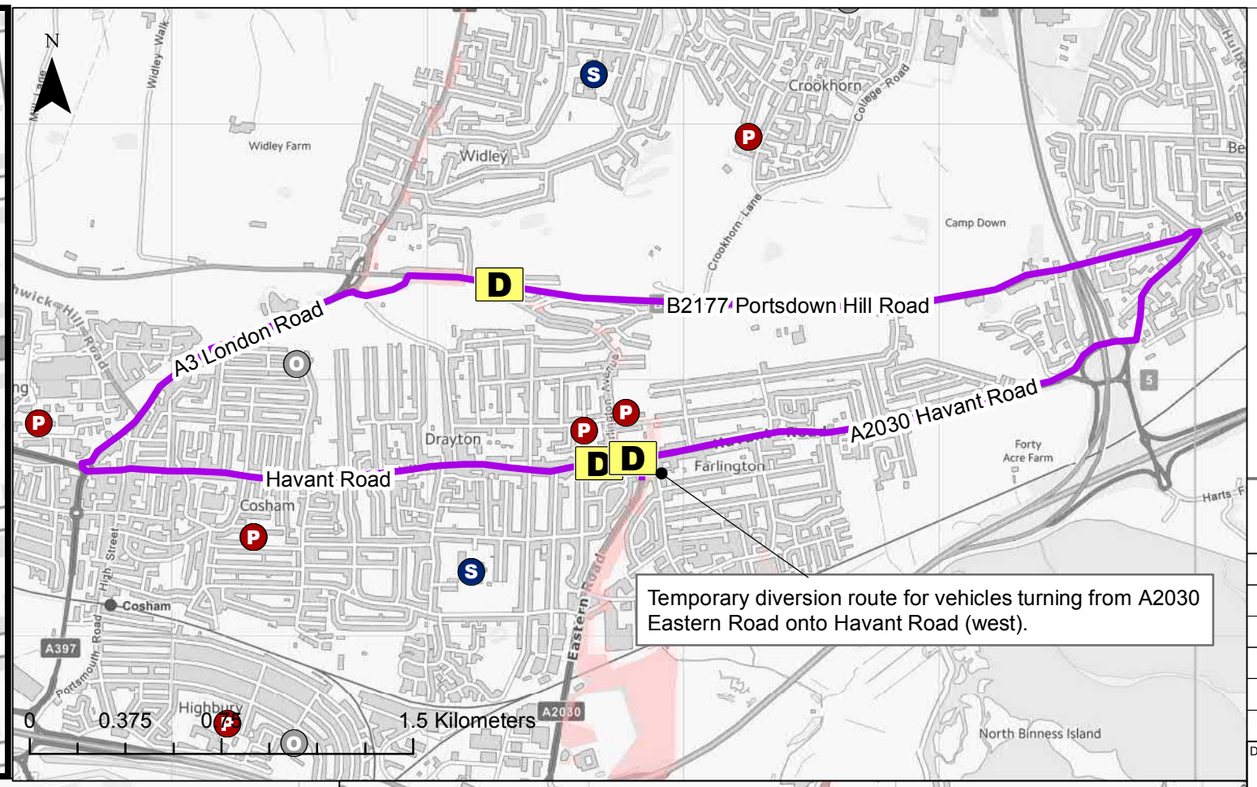
PROJECT: AQUIND Interconnector

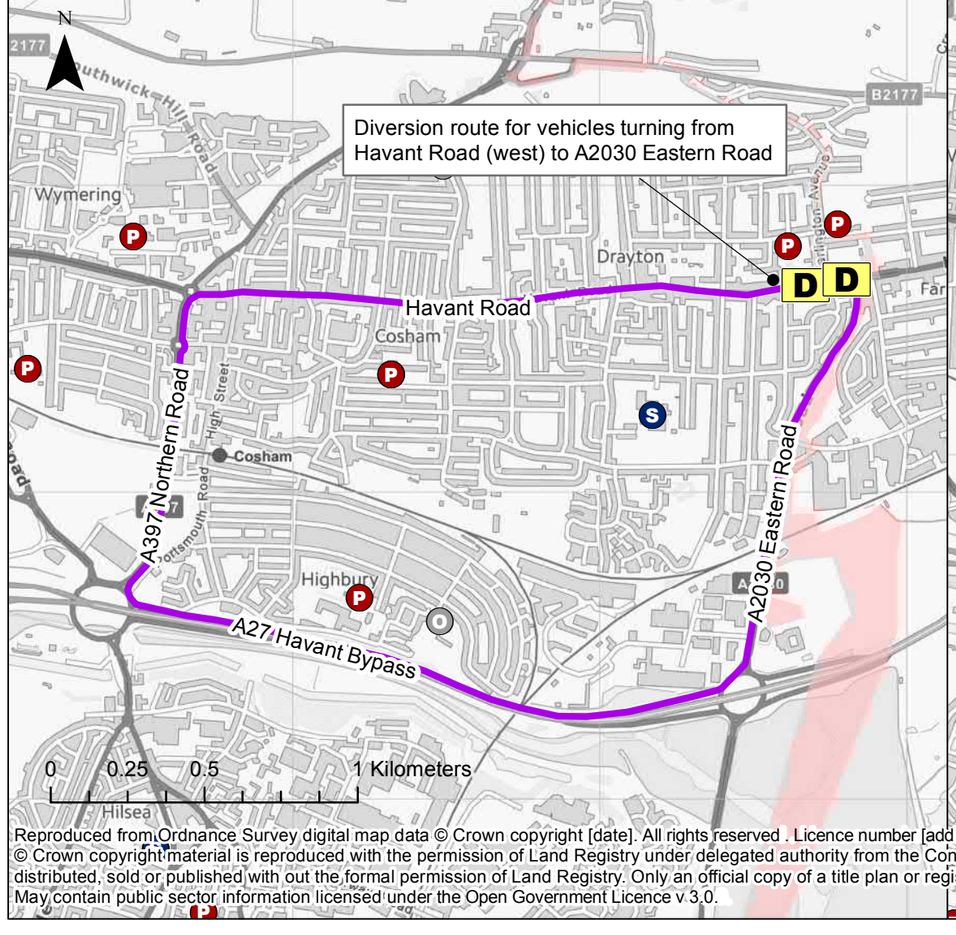
TITLE: Outline Diversion Route Proposals - Farlington Avenue and Evelegh Road

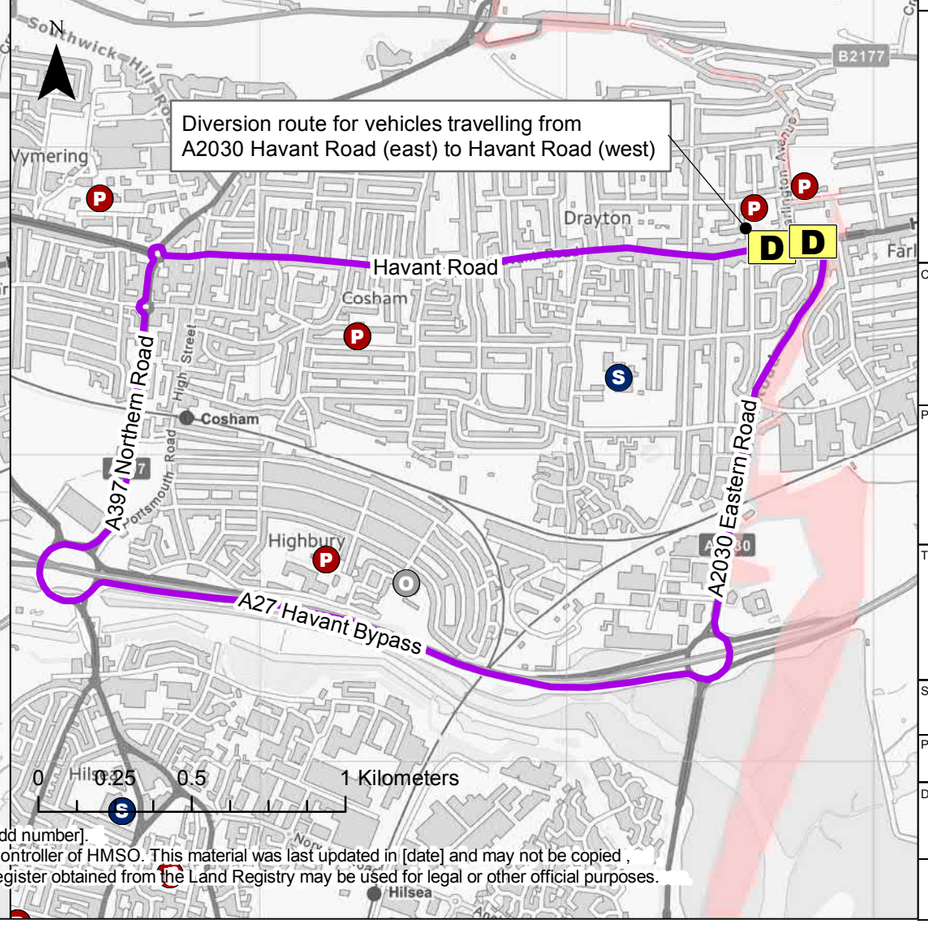
SCALE AT A3	CHECKED:		APPROVED:
1:10,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.11 REV.NO. 01









AQUIND Interconnector

- Order Limits
- D Diversion signage to be implemented
- Temporary Road Closure
- Diversion Route

School Type

- P Primary
- S Secondary
- O Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

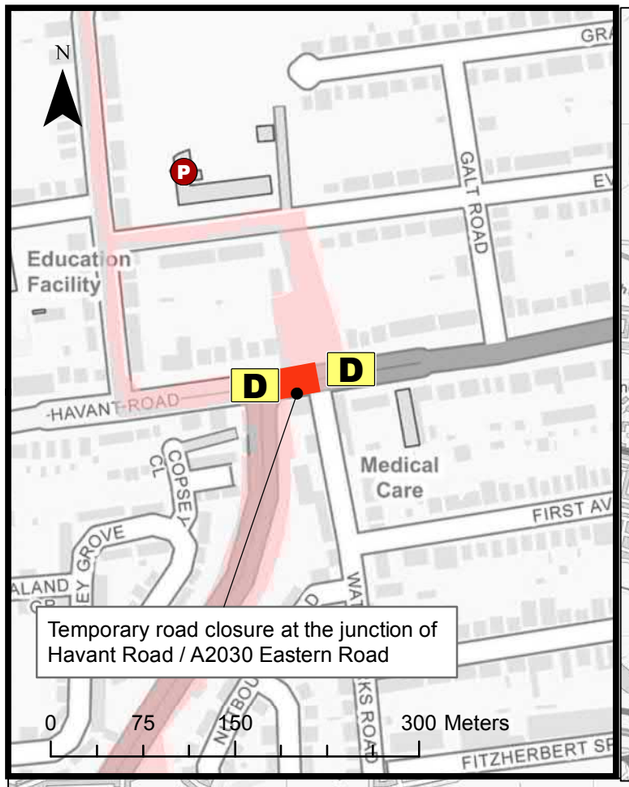
CLIENT: AQUIND

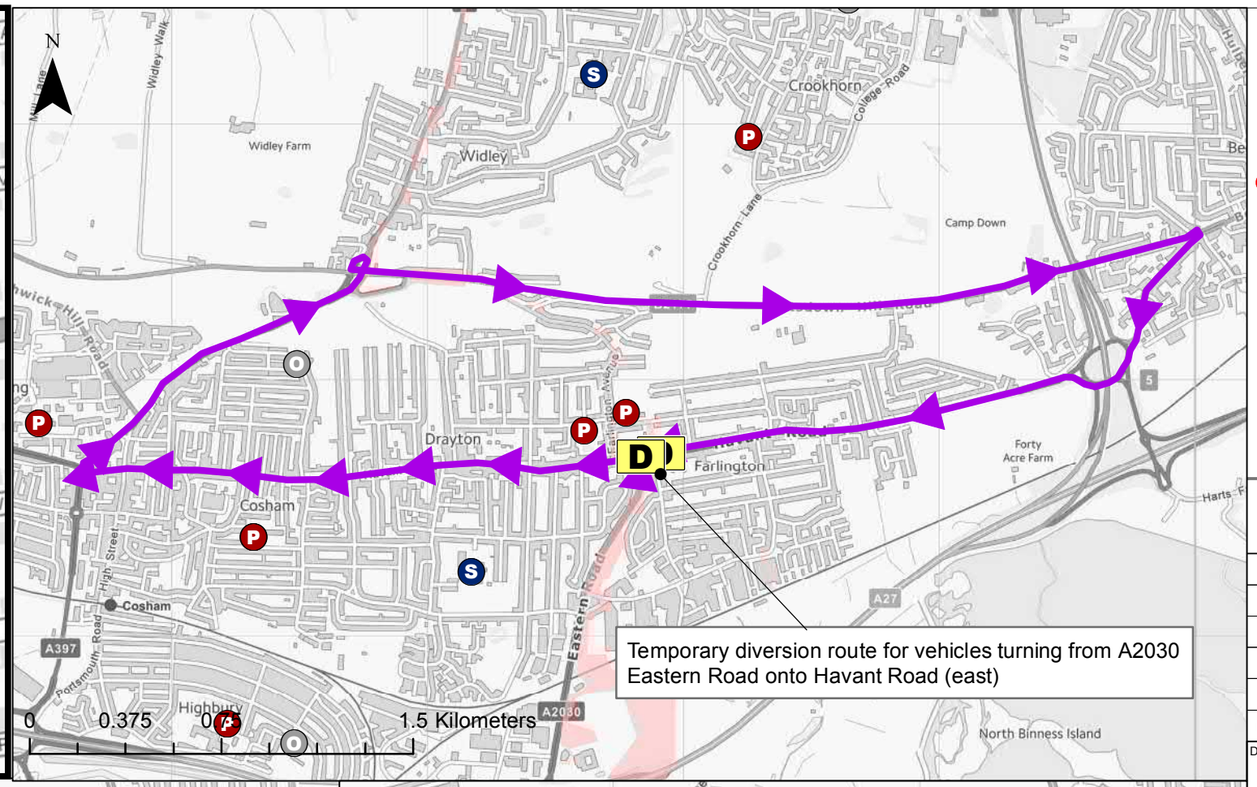
PROJECT: AQUIND Interconnector

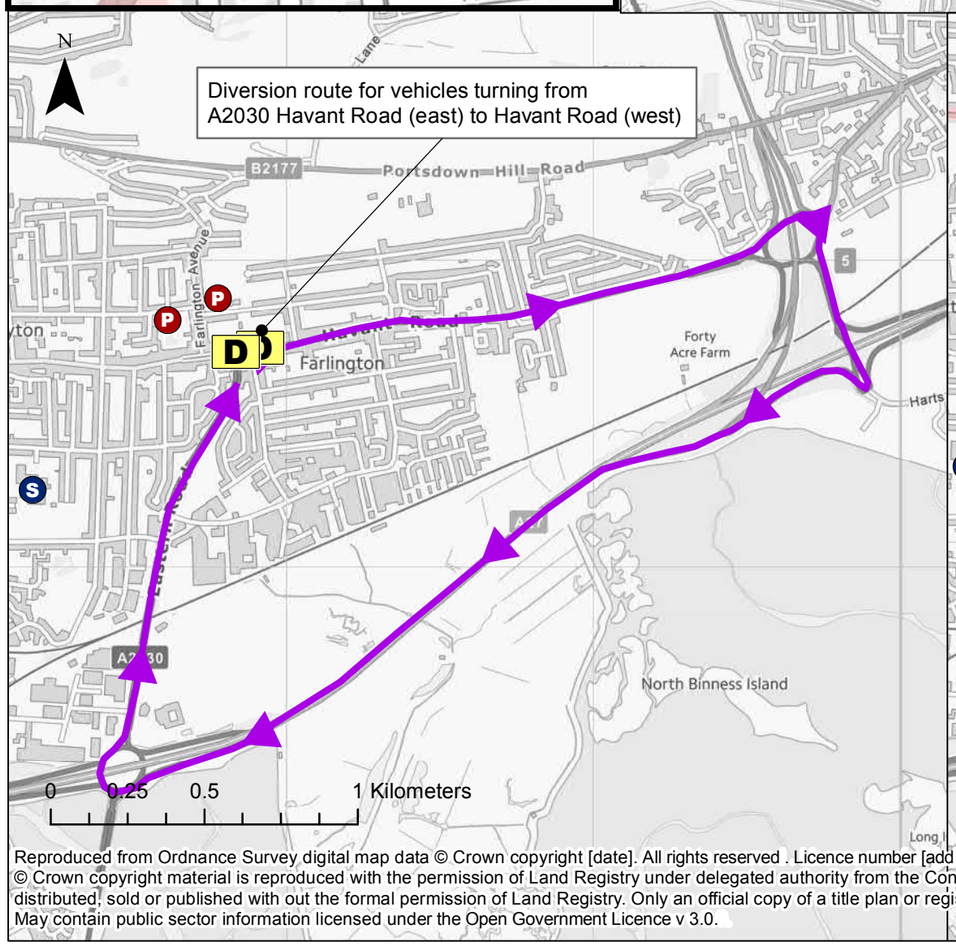
TITLE: Outline Diversion Route Proposals - Farlington Avenue / Havant Road Closure

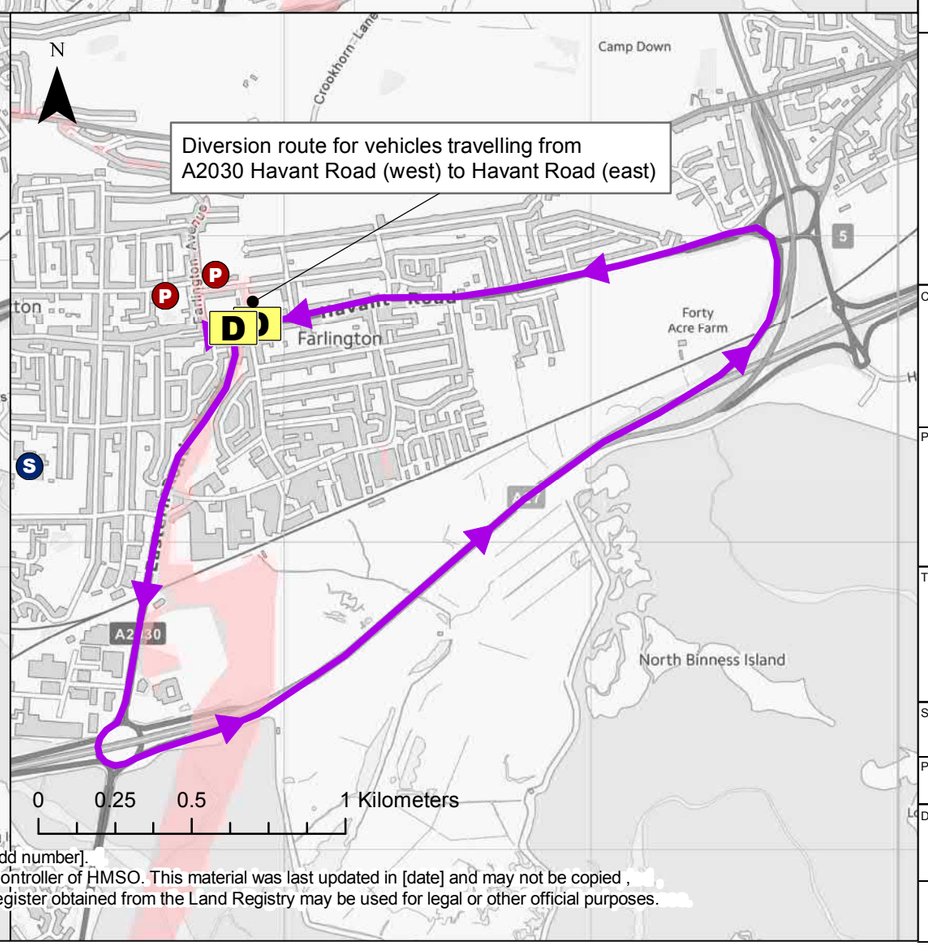
SCALE AT A3	CHECKED:		APPROVED:
1:24,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.12 REV.NO. 01









AQUIND Interconnector

Order Limits

D Diversion signage to be implemented

Temporary Road Closure

Diversion Routes

School Type

P Primary

S Secondary

Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
T+ 44 (0) 020 7314 5000
wsp.com

CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Outline Diversion Route Proposals - A2030 Eastern Road / Havant Road Closure

SCALE AT A3	CHECKED:		APPROVED:
1:24,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.13 REV.NO. 01

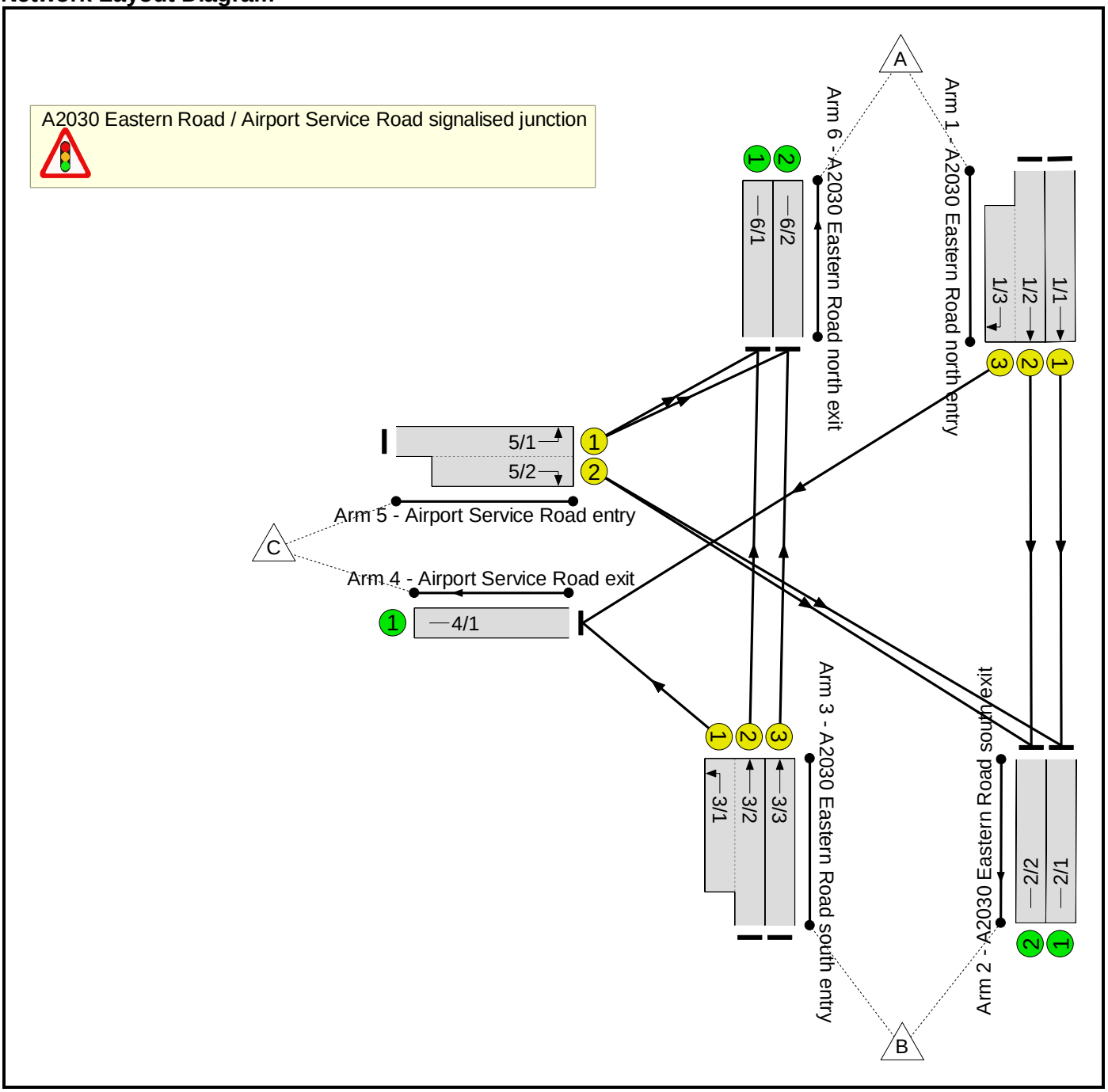
Appendix H – LOCAL JUNCTION MODELLING OUTPUTS

Full Input Data And Results

User and Project Details

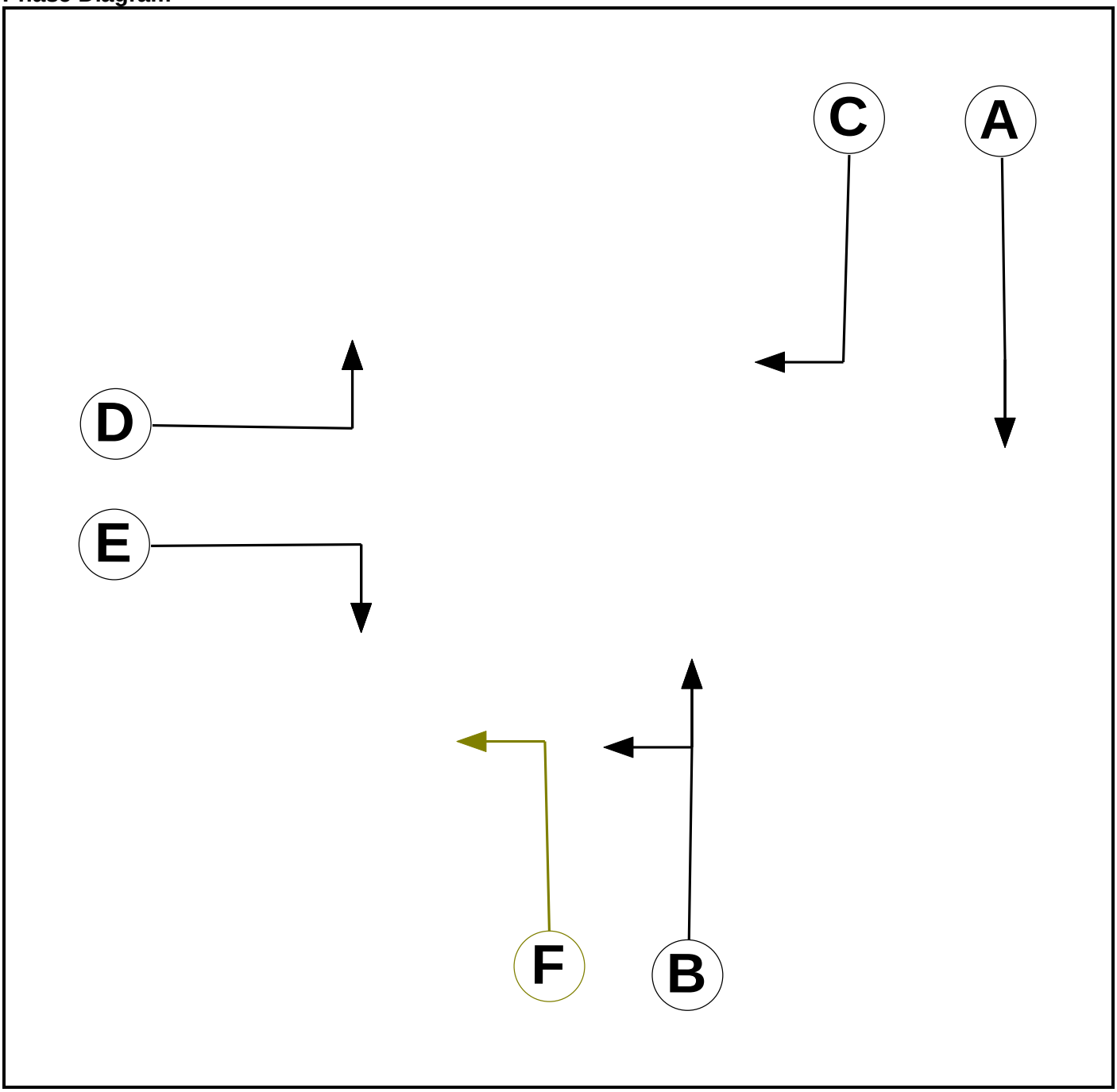
Project:	
Title:	**A2030 Eastern Road / Airport Service Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Eastern Rd_Airport Service Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	B	4	0

Full Input Data And Results

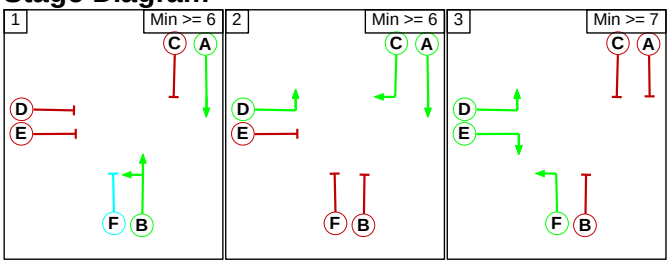
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	-	-	6	-
	B	-		5	6	5	-
	C	-	6		-	5	6
	D	-	5	-		-	-
	E	6	5	5	-		-
	F	-	-	5	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	A C D
3	D E F

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		6	6
	2	6		6
	3	6	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A2030 Eastern Road / Airport Service Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
1/2 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
1/3 (A2030 Eastern Road north entry)	U	C	2	3	17.4	Geom	-	3.20	0.00	Y	Arm 4 Right	12.00
2/1 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A2030 Eastern Road south entry)	U	B F	2	3	7.8	Geom	-	3.00	0.00	Y	Arm 4 Left	12.00
3/2 (A2030 Eastern Road south entry)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
3/3 (A2030 Eastern Road south entry)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
4/1 (Airport Service Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Airport Service Road entry)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 6 Left	12.00
5/2 (Airport Service Road entry)	U	E	2	3	14.8	Geom	-	2.75	0.00	Y	Arm 2 Right	12.00
6/1 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1651	43	1694
	B	1599	0	51	1650
	C	32	4	0	36
	Tot.	1631	1655	94	3380

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	830
1/2 (with short)	864(In) 821(Out)
1/3 (short)	43
2/1	832
2/2	823
3/1 (short)	51
3/2 (with short)	843(In) 792(Out)
3/3	807
4/1	94
5/1 (with short)	36(In) 32(Out)
5/2 (short)	4
6/1	808
6/2	823

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	100.0 %	1680	1680
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	2246	5	2251
	B	1462	0	1	1463
	C	153	0	0	153
	Tot.	1615	2246	6	3867

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	1122
1/2 (with short)	1129(In) 1124(Out)
1/3 (short)	5
2/1	1122
2/2	1124
3/1 (short)	1
3/2 (with short)	732(In) 731(Out)
3/3	731
4/1	6
5/1 (with short)	153(In) 153(Out)
5/2 (short)	0
6/1	808
6/2	807

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	0.0 %	1890	1890
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1356	212	1568
	B	1519	0	53	1572
	C	52	4	0	56
	Tot.	1571	1360	265	3196

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	1356
1/2 (with short)	212(In) 0(Out)
1/3 (short)	212
2/1	1358
2/2	2
3/1 (short)	53
3/2 (with short)	806(In) 753(Out)
3/3	766
4/1	265
5/1 (with short)	56(In) 52(Out)
5/2 (short)	4
6/1	779
6/2	792

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	0.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	100.0 %	1680	1680
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1548	271	1819
	B	1189	0	1	1190
	C	286	0	0	286
	Tot.	1475	1548	272	3295

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	807
1/2 (with short)	1012(In) 741(Out)
1/3 (short)	271
2/1	807
2/2	741
3/1 (short)	1
3/2 (with short)	596(In) 595(Out)
3/3	594
4/1	272
5/1 (with short)	286(In) 286(Out)
5/2 (short)	0
6/1	738
6/2	737

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	0.0 %	1890	1890
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	1615	71	1686
	B	1234	0	0	1234
	C	89	4	0	93
	Tot.	1323	1619	71	3013

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	816
1/2 (with short)	870(In) 799(Out)
1/3 (short)	71
2/1	818
2/2	801
3/1 (short)	0
3/2 (with short)	617(In) 617(Out)
3/3	617
4/1	71
5/1 (with short)	93(In) 89(Out)
5/2 (short)	4
6/1	662
6/2	661

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	0.0 %	1915	1915
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	100.0 %	1680	1680
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	2200	1	2201
	B	1164	0	0	1164
	C	310	0	0	310
	Tot.	1474	2200	1	3675

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A2030 Eastern Road / Airport Service Road signalised junction	
1/1	1100
1/2 (with short)	1101(In) 1100(Out)
1/3 (short)	1
2/1	1100
2/2	1100
3/1 (short)	0
3/2 (with short)	582(In) 582(Out)
3/3	582
4/1	1
5/1 (with short)	310(In) 310(Out)
5/2 (short)	0
6/1	737
6/2	737

Full Input Data And Results

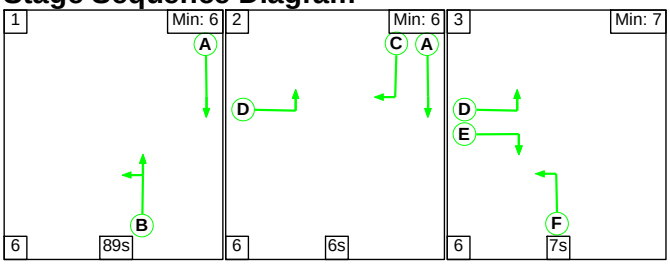
Lane Saturation Flows

Junction: A2030 Eastern Road / Airport Service Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/3 (A2030 Eastern Road north entry)	3.20	0.00	Y	Arm 4 Right	12.00	100.0 %	1720	1720
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 4 Left	12.00	0.0 %	1915	1915
3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
3/3 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
4/1 (Airport Service Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Airport Service Road entry)	2.75	0.00	Y	Arm 6 Left	12.00	100.0 %	1680	1680
5/2 (Airport Service Road entry)	2.75	0.00	Y	Arm 2 Right	12.00	0.0 %	1890	1890
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

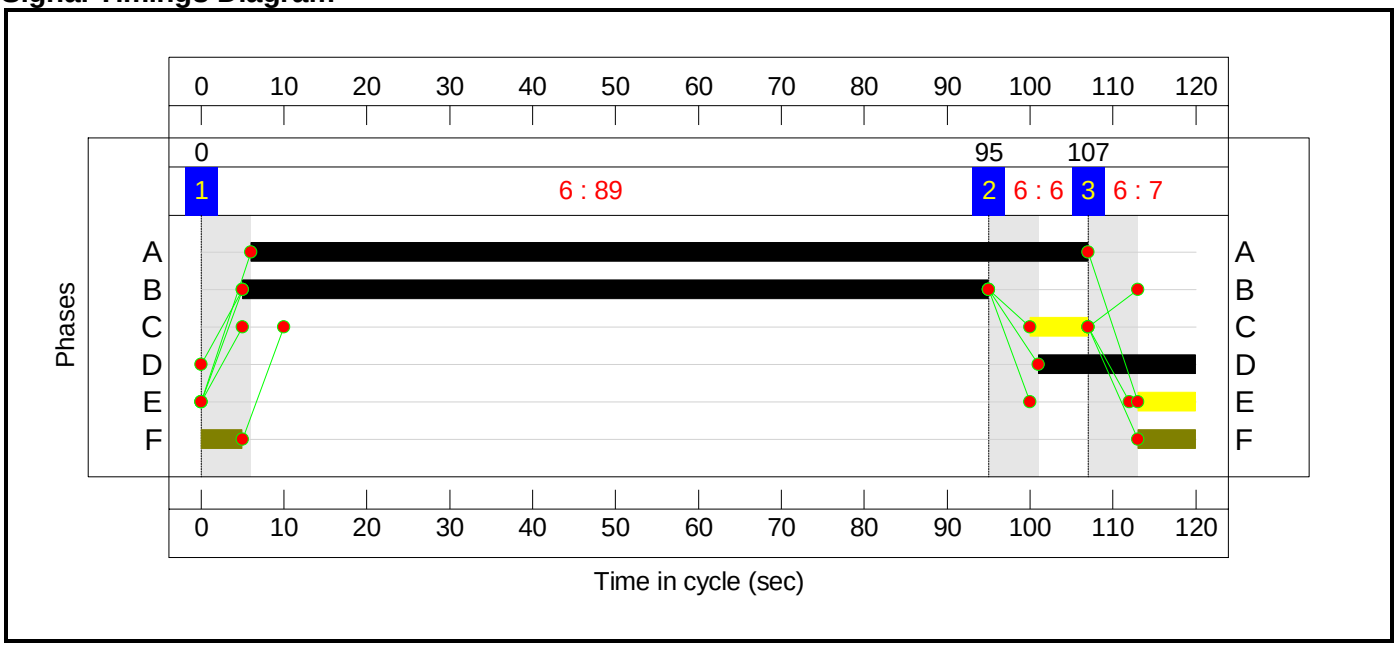


Stage Timings

Stage	1	2	3
Duration	89	6	7
Change Point	0	95	107

Full Input Data And Results

Signal Timings Diagram



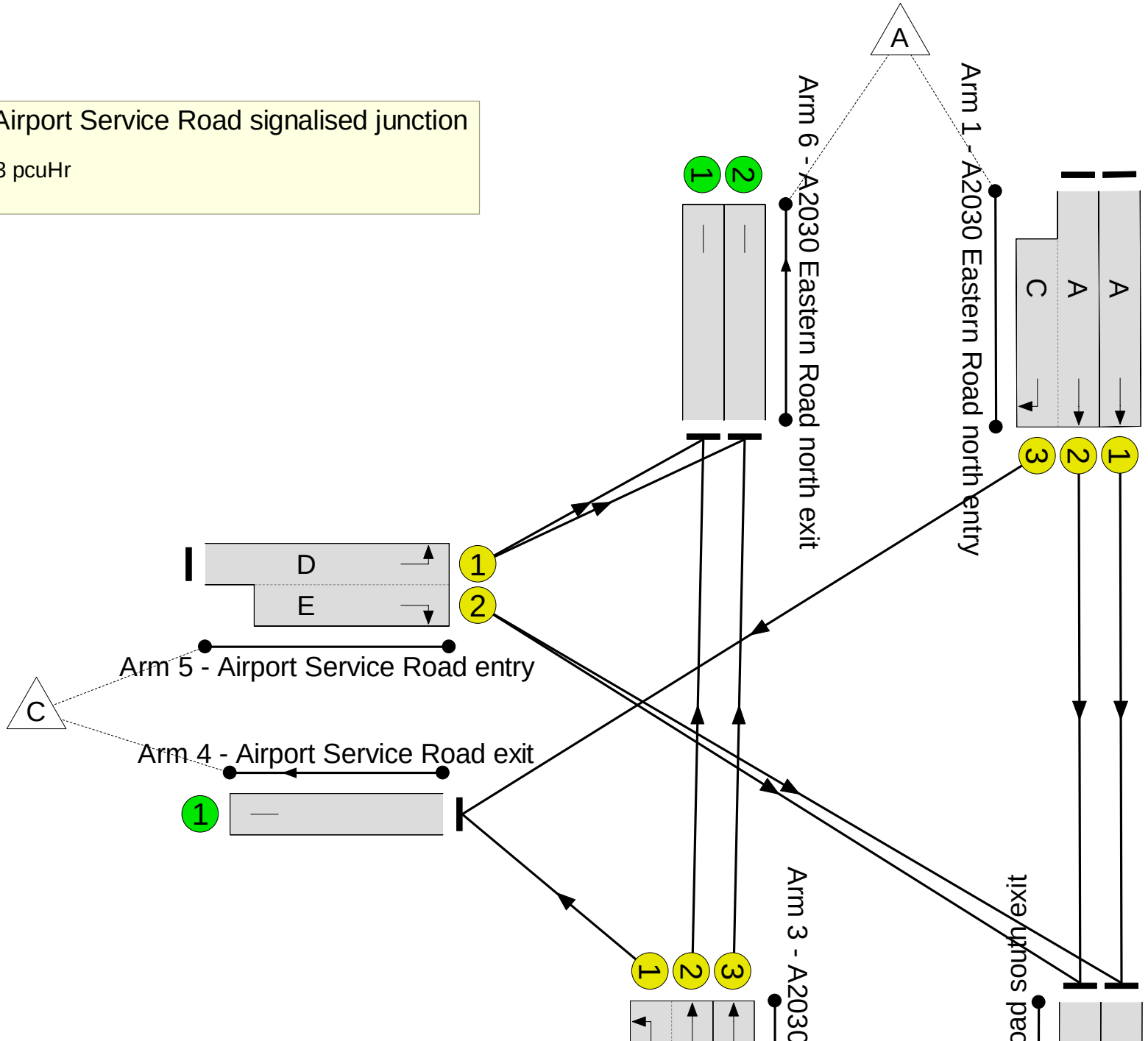
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 57.2 %

Total Traffic Delay: 7.3 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**57.3%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**57.3%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	830	1915	1628	51.0%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:7	-	864	1915:1720	1654	52.2%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	832	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	823	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	90:102	12	843	1915:1702	1472	57.3%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	90	-	807	1915	1452	55.6%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	94	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	19:7	-	36	1680:1680	315	11.4%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	808	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	823	Inf	Inf	0.0%

Full Input Data And Results

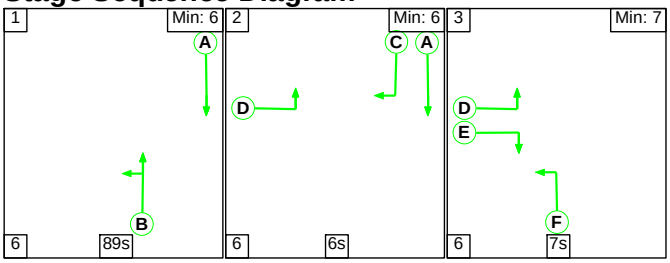
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**4.9**	**2.4**	**0.0**	**7.3**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**4.9**	**2.4**	**0.0**	**7.3**	**-**	**-**	**-**	**-**
1/1	830	830	-	-	-	0.5	0.5	-	1.1	4.6	7.1	0.5	7.7
1/2+1/3	864	864	-	-	-	1.2	0.5	-	1.7	7.2	7.1	0.5	7.6
2/1	832	832	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	843	843	-	-	-	1.3	0.7	-	2.0	8.6	10.8	0.7	11.5
3/3	807	807	-	-	-	1.4	0.6	-	2.0	8.8	11.2	0.6	11.8
4/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	36	36	-	-	-	0.4	0.1	-	0.5	50.1	0.9	0.1	1.0
6/1	808	808	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 57.2 Total Delay for Signalled Lanes (pcuHr): 7.29 Cycle Time (s): 120
PRC Over All Lanes (%): 57.2 Total Delay Over All Lanes(pcuHr): 7.29

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

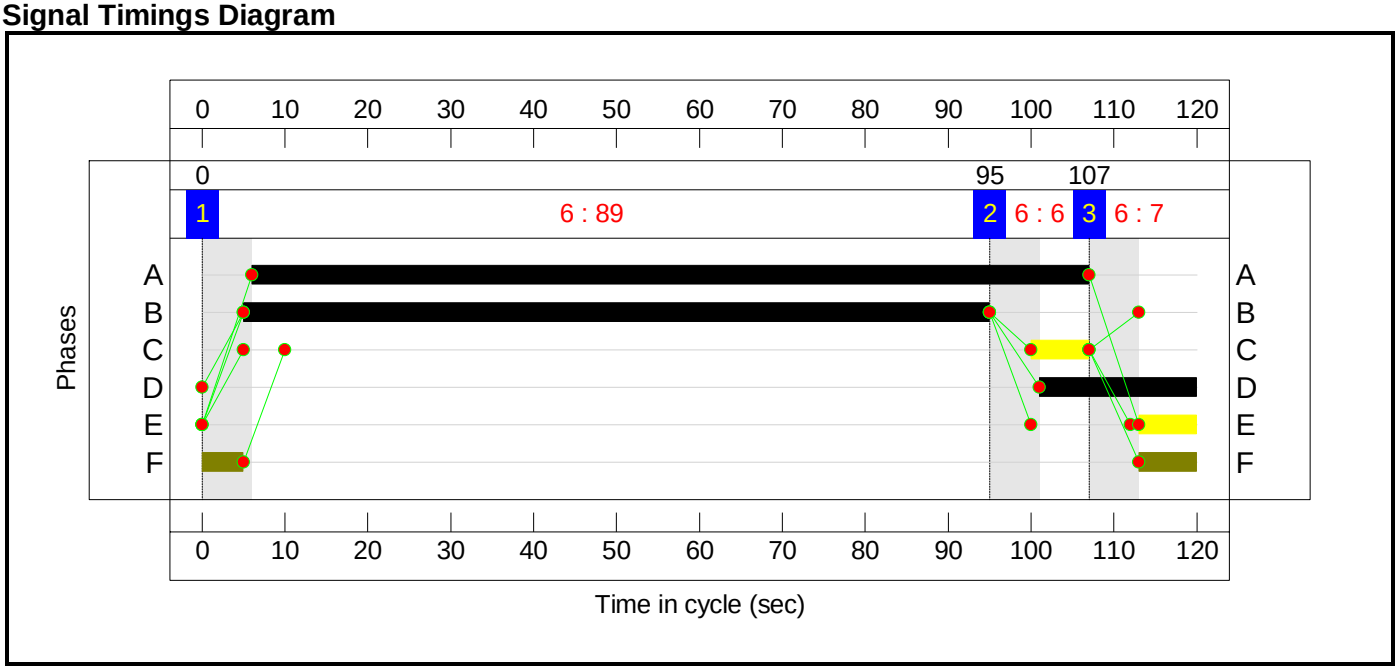
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	89	6	7
Change Point	0	95	107

Signal Timings Diagram



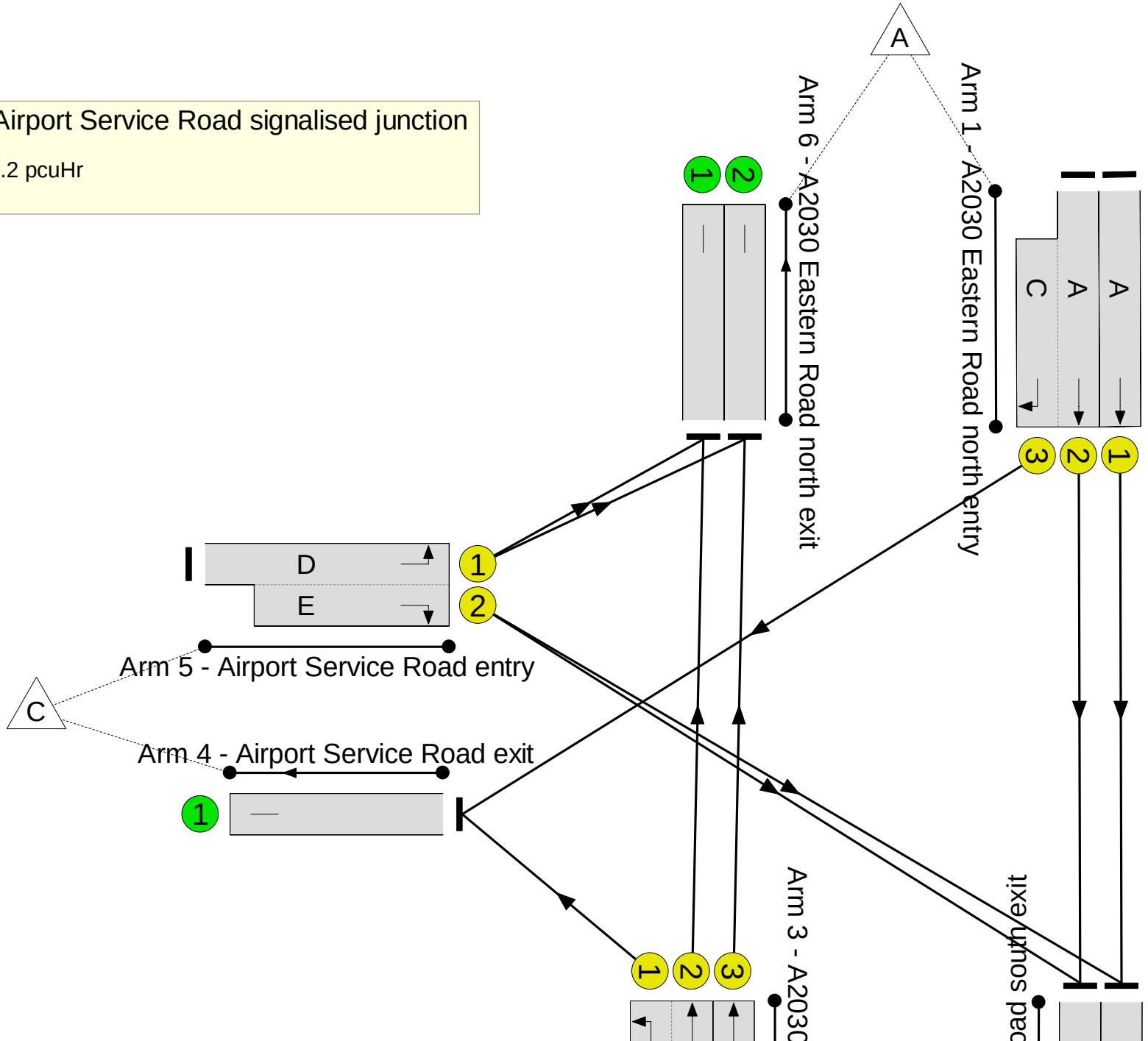
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 30.3 %

Total Traffic Delay: 10.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.1%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.1%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	1122	1915	1628	68.9%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:7	-	1129	1915:1720	1634	69.1%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1122	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1124	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	90:102	12	732	1915:1702	1454	50.3%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	90	-	731	1915	1452	50.3%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	6	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	19:7	-	153	1680:1890	280	54.6%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	808	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	807	Inf	Inf	0.0%

Full Input Data And Results

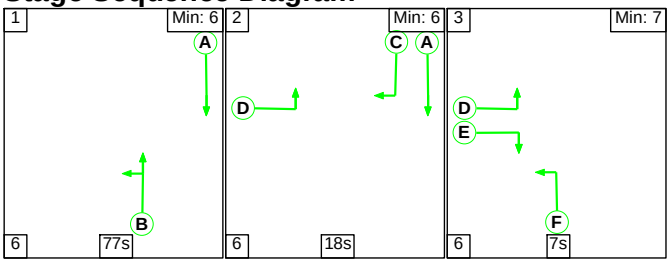
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**6.4**	**3.8**	**0.0**	**10.2**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**6.4**	**3.8**	**0.0**	**10.2**	**-**	**-**	**-**	**-**
1/1	1122	1122	-	-	-	1.0	1.1	-	2.1	6.8	13.4	1.1	14.5
1/2+1/3	1129	1129	-	-	-	1.1	1.1	-	2.2	7.0	13.4	1.1	14.5
2/1	1122	1122	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	1124	1124	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	732	732	-	-	-	1.2	0.5	-	1.7	8.2	9.3	0.5	9.8
3/3	731	731	-	-	-	1.2	0.5	-	1.7	8.2	9.3	0.5	9.8
4/1	6	6	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	153	153	-	-	-	1.9	0.6	-	2.5	59.9	4.7	0.6	5.3
6/1	808	808	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	807	807	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 30.3 Total Delay for Signalled Lanes (pcuHr): 10.19 Cycle Time (s): 120
PRC Over All Lanes (%): 30.3 Total Delay Over All Lanes(pcuHr): 10.19

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

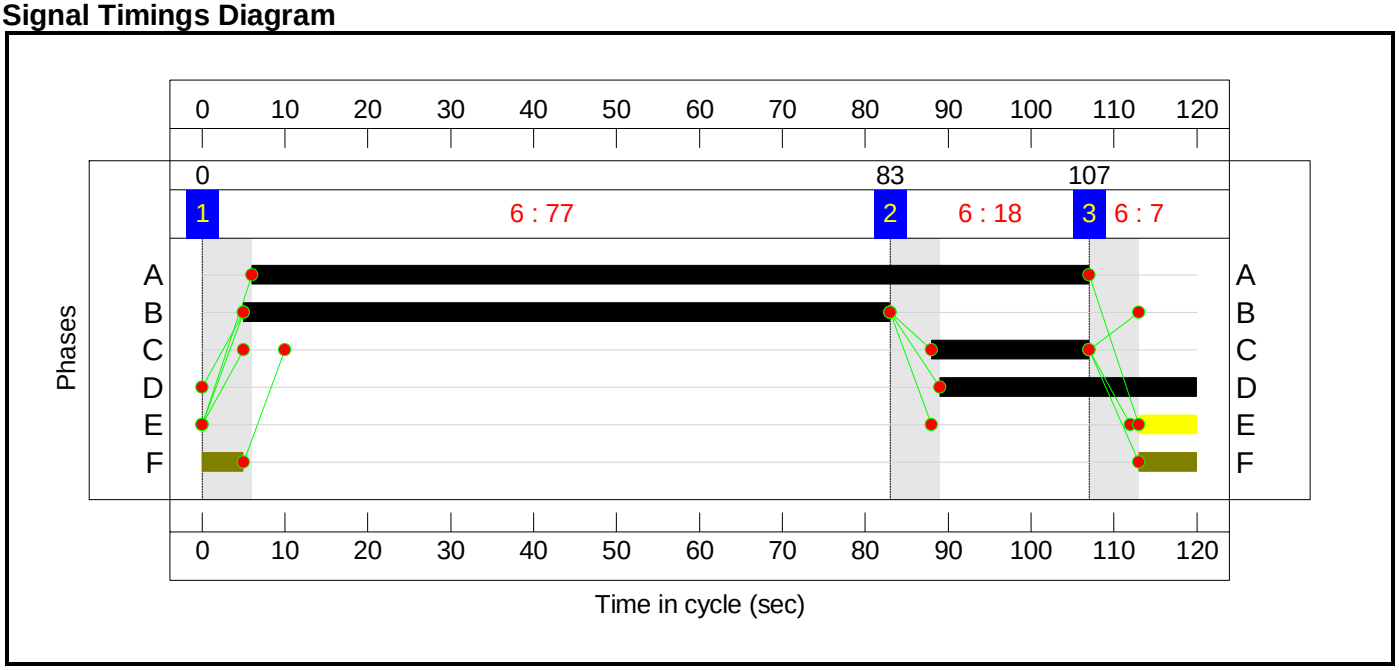
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	77	18	7
Change Point	0	83	107

Signal Timings Diagram



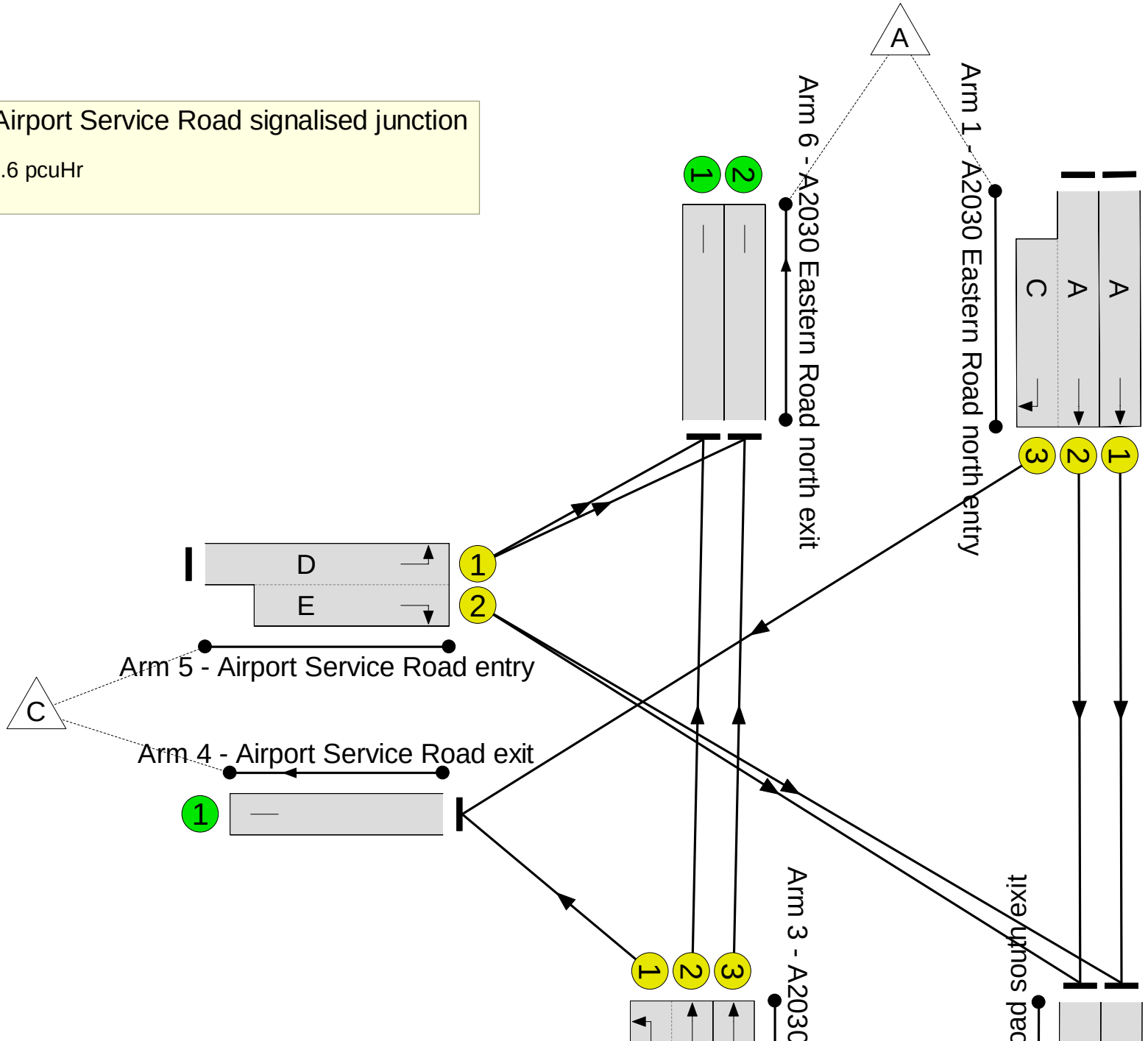
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 8.0 %

Total Traffic Delay: 15.6 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.3%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.3%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	1356	1915	1628	83.3%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:19	-	212	1915:1720	287	74.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1358	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	2	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	78:90	12	806	1915:1702	1283	62.8%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	78	-	766	1915	1261	60.8%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	265	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	31:7	-	56	1680:1680	482	11.6%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	792	Inf	Inf	0.0%

Full Input Data And Results

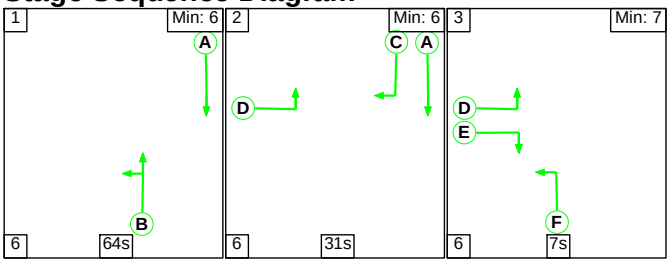
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.1**	**5.5**	**0.0**	**15.6**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**10.1**	**5.5**	**0.0**	**15.6**	**-**	**-**	**-**	**-**
1/1	1356	1356	-	-	-	1.7	2.5	-	4.2	11.1	23.0	2.5	25.4
1/2+1/3	212	212	-	-	-	2.8	1.4	-	4.2	70.8	6.7	1.4	8.1
2/1	1358	1358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	2	2	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	806	806	-	-	-	2.5	0.8	-	3.3	14.9	14.5	0.8	15.4
3/3	766	766	-	-	-	2.5	0.8	-	3.3	15.3	14.5	0.8	15.2
4/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	56	56	-	-	-	0.5	0.1	-	0.6	38.9	1.3	0.1	1.4
6/1	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	792	792	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 8.0 Total Delay for Signalled Lanes (pcuHr): 15.57 Cycle Time (s): 120
PRC Over All Lanes (%): 8.0 Total Delay Over All Lanes(pcuHr): 15.57

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

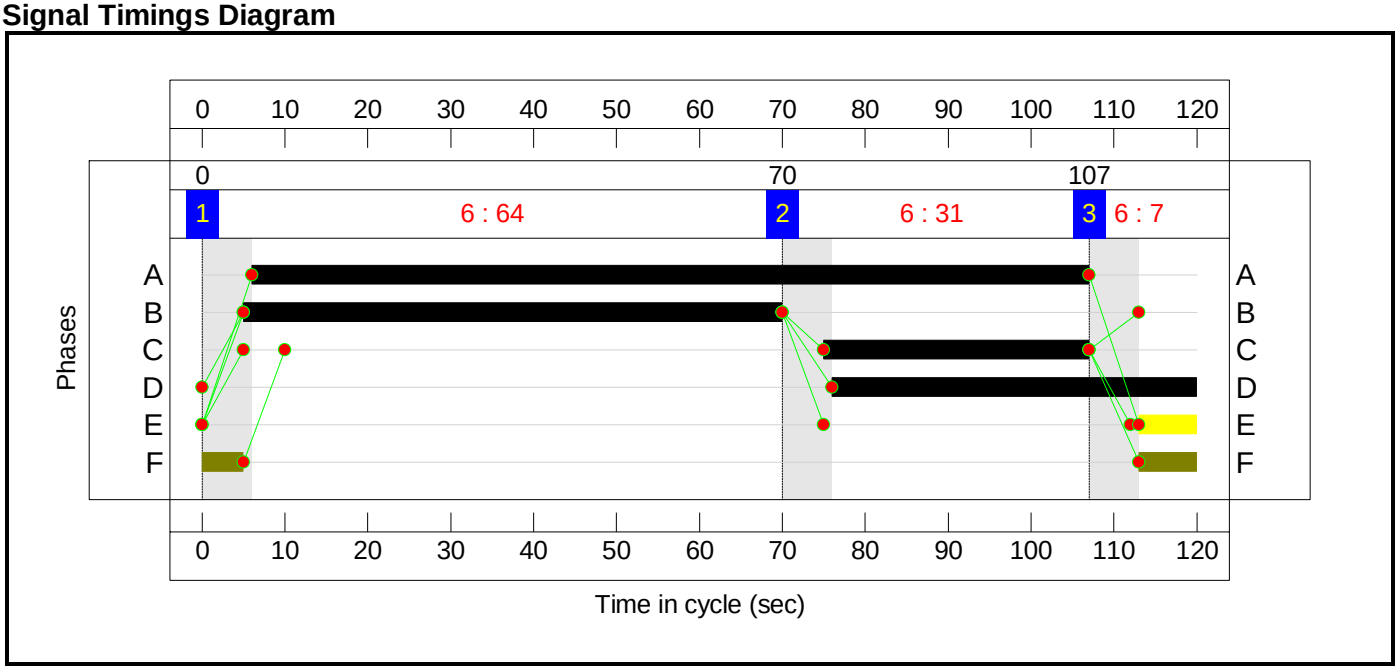
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	64	31	7
Change Point	0	70	107

Signal Timings Diagram



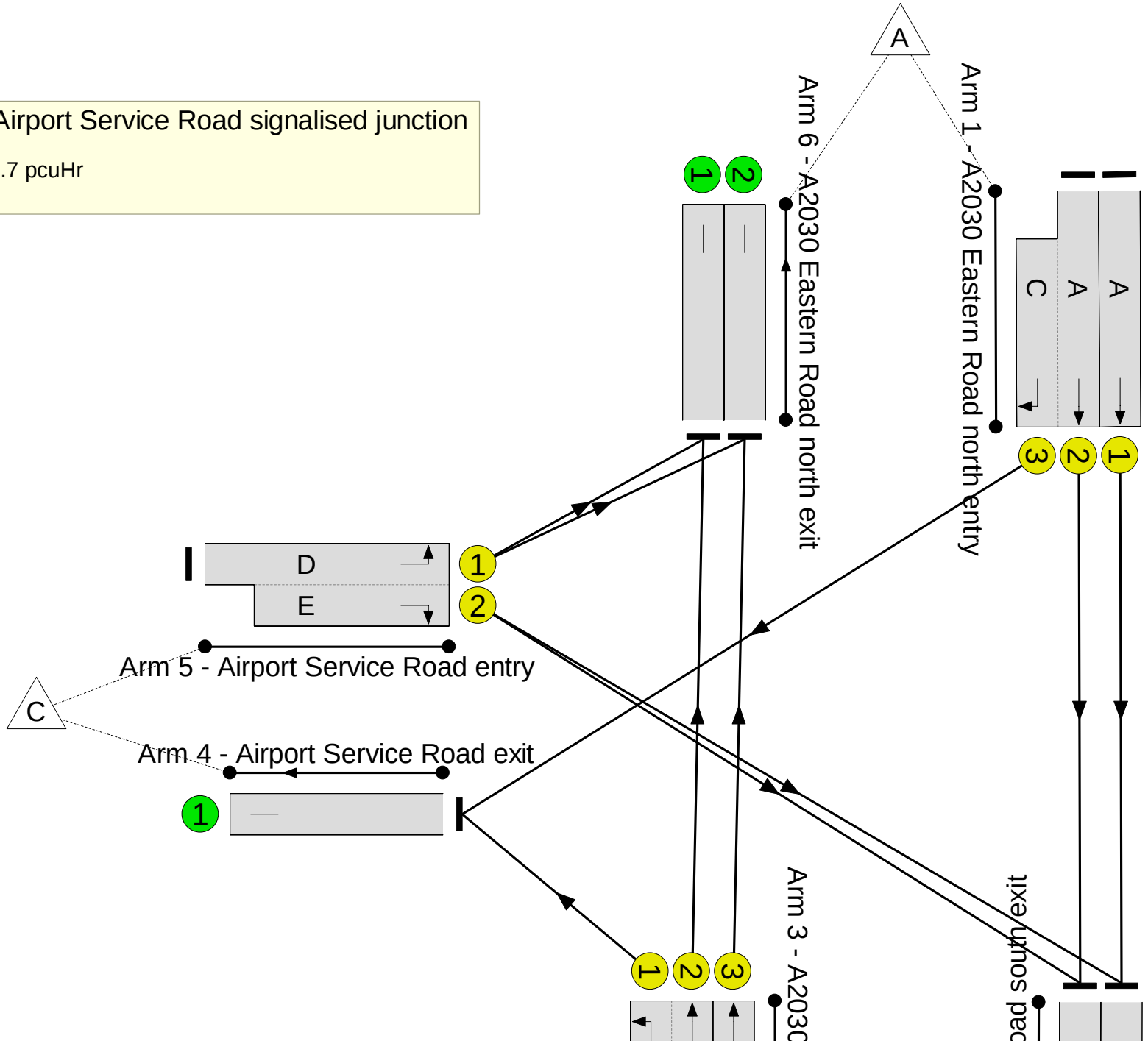
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 58.8 %

Total Traffic Delay: 14.7 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**56.7%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**56.7%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	807	1915	1628	49.6%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:32	-	1012	1915:1720	1785	56.7%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	807	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	741	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	65:77	12	596	1915:1702	1055	56.5%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	65	-	594	1915	1053	56.4%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	272	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	44:7	-	286	1680:1890	630	45.4%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	738	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%

Full Input Data And Results

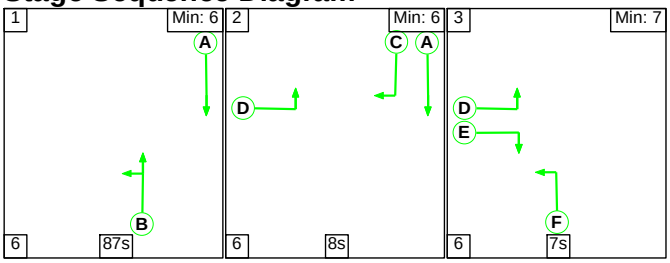
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.9**	**2.9**	**0.0**	**14.7**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**11.9**	**2.9**	**0.0**	**14.7**	**-**	**-**	**-**	**-**
1/1	807	807	-	-	-	0.5	0.5	-	1.0	4.5	6.9	0.5	7.4
1/2+1/3	1012	1012	-	-	-	3.3	0.7	-	3.9	14.0	7.8	0.7	8.4
2/1	807	807	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	741	741	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	596	596	-	-	-	2.9	0.6	-	3.6	21.5	12.9	0.6	13.5
3/3	594	594	-	-	-	2.9	0.6	-	3.6	21.5	12.9	0.6	13.5
4/1	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	286	286	-	-	-	2.2	0.4	-	2.7	33.5	7.1	0.4	7.6
6/1	738	738	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 58.8 Total Delay for Signalled Lanes (pcuHr): 14.71 Cycle Time (s): 120
PRC Over All Lanes (%): 58.8 Total Delay Over All Lanes(pcuHr): 14.71

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

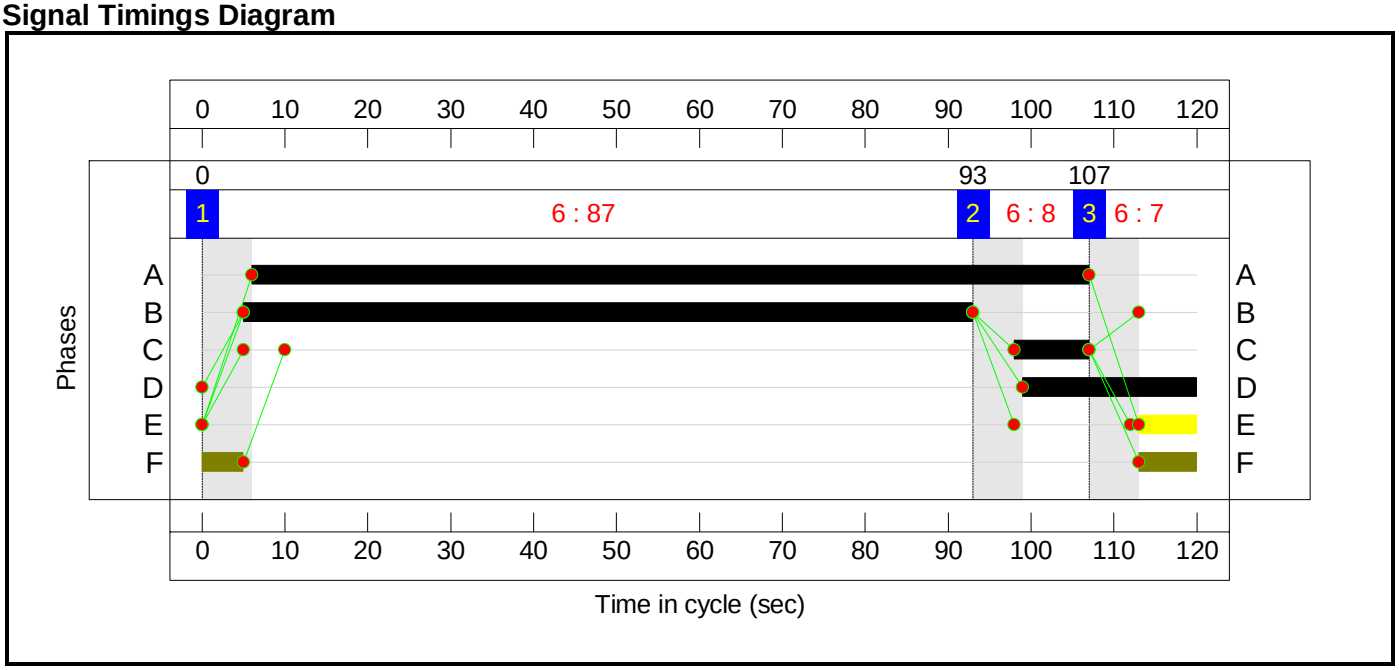
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	87	8	7
Change Point	0	93	107

Signal Timings Diagram



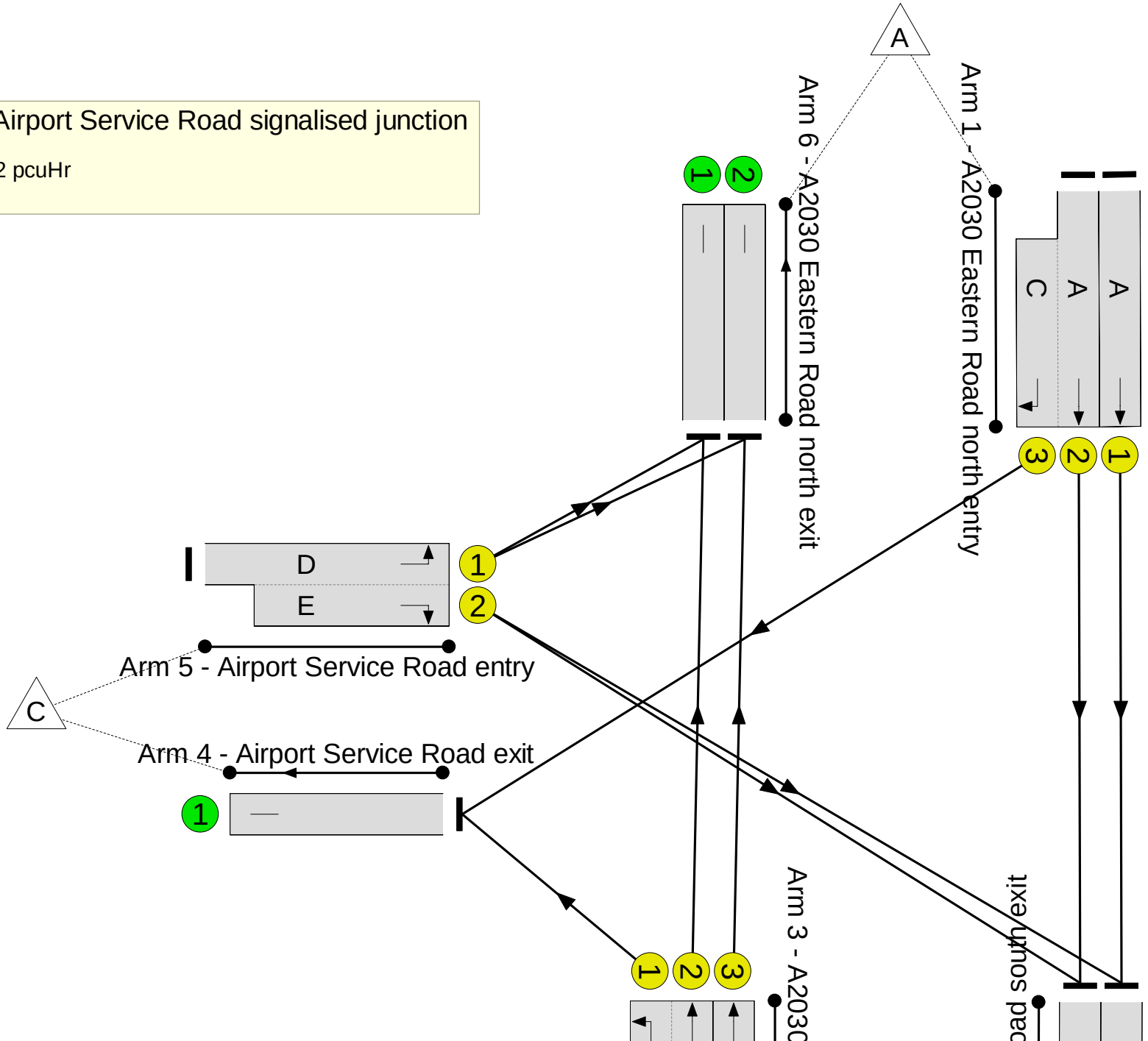
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 72.7 %

Total Traffic Delay: 7.2 pcuHr



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.1%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.1%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	816	1915	1628	50.1%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:9	-	870	1915:1720	1669	52.1%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	818	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	801	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	88:100	12	617	1915:1915	1420	43.4%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	88	-	617	1915	1420	43.4%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	71	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	21:7	-	93	1680:1680	322	28.9%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	661	Inf	Inf	0.0%

Full Input Data And Results

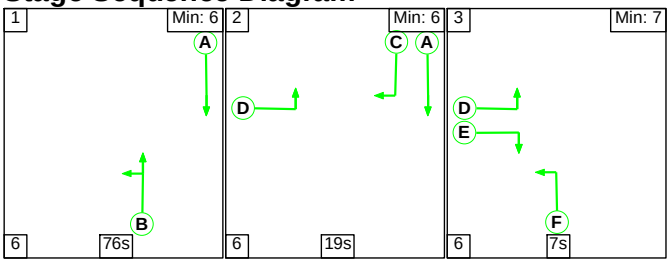
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.2**	**2.0**	**0.0**	**7.2**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.2**	**2.0**	**0.0**	**7.2**	**-**	**-**	**-**	**-**
1/1	816	816	-	-	-	0.5	0.5	-	1.0	4.6	7.0	0.5	7.5
1/2+1/3	870	870	-	-	-	1.6	0.5	-	2.1	8.7	6.7	0.5	7.2
2/1	818	818	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	801	801	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	617	617	-	-	-	1.0	0.4	-	1.4	8.1	7.7	0.4	8.1
3/3	617	617	-	-	-	1.0	0.4	-	1.4	8.1	7.7	0.4	8.1
4/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	93	93	-	-	-	1.1	0.2	-	1.3	50.6	2.5	0.2	2.7
6/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	661	661	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 72.7 Total Delay for Signalled Lanes (pcuHr): 7.23 Cycle Time (s): 120
PRC Over All Lanes (%): 72.7 Total Delay Over All Lanes(pcuHr): 7.23

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

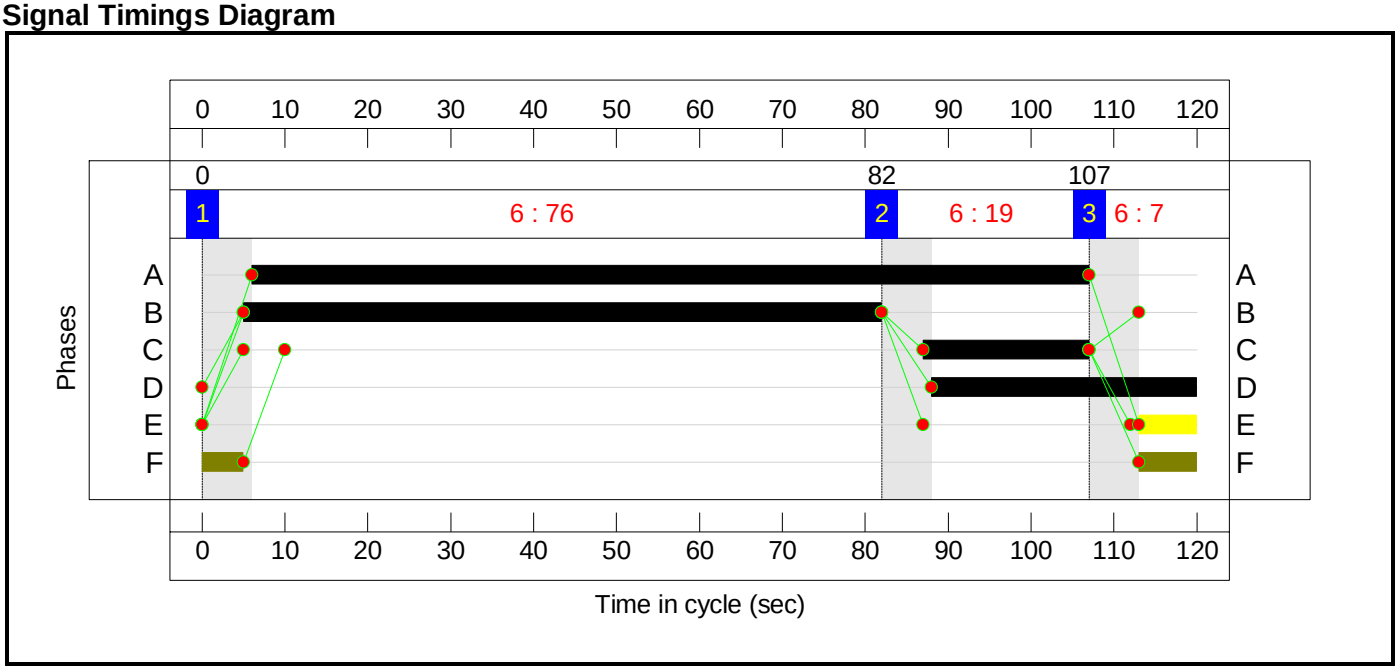
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	76	19	7
Change Point	0	82	107

Signal Timings Diagram



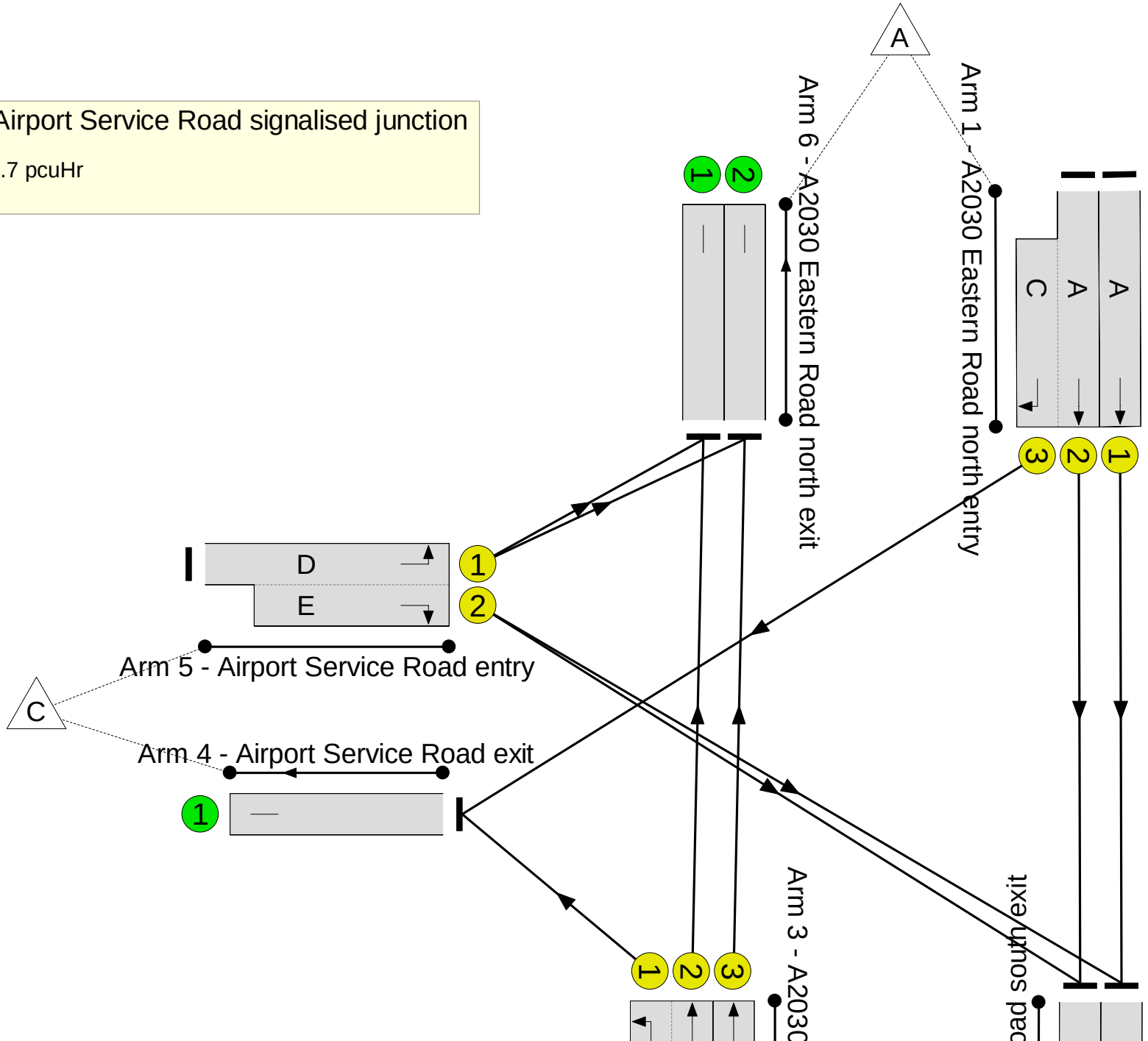
Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Airport Service Road signalised junction

PRC: 33.2 %

Total Traffic Delay: 12.7 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	101	-	1100	1915	1628	67.6%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	101:20	-	1101	1915:1720	1629	67.6%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B	F	1	77:89	12	582	1915:1915	1245	46.8%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	77	-	582	1915	1245	46.8%
4/1	Airport Service Road exit	U	N/A	N/A	-		-	-	-	1	Inf	Inf	0.0%
5/1+5/2	Airport Service Road entry Right Left	U	N/A	N/A	D E		1	32:7	-	310	1680:1890	462	67.1%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.7**	**4.0**	**0.0**	**12.7**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Airport Service Road signalised junction	**-**	**-**	**0**	**0**	**0**	**8.7**	**4.0**	**0.0**	**12.7**	**-**	**-**	**-**	**-**
1/1	1100	1100	-	-	-	1.0	1.0	-	2.0	6.6	12.8	1.0	13.9
1/2+1/3	1101	1101	-	-	-	1.0	1.0	-	2.0	6.6	12.8	1.0	13.9
2/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	582	582	-	-	-	1.7	0.4	-	2.1	13.3	9.7	0.4	10.1
3/3	582	582	-	-	-	1.7	0.4	-	2.1	13.3	9.7	0.4	10.1
4/1	1	1	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	310	310	-	-	-	3.3	1.0	-	4.3	50.4	9.1	1.0	10.1
6/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

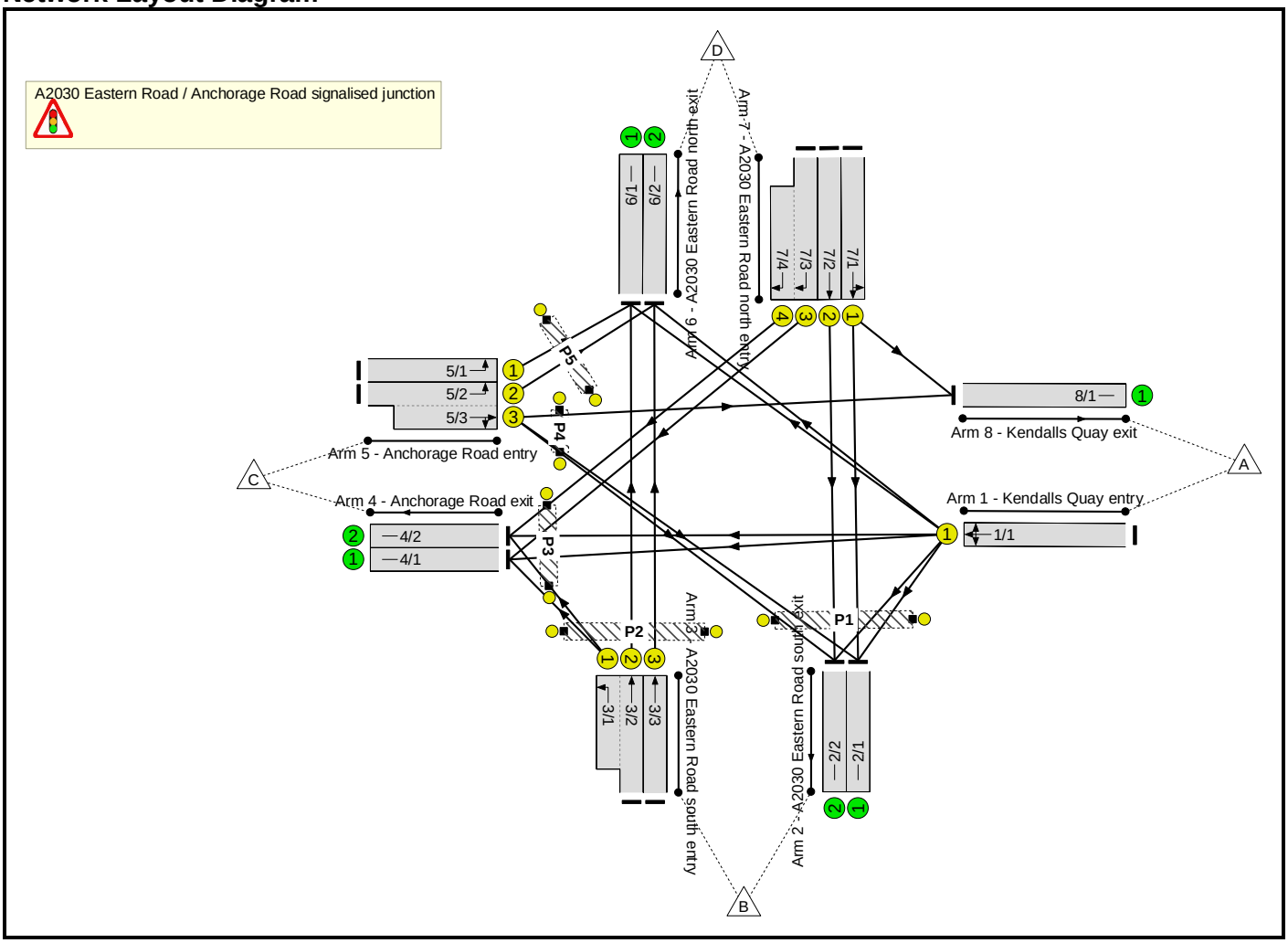
C1 PRC for Signalled Lanes (%): 33.2 Total Delay for Signalled Lanes (pcuHr): 12.66 Cycle Time (s): 120
PRC Over All Lanes (%): 33.2 Total Delay Over All Lanes(pcuHr): 12.66

Full Input Data And Results

User and Project Details

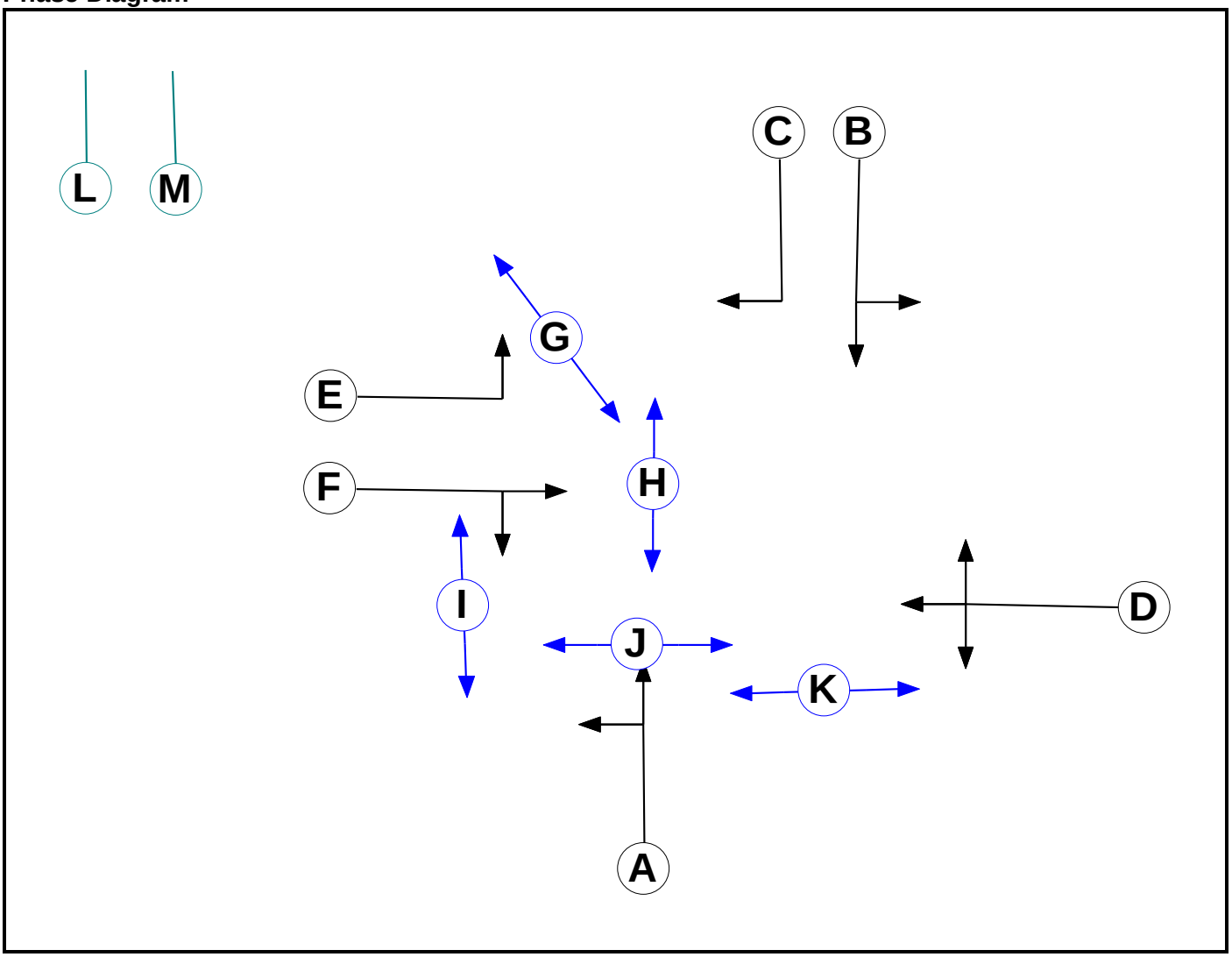
Project:	
Title:	**A2030 Eastern Road / Anchorage Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Eastern Rd_Anchorage Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Dummy		1	1
M	Dummy		1	1

Full Input Data And Results

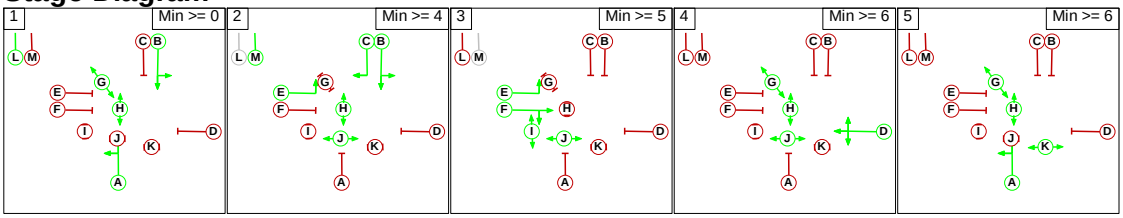
Phase Intergreens Matrix

		Starting Phase												
		A	B	C	D	E	F	G	H	I	J	K	L	M
Terminating Phase	A		-	5	5	8	6	-	-	7	6	-	-	8
	B	-		-	5	-	5	-	-	-	-	9	-	-
	C	6	-		5	-	5	-	-	9	-	-	-	-
	D	7	5	8		9	7	-	-	10	-	8	5	9
	E	5	-	-	5		-	5	-	-	-	-	-	-
	F	5	7	6	7	-		-	5	-	-	10	7	-
	G	-	-	-	-	5	-		-	-	-	-	-	5
	H	-	-	-	-	-	5	-		-	-	-	-	-
	I	5	-	5	5	-	-	-	-		-	-	-	-
	J	5	-	-	-	-	-	-	-	-		-	-	-
	K	-	5	-	5	-	5	-	-	-	-		5	-
	L	-	-	-	-	-	-	-	-	-	-	-		-
	M	-	-	-	-	-	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G H L
2	B C E H J M
3	E F I J
4	D G H J
5	A G H K

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		8	8	6	9
	2	6		9	5	9
	3	7	7		7	10
	4	7	9	10		8
	5	5	8	8	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A2030 Eastern Road / Anchorage Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Kendalls Quay entry)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Left	20.00
											Arm 4 Ahead	Inf
											Arm 6 Right	20.00
2/1 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A2030 Eastern Road south entry)	U	A	2	3	14.8	Geom	-	3.50	0.00	Y	Arm 4 Left	15.00
3/2 (A2030 Eastern Road south entry)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
3/3 (A2030 Eastern Road south entry)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
4/1 (Anchorage Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (Anchorage Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Anchorage Road entry)	U	E	2	3	31.3	Geom	-	4.00	0.00	Y	Arm 6 Left	25.00
5/2 (Anchorage Road entry)	U	E	2	3	31.3	Geom	-	3.25	0.00	Y	Arm 6 Left	25.00
5/3 (Anchorage Road entry)	U	F	2	3	7.0	Geom	-	3.25	0.00	Y	Arm 2 Right	25.00
											Arm 8 Ahead	Inf
6/1 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A2030	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	Inf

Eastern Road north entry)											Arm 8 Left	20.00
7/2 (A2030 Eastern Road north entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	Inf
7/3 (A2030 Eastern Road north entry)	U	C	2	3	21.7	Geom	-	3.50	0.00	Y	Arm 4 Right	20.00
7/4 (A2030 Eastern Road north entry)	U	C	2	3	21.7	Geom	-	3.50	0.00	Y	Arm 4 Right	20.00
8/1 (Kendalls Quay exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	106	1526	1632
	C	0	143	0	566	709
	D	0	1551	574	0	2125
	Tot.	0	1694	680	2092	4466

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	847
2/2	847
3/1 (short)	106
3/2 (with short)	850(In) 744(Out)
3/3	782
4/1	340
4/2	340
5/1	566
5/2 (with short)	143(In) 0(Out)
5/3 (short)	143
6/1	1310
6/2	782
7/1	775
7/2	776
7/3 (with short)	574(In) 287(Out)
7/4 (short)	287
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	0.0 %	1940	1940
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	48	1567	1615
	C	0	258	0	663	921
	D	0	1994	178	0	2172
	Tot.	0	2252	226	2230	4708

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	1126
2/2	1126
3/1 (short)	48
3/2 (with short)	823(In) 775(Out)
3/3	792
4/1	113
4/2	113
5/1	663
5/2 (with short)	258(In) 0(Out)
5/3 (short)	258
6/1	1438
6/2	792
7/1	997
7/2	997
7/3 (with short)	178(In) 89(Out)
7/4 (short)	89
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	0.0 %	1940	1940
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	109	1463	1572
	C	0	107	0	633	740
	D	0	1462	573	0	2035
	Tot.	0	1569	682	2096	4347

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	785
2/2	784
3/1 (short)	109
3/2 (with short)	823(In) 714(Out)
3/3	749
4/1	342
4/2	340
5/1	335
5/2 (with short)	405(In) 298(Out)
5/3 (short)	107
6/1	1049
6/2	1047
7/1	731
7/2	731
7/3 (with short)	573(In) 287(Out)
7/4 (short)	286
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	47	1428	1475
	C	0	141	0	803	944
	D	0	1677	256	0	1933
	Tot.	0	1818	303	2231	4352

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	909
2/2	909
3/1 (short)	47
3/2 (with short)	755(In) 708(Out)
3/3	720
4/1	152
4/2	151
5/1	434
5/2 (with short)	510(In) 369(Out)
5/3 (short)	141
6/1	1142
6/2	1089
7/1	838
7/2	839
7/3 (with short)	256(In) 128(Out)
7/4 (short)	128
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	17	1277	1294
	C	0	134	0	768	902
	D	0	1552	579	0	2131
	Tot.	0	1686	596	2045	4327

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	843
2/2	843
3/1 (short)	17
3/2 (with short)	655(In) 638(Out)
3/3	639
4/1	299
4/2	297
5/1	418
5/2 (with short)	484(In) 350(Out)
5/3 (short)	134
6/1	1056
6/2	989
7/1	776
7/2	776
7/3 (with short)	579(In) 290(Out)
7/4 (short)	289
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	23	1450	1473
	C	0	232	0	738	970
	D	0	1968	175	0	2143
	Tot.	0	2200	198	2188	4586

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A2030 Eastern Road / Anchorage Road signalised junction	
1/1	0
2/1	1100
2/2	1100
3/1 (short)	23
3/2 (with short)	746(In) 723(Out)
3/3	727
4/1	100
4/2	98
5/1	644
5/2 (with short)	326(In) 94(Out)
5/3 (short)	232
6/1	1367
6/2	821
7/1	984
7/2	984
7/3 (with short)	175(In) 88(Out)
7/4 (short)	87
8/1	0

Full Input Data And Results

Lane Saturation Flows

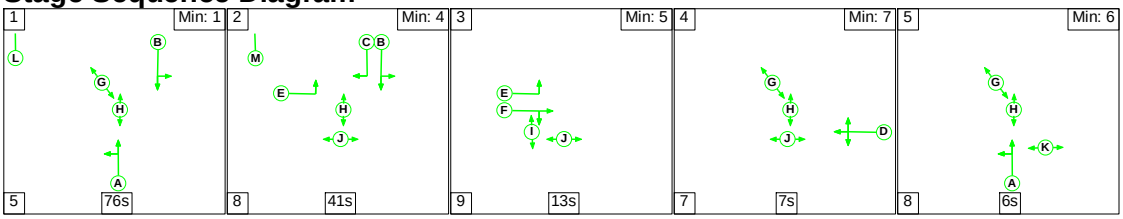
Junction: A2030 Eastern Road / Anchorage Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Kendalls Quay entry)	3.00	0.00	Y	Arm 2 Left	20.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	20.00	0.0 %		
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	15.00	100.0 %	1786	1786
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Anchorage Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Anchorage Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Anchorage Road entry)	4.00	0.00	Y	Arm 6 Left	25.00	100.0 %	1901	1901
5/2 (Anchorage Road entry)	3.25	0.00	Y	Arm 6 Left	25.00	100.0 %	1830	1830
5/3 (Anchorage Road entry)	3.25	0.00	Y	Arm 2 Right	25.00	100.0 %	1830	1830
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
				Arm 8 Left	20.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
7/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
7/4 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	20.00	100.0 %	1828	1828
8/1 (Kendalls Quay exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

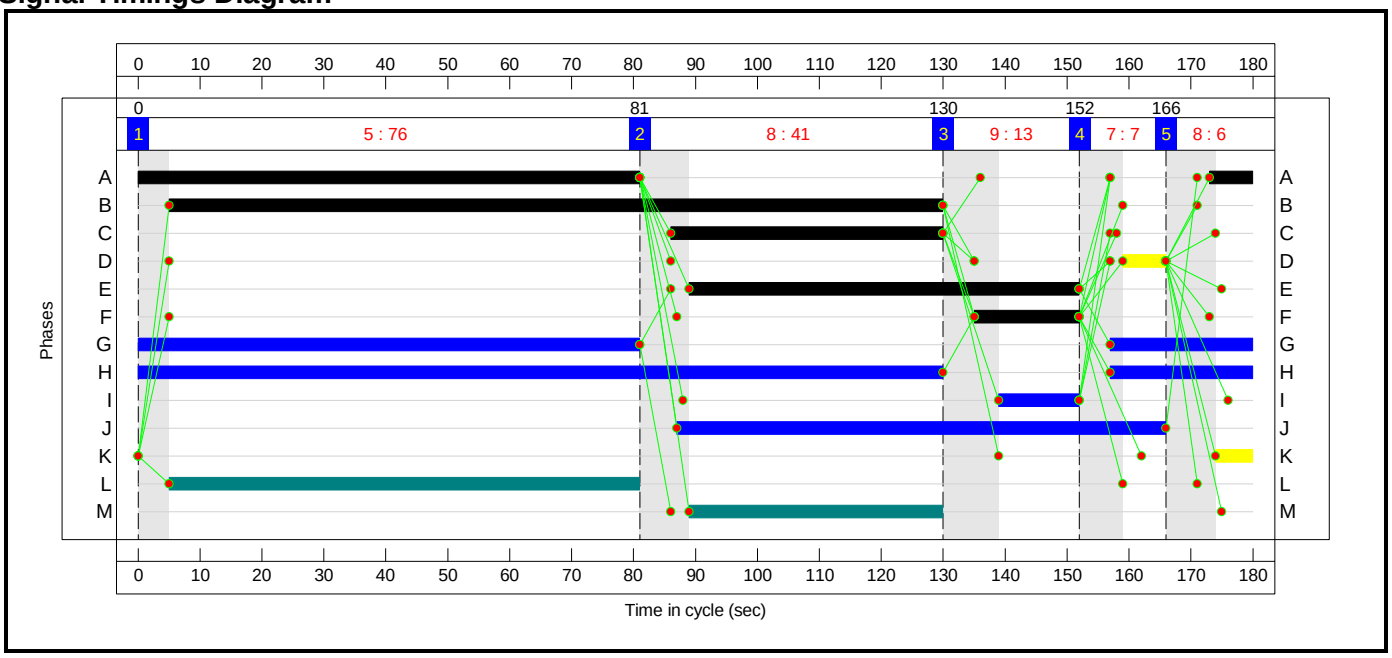
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	76	41	13	7	6
Change Point	0	81	130	152	166

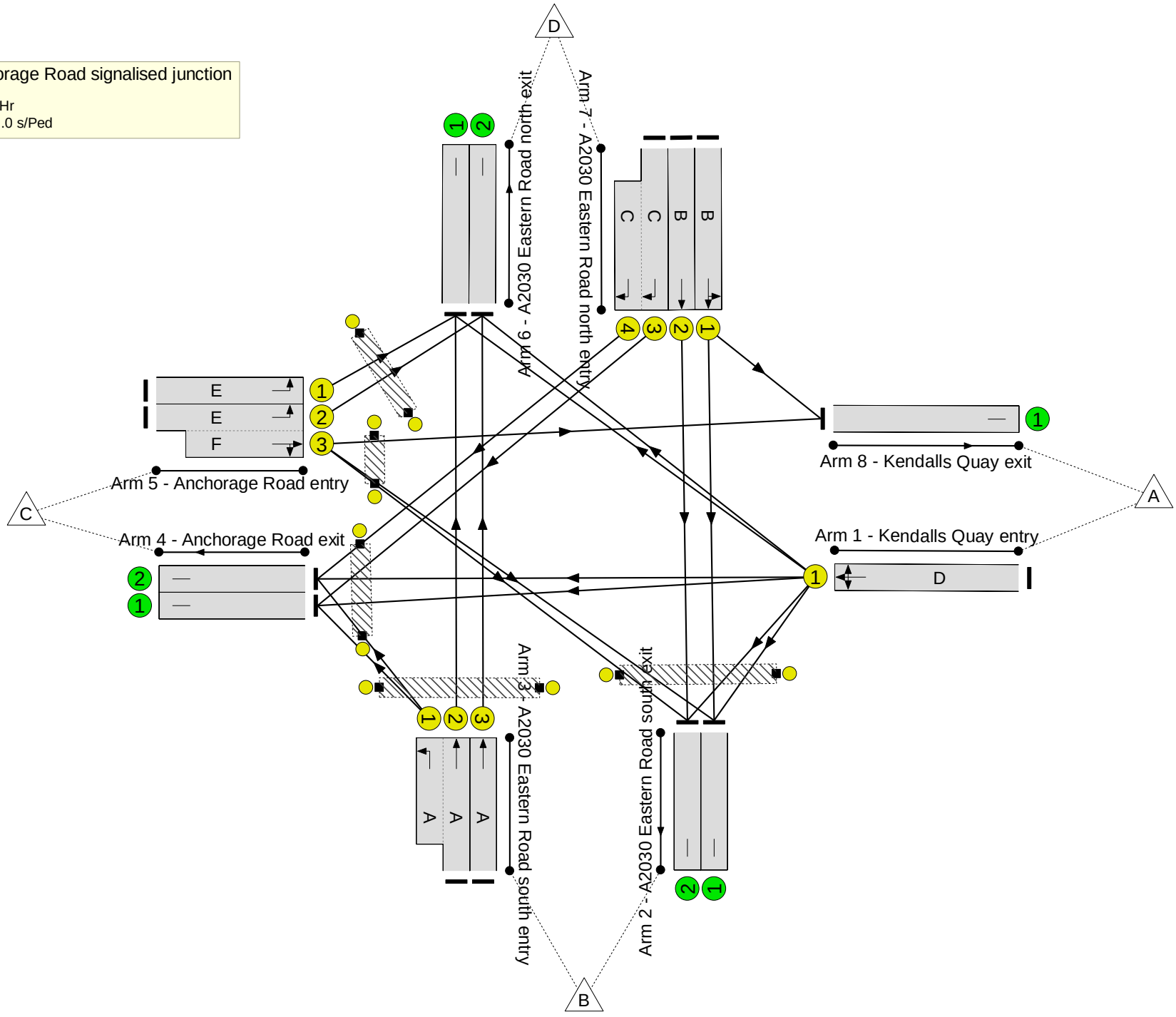
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 6.8 %
Total Traffic Delay: 54.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.2%**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.2%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	847	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	847	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	88	-	850	1965:1786	1009	84.2%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	88	-	782	1965	972	80.5%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	63	-	566	1901	676	83.7%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	63:17	-	143	1940:1830	181	79.2%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1310	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	125	-	775	1965	1375	56.3%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	125	-	776	1965	1375	56.4%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	44	-	574	1828:1828	902	63.7%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	79	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	13	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	153	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	104	-	0	-	0	0.0%

Full Input Data And Results

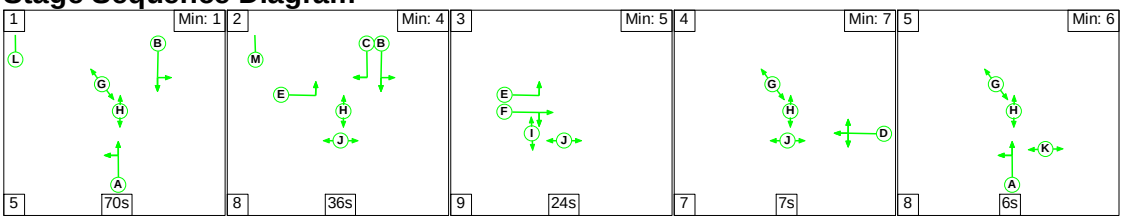
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**44.0**	**11.0**	**0.0**	**54.9**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**44.0**	**11.0**	**0.0**	**54.9**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	850	850	-	-	-	8.8	2.6	-	11.4	48.3	34.0	2.6	36.6
3/3	782	782	-	-	-	8.3	2.0	-	10.3	47.5	32.8	2.0	34.8
4/1	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	566	566	-	-	-	8.4	2.5	-	10.8	68.9	25.9	2.5	28.4
5/2+5/3	143	143	-	-	-	3.1	1.7	-	4.9	122.8	7.0	1.7	8.7
6/1	1310	1310	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	775	775	-	-	-	2.9	0.6	-	3.5	16.4	19.2	0.6	19.8
7/2	776	776	-	-	-	2.9	0.6	-	3.5	16.4	19.2	0.6	19.8
7/3+7/4	574	574	-	-	-	9.6	0.9	-	10.4	65.5	12.8	0.9	13.6
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 6.8 Total Delay for Signalled Lanes (pcuHr): 54.94 Cycle Time (s): 180
PRC Over All Lanes (%): 6.8 Total Delay Over All Lanes(pcuHr): 54.94

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

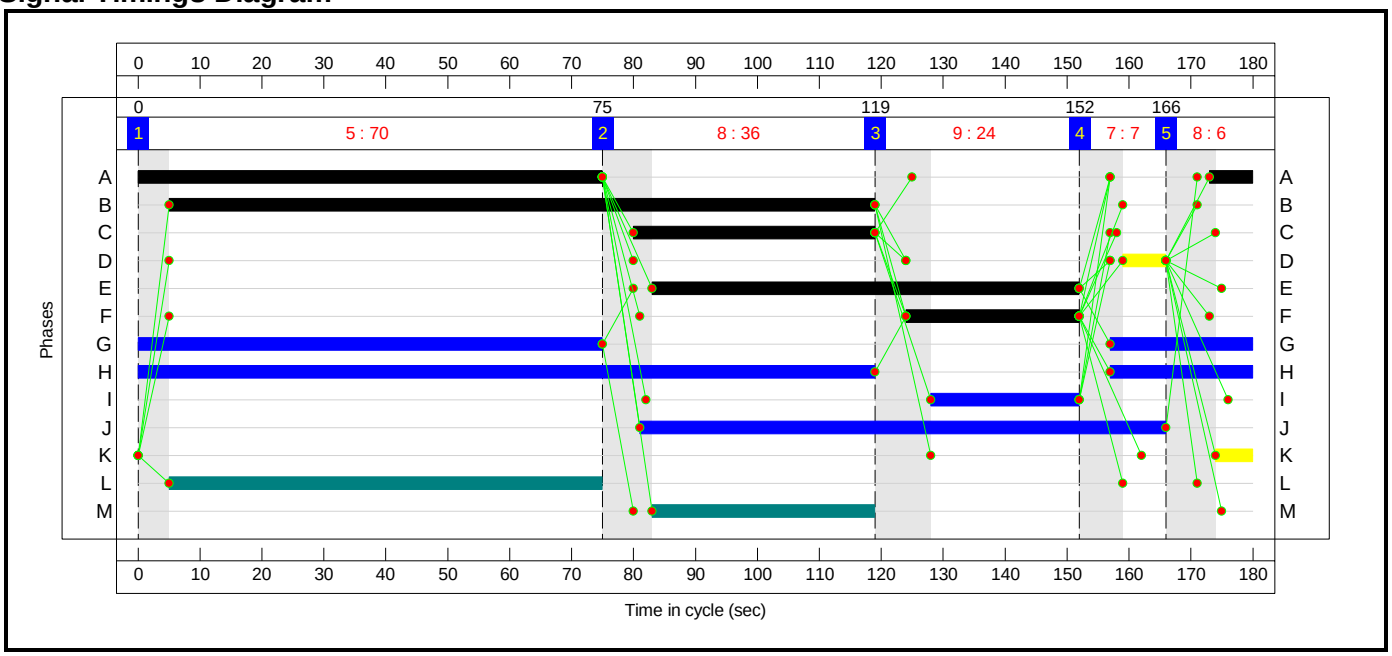
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	70	36	24	7	6
Change Point	0	75	119	152	166

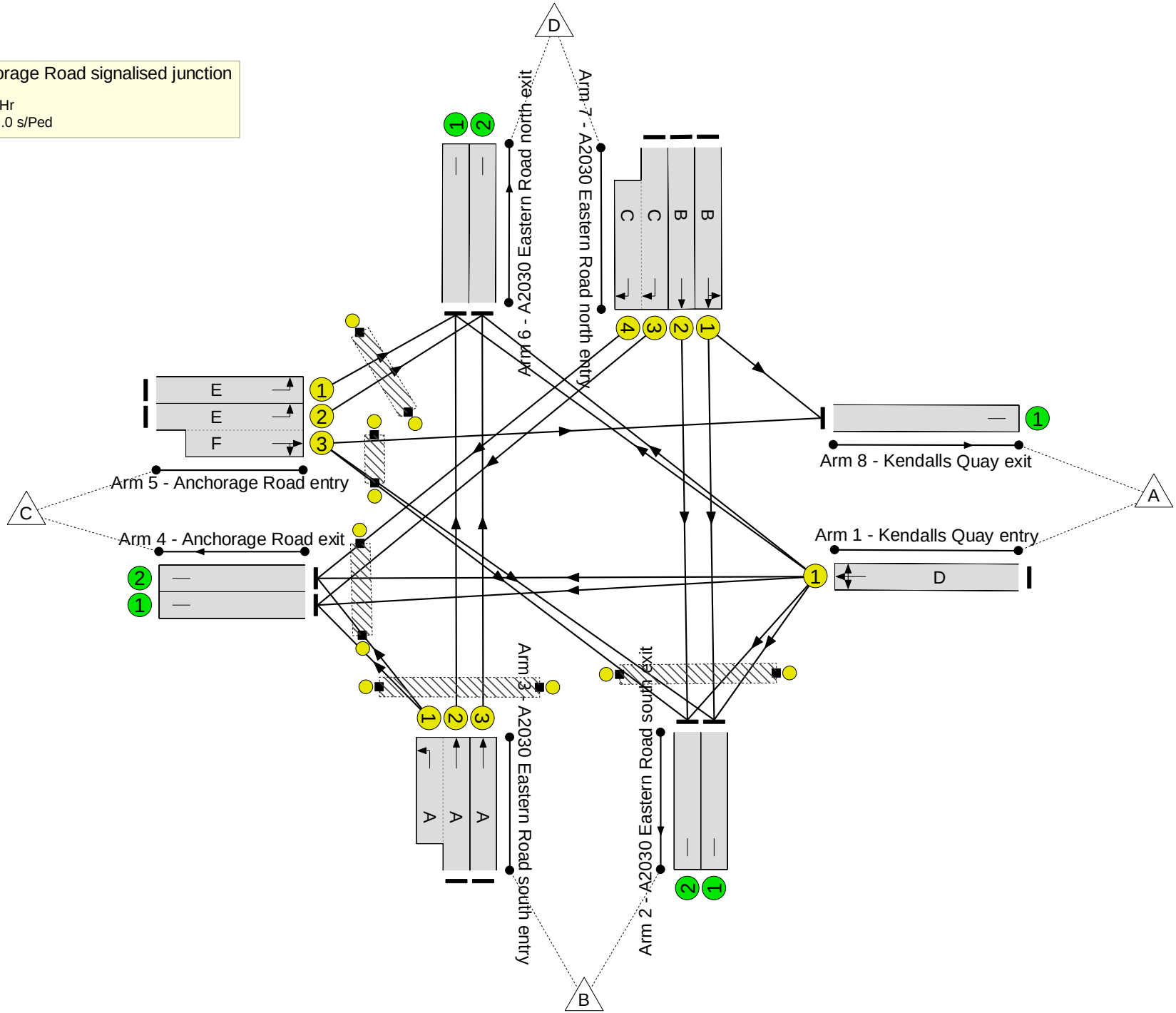
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 0.4 %
Total Traffic Delay: 68.5 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.7%**
A2030 Eastern Road / Anchorage Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.7%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1126	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1126	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	82	-	823	1965:1786	924	89.0%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	82	-	792	1965	906	87.4%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	113	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	113	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	69	-	663	1901	739	89.7%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	69:28	-	258	1940:1830	293	88.2%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1438	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	792	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	114	-	997	1965	1255	79.4%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	114	-	997	1965	1255	79.4%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	39	-	178	1828:1828	812	21.9%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	85	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	24	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	142	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	98	-	0	-	0	0.0%

Full Input Data And Results

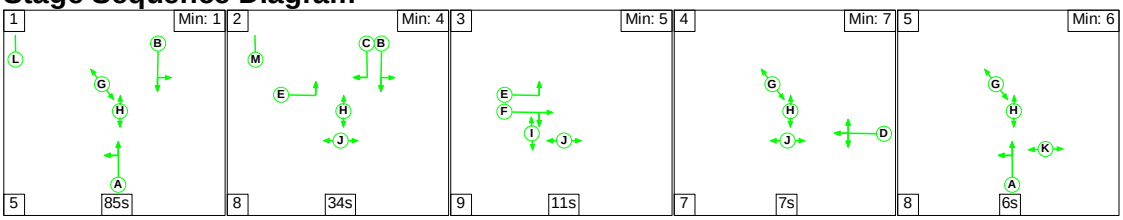
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**50.4**	**18.1**	**0.0**	**68.5**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**50.4**	**18.1**	**0.0**	**68.5**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1126	1126	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	1126	1126	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	823	823	-	-	-	9.9	3.8	-	13.7	59.9	36.3	3.8	40.1
3/3	792	792	-	-	-	9.6	3.3	-	12.9	58.7	35.6	3.3	38.9
4/1	113	113	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	113	113	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	663	663	-	-	-	9.5	3.9	-	13.4	73.0	30.9	3.9	34.9
5/2+5/3	258	258	-	-	-	5.3	3.2	-	8.5	117.9	12.6	3.2	15.8
6/1	1438	1438	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	792	792	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	997	997	-	-	-	6.6	1.9	-	8.5	30.7	36.3	1.9	38.2
7/2	997	997	-	-	-	6.6	1.9	-	8.5	30.7	36.3	1.9	38.2
7/3+7/4	178	178	-	-	-	2.8	0.1	-	3.0	60.1	3.6	0.1	3.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.4 Total Delay for Signalled Lanes (pcuHr): 68.47 Cycle Time (s): 180
PRC Over All Lanes (%): 0.4 Total Delay Over All Lanes(pcuHr): 68.47

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

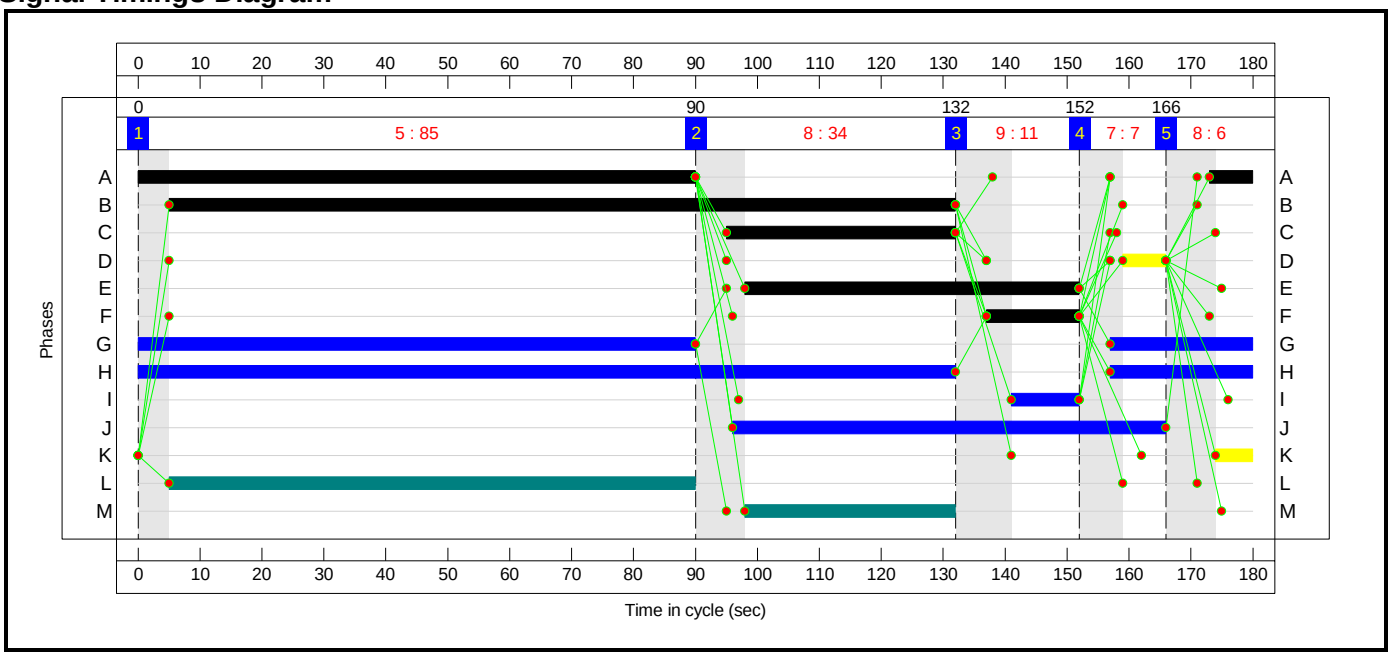
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	85	34	11	7	6
Change Point	0	90	132	152	166

Signal Timings Diagram

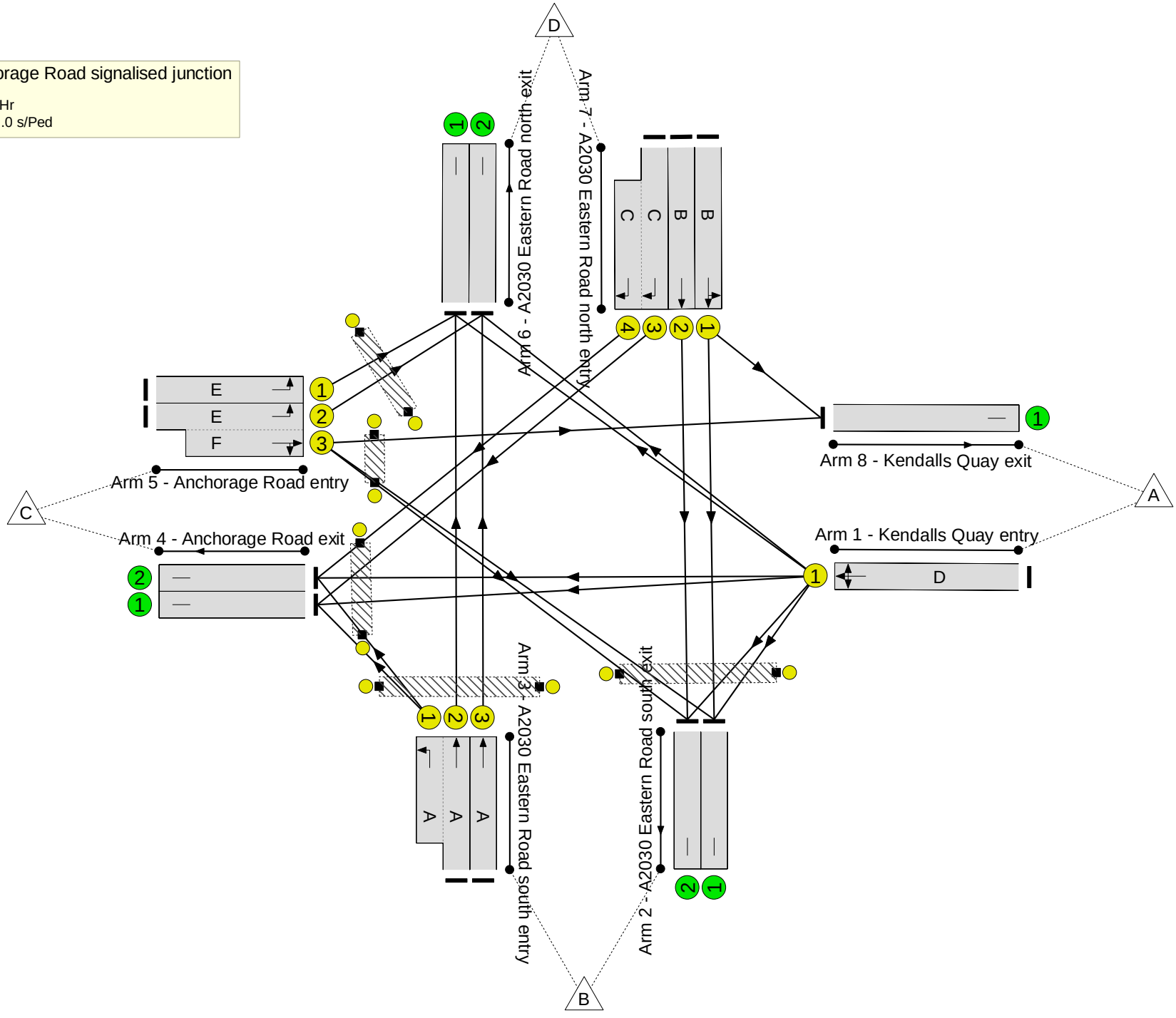


Full Input Data And Results

Network Layout Diagram

Full Input Data And Results

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 21.2 %
Total Traffic Delay: 47.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.2%**
A2030 Eastern Road / Anchorage Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.2%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	784	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	97	-	823	1965:1786	1109	74.2%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	97	-	749	1965	1070	70.0%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	342	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	54	-	335	1901	581	57.7%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	54:15	-	405	1830:1830	550	73.6%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1049	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1047	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	127	-	731	1965	1397	52.3%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	127	-	731	1965	1397	52.3%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	37	-	573	1828:1828	772	74.2%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	70	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	11	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	155	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	113	-	0	-	0	0.0%

Full Input Data And Results

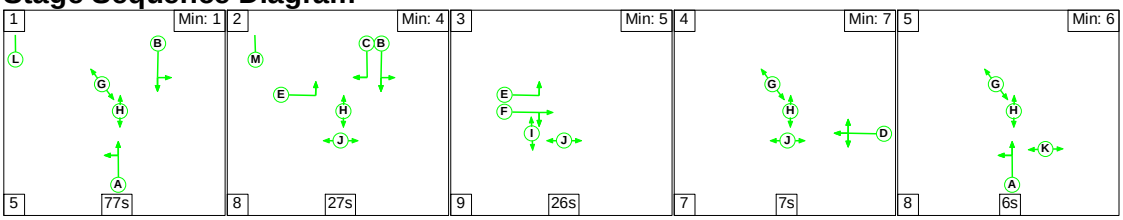
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**40.0**	**7.1**	**0.0**	**47.2**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**40.0**	**7.1**	**0.0**	**47.2**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	784	784	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	823	823	-	-	-	6.7	1.4	-	8.1	35.4	28.1	1.4	29.6
3/3	749	749	-	-	-	6.3	1.2	-	7.4	35.8	27.5	1.2	28.6
4/1	342	342	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	335	335	-	-	-	4.9	0.7	-	5.6	60.0	14.1	0.7	14.7
5/2+5/3	405	405	-	-	-	6.7	1.4	-	8.1	71.9	14.8	1.4	16.2
6/1	1049	1049	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1047	1047	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	731	731	-	-	-	2.4	0.5	-	3.0	14.7	16.7	0.5	17.2
7/2	731	731	-	-	-	2.4	0.5	-	3.0	14.7	16.7	0.5	17.2
7/3+7/4	573	573	-	-	-	10.6	1.4	-	12.0	75.4	13.4	1.4	14.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 21.2 Total Delay for Signalled Lanes (pcuHr): 47.15 Cycle Time (s): 180
PRC Over All Lanes (%): 21.2 Total Delay Over All Lanes(pcuHr): 47.15

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

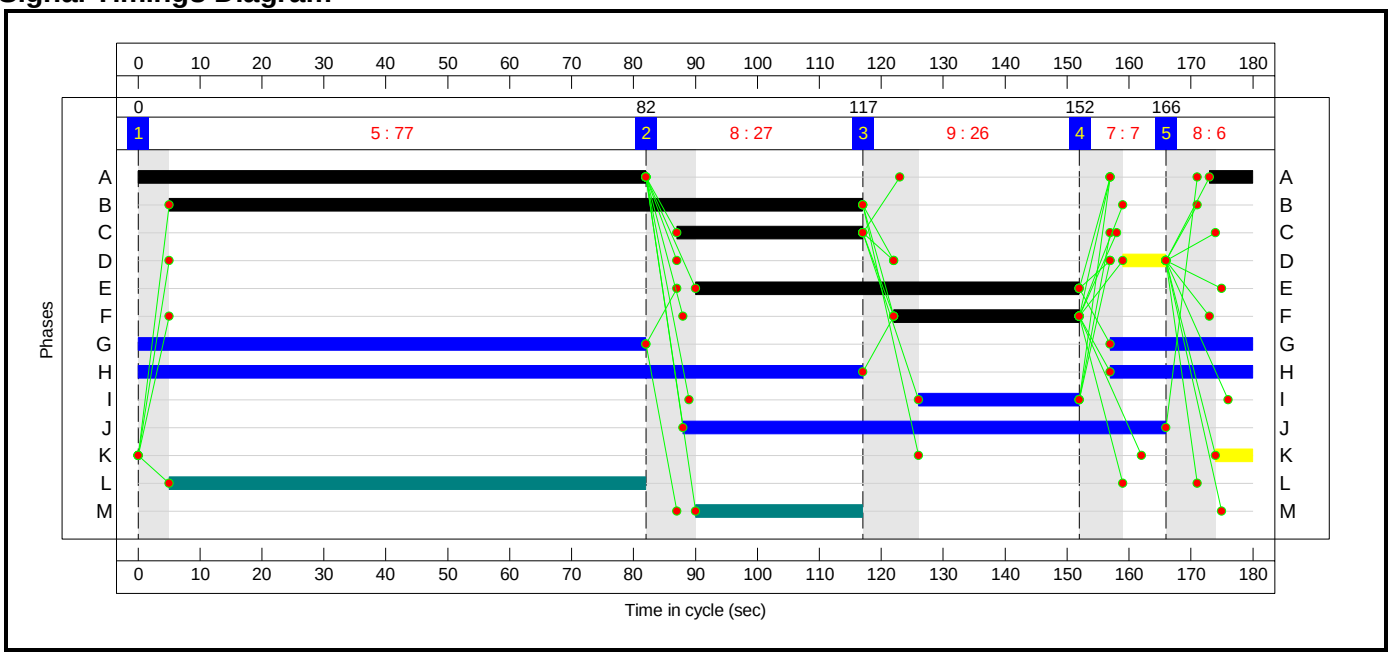
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	77	27	26	7	6
Change Point	0	82	117	152	166

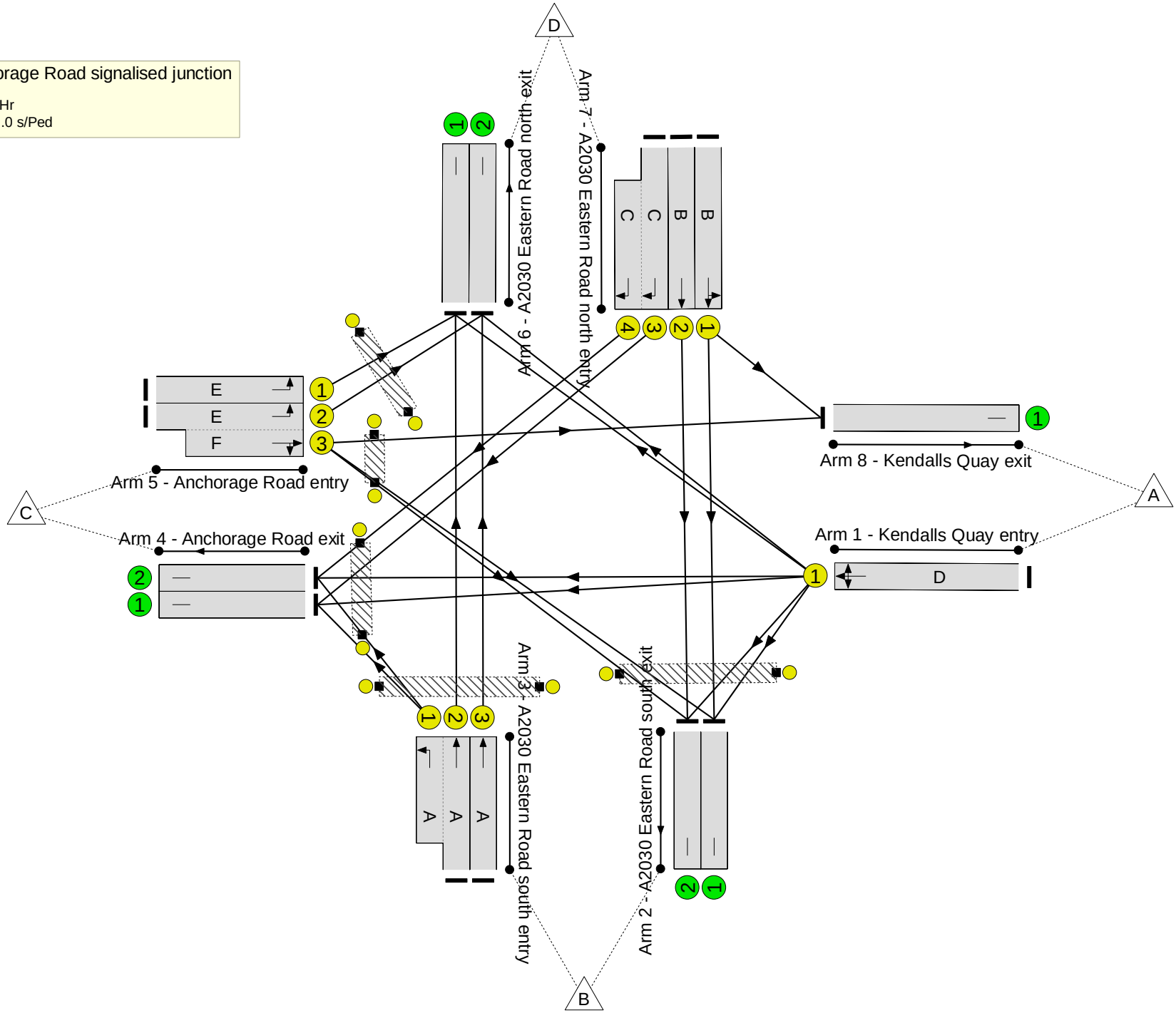
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 19.4 %
Total Traffic Delay: 50.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.4%**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.4%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	89	-	755	1965:1786	1001	75.4%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	89	-	720	1965	982	73.3%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	151	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	62	-	434	1901	665	65.2%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	62:30	-	510	1830:1830	679	75.1%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1142	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1089	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	112	-	838	1965	1234	67.9%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	112	-	839	1965	1234	68.0%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	30	-	256	1828:1828	630	40.7%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	78	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	26	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	140	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	105	-	0	-	0	0.0%

Full Input Data And Results

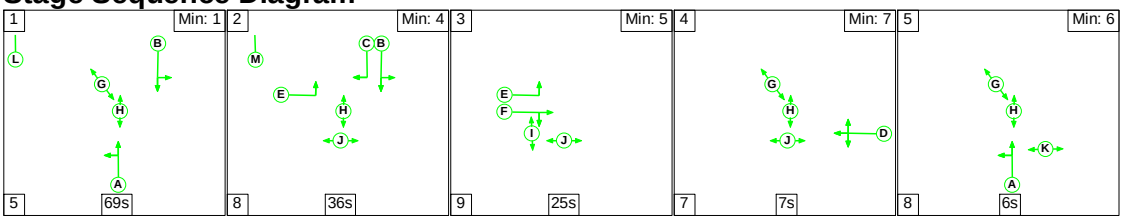
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**42.9**	**7.7**	**0.0**	**50.6**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**42.9**	**7.7**	**0.0**	**50.6**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	909	909	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	909	909	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	755	755	-	-	-	7.4	1.5	-	8.9	42.3	28.8	1.5	30.3
3/3	720	720	-	-	-	7.1	1.4	-	8.5	42.3	28.4	1.4	29.8
4/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	151	151	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	434	434	-	-	-	5.9	0.9	-	6.9	57.0	18.2	0.9	19.1
5/2+5/3	510	510	-	-	-	7.7	1.5	-	9.1	64.5	19.3	1.5	20.8
6/1	1142	1142	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	1089	1089	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	838	838	-	-	-	5.1	1.1	-	6.1	26.3	27.0	1.1	28.1
7/2	839	839	-	-	-	5.1	1.1	-	6.1	26.3	27.0	1.1	28.1
7/3+7/4	256	256	-	-	-	4.7	0.3	-	5.1	71.1	5.7	0.3	6.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 19.4 Total Delay for Signalled Lanes (pcuHr): 50.64 Cycle Time (s): 180
PRC Over All Lanes (%): 19.4 Total Delay Over All Lanes(pcuHr): 50.64

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

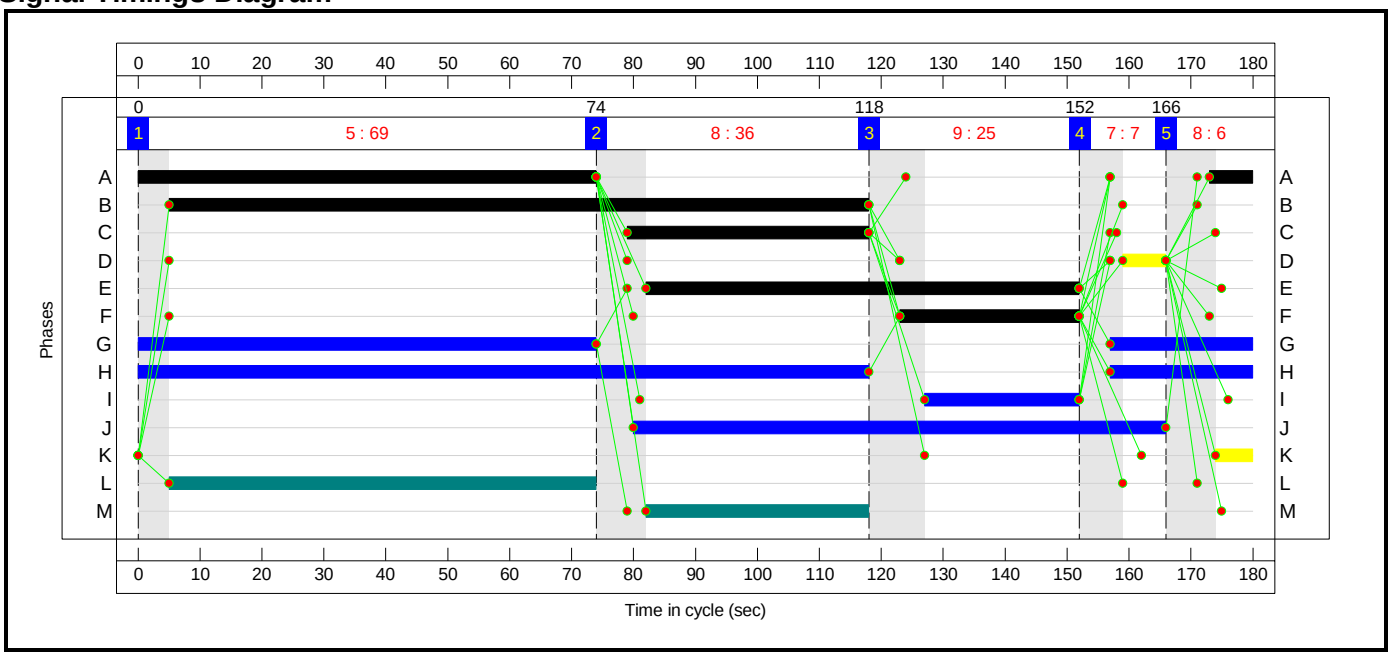
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	69	36	25	7	6
Change Point	0	74	118	152	166

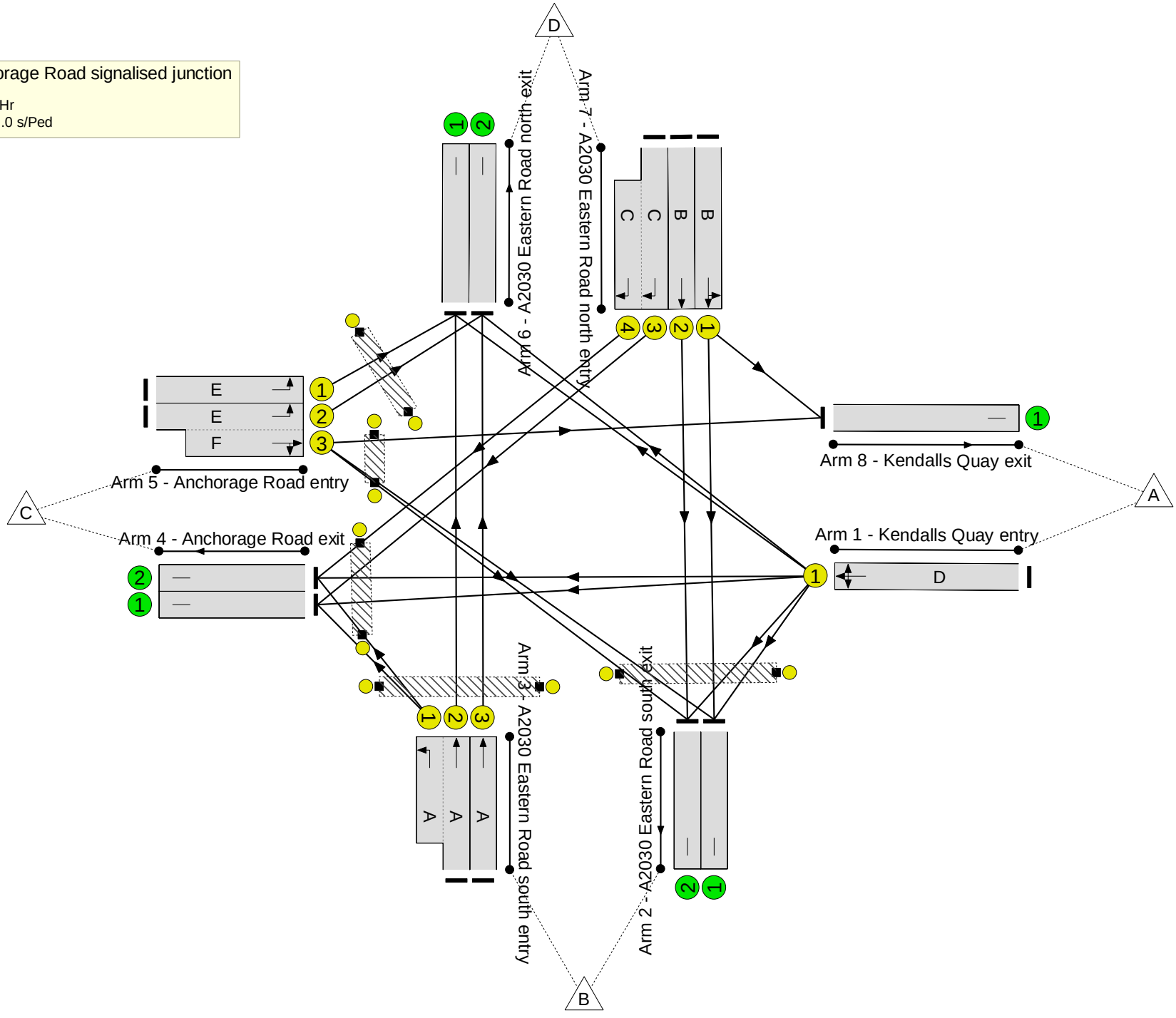
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 24.3 %
Total Traffic Delay: 52.0 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.4%**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.4%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	81	-	655	1965:1786	905	72.4%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	81	-	639	1965	895	71.4%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	70	-	418	1901	750	55.7%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	70:29	-	484	1830:1830	668	72.4%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1056	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	989	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	113	-	776	1965	1244	62.4%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	113	-	776	1965	1244	62.4%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	39	-	579	1828:1828	812	71.3%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	86	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	25	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	141	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	97	-	0	-	0	0.0%

Full Input Data And Results

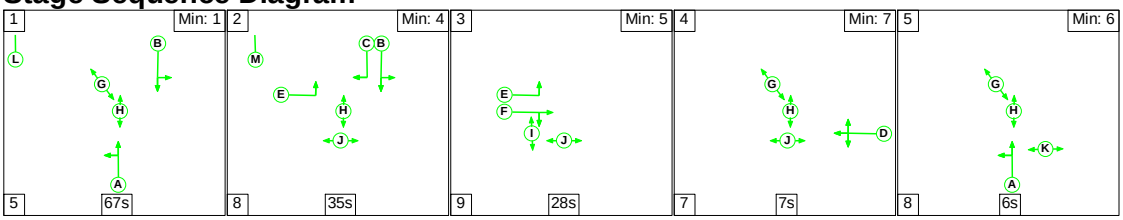
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**44.7**	**7.3**	**0.0**	**52.0**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**44.7**	**7.3**	**0.0**	**52.0**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	843	843	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	843	843	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	655	655	-	-	-	7.2	1.3	-	8.5	46.5	26.0	1.3	27.3
3/3	639	639	-	-	-	7.0	1.2	-	8.3	46.5	25.7	1.2	27.0
4/1	299	299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	418	418	-	-	-	4.9	0.6	-	5.5	47.7	16.1	0.6	16.8
5/2+5/3	484	484	-	-	-	6.6	1.3	-	7.9	58.5	16.3	1.3	17.6
6/1	1056	1056	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	989	989	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	776	776	-	-	-	4.3	0.8	-	5.1	23.8	23.5	0.8	24.3
7/2	776	776	-	-	-	4.3	0.8	-	5.1	23.8	23.5	0.8	24.3
7/3+7/4	579	579	-	-	-	10.4	1.2	-	11.6	72.3	13.4	1.2	14.6
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 24.3 Total Delay for Signalled Lanes (pcuHr): 52.02 Cycle Time (s): 180
PRC Over All Lanes (%): 24.3 Total Delay Over All Lanes(pcuHr): 52.02

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

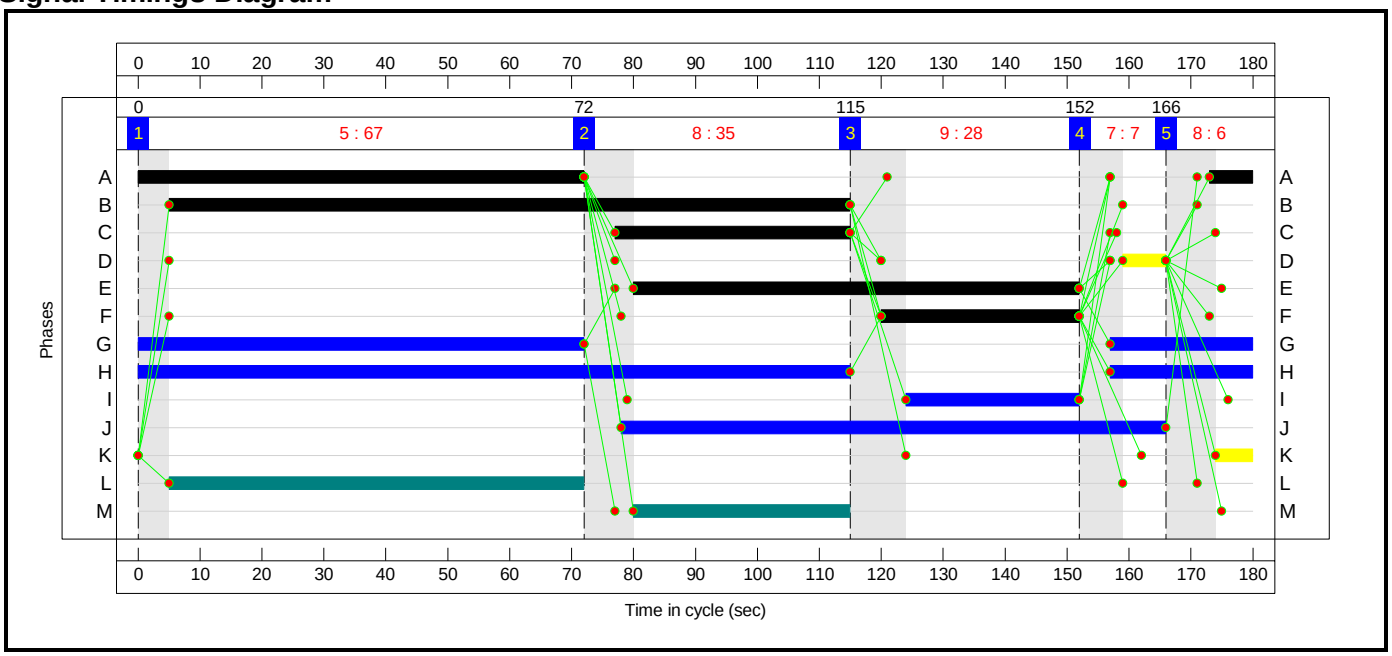
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	67	35	28	7	6
Change Point	0	72	115	152	166

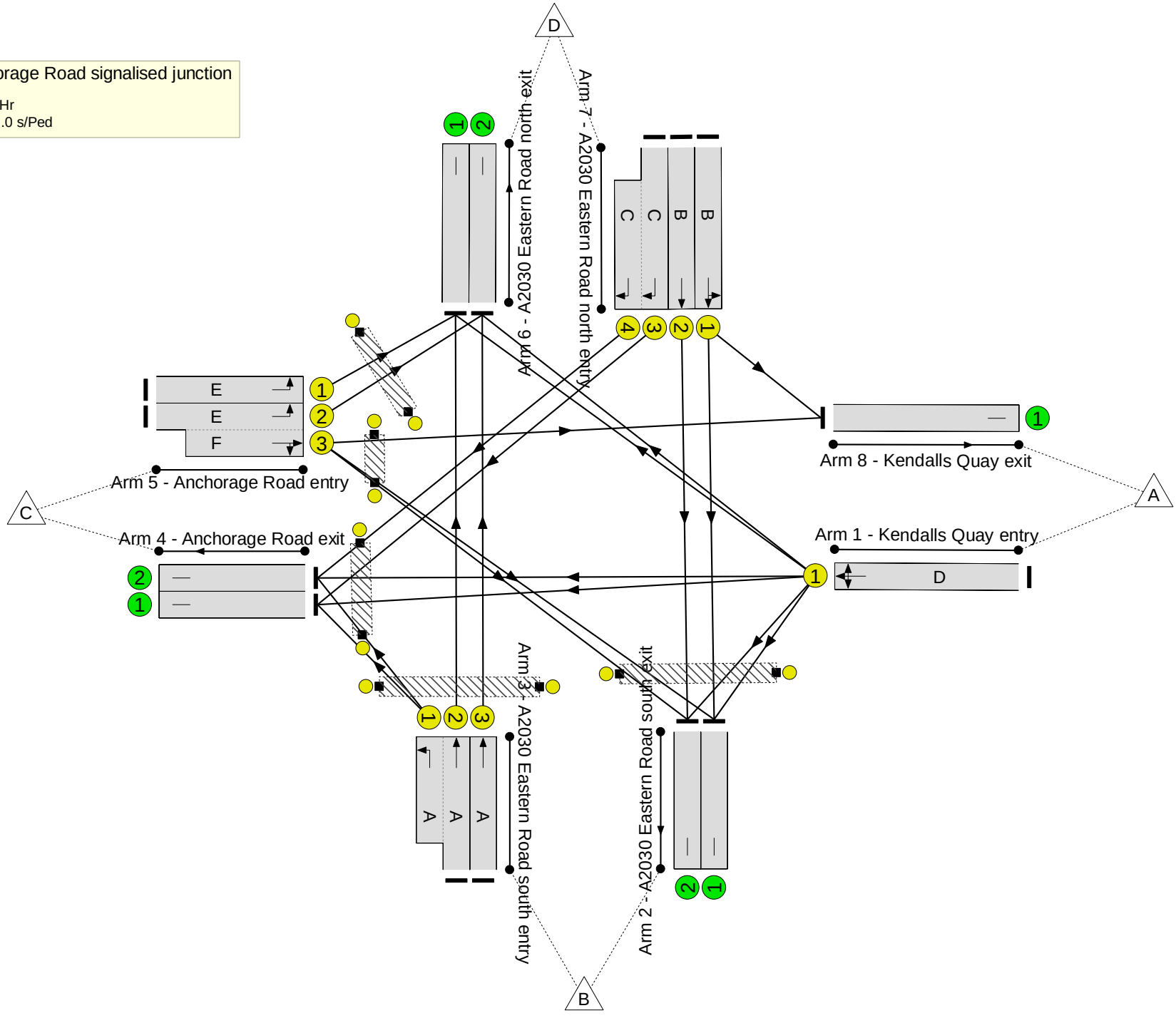
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Anchorage Road signalised junction
PRC: 6.7 %
Total Traffic Delay: 63.7 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.3%**
A2030 Eastern Road / Anchorage Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.3%**
1/1	Kendalls Quay entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	85	0.0%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%
3/2+3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	A		1	79	-	746	1965:1786	884	84.3%
3/3	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	79	-	727	1965	873	83.2%
4/1	Anchorage Road exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
4/2	Anchorage Road exit	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
5/1	Anchorage Road entry Left	U	N/A	N/A	E		1	72	-	644	1901	771	83.5%
5/2+5/3	Anchorage Road entry Right Left Ahead	U	N/A	N/A	E F		1	72:32	-	326	1830:1830	390	83.6%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	1367	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	821	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	B		1	110	-	984	1965	1212	81.2%
7/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	B		1	110	-	984	1965	1212	81.2%

Full Input Data And Results

7/3+7/4	A2030 Eastern Road north entry Right	U	N/A	N/A	C		1	38	-	175	1828:1828	792	22.1%
8/1	Kendalls Quay exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	J		1	88	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	28	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	138	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	95	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**49.5**	**14.2**	**0.0**	**63.7**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Anchorage Road signalised junction	**-**	**-**	**0**	**0**	**0**	**49.5**	**14.2**	**0.0**	**63.7**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2+3/1	746	746	-	-	-	9.1	2.6	-	11.7	56.5	32.5	2.6	35.1
3/3	727	727	-	-	-	8.9	2.4	-	11.3	56.0	31.9	2.4	34.3
4/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	644	644	-	-	-	8.6	2.4	-	11.0	61.7	28.8	2.4	31.2
5/2+5/3	326	326	-	-	-	5.6	2.4	-	8.0	87.9	12.7	2.4	15.1
6/1	1367	1367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	821	821	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	984	984	-	-	-	7.2	2.1	-	9.4	34.2	37.7	2.1	39.8
7/2	984	984	-	-	-	7.2	2.1	-	9.4	34.2	37.7	2.1	39.8
7/3+7/4	175	175	-	-	-	2.8	0.1	-	3.0	60.9	3.6	0.1	3.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 6.7 Total Delay for Signalled Lanes (pcuHr): 63.70 Cycle Time (s): 180
PRC Over All Lanes (%): 6.7 Total Delay Over All Lanes(pcuHr): 63.70

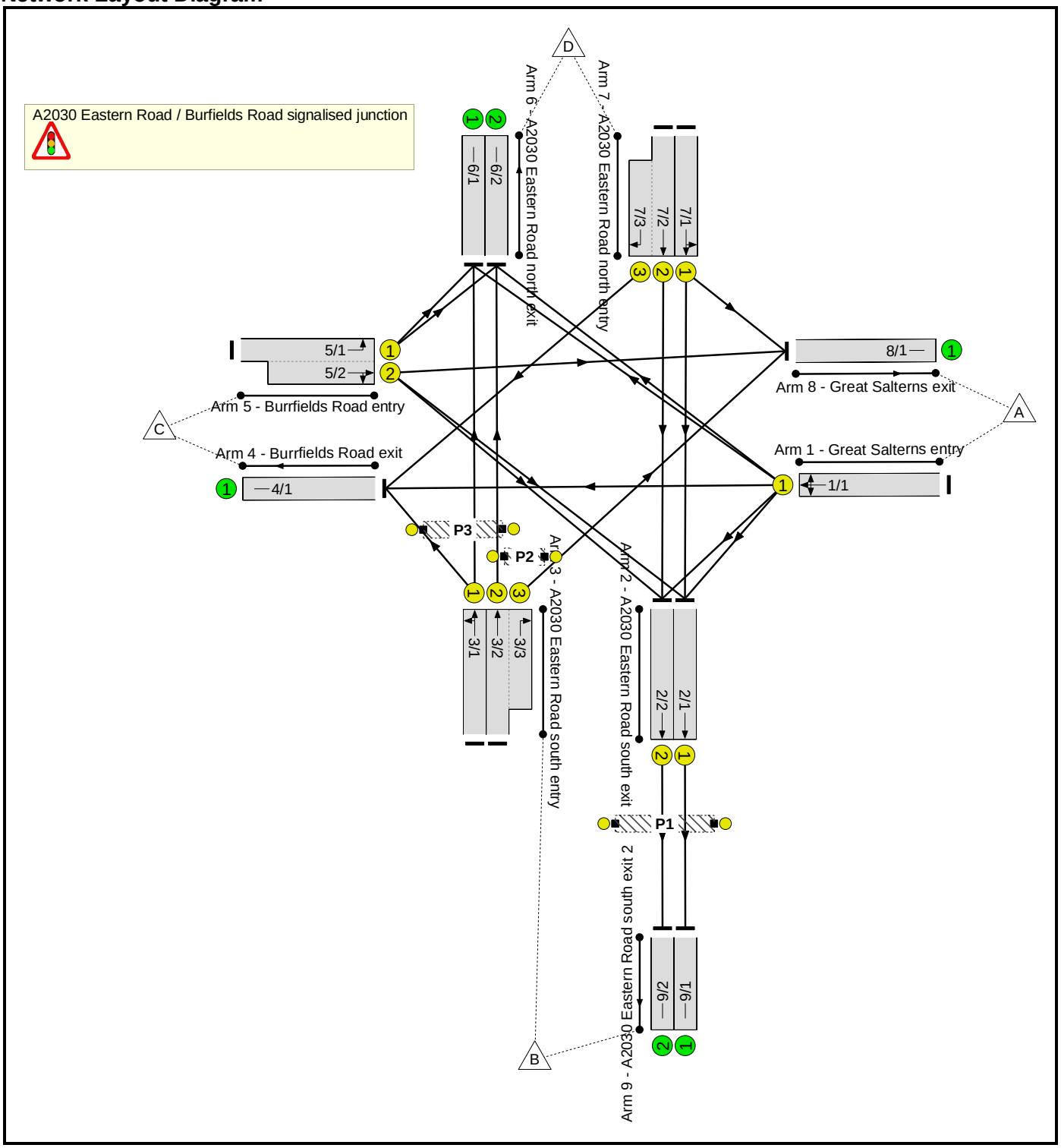
Full Input Data And Results

User and Project Details

Project:	
Title:	**A2030 Eastern Road / Burrfields Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Eastern Rd_Burrfields Rd.lsg3x
Author:	
Company:	
Address:	

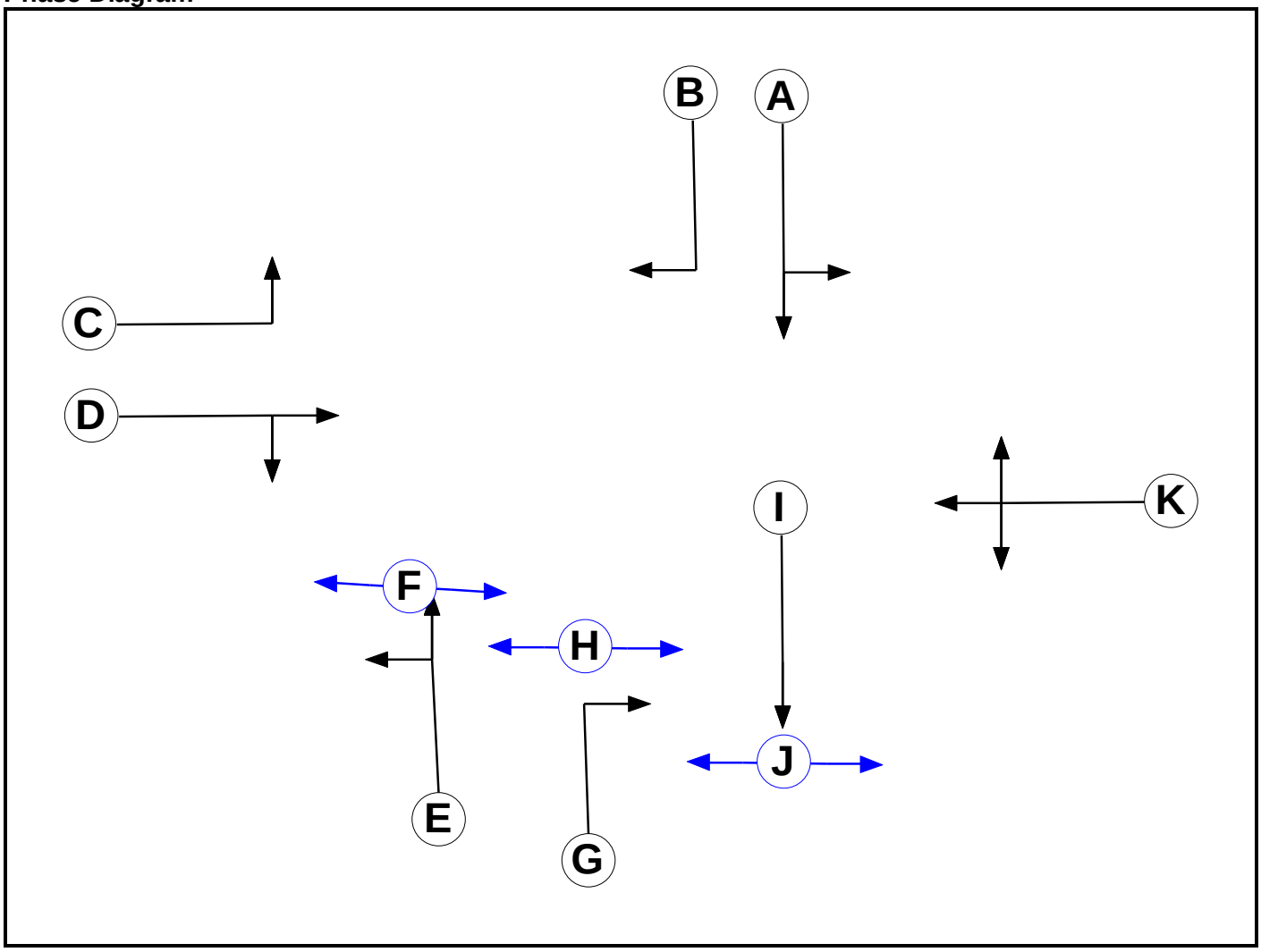
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Pedestrian		7	7
G	Traffic		7	7
H	Pedestrian		7	7
I	Traffic		7	7
J	Pedestrian		7	7
K	Traffic		7	7

Full Input Data And Results

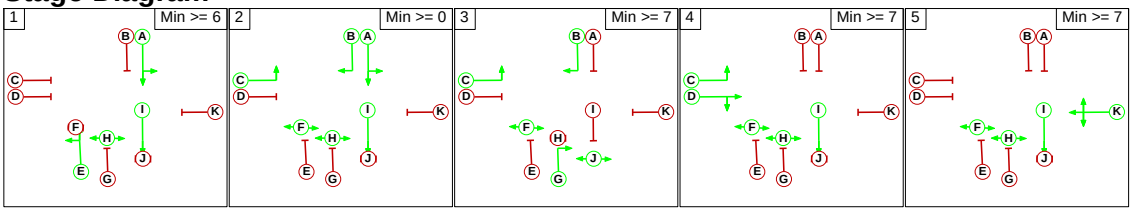
Phase Intergreens Matrix

		Starting Phase										
		A	B	C	D	E	F	G	H	I	J	K
Terminating Phase	A		-	-	5	-	-	7	-	-	-	6
	B	-		-	6	7	-	-	-	-	-	5
	C	-	-		-	5	-	-	-	-	-	7
	D	8	6	-		7	-	6	-	-	-	7
	E	-	7	5	7		5	-	-	-	-	6
	F	-	-	-	-	7		-	-	-	-	-
	G	5	-	-	8	-	-		5	-	-	5
	H	-	-	-	-	-	-	7		-	-	-
	I	-	-	-	-	-	-	-	-		5	-
	J	-	-	-	-	-	-	-	-	7		-
	K	6	5	7	7	6	-	5	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A E H I
2	A B C F H I
3	B C F G J
4	C D F H I
5	F H I K

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		7	7	7	6
	2	7		7	6	7
	3	7	7		8	7
	4	8	8	7		7
	5	7	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A2030 Eastern Road / Burfields Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Great Salterns entry)	U	K	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Left	15.00
											Arm 4 Ahead	Inf
											Arm 6 Right	15.00
2/1 (A2030 Eastern Road south exit)	U	I	2	3	3.1	Geom	-	3.00	0.00	Y	Arm 9 Ahead	Inf
2/2 (A2030 Eastern Road south exit)	U	I	2	3	3.1	Geom	-	3.00	0.00	Y	Arm 9 Ahead	Inf
3/1 (A2030 Eastern Road south entry)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Left	10.00
											Arm 6 Ahead	Inf
3/2 (A2030 Eastern Road south entry)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
3/3 (A2030 Eastern Road south entry)	U	G	2	3	12.2	Geom	-	3.50	0.00	Y	Arm 8 Right	10.00
4/1 (Burrfields Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Burrfields Road entry)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Left	12.00
5/2 (Burrfields Road entry)	U	D	2	3	7.8	Geom	-	3.25	0.00	Y	Arm 2 Right	15.00
											Arm 8 Ahead	Inf
6/1 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 8 Left	15.00

7/2 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
7/3 (A2030 Eastern Road north entry)	U	B	2	3	12.2	Geom	-	3.00	0.00	Y	Arm 4 Right	12.00
8/1 (Great Salterns exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (A2030 Eastern Road south exit 2)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (A2030 Eastern Road south exit 2)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	118	1519	1637
	C	0	90	0	132	222
	D	0	1305	350	0	1655
	Tot.	0	1395	468	1651	3514

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	1305
2/2	90
3/1	808
3/2 (with short)	829(In) 829(Out)
3/3 (short)	0
4/1	468
5/1 (with short)	222(In) 132(Out)
5/2 (short)	90
6/1	756
6/2	895
7/1	1305
7/2 (with short)	350(In) 0(Out)
7/3 (short)	350
8/1	0
9/1	1305
9/2	90

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	14.6 %	1923	1923
				Arm 6 Ahead	Inf	85.4 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	100.0 %	1724	1724
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	0.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	44	1195	1239
	C	0	178	0	267	445
	D	0	2061	185	0	2246
	Tot.	0	2239	229	1462	3930

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	1152
2/2	1087
3/1	615
3/2 (with short)	624(In) 624(Out)
3/3 (short)	0
4/1	229
5/1 (with short)	445(In) 267(Out)
5/2 (short)	178
6/1	704
6/2	758
7/1	1094
7/2 (with short)	1152(In) 967(Out)
7/3 (short)	185
8/1	0
9/1	1152
9/2	1087

Lane Saturation Flows

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	7.2 %	1944	1944
				Arm 6 Ahead	Inf	92.8 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	100.0 %	1724	1724
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	132	1541	1673
	C	0	91	0	31	122
	D	0	1144	216	0	1360
	Tot.	0	1235	348	1572	3155

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	605
2/2	630
3/1	826
3/2 (with short)	847(In) 847(Out)
3/3 (short)	0
4/1	348
5/1 (with short)	122(In) 31(Out)
5/2 (short)	91
6/1	709
6/2	863
7/1	593
7/2 (with short)	767(In) 551(Out)
7/3 (short)	216
8/1	0
9/1	605
9/2	630

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	16.0 %	1919	1919
				Arm 6 Ahead	Inf	84.0 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	100.0 %	1724	1724
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	38	1189	1227
	C	0	183	0	0	183
	D	0	1548	0	0	1548
	Tot.	0	1731	38	1189	2958

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	867
2/2	864
3/1	610
3/2 (with short)	617(In) 617(Out)
3/3 (short)	0
4/1	38
5/1 (with short)	183(In) 0(Out)
5/2 (short)	183
6/1	572
6/2	617
7/1	776
7/2 (with short)	772(In) 772(Out)
7/3 (short)	0
8/1	0
9/1	867
9/2	864

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	6.2 %	1947	1947
				Arm 6 Ahead	Inf	93.8 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	0.0 %	1915	1915
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	302	1234	1536
	C	0	74	0	0	74
	D	0	1278	342	0	1620
	Tot.	0	1352	644	1234	3230

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	1127
2/2	225
3/1	742
3/2 (with short)	794(In) 794(Out)
3/3 (short)	0
4/1	644
5/1 (with short)	74(In) 0(Out)
5/2 (short)	74
6/1	440
6/2	794
7/1	1127
7/2 (with short)	493(In) 151(Out)
7/3 (short)	342
8/1	0
9/1	1127
9/2	225

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	40.7 %	1852	1852
				Arm 6 Ahead	Inf	59.3 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	65	1123	1188
	C	0	180	0	41	221
	D	0	2024	176	0	2200
	Tot.	0	2204	241	1164	3609

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A2030 Eastern Road / Burfields Road signalised junction	
1/1	0
2/1	1124
2/2	1080
3/1	588
3/2 (with short)	600(In) 600(Out)
3/3 (short)	0
4/1	241
5/1 (with short)	221(In) 41(Out)
5/2 (short)	180
6/1	543
6/2	621
7/1	1073
7/2 (with short)	1127(In) 951(Out)
7/3 (short)	176
8/1	0
9/1	1124
9/2	1080

Full Input Data And Results

Lane Saturation Flows

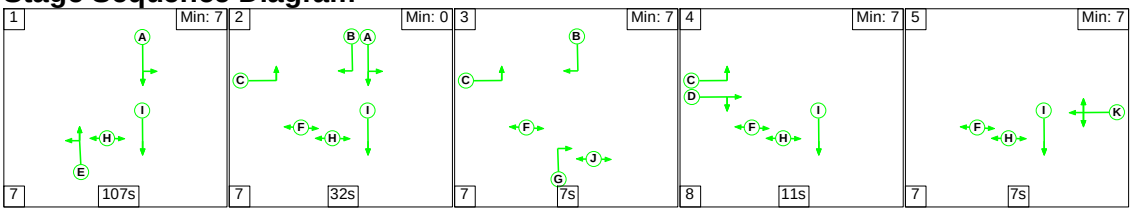
Junction: A2030 Eastern Road / Burfields Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Great Salterns entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	Inf	0.0 %		
				Arm 6 Right	15.00	0.0 %		
2/1 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
2/2 (A2030 Eastern Road south exit)	3.00	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1915	1915
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	10.00	11.1 %	1933	1933
				Arm 6 Ahead	Inf	88.9 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/3 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 8 Right	10.00	0.0 %	1965	1965
4/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Burrfields Road entry)	3.25	0.00	Y	Arm 6 Left	12.00	100.0 %	1724	1724
5/2 (Burrfields Road entry)	3.25	0.00	Y	Arm 2 Right	15.00	100.0 %	1764	1764
				Arm 8 Ahead	Inf	0.0 %		
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	15.00	0.0 %		
7/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1 (Great Salterns exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A2030 Eastern Road south exit 2 Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (A2030 Eastern Road south exit 2 Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

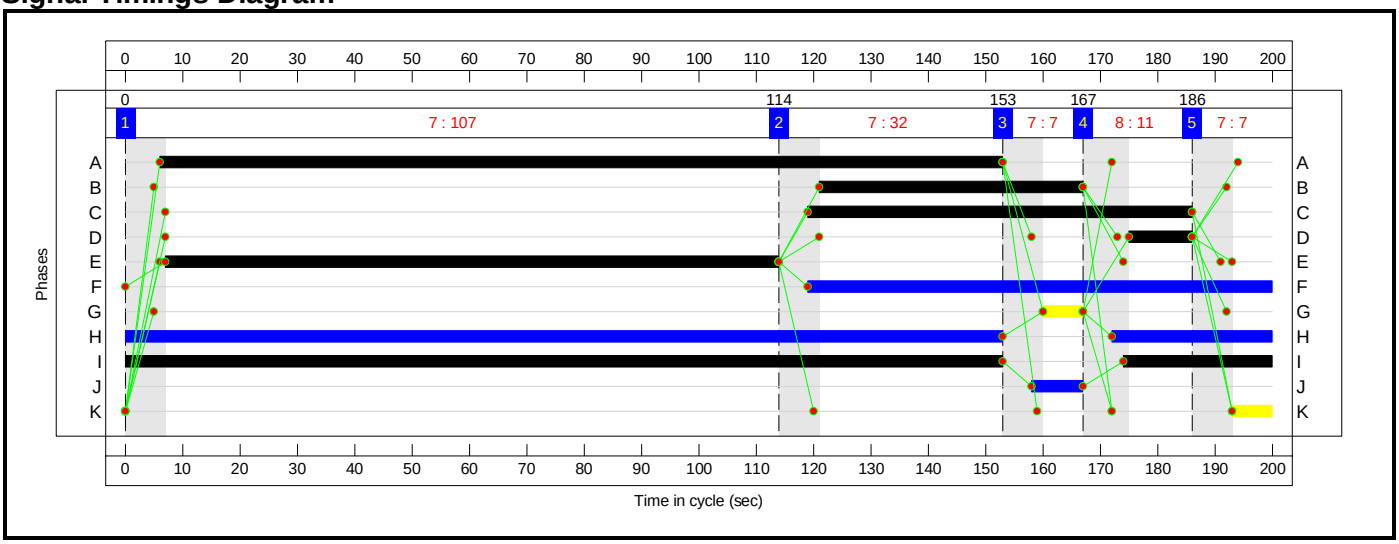
Stage Sequence Diagram



Stage Timings

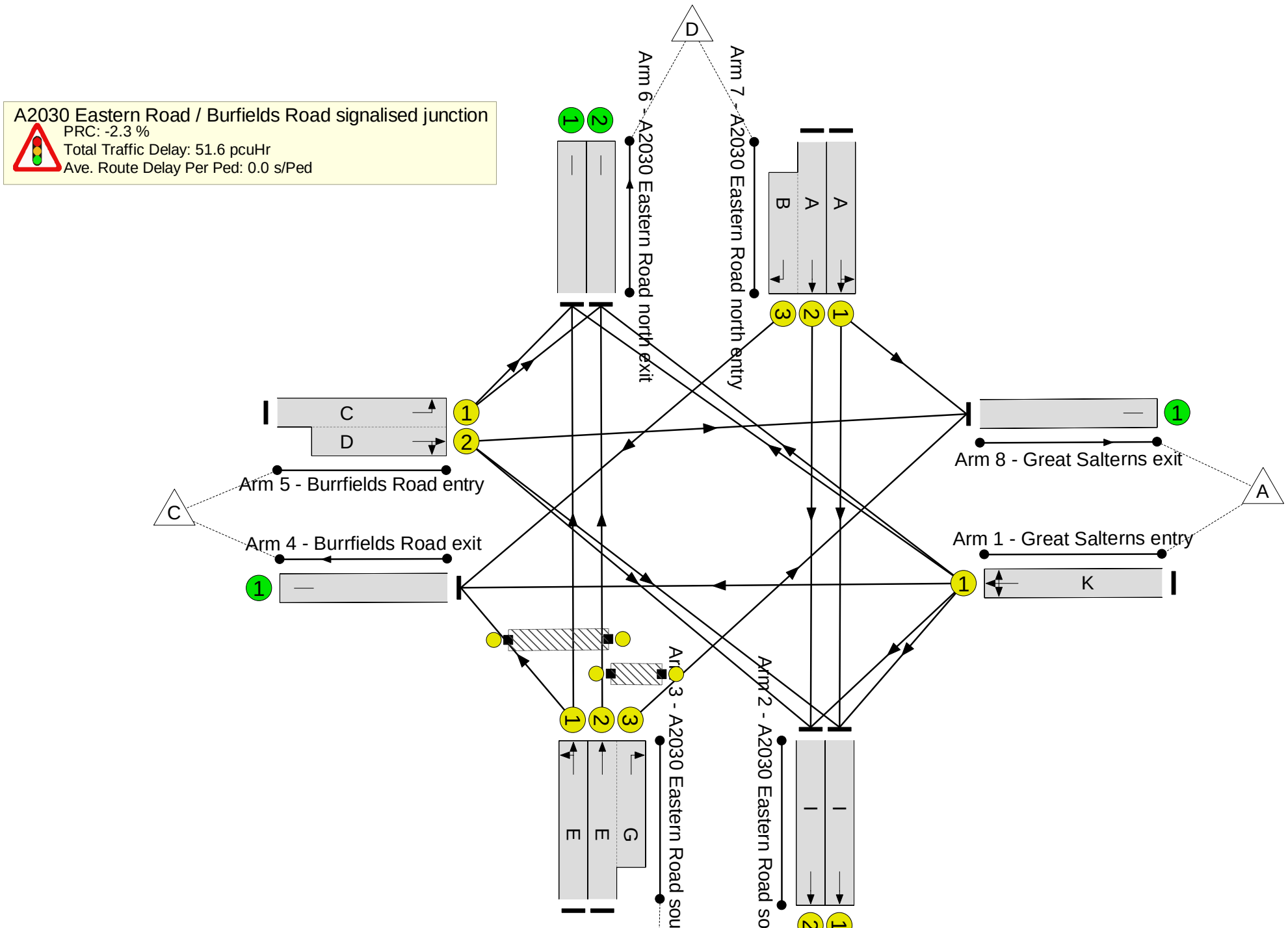
Stage	1	2	3	4	5
Duration	107	32	7	11	7
Change Point	0	114	153	167	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: -2.3 %
Total Traffic Delay: 51.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
E
E
G
I
I
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.1%**
A2030 Eastern Road / Burfields Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.1%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1305	1915	1724	75.7%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	90	1915	1724	5.2%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	107	-	808	1923	1038	77.8%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	107:7	-	829	1965:1965	1061	78.1%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	468	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	67:11	-	222	1724:1764	261	85.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	756	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	147	-	1305	1915	1417	92.1%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	147:46	-	350	1915:1702	400	87.5%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1305	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	90	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	81	-	0	-	0	0.0%

Full Input Data And Results

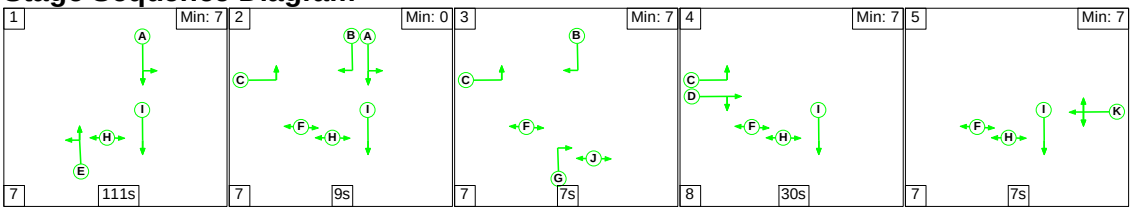
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**35.6**	**16.0**	**0.0**	**51.6**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**35.6**	**16.0**	**0.0**	**51.6**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1305	1305	-	-	-	0.1	1.5	-	1.6	4.5	1.0	1.5	2.5
2/2	90	90	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
3/1	808	808	-	-	-	8.2	1.7	-	9.9	44.2	35.5	1.7	37.2
3/2+3/3	829	829	-	-	-	8.4	1.8	-	10.2	44.2	36.6	1.8	38.4
4/1	468	468	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	222	222	-	-	-	4.1	2.5	-	6.6	106.6	5.2	2.5	7.7
6/1	756	756	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1305	1305	-	-	-	7.7	5.3	-	13.0	35.9	59.1	5.3	64.4
7/2+7/3	350	350	-	-	-	7.2	3.1	-	10.3	105.7	18.7	3.1	21.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	1305	1305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	90	90	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -2.3 Total Delay for Signalled Lanes (pcuHr): 51.64 Cycle Time (s): 200
PRC Over All Lanes (%): -2.3 Total Delay Over All Lanes(pcuHr): 51.64

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

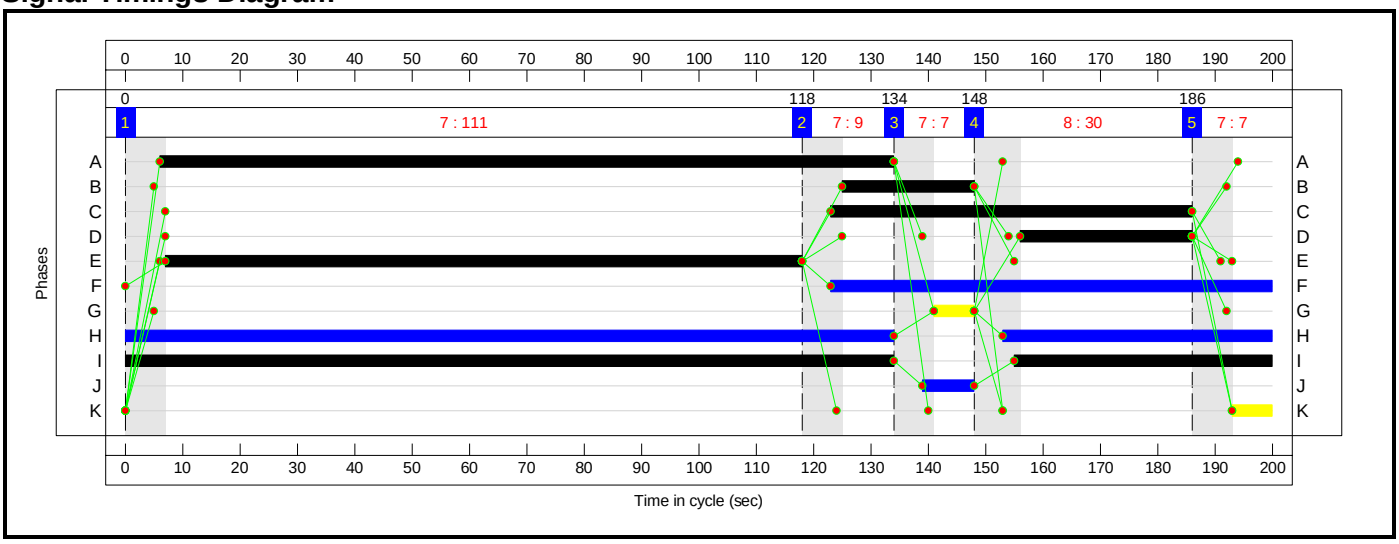
Stage Sequence Diagram



Stage Timings

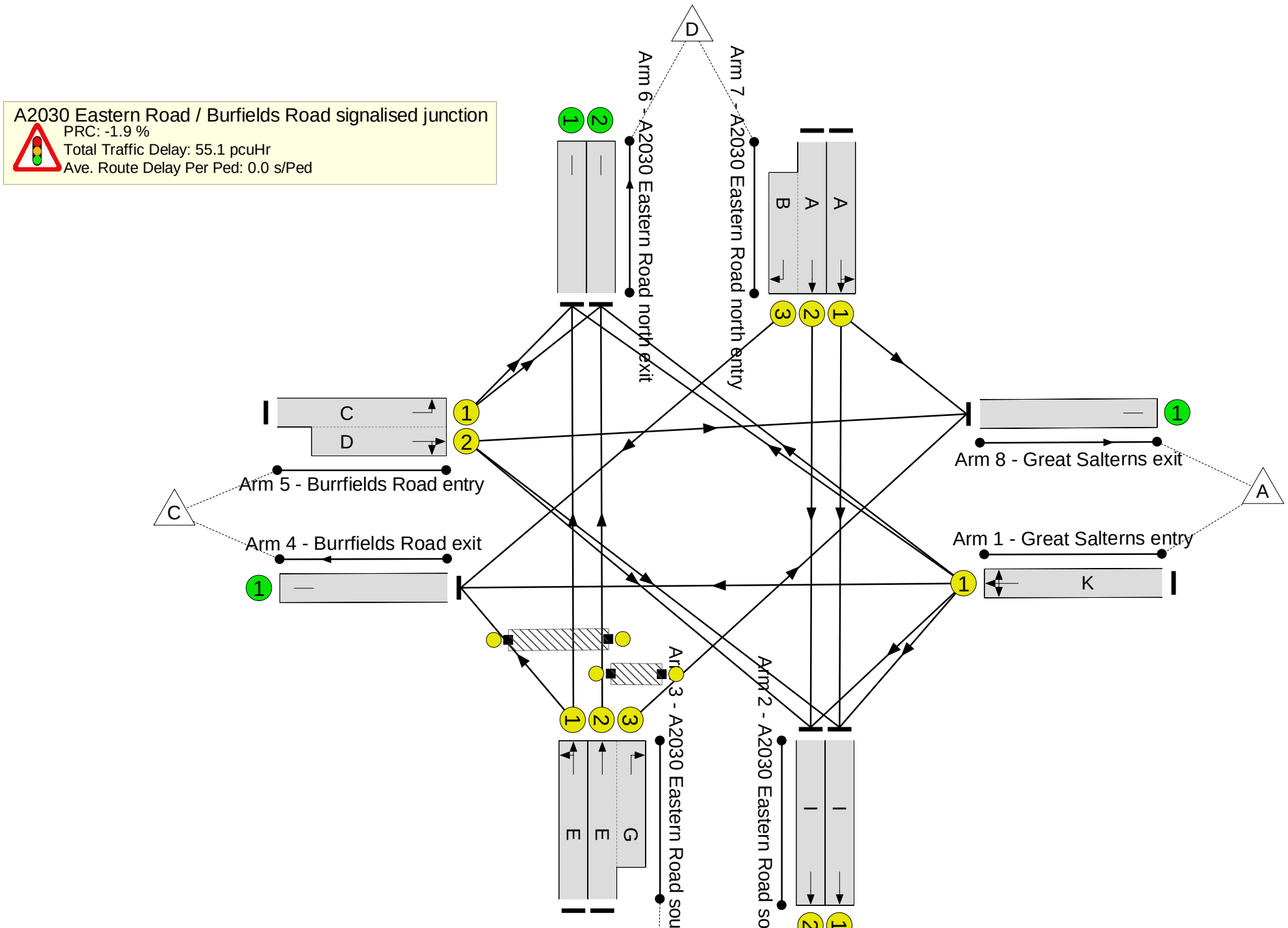
Stage	1	2	3	4	5
Duration	111	9	7	30	7
Change Point	0	118	134	148	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: -1.9 %
Total Traffic Delay: 55.1 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so
E
E
G
I
I

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.7%**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**91.7%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1152	1915	1724	66.8%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1087	1915	1724	63.1%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	111	-	615	1944	1089	56.5%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	111:7	-	624	1965:1965	1100	56.7%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	229	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	63:30	-	445	1724:1764	494	90.2%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	704	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	758	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	128	-	1094	1915	1235	88.6%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	128:23	-	1152	1915:1702	1256	91.7%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1152	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1087	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	77	-	0	-	0	0.0%

Full Input Data And Results

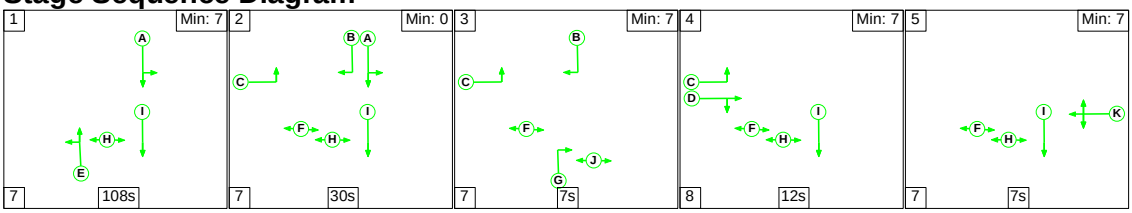
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**39.3**	**15.8**	**0.0**	**55.1**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**39.3**	**15.8**	**0.0**	**55.1**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1152	1152	-	-	-	0.1	1.0	-	1.1	3.4	0.8	1.0	1.8
2/2	1087	1087	-	-	-	0.1	0.9	-	0.9	3.1	0.7	0.9	1.6
3/1	615	615	-	-	-	4.8	0.6	-	5.5	32.1	21.9	0.6	22.5
3/2+3/3	624	624	-	-	-	4.9	0.7	-	5.6	32.1	22.2	0.7	22.8
4/1	229	229	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	445	445	-	-	-	8.2	3.9	-	12.1	98.3	18.7	3.9	22.6
6/1	704	704	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	758	758	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1094	1094	-	-	-	8.9	3.7	-	12.6	41.5	50.1	3.7	53.8
7/2+7/3	1152	1152	-	-	-	12.2	5.0	-	17.3	54.0	52.4	5.0	57.4
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	1152	1152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1087	1087	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.9 Total Delay for Signalled Lanes (pcuHr): 55.11 Cycle Time (s): 200
PRC Over All Lanes (%): -1.9 Total Delay Over All Lanes(pcuHr): 55.11

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

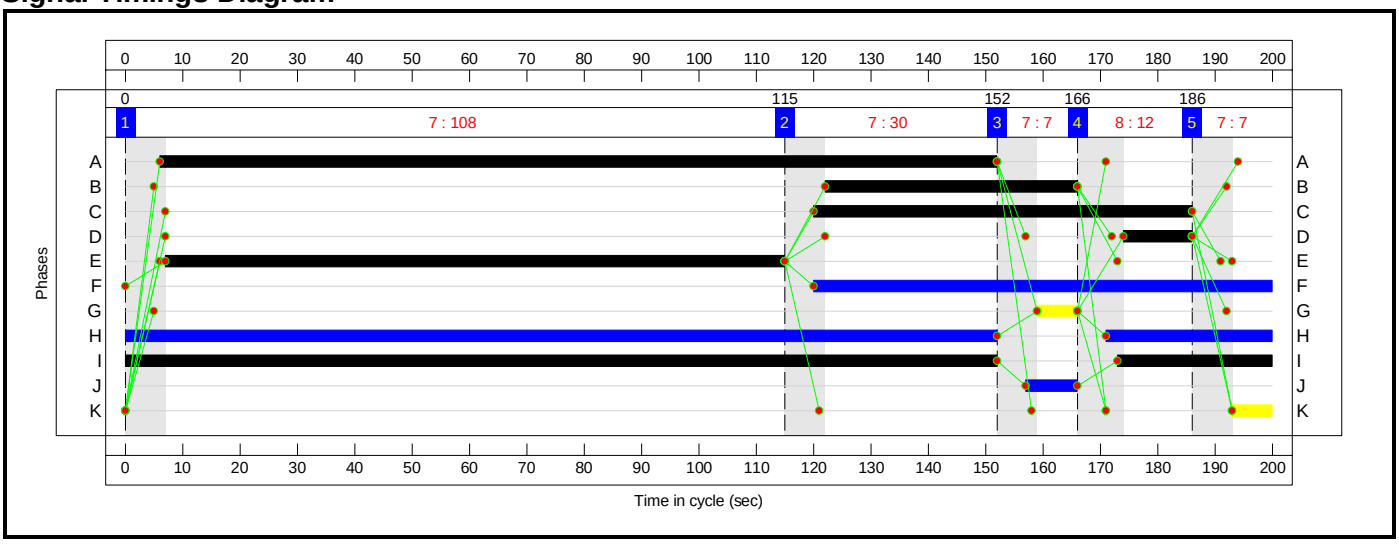
Stage Sequence Diagram



Stage Timings

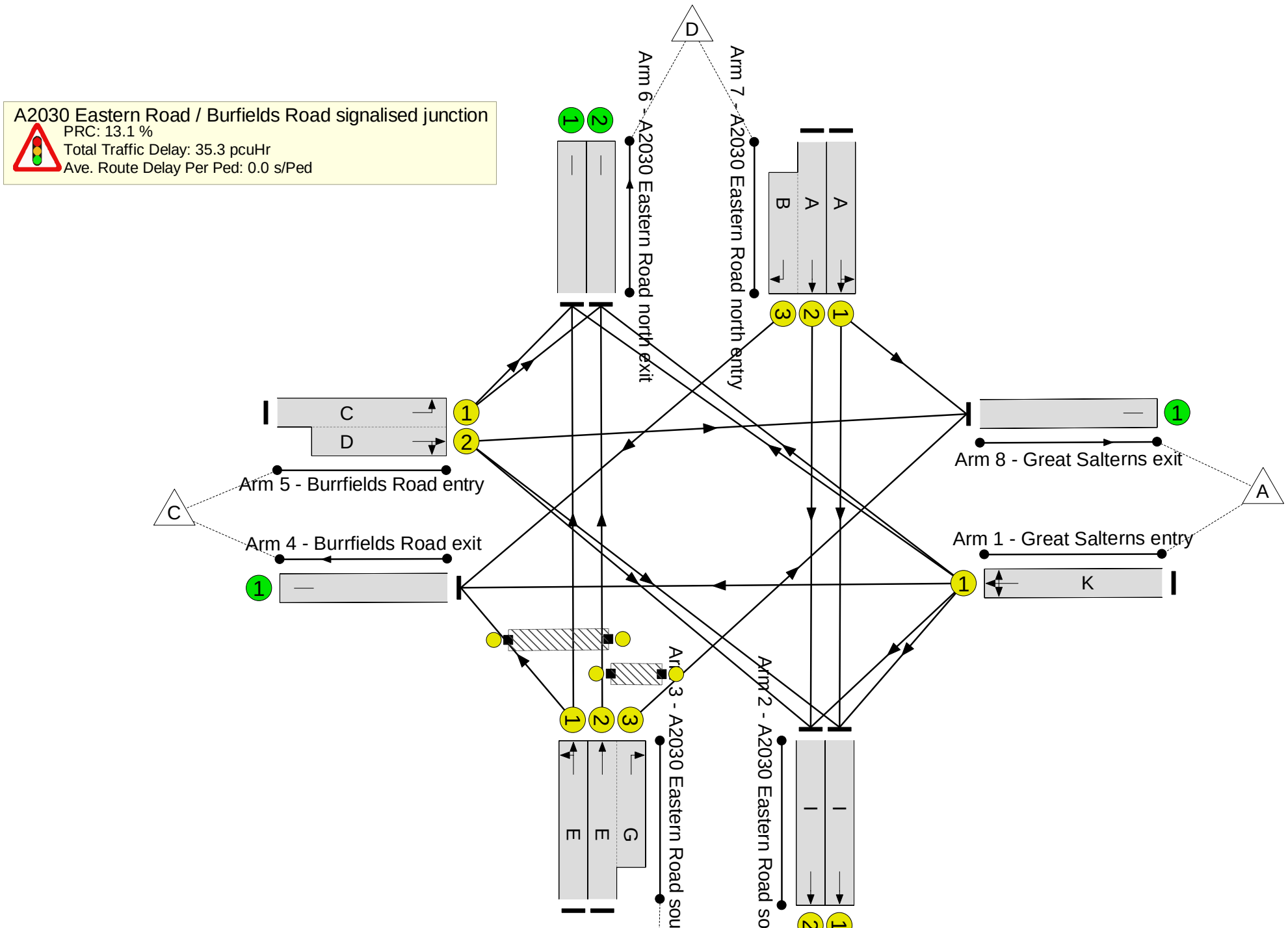
Stage	1	2	3	4	5
Duration	108	30	7	12	7
Change Point	0	115	152	166	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: 13.1 %
Total Traffic Delay: 35.3 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so
E
E
G
I
I

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.6%**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.6%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	605	1915	1724	35.1%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	630	1915	1724	36.6%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	108	-	826	1919	1046	79.0%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	108:7	-	847	1965:1965	1071	79.1%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	348	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	66:12	-	122	1724:1764	154	79.4%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	709	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	863	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	146	-	593	1915	1408	42.1%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	146:44	-	767	1915:1702	964	79.6%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	630	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	80	-	0	-	0	0.0%

Full Input Data And Results

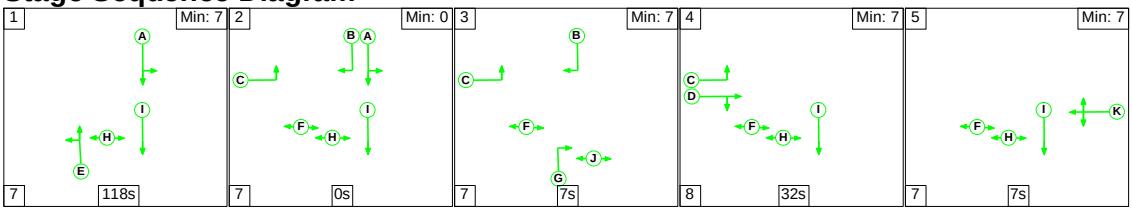
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**27.0**	**8.3**	**0.0**	**35.3**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**27.0**	**8.3**	**0.0**	**35.3**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	605	605	-	-	-	0.0	0.3	-	0.3	1.9	0.4	0.3	0.7
2/2	630	630	-	-	-	0.0	0.3	-	0.3	1.9	0.4	0.3	0.7
3/1	826	826	-	-	-	8.3	1.8	-	10.2	44.4	36.5	1.8	38.3
3/2+3/3	847	847	-	-	-	8.6	1.9	-	10.4	44.3	37.4	1.9	39.3
4/1	348	348	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	122	122	-	-	-	2.7	1.7	-	4.5	131.4	5.0	1.7	6.7
6/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	863	863	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	593	593	-	-	-	1.7	0.4	-	2.0	12.4	12.5	0.4	12.9
7/2+7/3	767	767	-	-	-	5.6	1.9	-	7.5	35.4	11.3	1.9	13.2
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	630	630	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 13.1 Total Delay for Signalled Lanes (pcuHr): 35.29 Cycle Time (s): 200
PRC Over All Lanes (%): 13.1 Total Delay Over All Lanes(pcuHr): 35.29

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

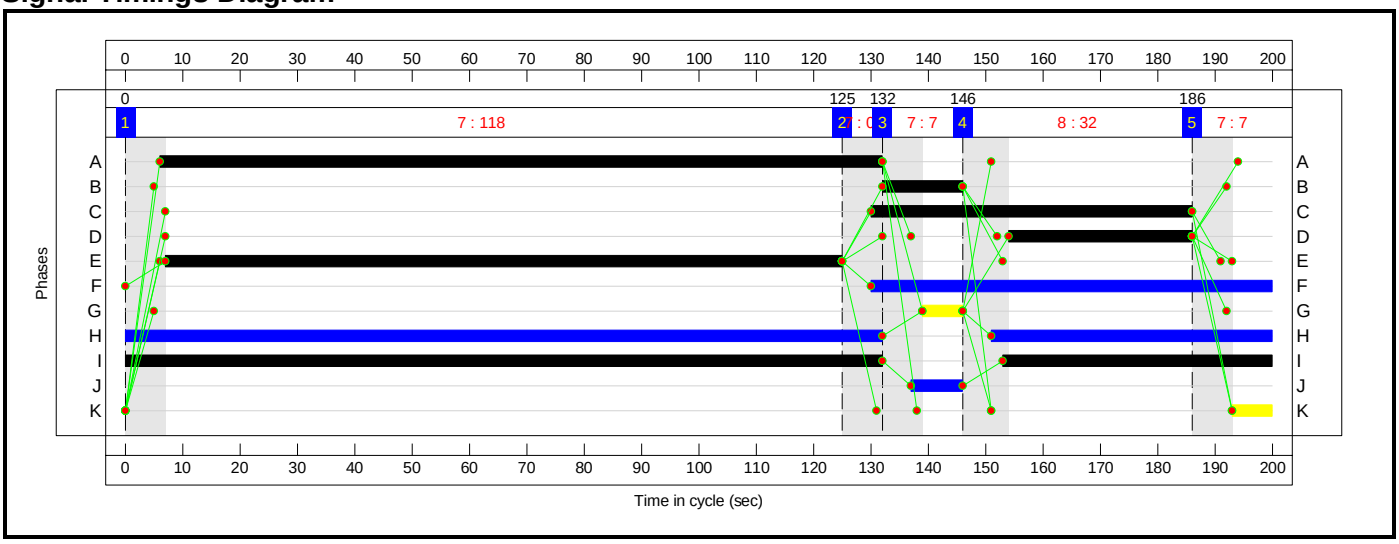
Stage Sequence Diagram



Stage Timings

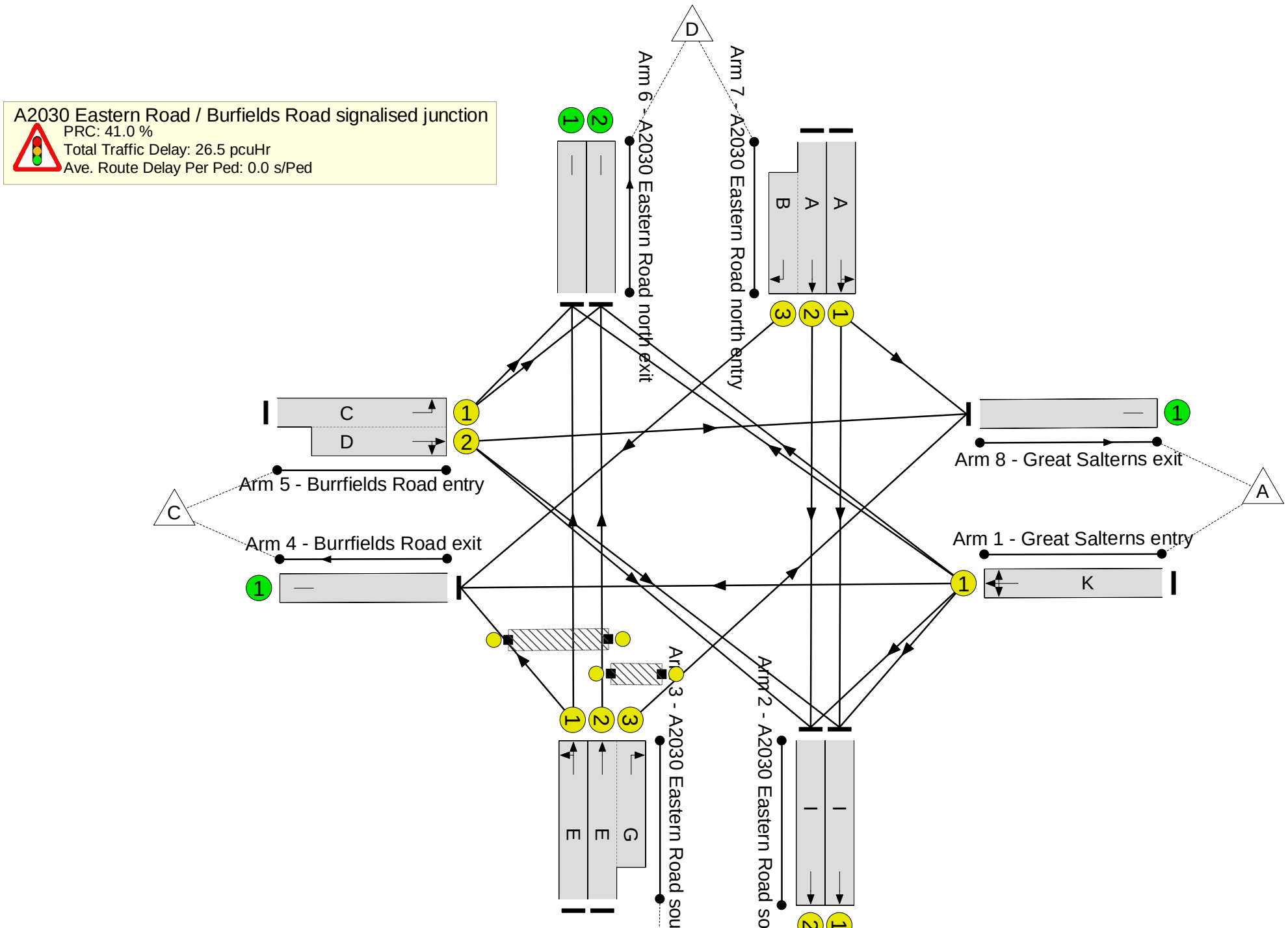
Stage	1	2	3	4	5
Duration	118	0	7	32	7
Change Point	0	125	132	146	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: 41.0 %
Total Traffic Delay: 26.5 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so
E
E
G
I
I

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.8%**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**63.8%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	867	1915	1724	50.3%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	864	1915	1724	50.1%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	118	-	610	1947	1158	52.7%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	118:7	-	617	1965:1965	1169	52.8%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	38	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	56:32	-	183	1940:1764	291	62.9%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	572	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	126	-	776	1915	1216	63.8%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	126:14	-	772	1915:1915	1213	63.6%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	867	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	864	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	70	-	0	-	0	0.0%

Full Input Data And Results

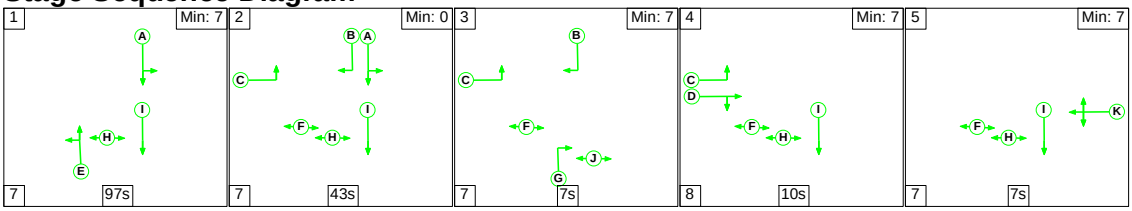
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**21.8**	**4.7**	**0.0**	**26.5**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**21.8**	**4.7**	**0.0**	**26.5**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	867	867	-	-	-	0.1	0.5	-	0.6	2.3	0.6	0.5	1.1
2/2	864	864	-	-	-	0.1	0.5	-	0.6	2.3	0.6	0.5	1.1
3/1	610	610	-	-	-	4.0	0.6	-	4.6	27.2	19.8	0.6	20.4
3/2+3/3	617	617	-	-	-	4.1	0.6	-	4.7	27.2	20.2	0.6	20.8
4/1	38	38	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	183	183	-	-	-	4.0	0.8	-	4.8	94.2	9.5	0.8	10.3
6/1	572	572	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	776	776	-	-	-	4.8	0.9	-	5.7	26.5	26.3	0.9	27.2
7/2+7/3	772	772	-	-	-	4.8	0.9	-	5.7	26.5	26.2	0.9	27.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	867	867	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	864	864	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 41.0 Total Delay for Signalled Lanes (pcuHr): 26.55 Cycle Time (s): 200
PRC Over All Lanes (%): 41.0 Total Delay Over All Lanes(pcuHr): 26.55

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

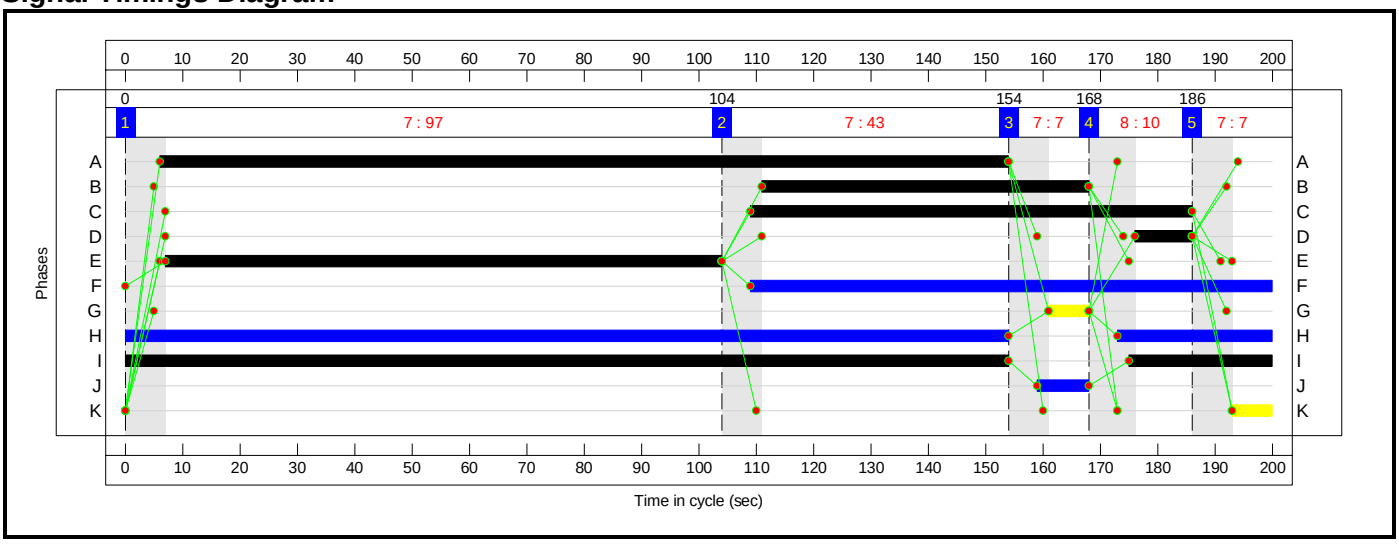
Stage Sequence Diagram



Stage Timings

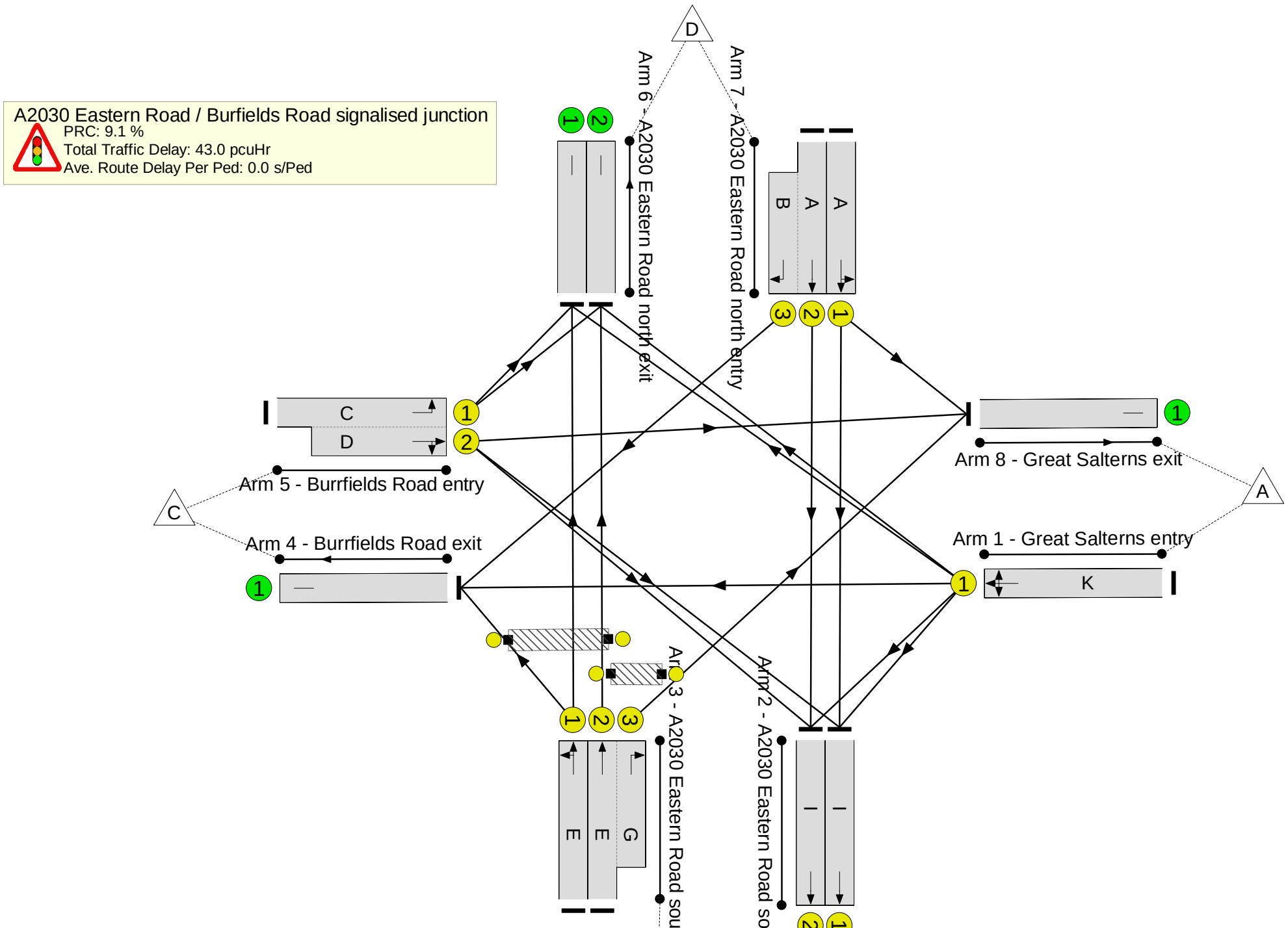
Stage	1	2	3	4	5
Duration	97	43	7	10	7
Change Point	0	104	154	168	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: 9.1 %
Total Traffic Delay: 43.0 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so
E
E
G
B
A
A
I
I

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1127	1915	1724	65.4%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	225	1915	1724	13.1%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	97	-	742	1852	907	81.8%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	97:7	-	794	1965:1965	963	82.5%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	644	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	77:10	-	74	1940:1764	97	76.3%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	440	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	794	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	148	-	1127	1915	1427	79.0%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	148:57	-	493	1915:1702	606	81.4%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1127	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	225	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	91	-	0	-	0	0.0%

Full Input Data And Results

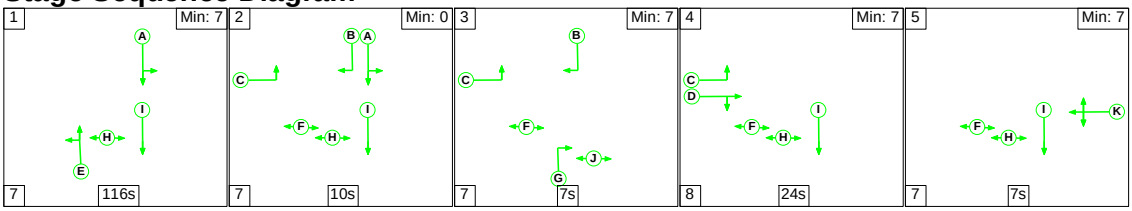
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**32.1**	**10.9**	**0.0**	**43.0**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**32.1**	**10.9**	**0.0**	**43.0**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1127	1127	-	-	-	0.1	0.9	-	1.0	3.3	0.8	0.9	1.8
2/2	225	225	-	-	-	0.0	0.1	-	0.1	1.4	0.1	0.1	0.2
3/1	742	742	-	-	-	8.9	2.2	-	11.1	54.0	35.0	2.2	37.2
3/2+3/3	794	794	-	-	-	9.6	2.3	-	11.9	54.0	37.7	2.3	40.0
4/1	644	644	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	74	74	-	-	-	1.9	1.4	-	3.3	162.8	4.0	1.4	5.5
6/1	440	440	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	794	794	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1127	1127	-	-	-	4.9	1.9	-	6.8	21.7	38.5	1.9	40.4
7/2+7/3	493	493	-	-	-	6.5	2.1	-	8.6	63.1	19.6	2.1	21.7
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	1127	1127	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	225	225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 9.1 Total Delay for Signalled Lanes (pcuHr): 42.95 Cycle Time (s): 200
PRC Over All Lanes (%): 9.1 Total Delay Over All Lanes(pcuHr): 42.95

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

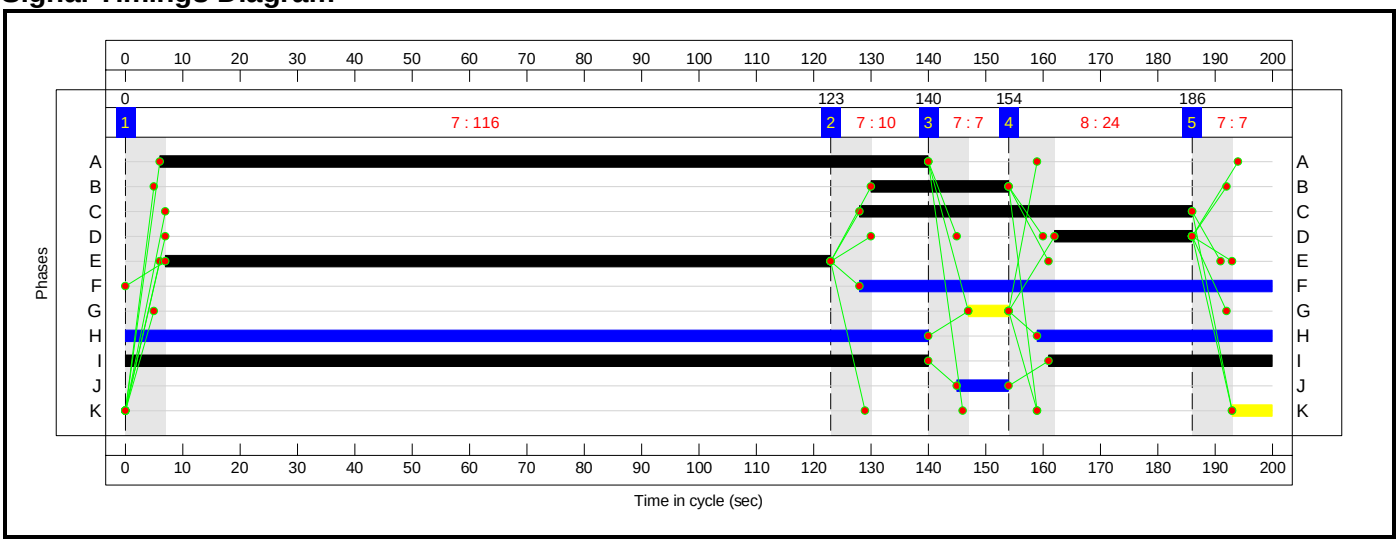
Stage Sequence Diagram



Stage Timings

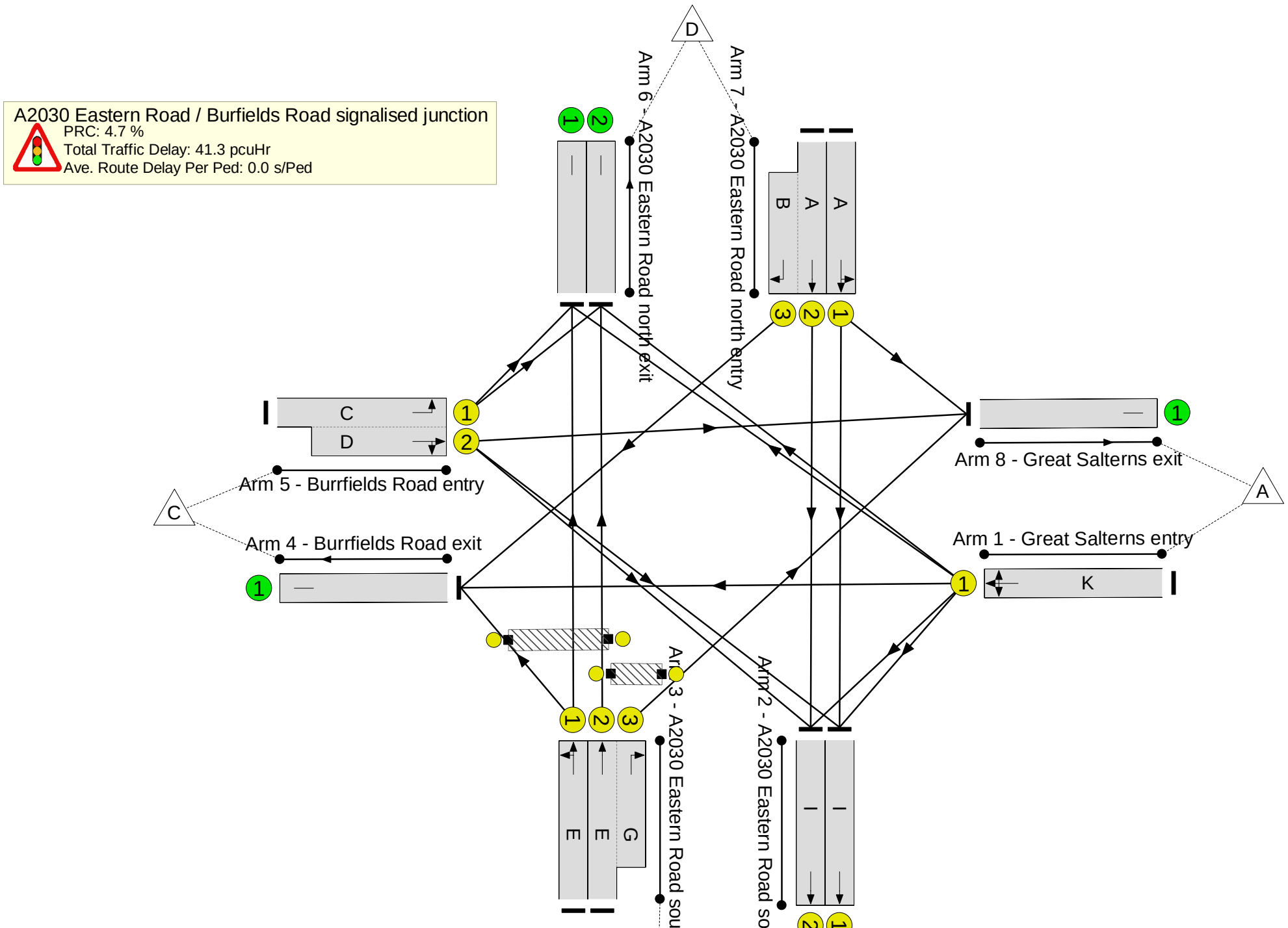
Stage	1	2	3	4	5
Duration	116	10	7	24	7
Change Point	0	123	140	154	186

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Eastern Road / Burfields Road signalised junction
PRC: 4.7 %
Total Traffic Delay: 41.3 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A2030 Eastern Road north exit
Arm 7 - A2030 Eastern Road north entry
C
D
Arm 5 - Burrfields Road entry
C
Arm 4 - Burrfields Road exit
Arm 8 - Great Salterns exit
A
Arm 1 - Great Salterns entry
K
E
E
G
I
I
Arm 3 - A2030 Eastern Road sou
Arm 2 - A2030 Eastern Road so

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.0%**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**86.0%**
1/1	Great Salterns entry Left Ahead Right	U	N/A	N/A	K		1	7	-	0	1915	77	0.0%
2/1	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1124	1915	1724	65.2%
2/2	A2030 Eastern Road south exit Ahead	U	N/A	N/A	I		1	179	-	1080	1915	1724	62.7%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	E		1	116	-	588	1933	1131	52.0%
3/2+3/3	A2030 Eastern Road south entry Ahead Right	U	N/A	N/A	E G		1	116:7	-	600	1965:1965	1150	52.2%
4/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	241	Inf	Inf	0.0%
5/1+5/2	Burrfields Road entry Right Left Ahead	U	N/A	N/A	C D		1	58:24	-	221	1724:1764	262	84.3%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	621	Inf	Inf	0.0%
7/1	A2030 Eastern Road north entry Ahead Left	U	N/A	N/A	A		1	134	-	1073	1915	1293	83.0%
7/2+7/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A B		1	134:24	-	1127	1915:1702	1310	86.0%
8/1	Great Salterns exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

9/1	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1124	Inf	Inf	0.0%
9/2	A2030 Eastern Road south exit 2	U	N/A	N/A	-		-	-	-	1080	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	181	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	F		1	72	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**30.7**	**10.6**	**0.0**	**41.3**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Burfields Road signalised junction	**-**	**-**	**0**	**0**	**0**	**30.7**	**10.6**	**0.0**	**41.3**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	1124	1124	-	-	-	0.1	0.9	-	1.0	3.2	0.8	0.9	1.7
2/2	1080	1080	-	-	-	0.1	0.8	-	0.9	3.0	0.7	0.8	1.6
3/1	588	588	-	-	-	4.0	0.5	-	4.6	28.1	19.4	0.5	20.0
3/2+3/3	600	600	-	-	-	4.1	0.5	-	4.7	28.1	19.8	0.5	20.4
4/1	241	241	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	221	221	-	-	-	4.9	2.4	-	7.3	118.6	10.2	2.4	12.6
6/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	621	621	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1073	1073	-	-	-	7.2	2.4	-	9.6	32.0	43.8	2.4	46.2
7/2+7/3	1127	1127	-	-	-	10.3	3.0	-	13.3	42.5	45.0	3.0	48.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	1124	1124	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1080	1080	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 4.7 Total Delay for Signalled Lanes (pcuHr): 41.32 Cycle Time (s): 200
PRC Over All Lanes (%): 4.7 Total Delay Over All Lanes(pcuHr): 41.32

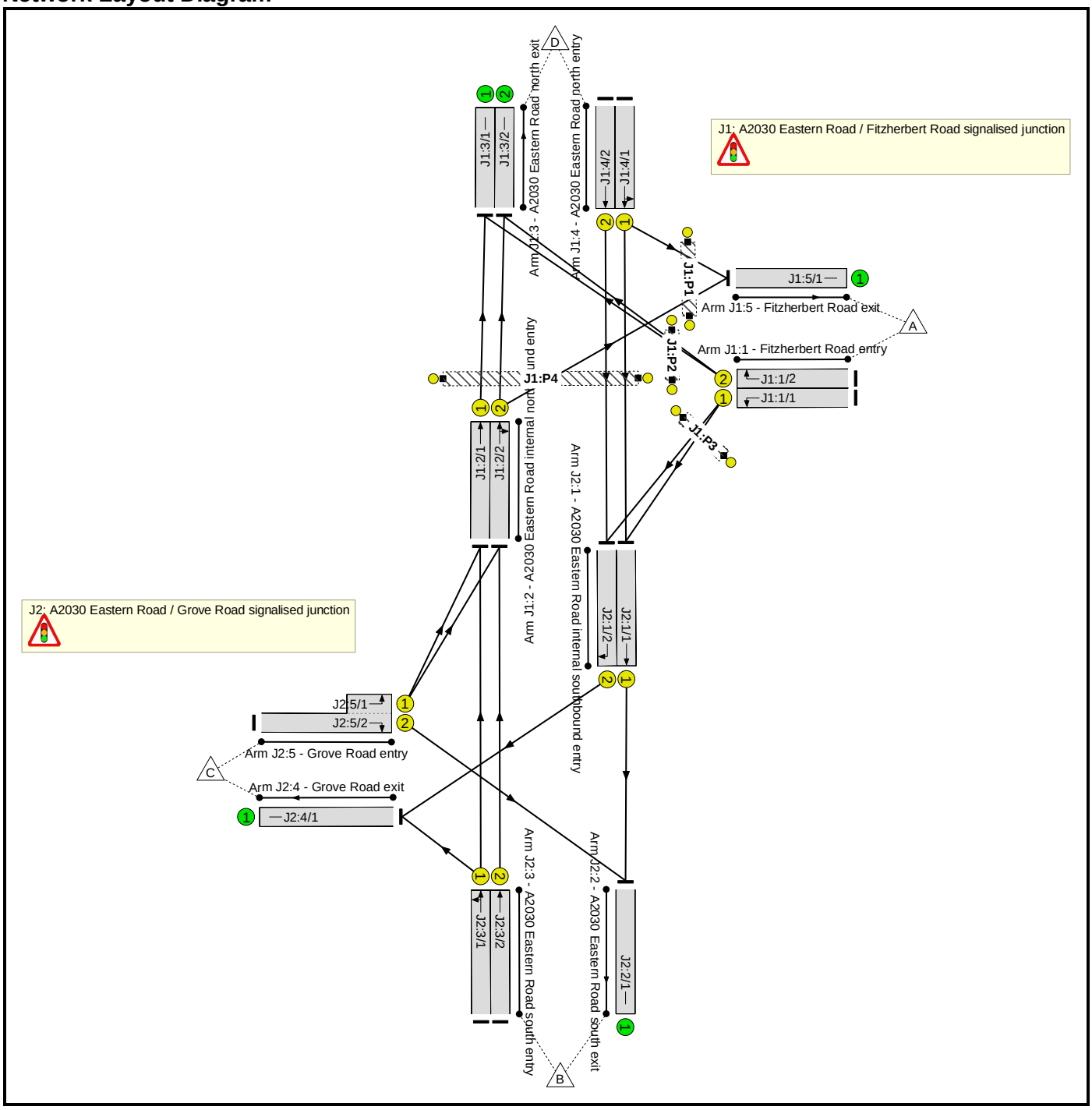
Full Input Data And Results

User and Project Details

Project:	
Title:	**A2030 Eastern Road / Grove Road / Fitzherbert Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Eastern Rd_Grove Rd_Fitzherbert Rd.lsg3x
Author:	
Company:	
Address:	

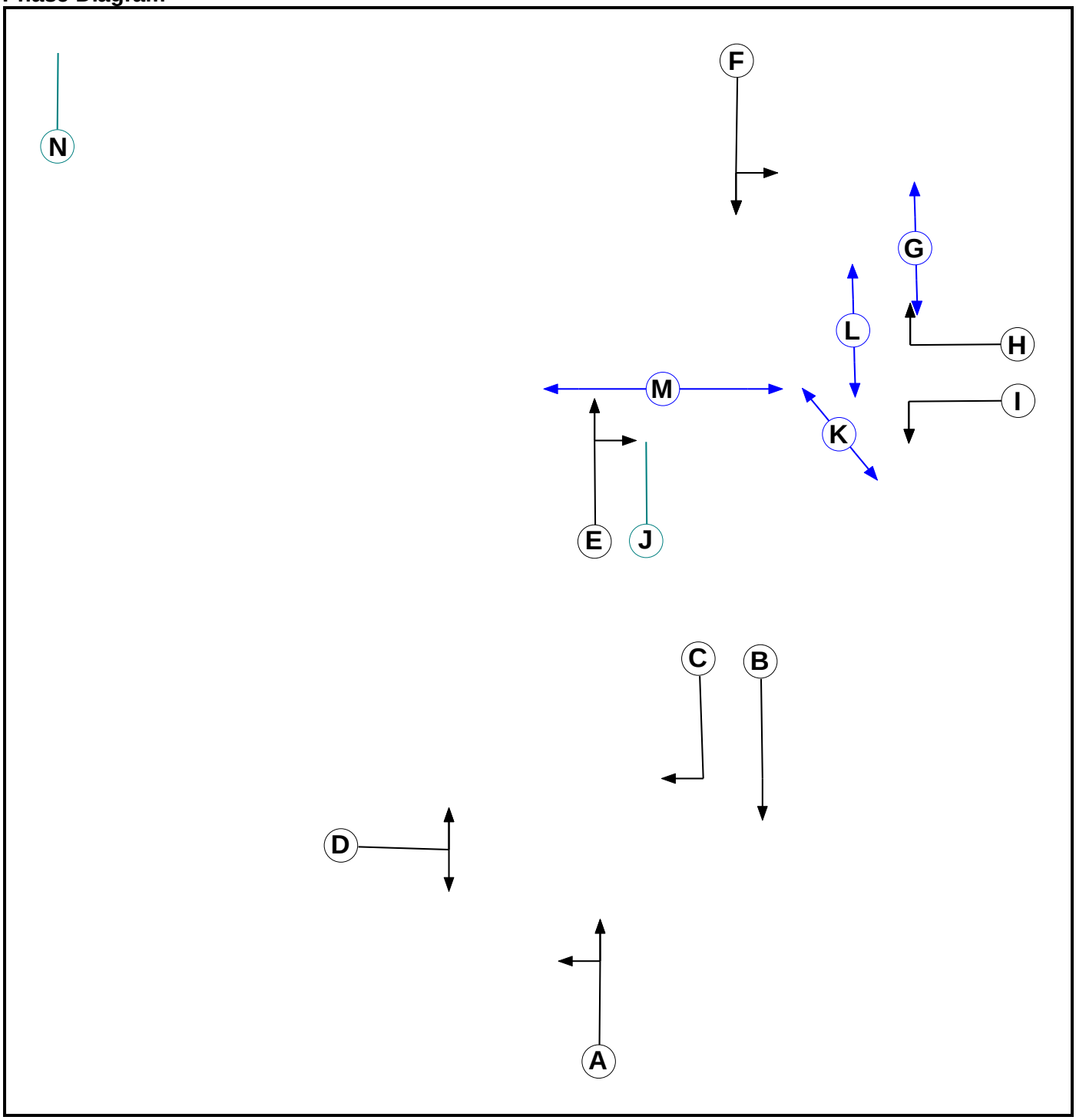
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		4	4
H	Traffic		7	7
I	Traffic		7	7
J	Dummy		7	7
K	Pedestrian		4	4
L	Pedestrian		4	4
M	Pedestrian		7	7
N	Dummy		2	2

Phase Intergreens Matrix

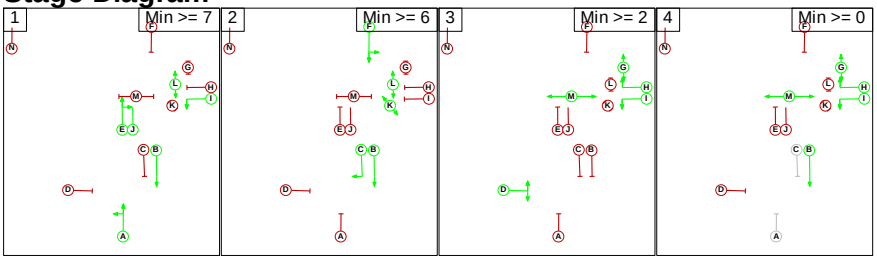
		Starting Phase														
			A	B	C	D	E	F	G	H	I	J	K	L	M	N
Terminating Phase	A		-	7	7	-	-	-	-	-	-	-	-	-	3
	B	-		-	5	-	-	-	-	-	-	-	-	-	3
	C	5	-		5	-	-	-	-	-	-	-	-	-	3
	D	5	7	6		-	-	-	-	-	-	-	-	-	3
	E	-	-	-	-		6	9	5	-	-	-	-	7	3
	F	-	-	-	-	7		8	5	6	7	-	-	10	3
	G	-	-	-	-	0	0		-	-	0	-	-	-	3
	H	-	-	-	-	8	6	-		-	6	-	5	-	3
	I	-	-	-	-	-	5	-	-		-	5	-	-	3
	J	-	-	-	-	-	6	9	5	-		-	-	5	3
	K	-	-	-	-	-	-	-	-	0	-		-	-	3
	L	-	-	-	-	-	-	-	0	-	-	-		-	3
	M	-	-	-	-	0	0	-	-	-	0	-	-		3
	N	2	2	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	A B E I J L
2	B C F K L
3	D G H I M
4	B G H I M

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		7	9	9
	2	7		10	10
	3	8	7		7
	4	8	6	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction
There are no Opposed Lanes in this Junction

Junction: J2: A2030 Eastern Road / Grove Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (Fitzherbert Road entry)	U	I	2	3	60.0	Geom	-	4.00	0.00	Y	Arm J2:1 Left	18.00
J1:1/2 (Fitzherbert Road entry)	U	H	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:3 Right	12.00
J1:2/1 (A2030 Eastern Road internal northbound entry)	U	E	2	3	10.4	Geom	-	3.00	0.00	Y	Arm J1:3 Ahead	Inf
J1:2/2 (A2030 Eastern Road internal northbound entry)	U	E	2	3	10.4	Geom	-	3.00	0.00	Y	Arm J1:3 Ahead Arm J1:5 Right	Inf 12.00
J1:3/1 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:3/2 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:4/1 (A2030 Eastern Road north entry)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:5 Left Arm J2:1 Ahead	18.00 Inf
J1:4/2 (A2030 Eastern Road north entry)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:1 Ahead	Inf
J1:5/1 (Fitzherbert Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	U	B	2	3	9.6	Geom	-	3.00	0.00	Y	Arm J2:2 Ahead	Inf
J2:1/2 (A2030 Eastern Road internal southbound entry)	U	C	2	3	9.6	Geom	-	3.00	0.00	Y	Arm J2:4 Right	12.00
J2:2/1 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1 (A2030 Eastern Road south entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:2 Ahead Arm J2:4 Left	Inf 18.00
J2:3/2 (A2030 Eastern Road south entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:2 Ahead	Inf
J2:4/1 (Grove Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (Grove Road entry)	U	D	2	3	3.5	Geom	-	3.25	0.00	Y	Arm J1:2 Left	15.00
J2:5/2 (Grove Road entry)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Right	15.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	228	1	8	237
	B	272	0	367	241	880
	C	5	386	0	5	396
	D	5	324	1	0	330
	Tot.	282	938	369	254	1843

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	229
J1:1/2	8
J1:2/1	146
J1:2/2	377
J1:3/1	150
J1:3/2	104
J1:4/1	329
J1:4/2	1
J1:5/1	282
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	552
J2:1/2	2
J2:2/1	938
J2:3/1	508
J2:3/2	372
J2:4/1	369
J2:5/1 (short)	10
J2:5/2 (with short)	396(In) 386(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	26.5 %	1754	1754
				Arm J1:5 Right	12.00	73.5 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	1.5 %	1913	1913
				Arm J2:1 Ahead	Inf	98.5 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	27.8 %	1806	1806
				Arm J2:4 Left	18.00	72.2 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	254	1	7	262
	B	291	0	466	428	1185
	C	0	318	0	1	319
	D	4	279	1	0	284
	Tot.	295	851	468	436	2050

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	255
J1:1/2	7
J1:2/1	190
J1:2/2	530
J1:3/1	193
J1:3/2	243
J1:4/1	283
J1:4/2	1
J1:5/1	295
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	533
J2:1/2	2
J2:2/1	851
J2:3/1	655
J2:3/2	530
J2:4/1	468
J2:5/1 (short)	1
J2:5/2 (with short)	319(In) 318(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	45.1 %	1792	1792
				Arm J1:5 Right	12.00	54.9 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	1.4 %	1913	1913
				Arm J2:1 Ahead	Inf	98.6 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	28.9 %	1808	1808
				Arm J2:4 Left	18.00	71.1 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	227	1	3	231
	B	201	0	446	179	826
	C	5	369	0	5	379
	D	0	237	1	0	238
	Tot.	206	833	448	187	1674

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	228
J1:1/2	3
J1:2/1	23
J1:2/2	367
J1:3/1	24
J1:3/2	163
J1:4/1	237
J1:4/2	1
J1:5/1	206
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	464
J2:1/2	2
J2:2/1	833
J2:3/1	464
J2:3/2	362
J2:4/1	448
J2:5/1 (short)	10
J2:5/2 (with short)	379(In) 369(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	43.9 %	1789	1789
				Arm J1:5 Right	12.00	56.1 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	0.0 %	1915	1915
				Arm J2:1 Ahead	Inf	100.0 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	3.9 %	1773	1773
				Arm J2:4 Left	18.00	96.1 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	254	1	3	258
	B	193	0	666	284	1143
	C	3	291	0	5	299
	D	0	192	1	0	193
	Tot.	196	737	668	292	1893

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	255
J1:1/2	3
J1:2/1	5
J1:2/2	480
J1:3/1	6
J1:3/2	286
J1:4/1	192
J1:4/2	1
J1:5/1	196
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	446
J2:1/2	2
J2:2/1	737
J2:3/1	666
J2:3/2	477
J2:4/1	668
J2:5/1 (short)	8
J2:5/2 (with short)	299(In) 291(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	59.2 %	1822	1822
				Arm J1:5 Right	12.00	40.8 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	0.0 %	1915	1915
				Arm J2:1 Ahead	Inf	100.0 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	0.0 %	1768	1768
				Arm J2:4 Left	18.00	100.0 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	227	1	3	231
	B	203	0	445	181	829
	C	5	405	0	5	415
	D	0	237	1	0	238
	Tot.	208	869	447	189	1713

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	228
J1:1/2	3
J1:2/1	25
J1:2/2	369
J1:3/1	26
J1:3/2	163
J1:4/1	237
J1:4/2	1
J1:5/1	208
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	464
J2:1/2	2
J2:2/1	869
J2:3/1	465
J2:3/2	364
J2:4/1	447
J2:5/1 (short)	10
J2:5/2 (with short)	415(In) 405(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	43.6 %	1789	1789
				Arm J1:5 Right	12.00	56.4 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	0.0 %	1915	1915
				Arm J2:1 Ahead	Inf	100.0 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	4.3 %	1774	1774
				Arm J2:4 Left	18.00	95.7 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	254	1	3	258
	B	195	0	663	288	1146
	C	1	324	0	1	326
	D	0	211	1	0	212
	Tot.	196	789	665	292	1942

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction	
J1:1/1	255
J1:1/2	3
J1:2/1	1
J1:2/2	484
J1:3/1	2
J1:3/2	290
J1:4/1	211
J1:4/2	1
J1:5/1	196
Junction: J2: A2030 Eastern Road / Grove Road signalised junction	
J2:1/1	465
J2:1/2	2
J2:2/1	789
J2:3/1	663
J2:3/2	483
J2:4/1	665
J2:5/1 (short)	2
J2:5/2 (with short)	326(In) 324(Out)

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A2030 Eastern Road / Fitzherbert Road signalised junction

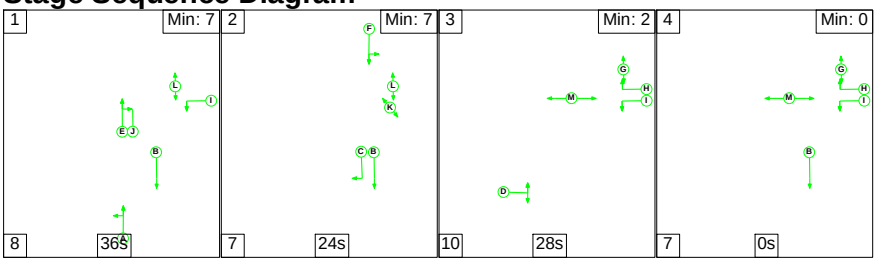
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Fitzherbert Road entry)	4.00	0.00	Y	Arm J2:1 Left	18.00	100.0 %	1860	1860
J1:1/2 (Fitzherbert Road entry)	3.50	0.00	Y	Arm J1:3 Right	12.00	100.0 %	1747	1747
J1:2/1 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1915	1915
J1:2/2 (A2030 Eastern Road internal northbound entry)	3.00	0.00	Y	Arm J1:3 Ahead	Inf	59.5 %	1823	1823
				Arm J1:5 Right	12.00	40.5 %		
J1:3/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:4/1 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J1:5 Left	18.00	0.0 %	1915	1915
				Arm J2:1 Ahead	Inf	100.0 %		
J1:4/2 (A2030 Eastern Road north entry)	3.00	0.00	Y	Arm J2:1 Ahead	Inf	100.0 %	1915	1915
J1:5/1 (Fitzherbert Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Grove Road signalised junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (A2030 Eastern Road internal southbound entry)	3.00	0.00	Y	Arm J2:4 Right	12.00	100.0 %	1702	1702
J2:2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	0.0 %	1768	1768
				Arm J2:4 Left	18.00	100.0 %		
J2:3/2 (A2030 Eastern Road south entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J2:4/1 (Grove Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Grove Road entry)	3.25	0.00	Y	Arm J1:2 Left	15.00	100.0 %	1764	1764
J2:5/2 (Grove Road entry)	3.25	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1764	1764

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

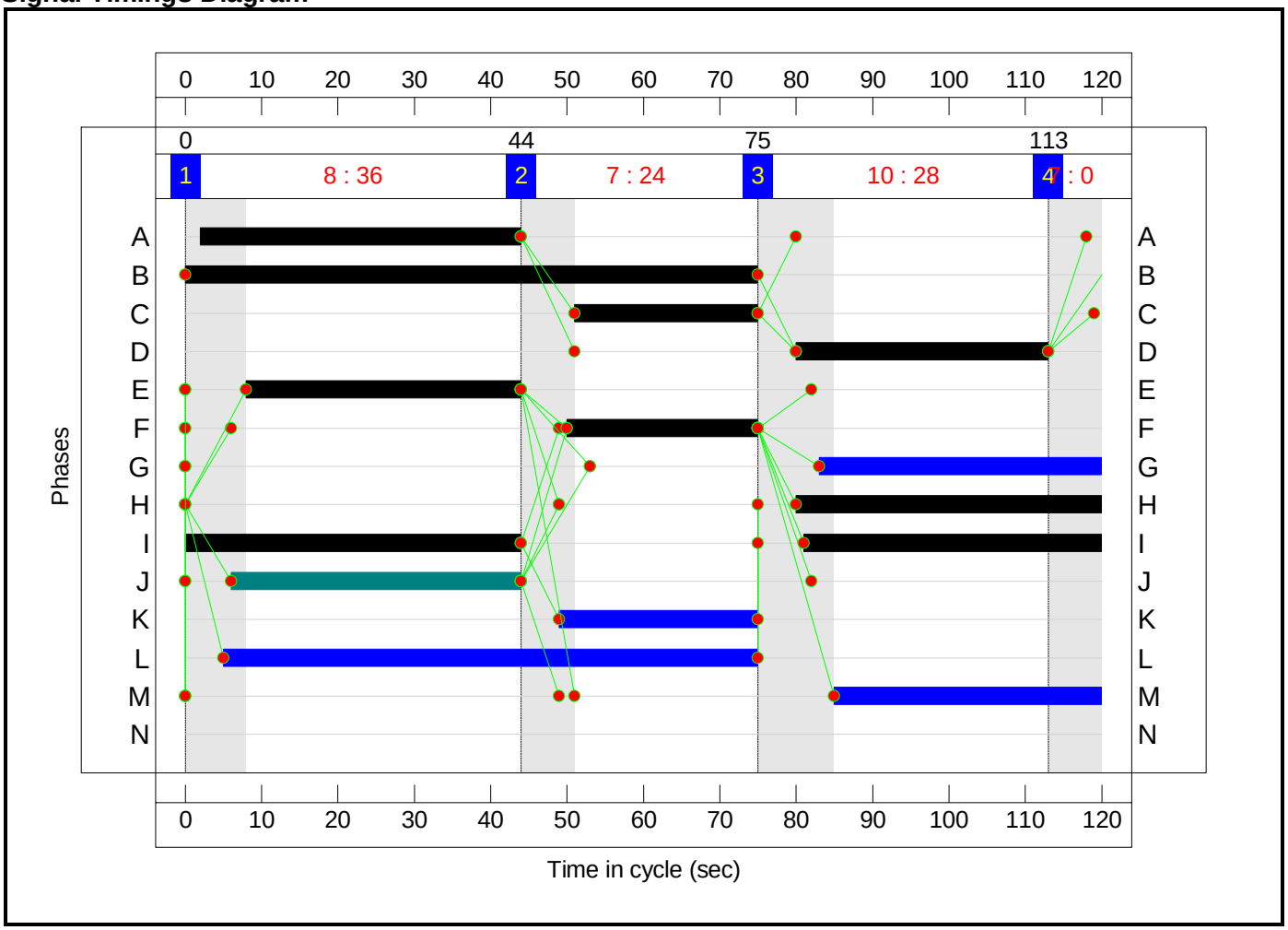


Stage Timings

Stage	1	2	3	4
Duration	36	24	28	0
Change Point	0	44	75	113

Full Input Data And Results

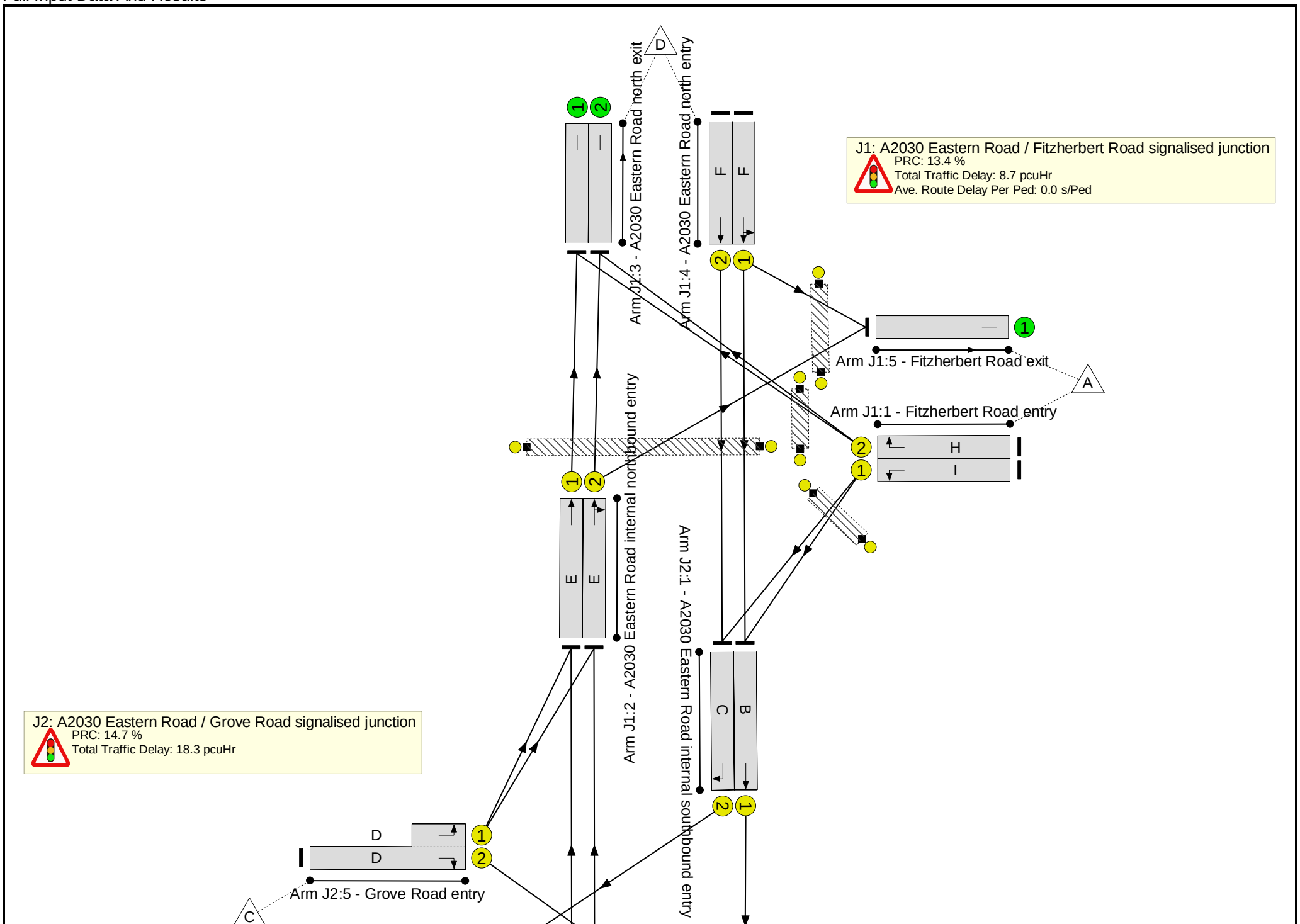
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.4%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.4%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	83	-	229	1860	1302	17.6%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	40	-	8	1747	597	1.3%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	36	-	146	1915	590	24.7%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	36	-	377	1754	541	69.7%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	150	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	104	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	25	-	329	1913	414	79.4%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	25	-	1	1915	415	0.2%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	282	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	37	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	70	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	26	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	35	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.5%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	75	-	552	1915	1213	45.5%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	24	-	2	1702	355	0.6%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	938	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	42	-	508	1806	647	78.5%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	42	-	372	1915	686	54.2%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	369	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	33	-	396	1764:1764	512	77.3%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.2**	**7.7**	**0.0**	**26.9**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.4**	**3.3**	**0.0**	**8.7**	**-**	**-**	**-**	**-**
1/1	229	229	-	-	-	0.4	0.1	-	0.5	7.8	2.6	0.1	2.7
1/2	8	8	-	-	-	0.1	0.0	-	0.1	29.4	0.2	0.0	0.2
2/1	146	146	-	-	-	0.2	0.2	-	0.4	9.5	0.6	0.2	0.7
2/2	377	377	-	-	-	0.7	1.1	-	1.8	17.2	10.9	1.1	12.0
3/1	150	150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	104	104	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	329	329	-	-	-	4.1	1.8	-	5.9	64.7	10.3	1.8	12.2
4/2	1	1	-	-	-	0.0	0.0	-	0.0	41.6	0.0	0.0	0.0
5/1	282	282	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**13.8**	**4.4**	**0.0**	**18.3**	**-**	**-**	**-**	**-**
1/1	552	552	-	-	-	1.4	0.4	-	1.9	12.1	6.0	0.4	6.4
1/2	2	2	-	-	-	0.0	0.0	-	0.0	34.5	0.0	0.0	0.0
2/1	938	938	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	508	508	-	-	-	4.9	1.8	-	6.6	47.0	15.1	1.8	16.9
3/2	372	372	-	-	-	3.2	0.6	-	3.8	36.4	9.8	0.6	10.4
4/1	369	369	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	396	396	-	-	-	4.3	1.7	-	6.0	54.5	11.9	1.7	13.6

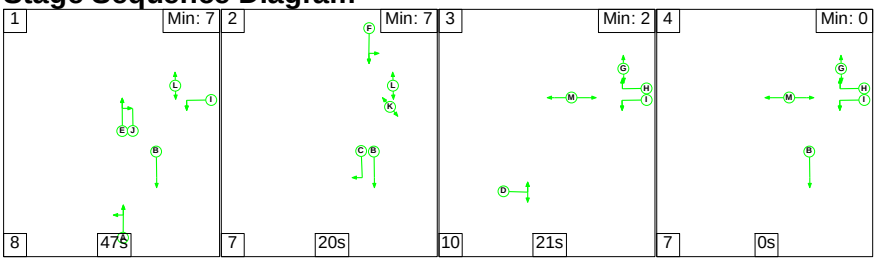
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	13.4	Total Delay for Signalled Lanes (pcuHr):	26.93	Cycle Time (s):	120
	PRC Over All Lanes (%):	13.4	Total Delay Over All Lanes(pcuHr):	26.93		

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

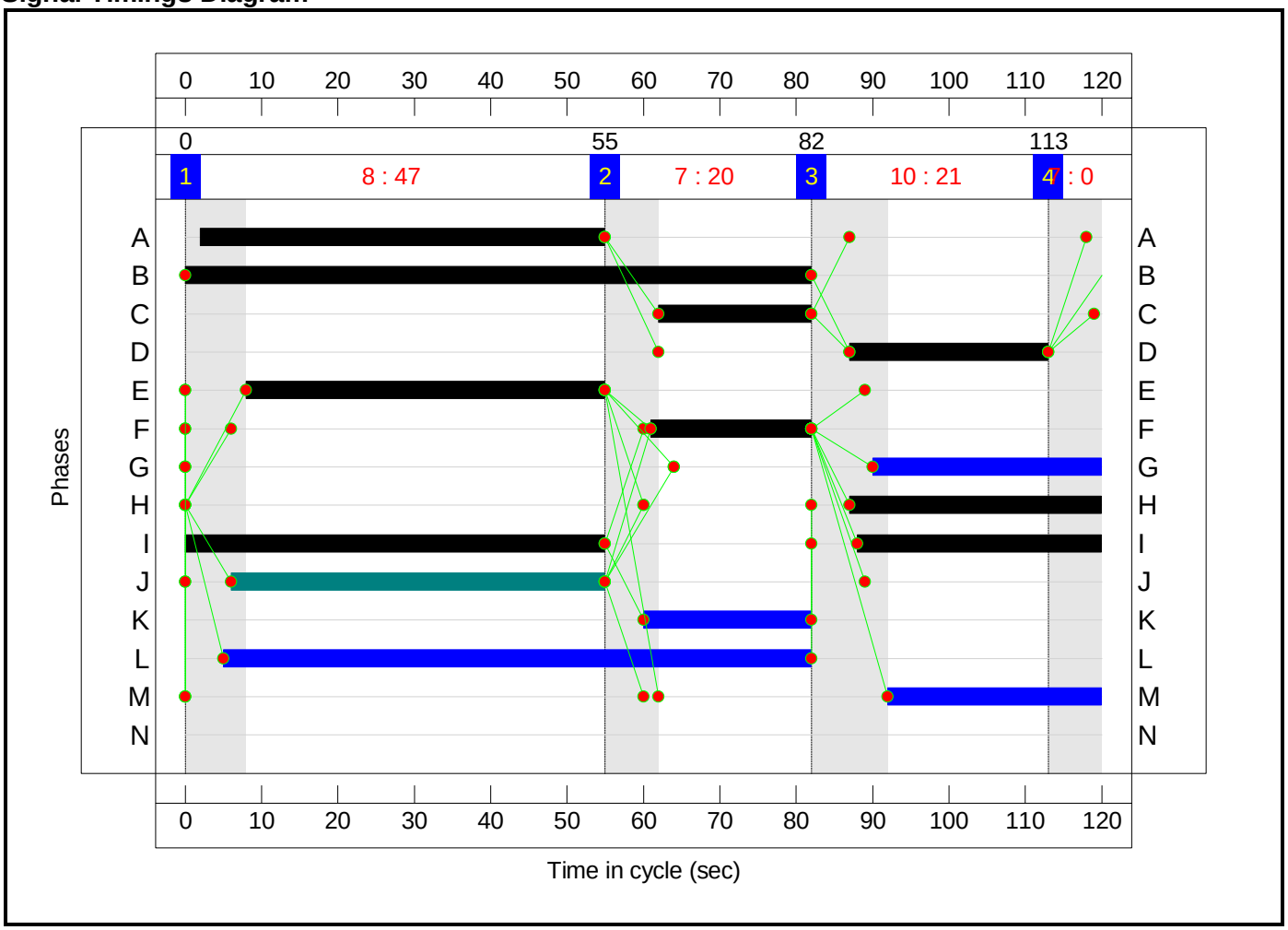
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	47	20	21	0
Change Point	0	55	82	113

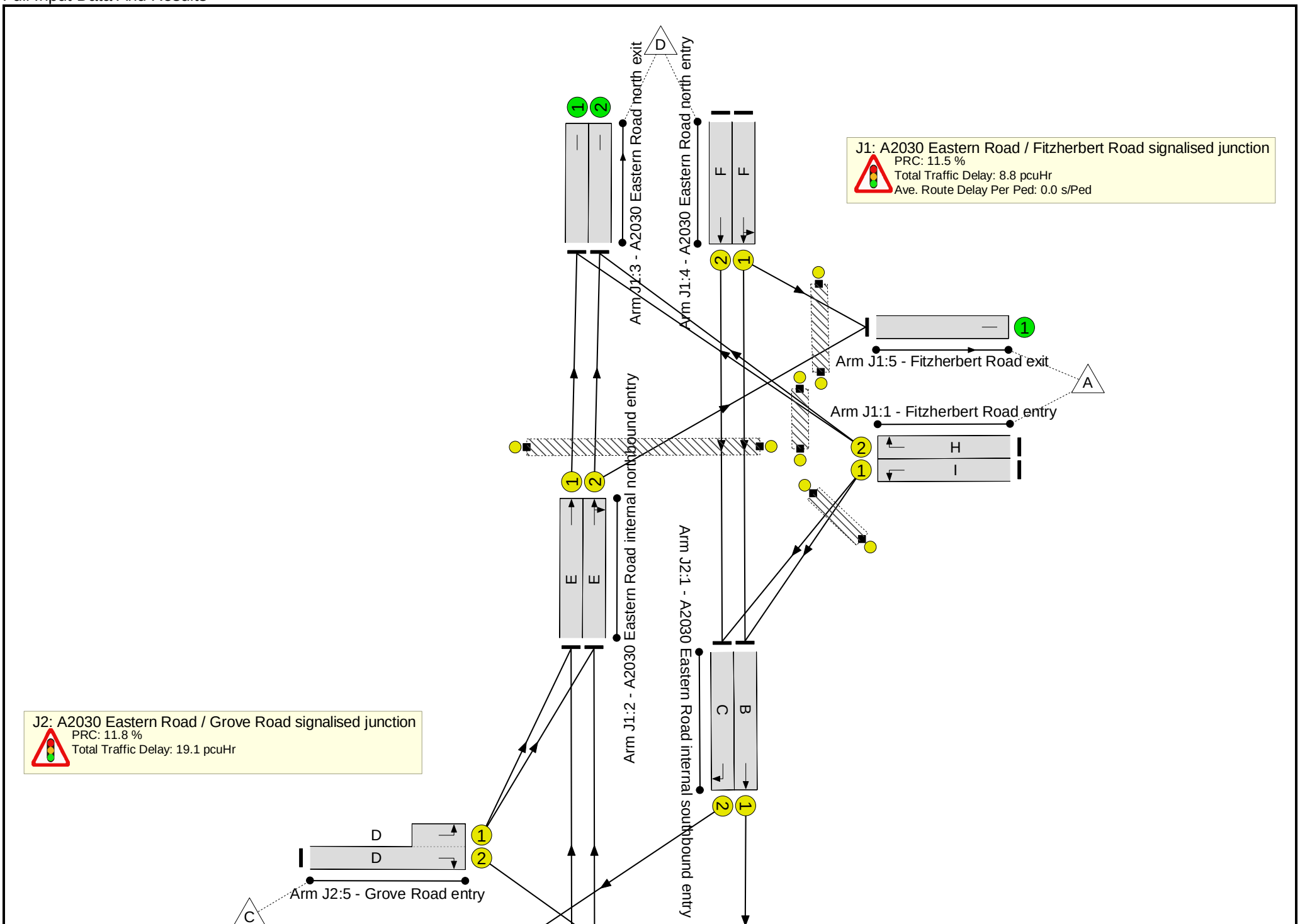
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.7%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.7%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	87	-	255	1860	1364	18.7%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	33	-	7	1747	495	1.4%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	47	-	190	1915	766	24.8%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	47	-	530	1792	717	73.9%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	243	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	21	-	283	1913	351	80.7%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	21	-	1	1915	351	0.3%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	30	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	77	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	22	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	28	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.5%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	82	-	533	1915	1325	40.2%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	20	-	2	1702	298	0.7%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	851	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	53	-	655	1808	814	80.5%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	53	-	530	1915	862	61.5%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	468	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	26	-	319	1764:1764	398	80.1%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**19.2**	**8.7**	**0.0**	**27.9**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.1**	**3.7**	**0.0**	**8.8**	**-**	**-**	**-**	**-**
1/1	255	255	-	-	-	0.4	0.1	-	0.5	6.6	2.6	0.1	2.7
1/2	7	7	-	-	-	0.1	0.0	-	0.1	34.9	0.2	0.0	0.2
2/1	190	190	-	-	-	0.2	0.2	-	0.4	7.1	0.4	0.2	0.6
2/2	530	530	-	-	-	0.8	1.4	-	2.2	15.1	15.0	1.4	16.4
3/1	193	193	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	243	243	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	283	283	-	-	-	3.7	2.0	-	5.7	72.1	9.0	2.0	11.0
4/2	1	1	-	-	-	0.0	0.0	-	0.0	45.6	0.0	0.0	0.0
5/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**14.0**	**5.1**	**0.0**	**19.1**	**-**	**-**	**-**	**-**
1/1	533	533	-	-	-	1.2	0.3	-	1.6	10.7	6.1	0.3	6.5
1/2	2	2	-	-	-	0.0	0.0	-	0.0	36.2	0.0	0.0	0.0
2/1	851	851	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	655	655	-	-	-	5.2	2.0	-	7.2	39.5	18.7	2.0	20.8
3/2	530	530	-	-	-	3.7	0.8	-	4.5	30.5	13.4	0.8	14.2
4/1	468	468	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	319	319	-	-	-	3.9	1.9	-	5.8	65.7	10.0	1.9	11.9

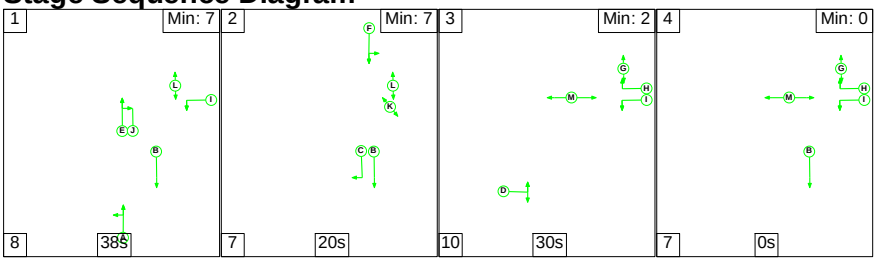
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	11.5	Total Delay for Signalled Lanes (pcuHr):	27.91	Cycle Time (s):	120
	PRC Over All Lanes (%):	11.5	Total Delay Over All Lanes(pcuHr):	27.91		

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

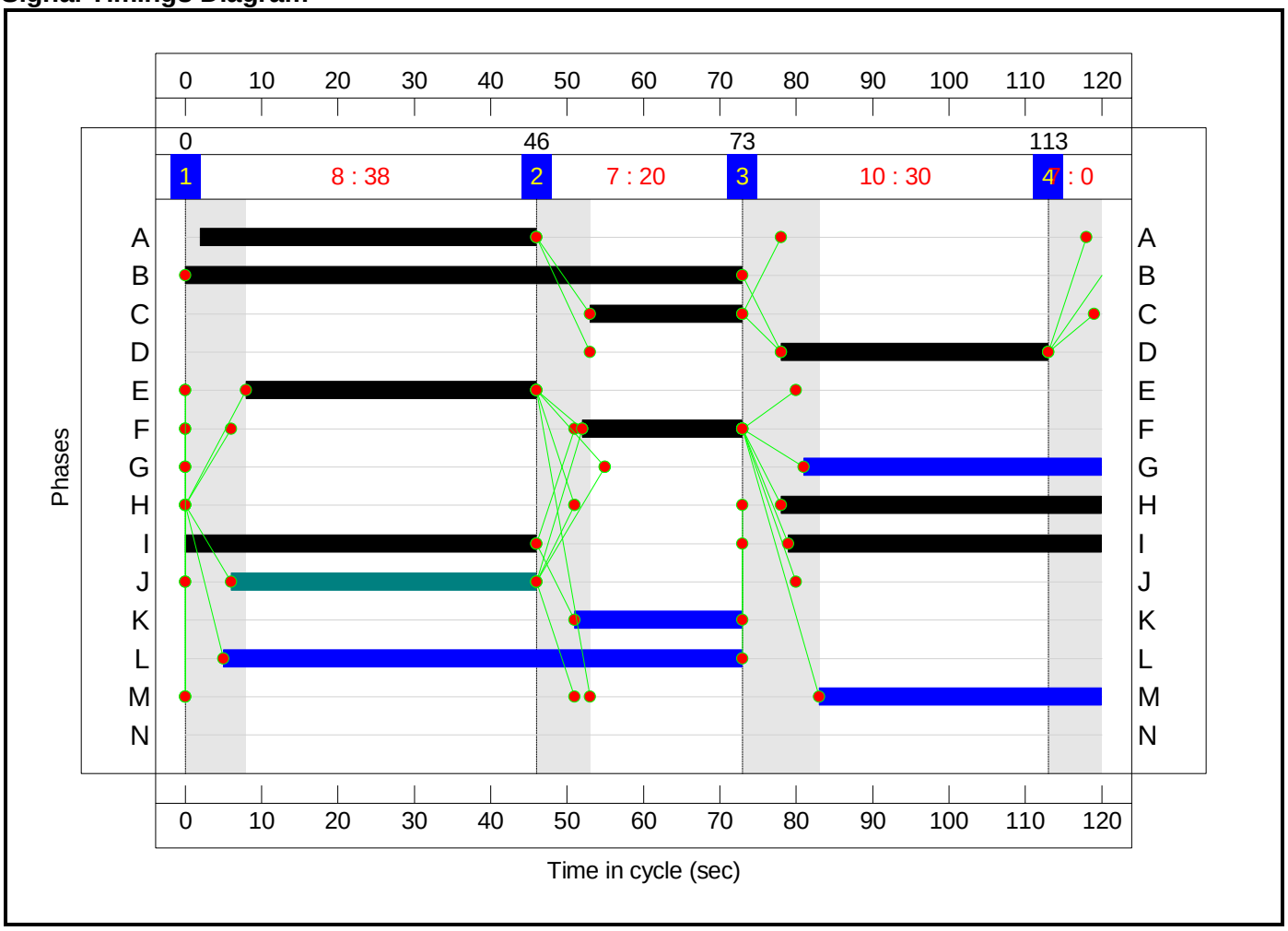
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	38	20	30	0
Change Point	0	46	73	113

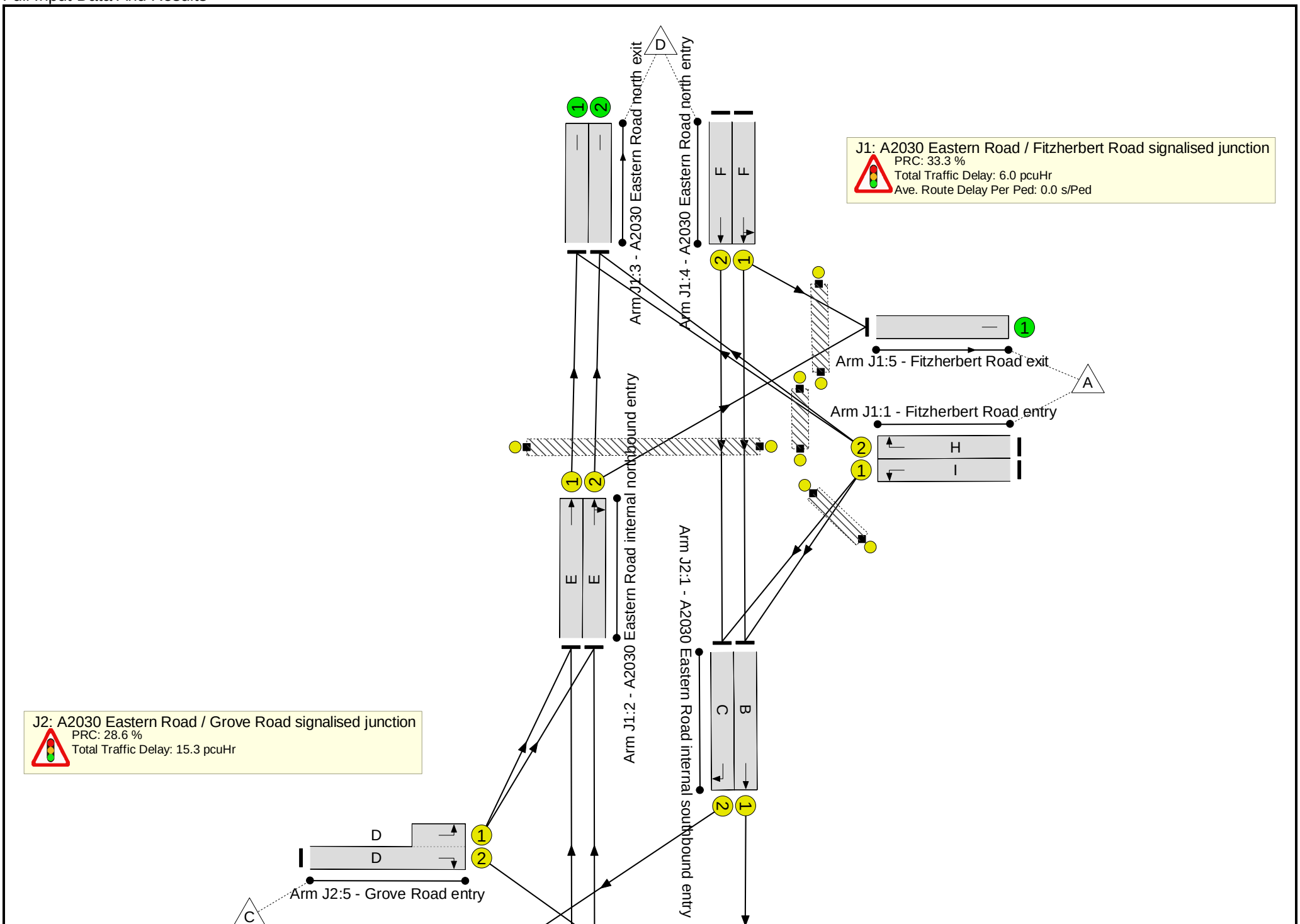
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.0%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.5%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	87	-	228	1860	1364	16.7%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	42	-	3	1747	626	0.5%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	38	-	23	1915	622	3.7%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	38	-	367	1789	581	63.1%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	163	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	21	-	237	1915	351	67.5%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	21	-	1	1915	351	0.3%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	39	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	68	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	22	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	37	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.0%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	73	-	464	1915	1181	39.3%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	20	-	2	1702	298	0.7%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	833	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	44	-	464	1773	665	69.8%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	44	-	362	1915	718	50.4%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	35	-	379	1764:1764	542	70.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**16.2**	**5.1**	**0.0**	**21.4**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**4.0**	**2.0**	**0.0**	**6.0**	**-**	**-**	**-**	**-**
1/1	228	228	-	-	-	0.3	0.1	-	0.4	6.5	2.3	0.1	2.4
1/2	3	3	-	-	-	0.0	0.0	-	0.0	27.9	0.1	0.0	0.1
2/1	23	23	-	-	-	0.1	0.0	-	0.1	13.3	0.2	0.0	0.2
2/2	367	367	-	-	-	0.6	0.8	-	1.5	14.4	10.2	0.8	11.0
3/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	163	163	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	237	237	-	-	-	3.0	1.0	-	4.0	61.2	7.3	1.0	8.3
4/2	1	1	-	-	-	0.0	0.0	-	0.0	45.6	0.0	0.0	0.0
5/1	206	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**12.2**	**3.1**	**0.0**	**15.3**	**-**	**-**	**-**	**-**
1/1	464	464	-	-	-	1.3	0.3	-	1.6	12.5	5.5	0.3	5.8
1/2	2	2	-	-	-	0.0	0.0	-	0.0	36.3	0.0	0.0	0.0
2/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	464	464	-	-	-	4.1	1.1	-	5.2	40.6	13.0	1.1	14.2
3/2	362	362	-	-	-	2.9	0.5	-	3.4	33.9	9.3	0.5	9.8
4/1	448	448	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	379	379	-	-	-	3.9	1.1	-	5.1	48.1	11.0	1.1	12.1

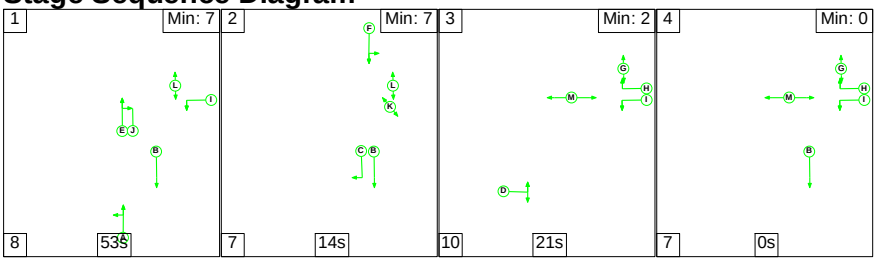
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	28.6	Total Delay for Signalled Lanes (pcuHr):	21.35	Cycle Time (s):	120
	PRC Over All Lanes (%):	28.6	Total Delay Over All Lanes(pcuHr):	21.35		

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

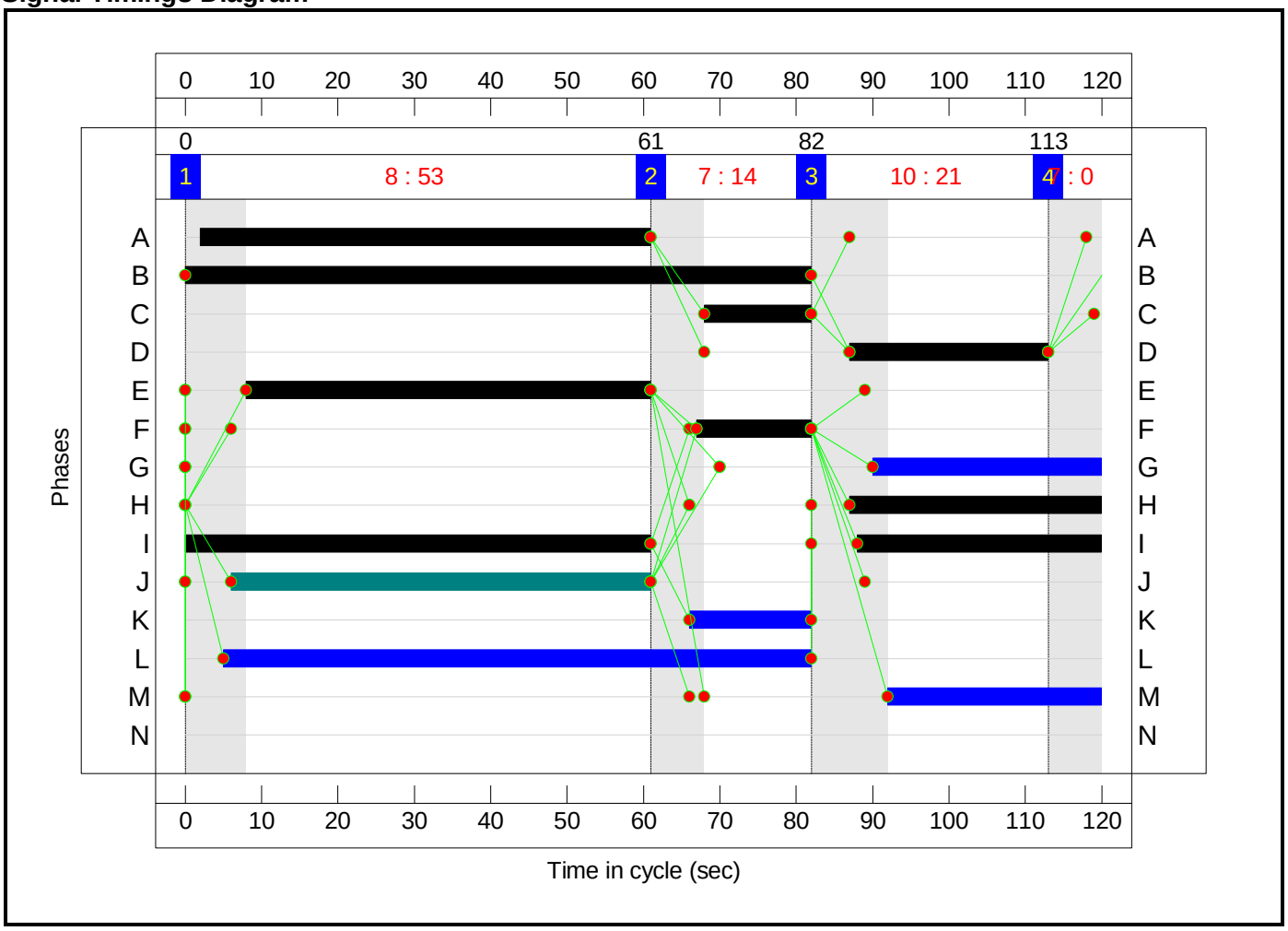
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	53	14	21	0
Change Point	0	61	82	113

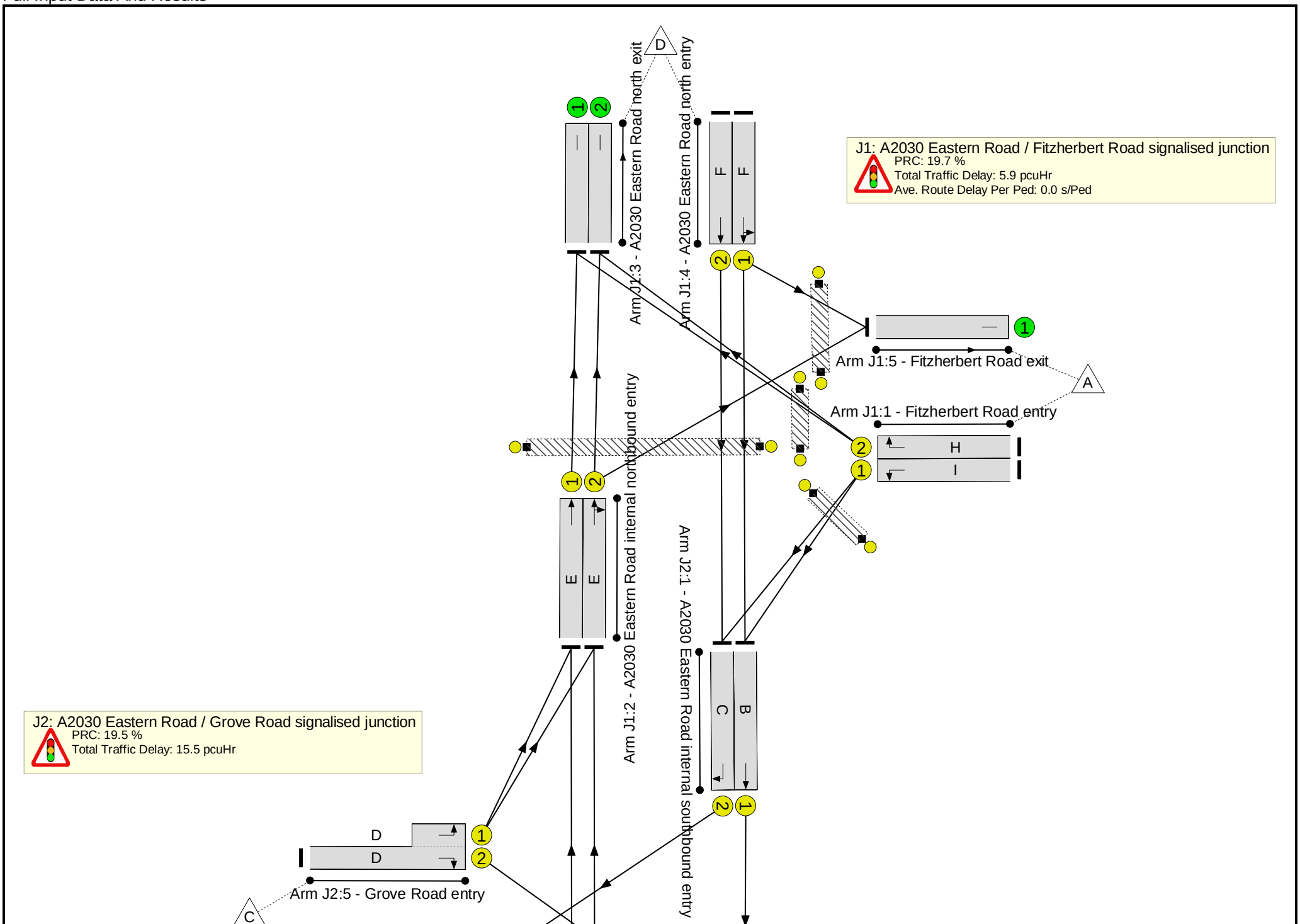
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.2%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	93	-	255	1860	1457	17.5%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	33	-	3	1747	495	0.6%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	53	-	5	1915	862	0.6%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	53	-	480	1822	820	58.5%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	6	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	15	-	192	1915	255	75.2%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	15	-	1	1915	255	0.4%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	196	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	30	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	77	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	16	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	28	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.3%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	82	-	446	1915	1325	33.7%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	14	-	2	1702	213	0.9%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	59	-	666	1768	884	75.3%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	59	-	477	1915	957	49.8%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	668	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	26	-	299	1764:1764	408	73.3%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.5**	**5.9**	**0.0**	**21.4**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**3.6**	**2.3**	**0.0**	**5.9**	**-**	**-**	**-**	**-**
1/1	255	255	-	-	-	0.2	0.1	-	0.3	4.8	2.1	0.1	2.2
1/2	3	3	-	-	-	0.0	0.0	-	0.0	34.8	0.1	0.0	0.1
2/1	5	5	-	-	-	0.0	0.0	-	0.0	28.1	0.2	0.0	0.2
2/2	480	480	-	-	-	0.7	0.7	-	1.4	10.2	11.8	0.7	12.5
3/1	6	6	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	192	192	-	-	-	2.7	1.4	-	4.1	77.3	6.1	1.4	7.6
4/2	1	1	-	[redacted]	-	0.0	0.0	-	0.0	52.6	0.0	0.0	0.0
5/1	196	196	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**11.9**	**3.6**	**0.0**	**15.5**	**-**	**-**	**-**	**-**
1/1	446	446	-	-	-	1.2	0.3	-	1.5	11.7	5.9	0.3	6.1
1/2	2	2	-	-	-	0.0	0.0	-	0.0	40.0	0.0	0.0	0.0
2/1	737	737	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	666	666	-	-	-	4.5	1.5	-	6.0	32.2	17.8	1.5	19.3
3/2	477	477	-	-	-	2.6	0.5	-	3.1	23.7	10.5	0.5	11.0
4/1	668	668	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	299	299	-	-	-	3.6	1.3	-	4.9	59.3	9.0	1.3	10.4

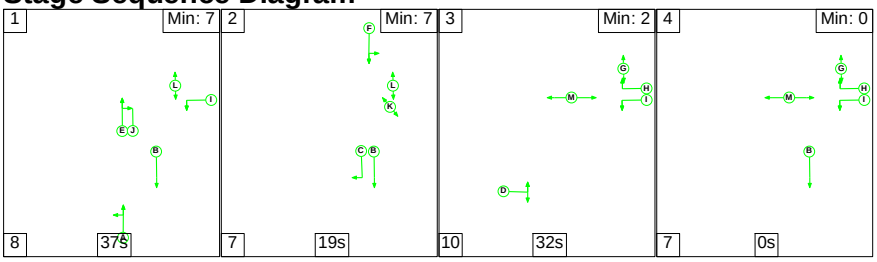
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	19.5	Total Delay for Signalled Lanes (pcuHr):	21.40	Cycle Time (s):	120
	PRC Over All Lanes (%):	19.5	Total Delay Over All Lanes(pcuHr):	21.40		

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

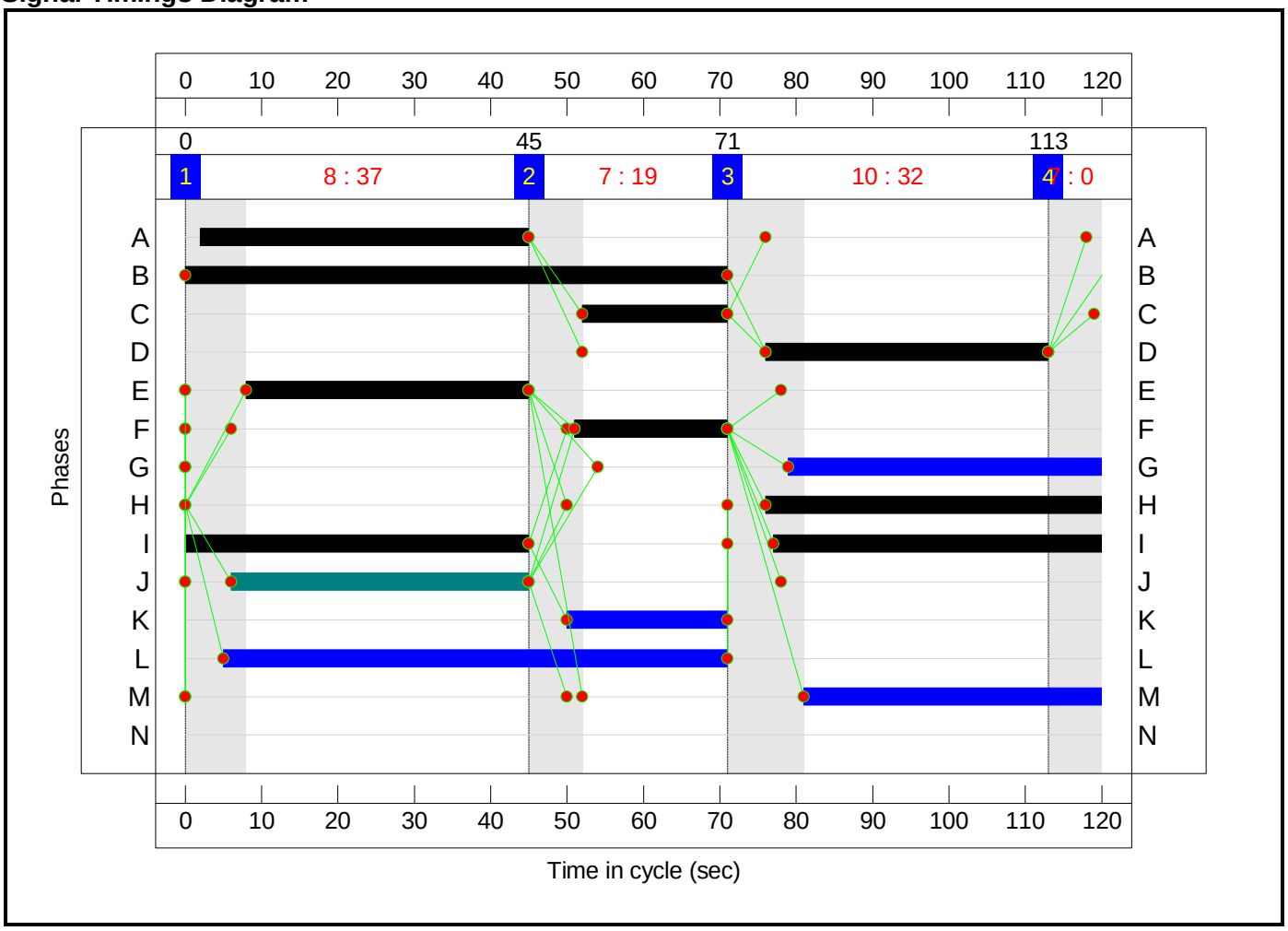
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	37	19	32	0
Change Point	0	45	71	113

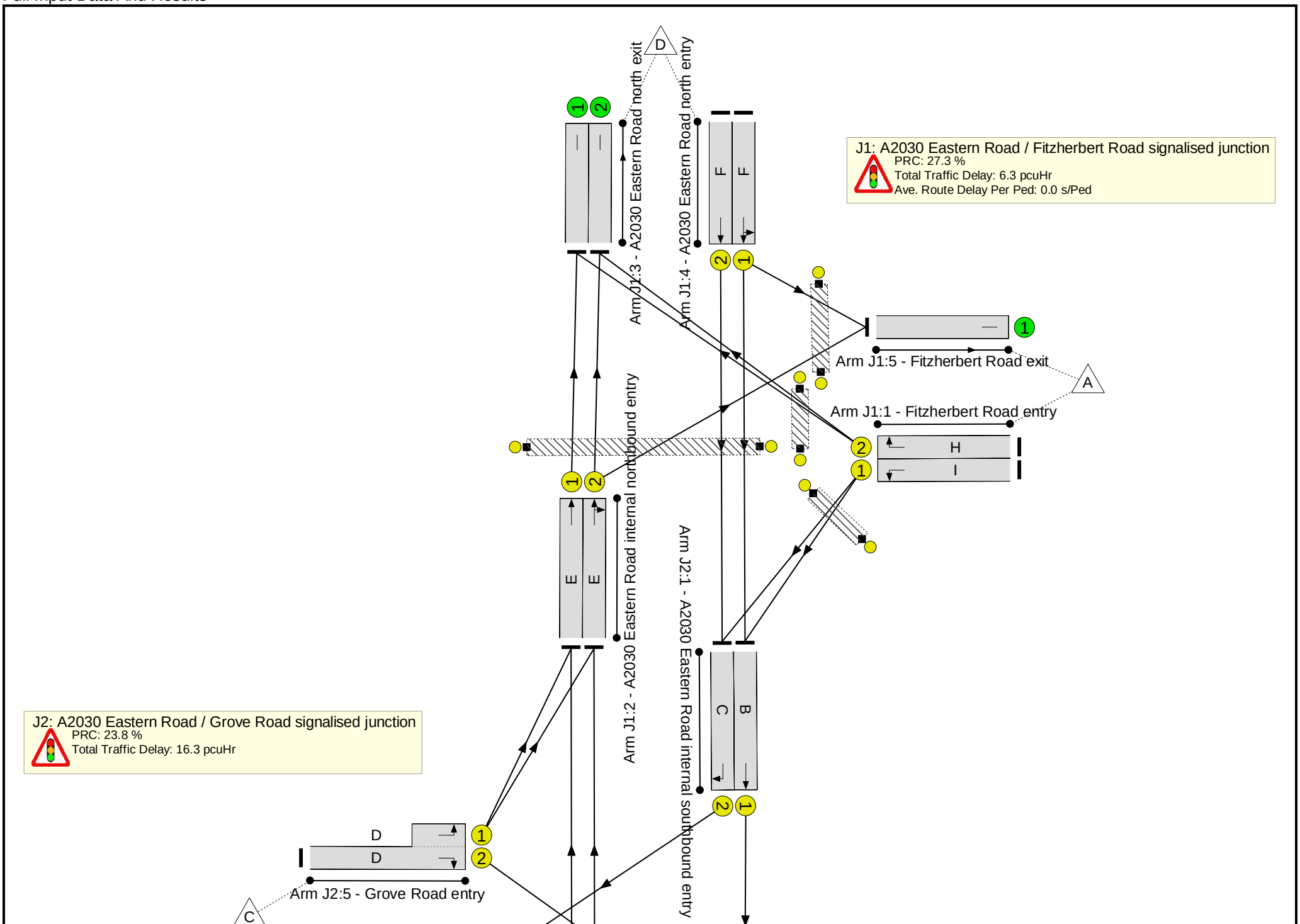
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.7%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.7%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	88	-	228	1860	1380	16.5%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	44	-	3	1747	655	0.5%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	37	-	25	1915	606	4.1%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	37	-	369	1789	567	65.1%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	26	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	163	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	20	-	237	1915	335	70.7%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	20	-	1	1915	335	0.3%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	208	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	41	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	66	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	21	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	39	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.7%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	71	-	464	1915	1149	40.4%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	19	-	2	1702	284	0.7%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	869	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	43	-	465	1774	650	71.5%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	43	-	364	1915	702	51.8%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	37	-	415	1764:1764	571	72.7%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**16.9**	**5.7**	**0.0**	**22.6**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**4.1**	**2.2**	**0.0**	**6.3**	**-**	**-**	**-**	**-**
1/1	228	228	-	-	-	0.3	0.1	-	0.4	6.1	2.2	0.1	2.3
1/2	3	3	-	-	-	0.0	0.0	-	0.0	26.5	0.1	0.0	0.1
2/1	25	25	-	-	-	0.1	0.0	-	0.1	13.2	0.2	0.0	0.2
2/2	369	369	-	-	-	0.6	0.9	-	1.6	15.2	10.5	0.9	11.4
3/1	26	26	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	163	163	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	237	237	-	-	-	3.1	1.2	-	4.2	64.5	7.4	1.2	8.6
4/2	1	1	-	-	-	0.0	0.0	-	0.0	46.6	0.0	0.0	0.0
5/1	208	208	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**12.8**	**3.4**	**0.0**	**16.3**	**-**	**-**	**-**	**-**
1/1	464	464	-	-	-	1.4	0.3	-	1.8	13.6	5.6	0.3	6.0
1/2	2	2	-	-	-	0.0	0.0	-	0.0	36.7	0.0	0.0	0.0
2/1	869	869	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	465	465	-	-	-	4.2	1.2	-	5.4	42.2	13.2	1.2	14.4
3/2	364	364	-	-	-	3.0	0.5	-	3.5	35.0	9.4	0.5	9.9
4/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	415	415	-	-	-	4.2	1.3	-	5.5	47.7	12.1	1.3	13.4

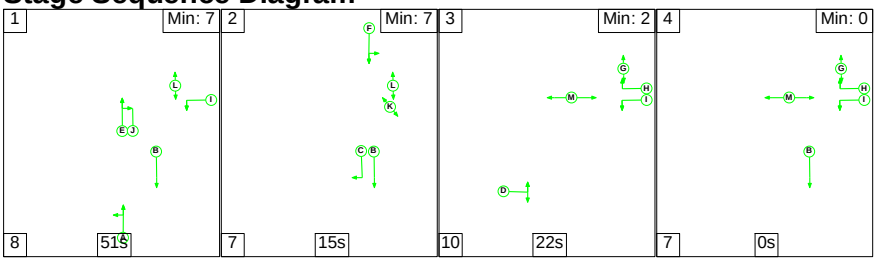
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	23.8	Total Delay for Signalled Lanes (pcuHr):	22.58	Cycle Time (s):	120
	PRC Over All Lanes (%):	23.8	Total Delay Over All Lanes(pcuHr):	22.58		

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

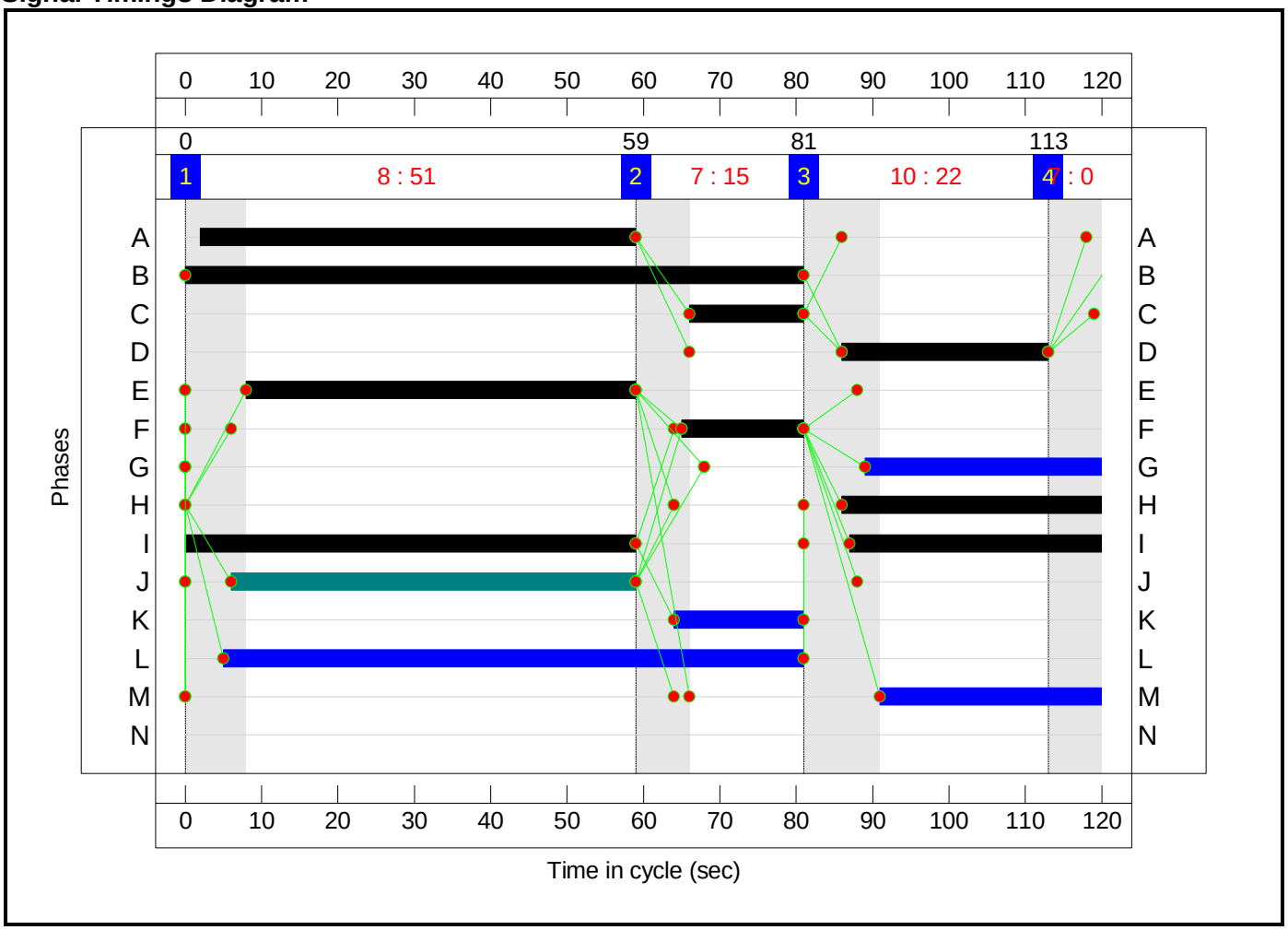
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	51	15	22	0
Change Point	0	59	81	113

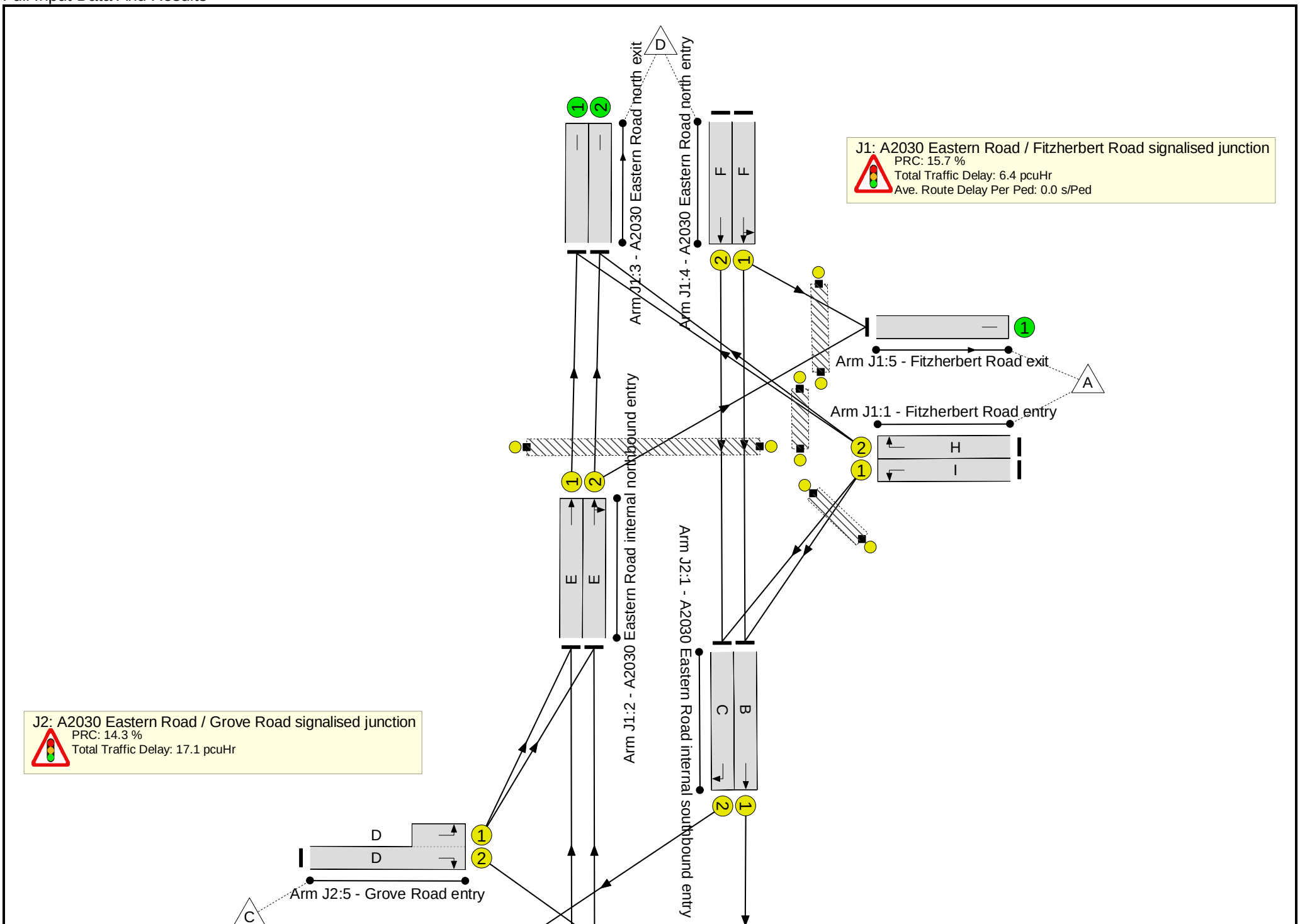
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.7%**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
1/1	Fitzherbert Road entry Left	U	N/A	N/A	I		1	92	-	255	1860	1442	17.7%
1/2	Fitzherbert Road entry Right	U	N/A	N/A	H		1	34	-	3	1747	510	0.6%
2/1	A2030 Eastern Road internal northbound entry Ahead	U	N/A	N/A	E		1	51	-	1	1915	830	0.1%
2/2	A2030 Eastern Road internal northbound entry Ahead Right	U	N/A	N/A	E		1	51	-	484	1823	790	61.3%
3/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	2	Inf	Inf	0.0%
3/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
4/1	A2030 Eastern Road north entry Left Ahead	U	N/A	N/A	F		1	16	-	211	1915	271	77.8%
4/2	A2030 Eastern Road north entry Ahead	U	N/A	N/A	F		1	16	-	1	1915	271	0.4%
5/1	Fitzherbert Road exit	U	N/A	N/A	-		-	-	-	196	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	G		1	31	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	L		1	76	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	K		1	17	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	M		1	29	-	0	-	0	0.0%

Full Input Data And Results

J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**78.7%**
1/1	A2030 Eastern Road internal southbound entry Ahead	U	N/A	N/A	B		1	81	-	465	1915	1309	35.5%
1/2	A2030 Eastern Road internal southbound entry Right	U	N/A	N/A	C		1	15	-	2	1702	227	0.9%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	789	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Ahead Left	U	N/A	N/A	A		1	57	-	663	1768	855	77.6%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	A		1	57	-	483	1915	926	52.2%
4/1	Grove Road exit	U	N/A	N/A	-		-	-	-	665	Inf	Inf	0.0%
5/2+5/1	Grove Road entry Left Right	U	N/A	N/A	D		1	27	-	326	1764:1764	414	78.7%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**16.7**	**6.9**	**0.0**	**23.6**	**-**	**-**	**-**	**-**
J1: A2030 Eastern Road / Fitzherbert Road signalised junction	**-**	**-**	**0**	**0**	**0**	**3.9**	**2.6**	**0.0**	**6.4**	**-**	**-**	**-**	**-**
1/1	255	255	-	-	-	0.2	0.1	-	0.4	5.0	2.2	0.1	2.3
1/2	3	3	-	-	-	0.0	0.0	-	0.0	34.0	0.1	0.0	0.1
2/1	1	1	-	-	-	0.0	0.0	-	0.0	28.1	0.0	0.0	0.0
2/2	484	484	-	-	-	0.7	0.8	-	1.4	10.8	12.3	0.8	13.1
3/1	2	2	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	290	290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	211	211	-	-	-	2.9	1.7	-	4.6	78.0	6.7	1.7	8.4
4/2	1	1	-	-	-	0.0	0.0	-	0.0	51.3	0.0	0.0	0.0
5/1	196	196	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Grove Road signalised junction	**-**	**-**	**0**	**0**	**0**	**12.8**	**4.3**	**0.0**	**17.1**	**-**	**-**	**-**	**-**
1/1	465	465	-	-	-	1.3	0.3	-	1.6	12.3	6.1	0.3	6.4
1/2	2	2	-	-	-	0.0	0.0	-	0.0	39.1	0.0	0.0	0.0
2/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	663	663	-	-	-	4.7	1.7	-	6.4	34.9	18.2	1.7	19.9
3/2	483	483	-	-	-	2.9	0.5	-	3.4	25.5	11.0	0.5	11.5
4/1	665	665	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	326	326	-	-	-	3.9	1.8	-	5.7	62.8	10.1	1.8	11.9

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	14.3	Total Delay for Signalled Lanes (pcuHr):	23.56	Cycle Time (s):	120
	PRC Over All Lanes (%):	14.3	Total Delay Over All Lanes(pcuHr):	23.56		

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []

Filename: A2030 Eastern Rd_Hayling Ave.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\PICADY\TA Models and Outputs
Report generation date: 29/10/2019 10:14:47

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Stream B-AC	118.4	6018.44	12.85	F	78.8	1568.04	9999999999.00	F
Stream C-AB	0.9	18.60	0.45	C	2.1	17.26	0.61	C
	EMM - DS1							
Stream B-AC	87.0	3039.90	3.09	F	47.8	713.81	1.65	F
Stream C-AB	0.6	16.81	0.37	C	0.6	13.41	0.37	B
	EML - DS2							
Stream B-AC	97.0	4760.80	4.30	F	90.8	1615.35	9999999999.00	F
Stream C-AB	0.9	17.93	0.44	C	2.6	17.62	0.65	C

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

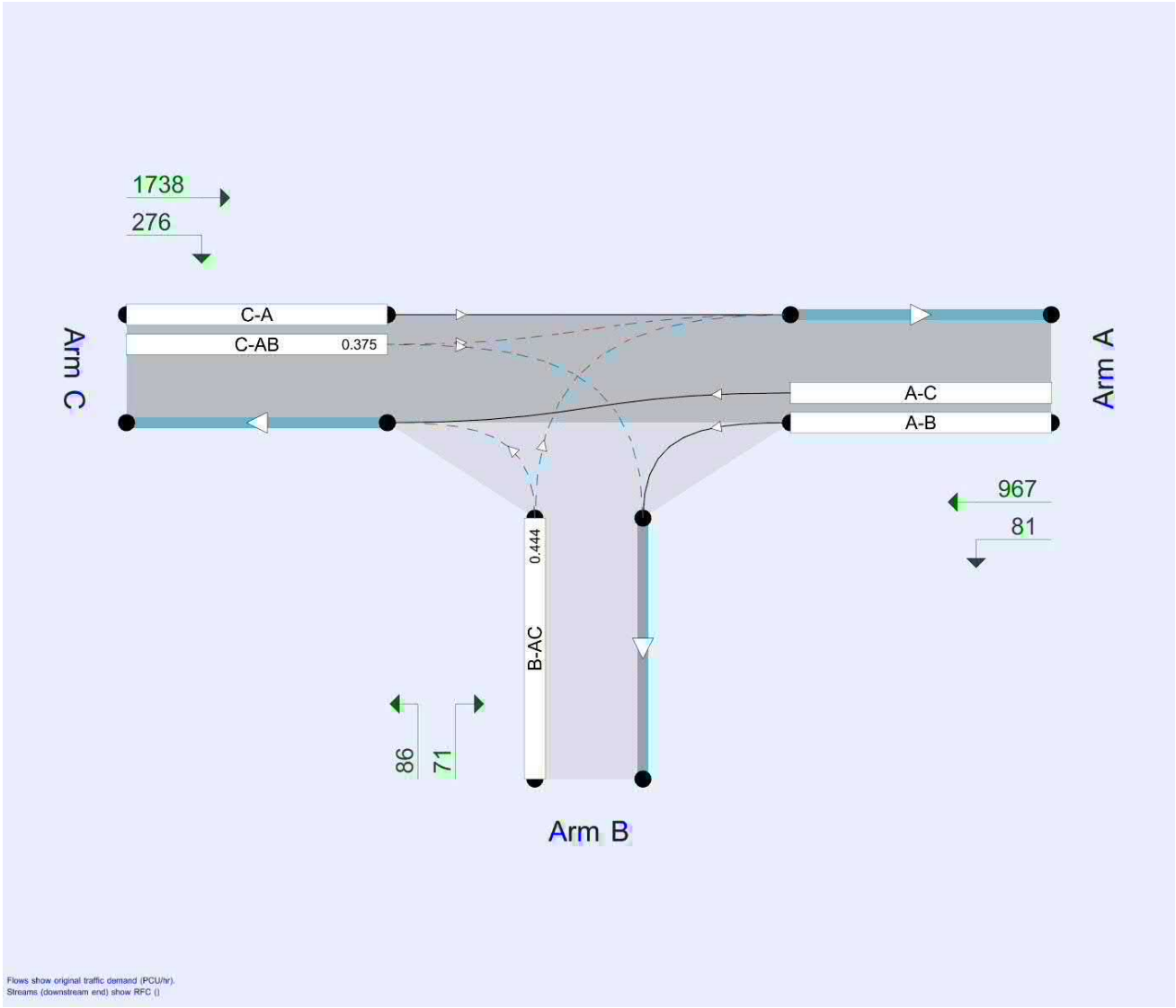
File summary

File Description

Title	A2030 Eastern Road / Hayling Avenue priority T-junction
Location	
Site number	
Date	23/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	451.25	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A2030 Eastern Road south		Major
B	Hayling Avenue		Minor
C	A2030 Eastern Road north		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.00		✓	2.50	250.0	✓	6.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.10	28	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	568	0.085	0.216	0.136	0.308
1	B-C	728	0.092	0.233	-	-
1	C-B	742	0.238	0.238	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1413	100.000
B		✓	224	100.000
C		✓	1357	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	1358
	B	73	0	151
	C	1203	154	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	12.85	6018.44	118.4	F
C-AB	0.45	18.60	0.9	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	169	317	0.532	164	1.2	25.147	D
C-AB	116	490	0.237	115	0.3	10.514	B
C-A	906			906			
A-B	41			41			
A-C	1022			1022			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	201	222	0.906	186	5.0	86.980	F
C-AB	139	442	0.314	138	0.5	12.998	B
C-A	1081			1081			
A-B	49			49			
A-C	1221			1221			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	247	21	11.965	21	61.5	6018.441	F
C-AB	178	391	0.455	176	0.9	18.325	C
C-A	1316			1316			
A-B	61			61			
A-C	1495			1495			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	247	19	12.846	19	118.4	2154.856	F
C-AB	178	391	0.455	178	0.9	18.596	C
C-A	1316			1316			
A-B	61			61			
A-C	1495			1495			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	201	221	0.910	219	114.0	1605.421	F
C-AB	139	442	0.314	141	0.5	13.200	B
C-A	1081			1081			
A-B	49			49			
A-C	1221			1221			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	169	317	0.533	314	77.7	1103.220	F
C-AB	116	490	0.237	117	0.3	10.632	B
C-A	906			906			
A-B	41			41			
A-C	1022			1022			

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	67.42	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1068	100.000
B		✓	136	100.000
C		✓	2034	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	81	987
	B	70	0	66
	C	1776	258	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	9999999999.00	1568.04	78.8	F
C-AB	0.61	17.26	2.1	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	102	245	0.419	99	0.8	26.780	D
C-AB	196	556	0.352	193	0.6	10.864	B
C-A	1335			1335			
A-B	61			61			
A-C	743			743			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	122	137	0.894	109	4.0	114.653	F
C-AB	241	535	0.451	240	0.9	13.380	B
C-A	1587			1587			
A-B	73			73			
A-C	887			887			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	150	0	9999999999.000	0	41.4	148.112	F
C-AB	368	599	0.614	363	2.0	16.668	C
C-A	1872			1872			
A-B	89			89			
A-C	1087			1087			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	150	0	9999999999.000	0	78.8	112.840	F
C-AB	368	599	0.614	367	2.1	17.260	C
C-A	1872			1872			
A-B	89			89			
A-C	1087			1087			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	122	134	0.909	133	76.2	1568.038	F
C-AB	241	535	0.451	246	1.0	13.927	B
C-A	1587			1587			
A-B	73			73			
A-C	887			887			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	102	243	0.421	240	41.9	893.144	F
C-AB	196	556	0.352	197	0.6	11.090	B
C-A	1335			1335			
A-B	61			61			
A-C	743			743			

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	238.56	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1436	100.000
B		✓	224	100.000
C		✓	1203	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	1381
	B	73	0	151
	C	1081	122	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	3.09	3039.90	87.0	F
C-AB	0.37	16.81	0.6	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	169	331	0.510	164	1.1	23.224	C
C-AB	92	486	0.189	91	0.3	10.010	B
C-A	814			814			
A-B	41			41			
A-C	1040			1040			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	201	245	0.820	191	3.6	64.208	F
C-AB	110	436	0.252	109	0.4	12.102	B
C-A	972			972			
A-B	49			49			
A-C	1241			1241			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	247	80	3.064	80	45.3	986.967	F
C-AB	136	372	0.366	135	0.6	16.671	C
C-A	1188			1188			
A-B	61			61			
A-C	1521			1521			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	247	80	3.091	80	87.0	3039.898	F
C-AB	136	372	0.366	136	0.6	16.810	C
C-A	1188			1188			
A-B	61			61			
A-C	1521			1521			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	201	245	0.822	242	76.8	1137.798	F
C-AB	110	436	0.252	111	0.4	12.214	B
C-A	972			972			
A-B	49			49			
A-C	1241			1241			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	169	330	0.510	326	37.6	637.269	F
C-AB	92	486	0.189	92	0.3	10.085	B
C-A	814			814			
A-B	41			41			
A-C	1040			1040			

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	52.83	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1080	100.000
B		✓	207	100.000
C		✓	1549	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	79	1001
	B	74	0	133
	C	1396	153	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	1.65	713.81	47.8	F
C-AB	0.37	13.41	0.6	B
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	156	359	0.435	153	0.8	18.940	C
C-AB	115	549	0.210	114	0.3	9.076	A
C-A	1051			1051			
A-B	59			59			
A-C	754			754			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	186	280	0.665	182	1.9	38.703	E
C-AB	138	513	0.269	137	0.4	10.541	B
C-A	1255			1255			
A-B	71			71			
A-C	900			900			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	228	138	1.649	135	25.2	403.742	F
C-AB	171	466	0.366	170	0.6	13.324	B
C-A	1535			1535			
A-B	87			87			
A-C	1102			1102			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	228	138	1.655	137	47.8	713.815	F
C-AB	171	466	0.366	171	0.6	13.405	B
C-A	1535			1535			
A-B	87			87			
A-C	1102			1102			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	186	279	0.667	273	26.1	471.714	F
C-AB	138	513	0.269	139	0.4	10.617	B
C-A	1255			1255			
A-B	71			71			
A-C	900			900			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	156	358	0.435	257	0.9	80.857	F
C-AB	115	549	0.210	116	0.3	9.144	A
C-A	1051			1051			
A-B	59			59			
A-C	754			754			

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	361.77	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1381	100.000
B		✓	221	100.000
C		✓	1314	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	1326
	B	73	0	148
	C	1161	153	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	4.30	4760.80	97.0	F
C-AB	0.44	17.93	0.9	C
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	166	327	0.510	162	1.1	23.511	C
C-AB	115	496	0.233	114	0.3	10.343	B
C-A	874			874			
A-B	41			41			
A-C	998			998			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	199	237	0.839	188	3.8	69.219	F
C-AB	138	449	0.307	137	0.5	12.685	B
C-A	1043			1043			
A-B	49			49			
A-C	1192			1192			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	243	58	4.215	57	50.3	1240.789	F
C-AB	175	396	0.442	173	0.9	17.693	C
C-A	1272			1272			
A-B	61			61			
A-C	1460			1460			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	243	57	4.298	57	97.0	4760.803	F
C-AB	175	396	0.442	175	0.9	17.926	C
C-A	1272			1272			
A-B	61			61			
A-C	1460			1460			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	199	236	0.842	233	88.3	1284.250	F
C-AB	138	449	0.307	140	0.5	12.861	B
C-A	1043			1043			
A-B	49			49			
A-C	1192			1192			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	166	326	0.510	322	49.4	774.218	F
C-AB	115	496	0.233	116	0.3	10.449	B
C-A	874			874			
A-B	41			41			
A-C	998			998			

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	80.56	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1048	100.000
B		✓	157	100.000
C		✓	2014	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	81	967
	B	71	0	86
	C	1738	276	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	9999999999.00	1615.35	90.8	F
C-AB	0.65	17.62	2.6	C
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	118	266	0.444	115	0.8	25.659	D
C-AB	210	561	0.375	207	0.7	11.126	B
C-A	1306			1306			
A-B	61			61			
A-C	728			728			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	141	156	0.906	127	4.4	108.281	F
C-AB	262	546	0.479	260	1.0	13.766	B
C-A	1549			1549			
A-B	73			73			
A-C	869			869			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	173	0	9999999999.000	0	47.6	167.734	F
C-AB	422	649	0.649	416	2.5	16.842	C
C-A	1796			1796			
A-B	89			89			
A-C	1065			1065			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	173	0	9999999999.000	0	90.8	131.433	F
C-AB	422	649	0.649	421	2.6	17.616	C
C-A	1796			1796			
A-B	89			89			
A-C	1065			1065			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	141	153	0.924	151	88.4	1615.353	F
C-AB	262	546	0.479	268	1.1	14.512	B
C-A	1549			1549			
A-B	73			73			
A-C	869			869			

18:00 - 18:15

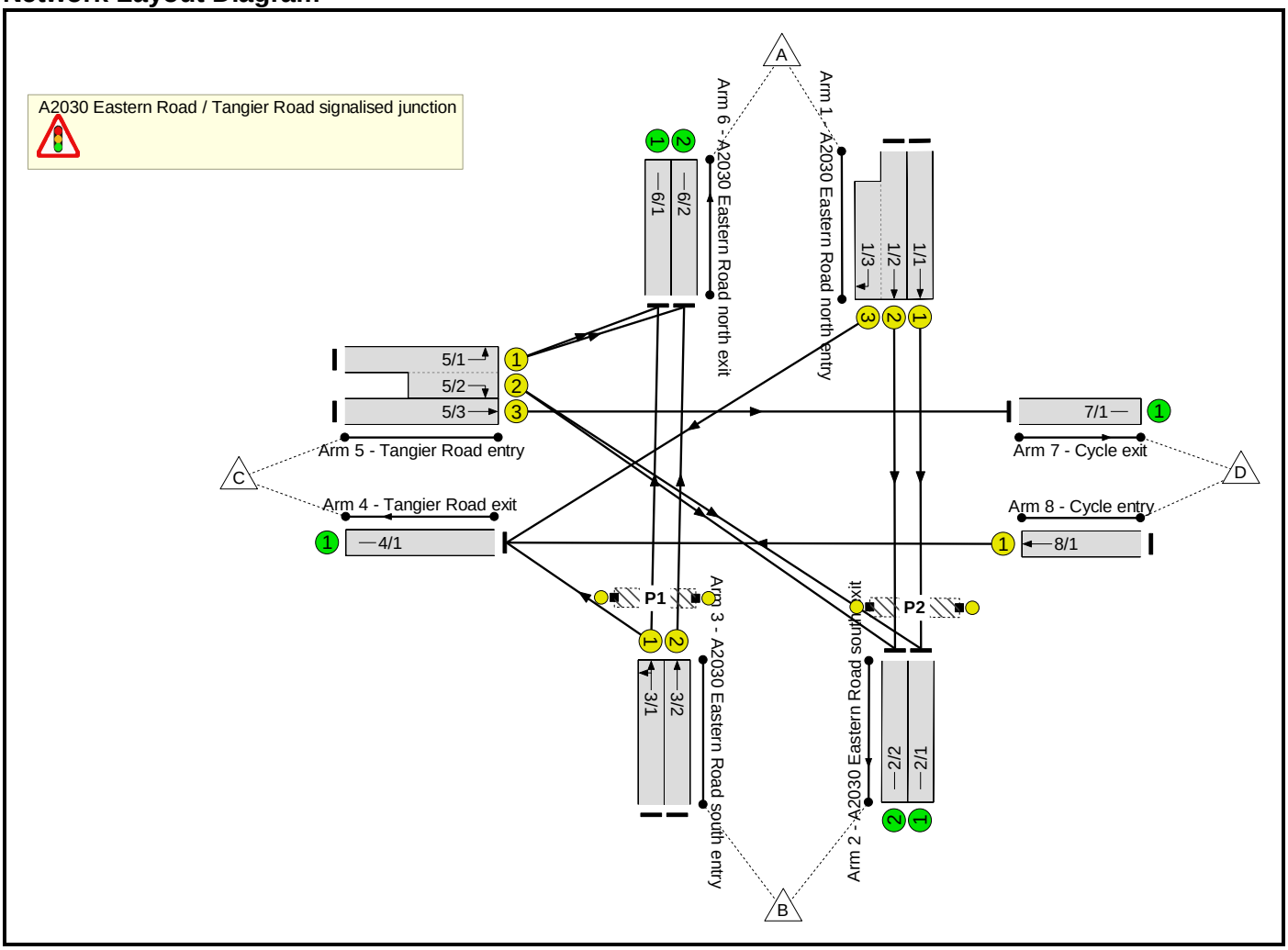
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	118	265	0.447	261	52.6	975.231	F
C-AB	210	561	0.375	212	0.7	11.396	B
C-A	1306			1306			
A-B	61			61			
A-C	728			728			

Full Input Data And Results

User and Project Details

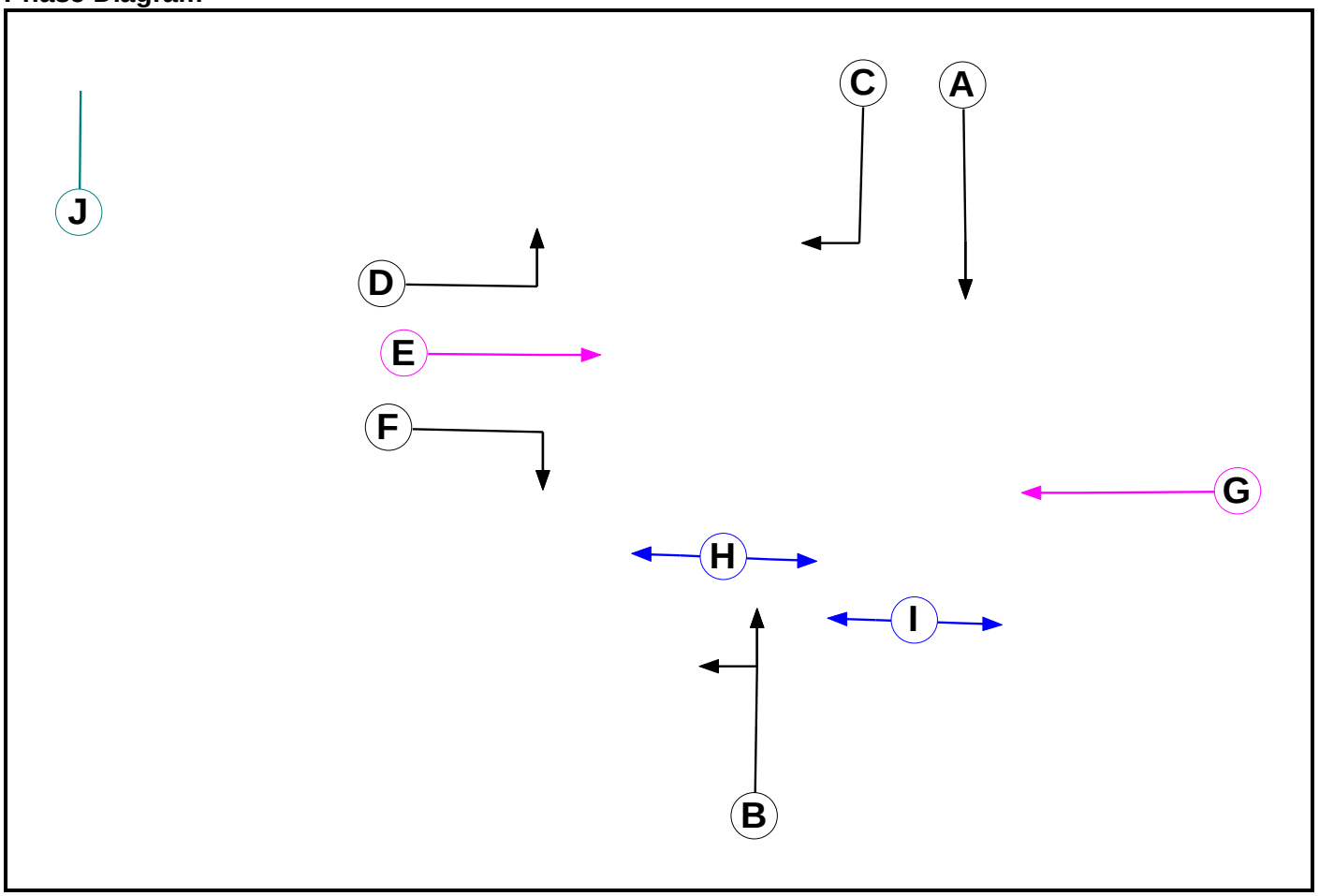
Project:	
Title:	**A2030 Eastern Road / Tangier Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Eastern Rd_Tangier Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Cycle		7	7
F	Traffic		7	7
G	Cycle		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7
J	Dummy		3	3

Full Input Data And Results

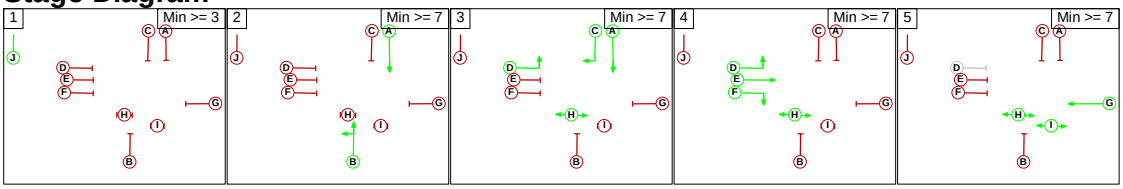
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	-	7	7	7	-	9	3
B	-		7	7	7	7	7	5	-	3
C	-	7		-	8	8	8	-	-	3
D	-	6	-		-	-	-	-	-	3
E	8	8	8	-		-	8	-	-	3
F	8	8	8	-	-		8	-	10	3
G	8	8	8	-	8	8		-	-	3
H	-	8	-	-	-	-	-		-	3
I	8	-	-	-	-	8	-	-		3
J	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	J
2	A B
3	A C D H
4	D E F H
5	G H I

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		2	2	2	2
2	3		7	7	9
3	3	8		8	9
4	3	8	8		10
5	3	8	8	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A2030 Eastern Road / Tangier Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	Inf
1/2 (A2030 Eastern Road north entry)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	Inf
1/3 (A2030 Eastern Road north entry)	U	C	2	3	14.8	Geom	-	3.50	0.00	Y	Arm 4 Right	12.00
2/1 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (A2030 Eastern Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A2030 Eastern Road south entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Left	12.00
											Arm 6 Ahead	Inf
3/2 (A2030 Eastern Road south entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
4/1 (Tangier Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Tangier Road entry)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Left	10.00
5/2 (Tangier Road entry)	U	F	2	3	5.2	Geom	-	3.50	0.00	Y	Arm 2 Right	10.00
5/3 (Tangier Road entry)	U	E	2	3	17.4	Geom	-	2.00	0.00	Y	Arm 7 Ahead	Inf
6/1 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (A2030 Eastern Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Cycle exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Cycle entry)	U	G	2	3	60.0	Geom	-	2.00	0.00	Y	Arm 4 Ahead	Inf

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1354	42	0	1396
	B	1506	0	9	0	1515
	C	131	3	0	0	134
	D	0	0	0	0	0
	Tot.	1637	1357	51	0	3045

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	680
1/2 (with short)	716(In) 674(Out)
1/3 (short)	42
2/1	682
2/2	675
3/1	757
3/2	758
4/1	51
5/1 (with short)	134(In) 131(Out)
5/2 (short)	3
5/3	0
6/1	814
6/2	823
7/1	0
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.2 %	1962	1962
				Arm 6 Ahead	Inf	98.8 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	2031	208	0	2239
	B	1051	0	9	0	1060
	C	189	3	0	0	192
	D	0	0	0	0	0
	Tot.	1240	2034	217	0	3491

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	1061
1/2 (with short)	1178(In) 970(Out)
1/3 (short)	208
2/1	1063
2/2	971
3/1	529
3/2	531
4/1	217
5/1 (with short)	192(In) 189(Out)
5/2 (short)	3
5/3	0
6/1	615
6/2	625
7/1	0
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.7 %	1961	1961
				Arm 6 Ahead	Inf	98.3 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1200	35	0	1235
	B	1529	0	9	0	1538
	C	144	3	0	0	147
	D	0	0	0	0	0
	Tot.	1673	1203	44	0	2920

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	602
1/2 (with short)	633(In) 598(Out)
1/3 (short)	35
2/1	604
2/2	599
3/1	768
3/2	770
4/1	44
5/1 (with short)	147(In) 144(Out)
5/2 (short)	3
5/3	0
6/1	831
6/2	842
7/1	0
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.2 %	1962	1962
				Arm 6 Ahead	Inf	98.8 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1546	57	0	1603
	B	1131	0	9	0	1140
	C	97	3	0	0	100
	D	0	0	0	0	0
	Tot.	1228	1549	66	0	2843

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	768
1/2 (with short)	835(In) 778(Out)
1/3 (short)	57
2/1	770
2/2	779
3/1	569
3/2	571
4/1	66
5/1 (with short)	100(In) 97(Out)
5/2 (short)	3
5/3	0
6/1	609
6/2	619
7/1	0
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.6 %	1961	1961
				Arm 6 Ahead	Inf	98.4 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1311	41	0	1352
	B	1472	0	9	0	1481
	C	64	3	0	0	67
	D	0	0	0	0	0
	Tot.	1536	1314	50	0	2900

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	658
1/2 (with short)	694(In) 653(Out)
1/3 (short)	41
2/1	660
2/2	654
3/1	740
3/2	741
4/1	50
5/1 (with short)	67(In) 64(Out)
5/2 (short)	3
5/3	0
6/1	763
6/2	773
7/1	0
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.2 %	1962	1962
				Arm 6 Ahead	Inf	98.8 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	2011	193	0	2204
	B	1050	0	9	0	1059
	C	138	3	0	0	141
	D	0	0	0	0	0
	Tot.	1188	2014	202	0	3404

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A2030 Eastern Road / Tangier Road signalised junction	
1/1	1046
1/2 (with short)	1158(In) 965(Out)
1/3 (short)	193
2/1	1048
2/2	966
3/1	529
3/2	530
4/1	202
5/1 (with short)	141(In) 138(Out)
5/2 (short)	3
5/3	0
6/1	589
6/2	599
7/1	0
8/1	0

Full Input Data And Results

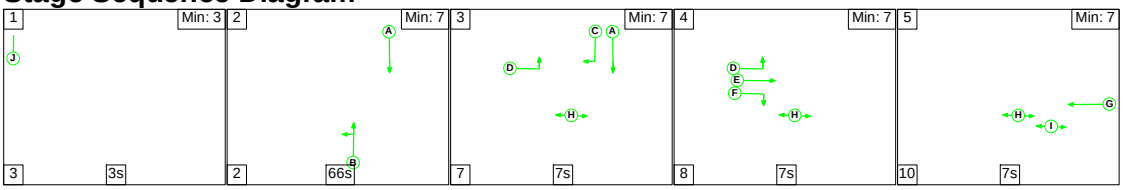
Lane Saturation Flows

Junction: A2030 Eastern Road / Tangier Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/2 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1965	1965
1/3 (A2030 Eastern Road north entry)	3.50	0.00	Y	Arm 4 Right	12.00	100.0 %	1747	1747
2/1 (A2030 Eastern Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (A2030 Eastern Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 4 Left	12.00	1.7 %	1961	1961
				Arm 6 Ahead	Inf	98.3 %		
3/2 (A2030 Eastern Road south entry)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
4/1 (Tangier Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Tangier Road entry)	3.50	0.00	Y	Arm 6 Left	10.00	100.0 %	1709	1709
5/2 (Tangier Road entry)	3.50	0.00	Y	Arm 2 Right	10.00	100.0 %	1709	1709
5/3 (Tangier Road entry)	2.00	0.00	Y	Arm 7 Ahead	Inf	0.0 %	1815	1815
6/1 (A2030 Eastern Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (A2030 Eastern Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Cycle exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Cycle entry)	2.00	0.00	Y	Arm 4 Ahead	Inf	0.0 %	1815	1815

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

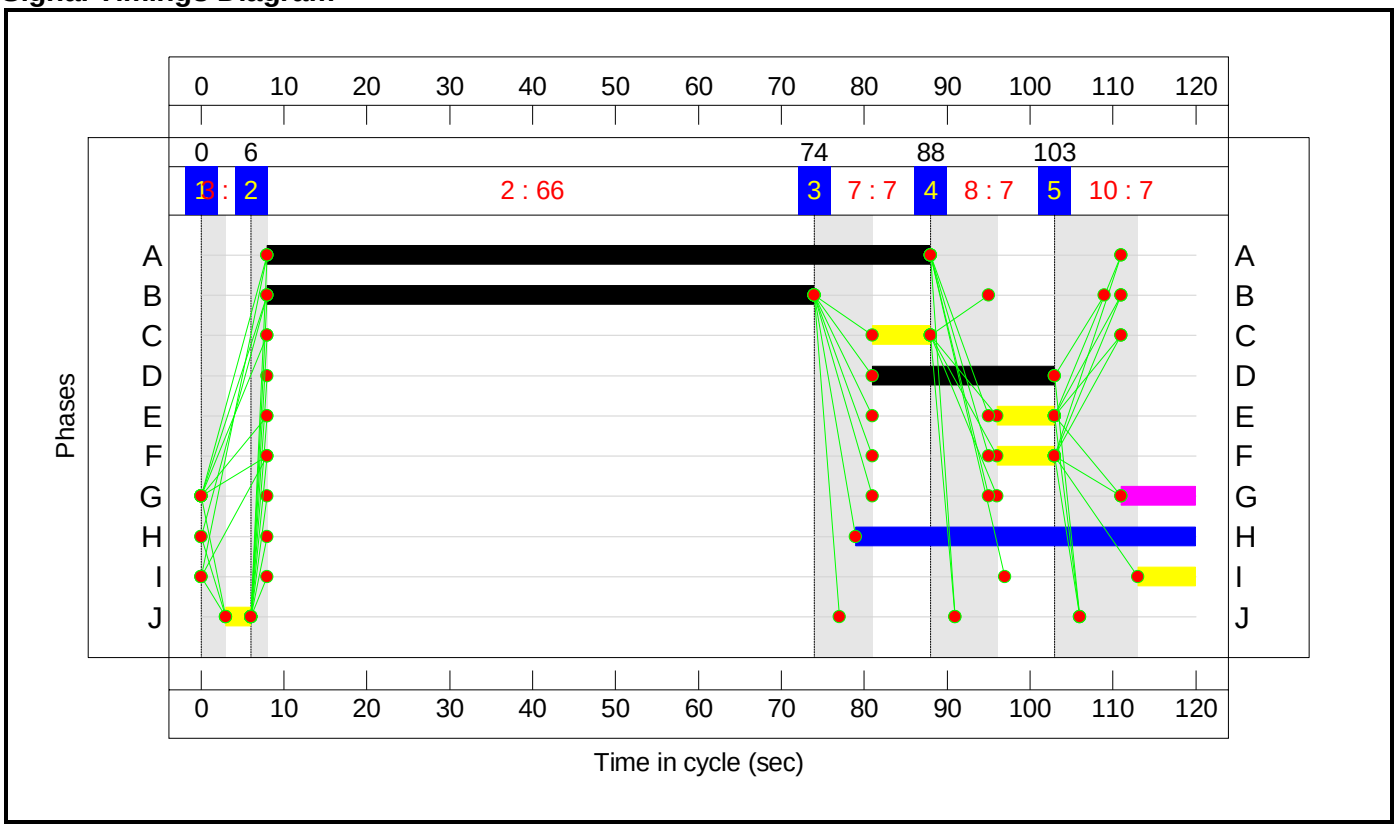


Full Input Data And Results

Stage Timings

Stage	1	2	3	4	5
Duration	3	66	7	7	7
Change Point	0	6	74	88	103

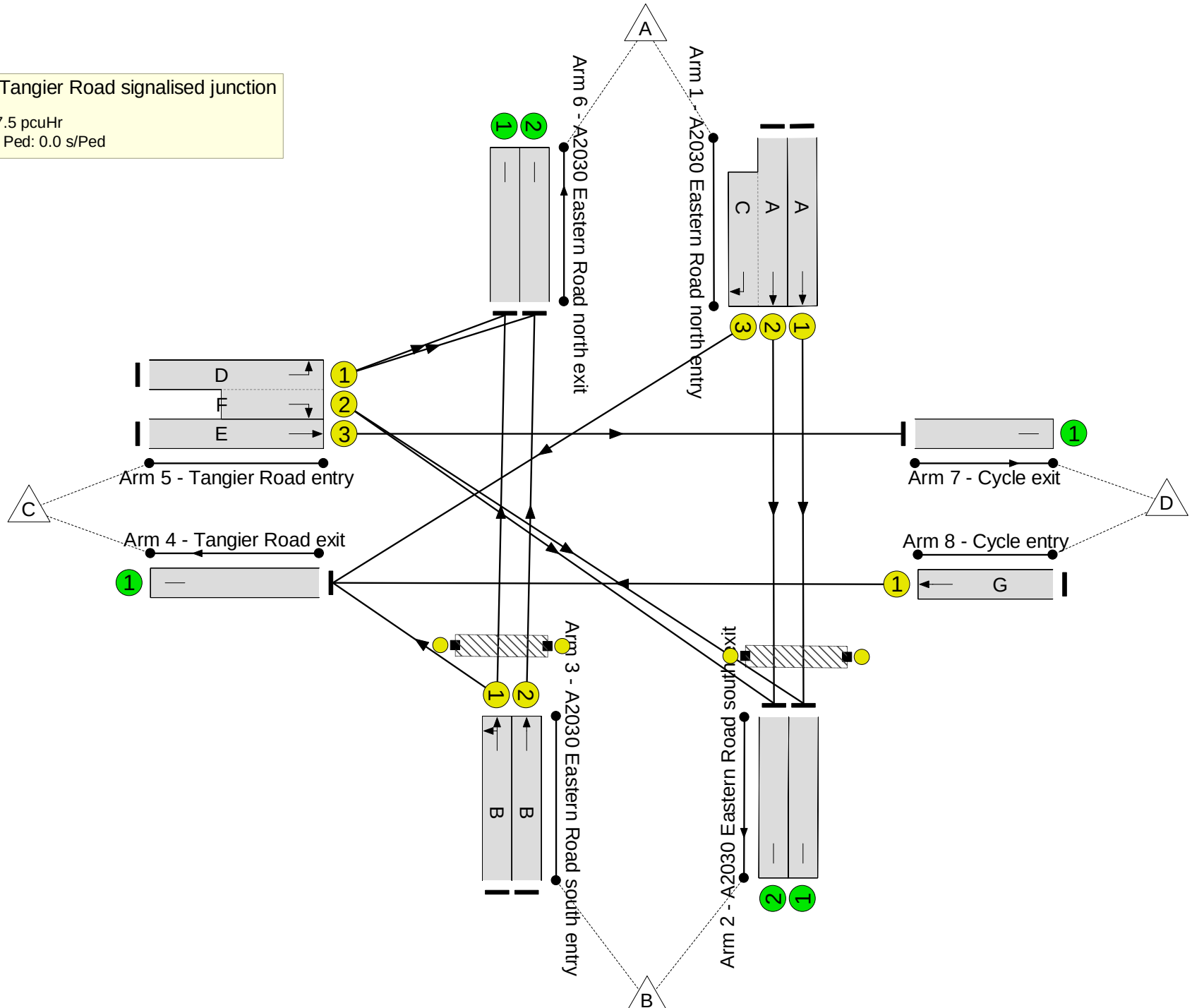
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction
PRC: 30.2 %
Total Traffic Delay: 17.5 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.1%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.1%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	680	1965	1326	51.3%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:7	-	716	1965:1747	1353	52.9%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	675	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	66	-	757	1962	1095	69.1%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	66	-	758	1965	1097	69.1%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	22:7	-	134	1709:1709	328	40.9%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	814	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	823	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	41	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

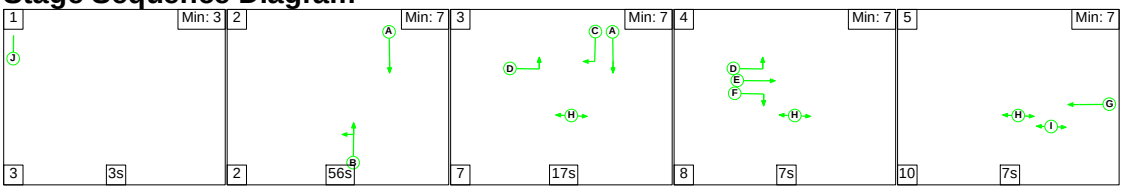
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.9**	**3.7**	**0.0**	**17.5**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**13.9**	**3.7**	**0.0**	**17.5**	**-**	**-**	**-**	**-**
1/1	680	680	-	-	-	1.8	0.5	-	2.4	12.5	11.1	0.5	11.7
1/2+1/3	716	716	-	-	-	2.4	0.6	-	3.0	15.0	11.0	0.6	11.6
2/1	682	682	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	675	675	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	757	757	-	-	-	4.0	1.1	-	5.1	24.3	18.1	1.1	19.2
3/2	758	758	-	-	-	4.0	1.1	-	5.1	24.3	18.1	1.1	19.2
4/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	134	134	-	-	-	1.6	0.3	-	1.9	52.0	3.8	0.3	4.2
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	814	814	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 30.2 Total Delay for Signalled Lanes (pcuHr): 17.52 Cycle Time (s): 120
PRC Over All Lanes (%): 30.2 Total Delay Over All Lanes(pcuHr): 17.52

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

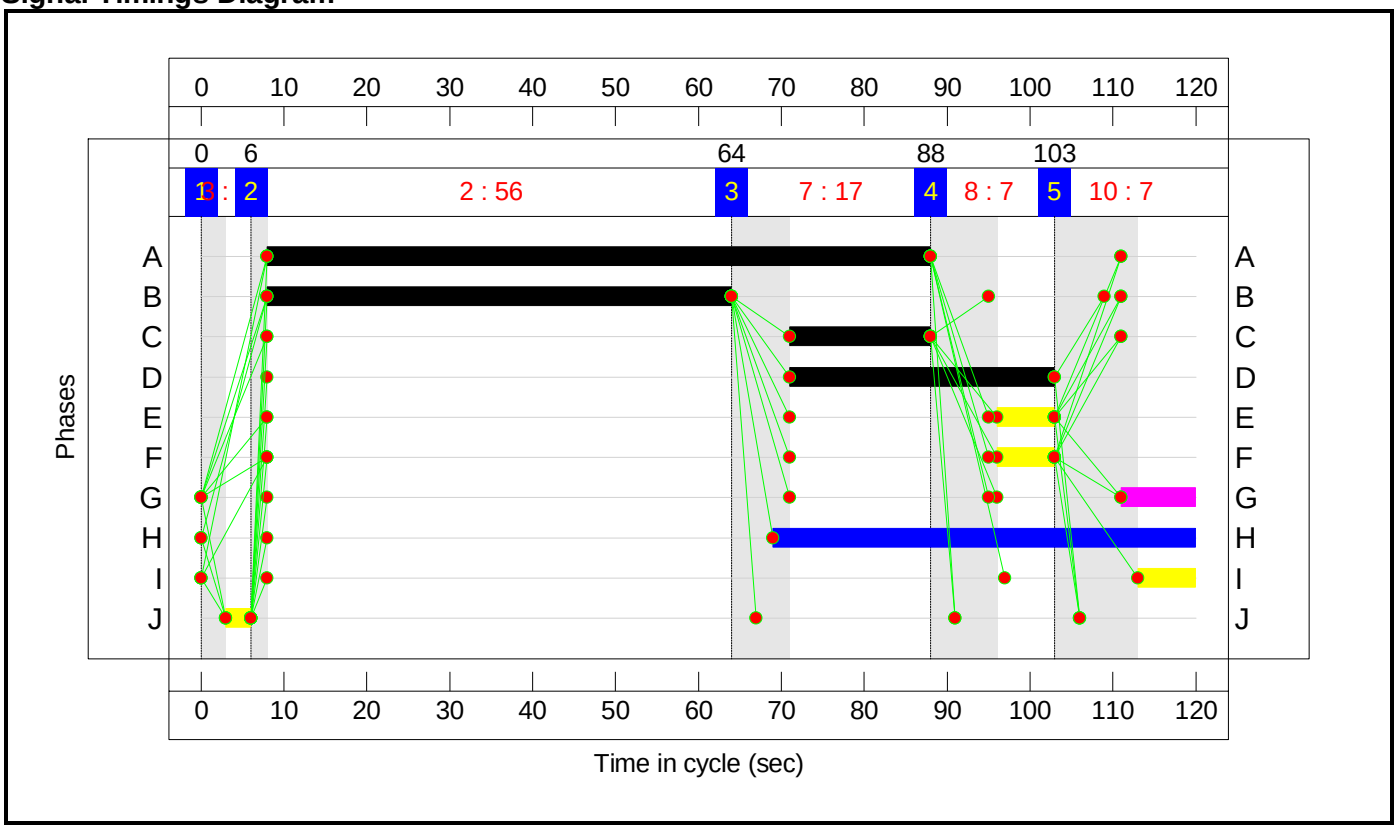
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	3	56	17	7	7
Change Point	0	6	64	88	103

Signal Timings Diagram



Full Input Data And Results

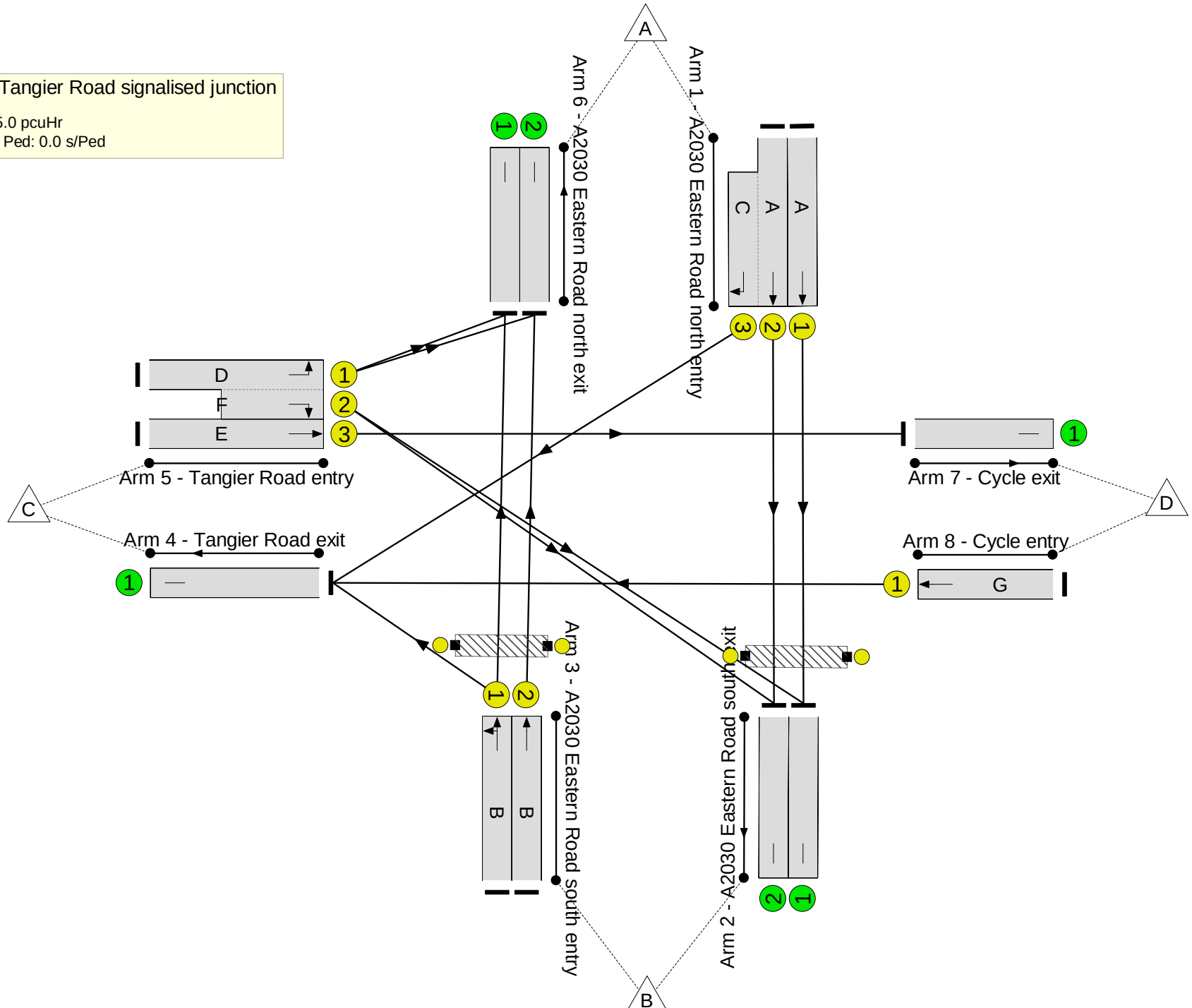
Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction

PRC: 7.6 %

Total Traffic Delay: 25.0 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.7%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.7%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	1061	1965	1326	80.0%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:17	-	1178	1965:1747	1408	83.7%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1063	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	56	-	529	1961	931	56.8%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	56	-	531	1965	933	56.9%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	217	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	32:7	-	192	1709:1709	469	40.9%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	625	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	51	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**18.9**	**6.1**	**0.0**	**25.0**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**18.9**	**6.1**	**0.0**	**25.0**	**-**	**-**	**-**	**-**
1/1	1061	1061	-	-	-	4.1	2.0	-	6.0	20.5	24.8	2.0	26.7
1/2+1/3	1178	1178	-	-	-	6.3	2.5	-	8.8	26.8	24.0	2.5	26.5
2/1	1063	1063	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	529	529	-	-	-	3.3	0.7	-	4.0	27.1	12.6	0.7	13.3
3/2	531	531	-	-	-	3.3	0.7	-	4.0	27.1	12.7	0.7	13.3
4/1	217	217	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	192	192	-	-	-	1.9	0.3	-	2.3	42.2	5.1	0.3	5.4
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1

PRC for Signalled Lanes (%): 7.6
PRC Over All Lanes (%): 7.6

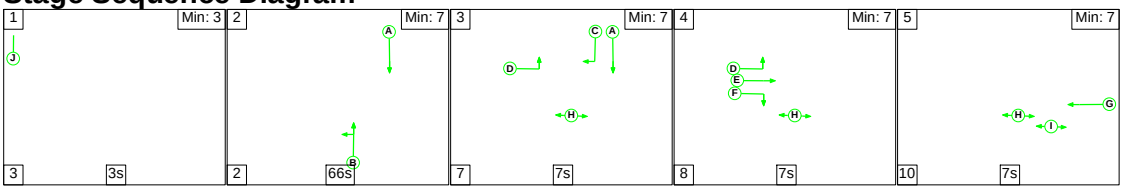
Total Delay for Signalled Lanes (pcuHr): 25.05
Total Delay Over All Lanes(pcuHr): 25.05

Cycle Time (s): 120

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

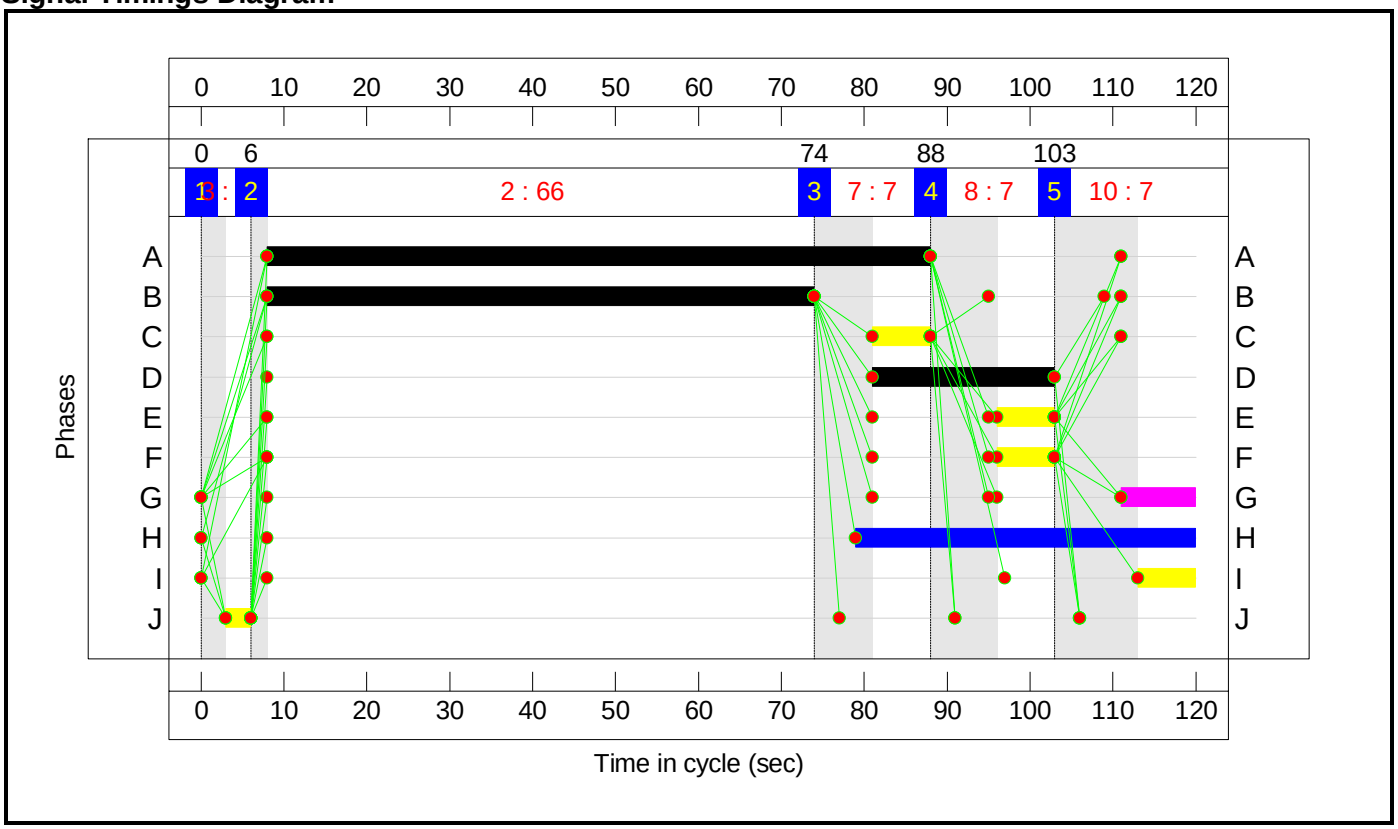
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	3	66	7	7	7
Change Point	0	6	74	88	103

Signal Timings Diagram



Full Input Data And Results

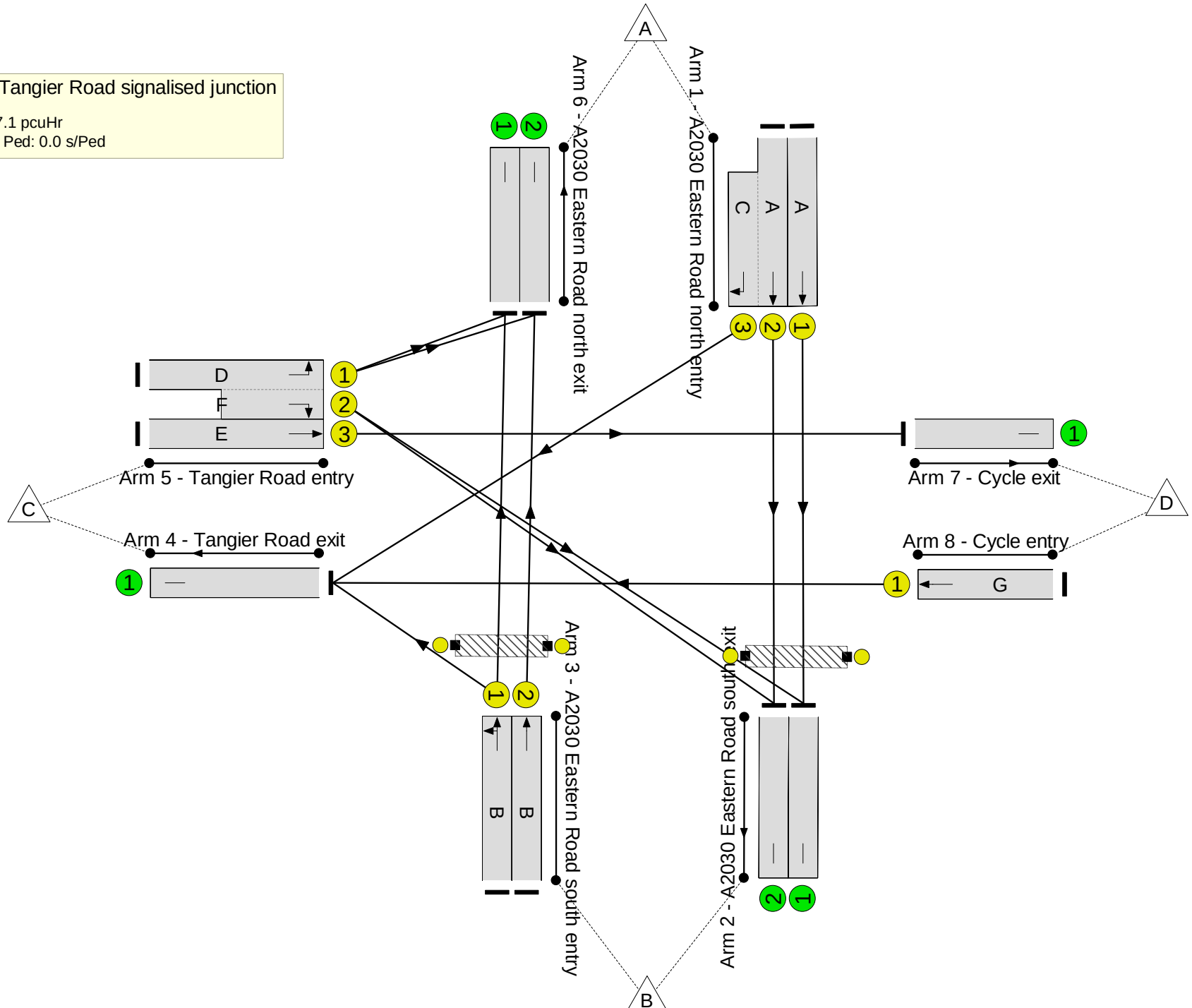
Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction

PRC: 28.2 %

Total Traffic Delay: 17.1 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.2%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.2%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	602	1965	1326	45.4%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:7	-	633	1965:1747	1352	46.8%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	66	-	768	1962	1095	70.1%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	66	-	770	1965	1097	70.2%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	22:7	-	147	1709:1709	327	44.9%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	831	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	842	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	41	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

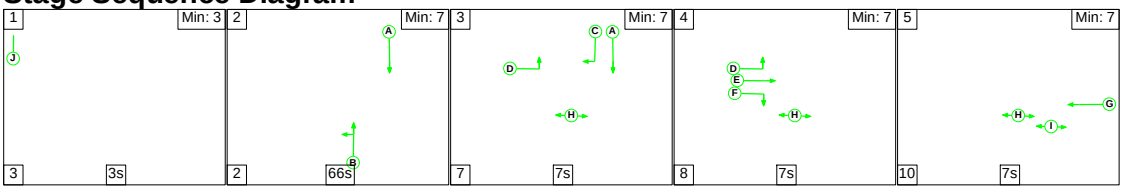
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.5**	**3.6**	**0.0**	**17.1**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**13.5**	**3.6**	**0.0**	**17.1**	**-**	**-**	**-**	**-**
1/1	602	602	-	-	-	1.5	0.4	-	1.9	11.6	9.4	0.4	9.8
1/2+1/3	633	633	-	-	-	2.0	0.4	-	2.5	14.1	9.3	0.4	9.7
2/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	768	768	-	-	-	4.1	1.2	-	5.3	24.7	18.6	1.2	19.7
3/2	770	770	-	-	-	4.1	1.2	-	5.3	24.7	18.6	1.2	19.8
4/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	147	147	-	-	-	1.8	0.4	-	2.2	53.0	4.2	0.4	4.6
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	831	831	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	842	842	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 28.2 Total Delay for Signalled Lanes (pcuHr): 17.13 Cycle Time (s): 120
PRC Over All Lanes (%): 28.2 Total Delay Over All Lanes(pcuHr): 17.13

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

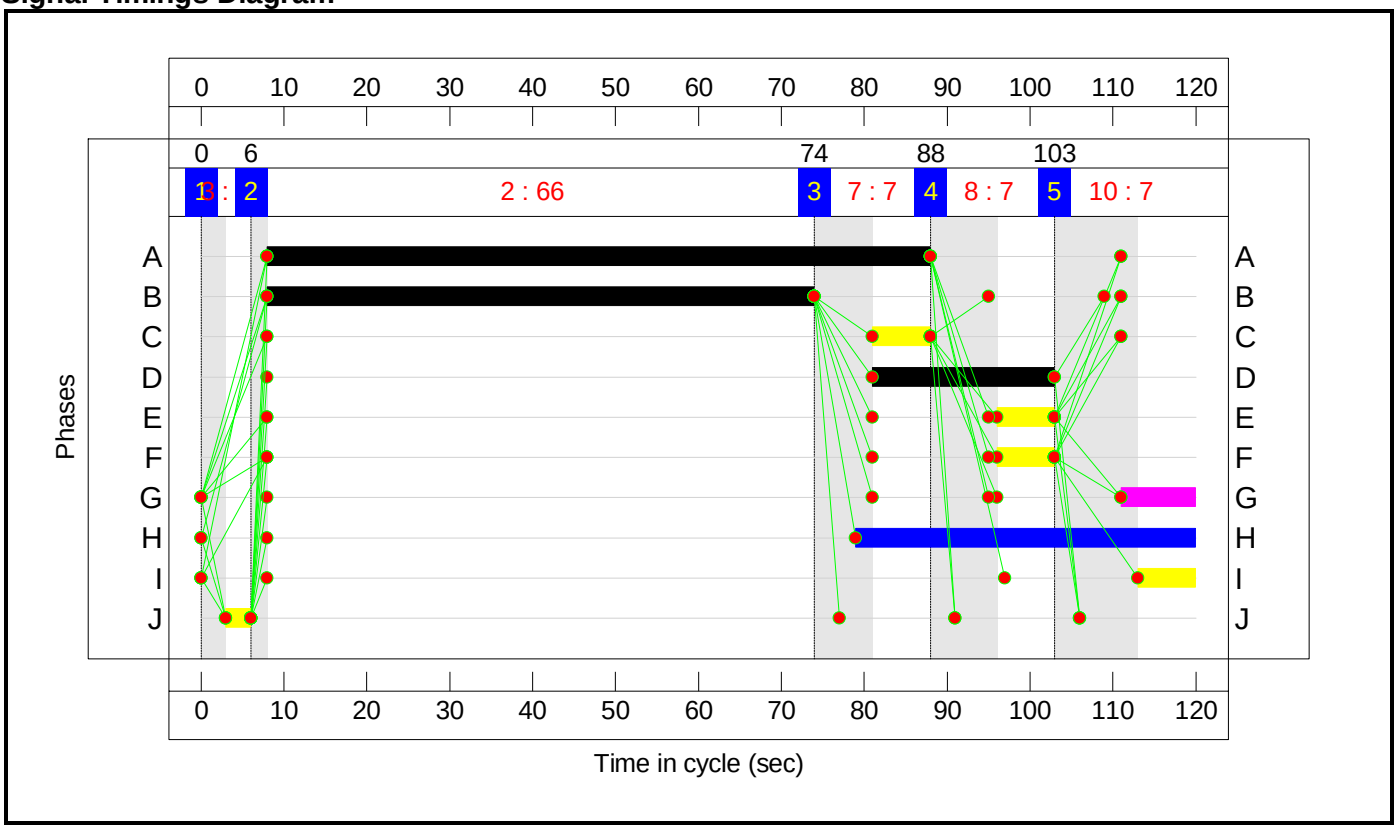
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	3	66	7	7	7
Change Point	0	6	74	88	103

Signal Timings Diagram



Full Input Data And Results

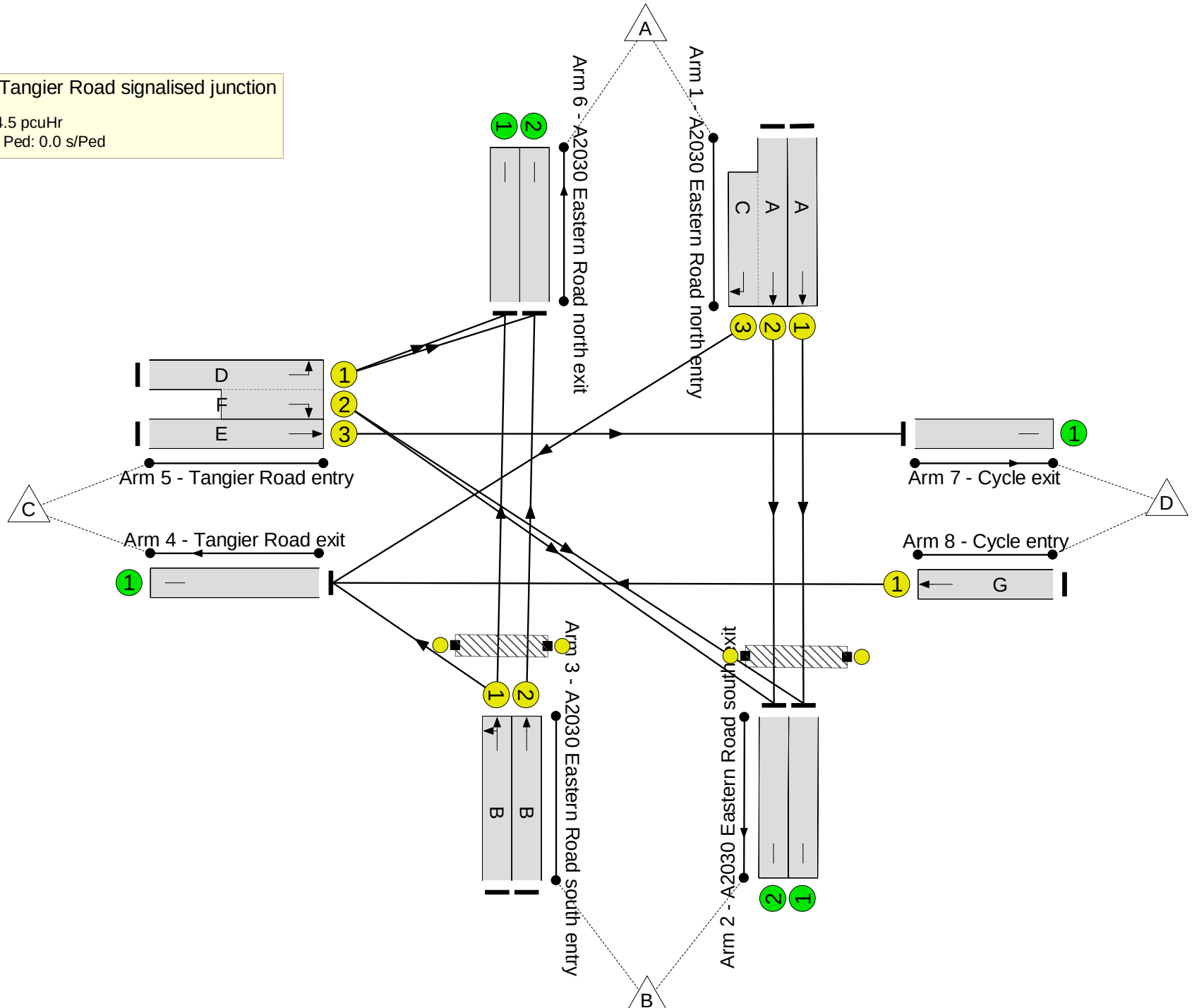
Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction

PRC: 46.2 %

Total Traffic Delay: 14.5 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.5%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.5%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	768	1965	1326	57.9%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:7	-	835	1965:1747	1357	61.5%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	770	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	779	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	66	-	569	1961	1095	52.0%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	66	-	571	1965	1097	52.0%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	66	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	22:7	-	100	1709:1709	329	30.4%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	609	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	619	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	41	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

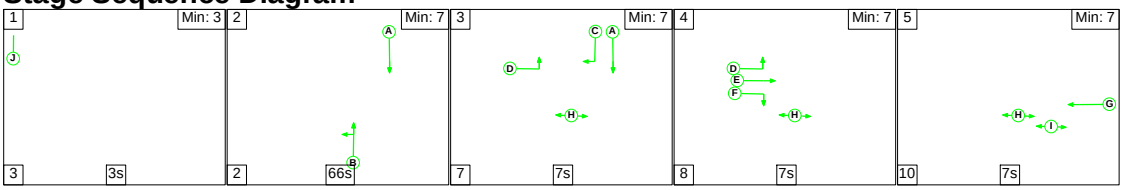
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.7**	**2.8**	**0.0**	**14.5**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**11.7**	**2.8**	**0.0**	**14.5**	**-**	**-**	**-**	**-**
1/1	768	768	-	-	-	2.2	0.7	-	2.9	13.6	13.7	0.7	14.3
1/2+1/3	835	835	-	-	-	3.1	0.8	-	3.9	16.9	13.8	0.8	14.6
2/1	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	779	779	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	569	569	-	-	-	2.6	0.5	-	3.1	19.9	11.7	0.5	12.2
3/2	571	571	-	-	-	2.6	0.5	-	3.2	19.9	11.7	0.5	12.3
4/1	66	66	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	100	100	-	-	-	1.2	0.2	-	1.4	49.8	2.7	0.2	3.0
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	609	609	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	619	619	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 46.2 Total Delay for Signalled Lanes (pcuHr): 14.51 Cycle Time (s): 120
PRC Over All Lanes (%): 46.2 Total Delay Over All Lanes(pcuHr): 14.51

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

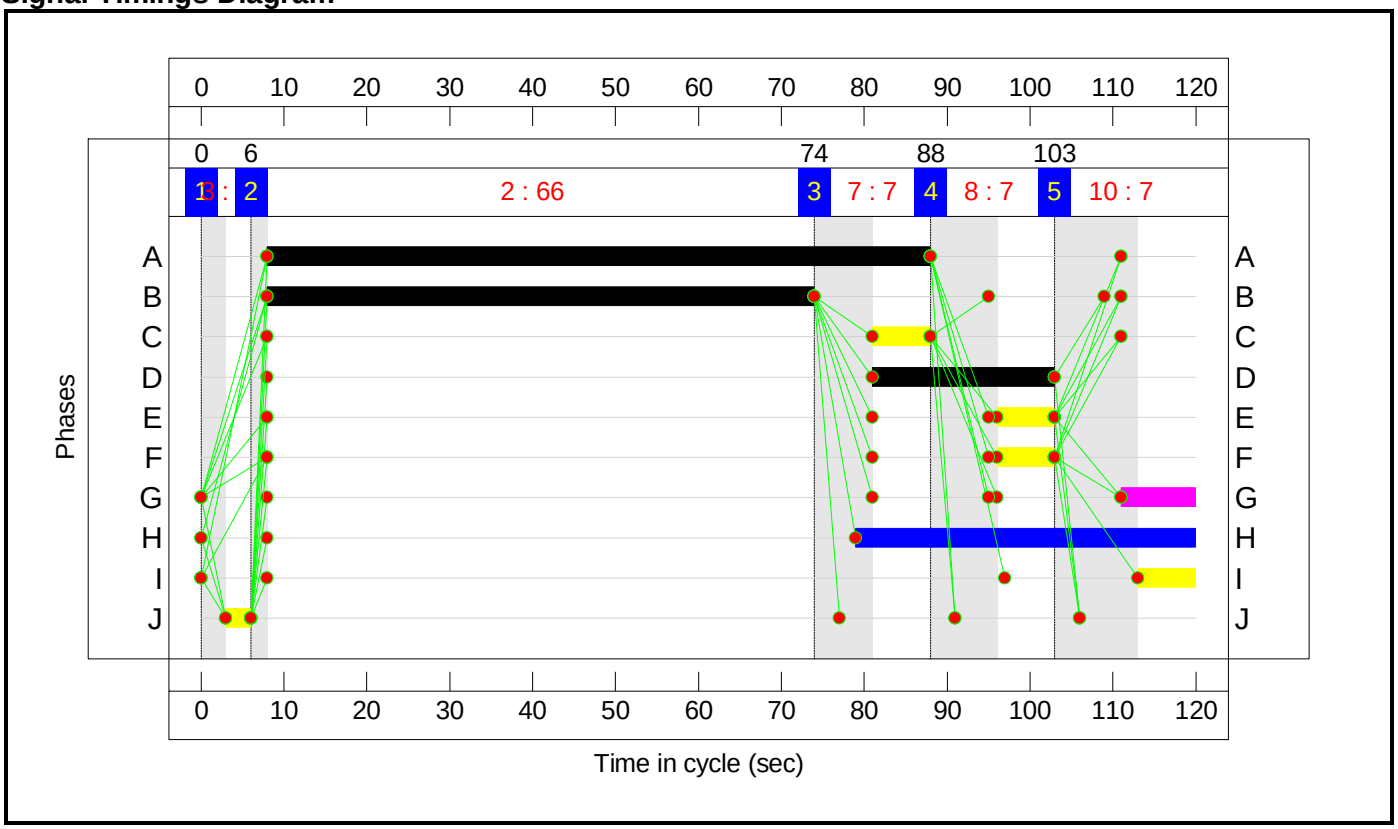
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	3	66	7	7	7
Change Point	0	6	74	88	103

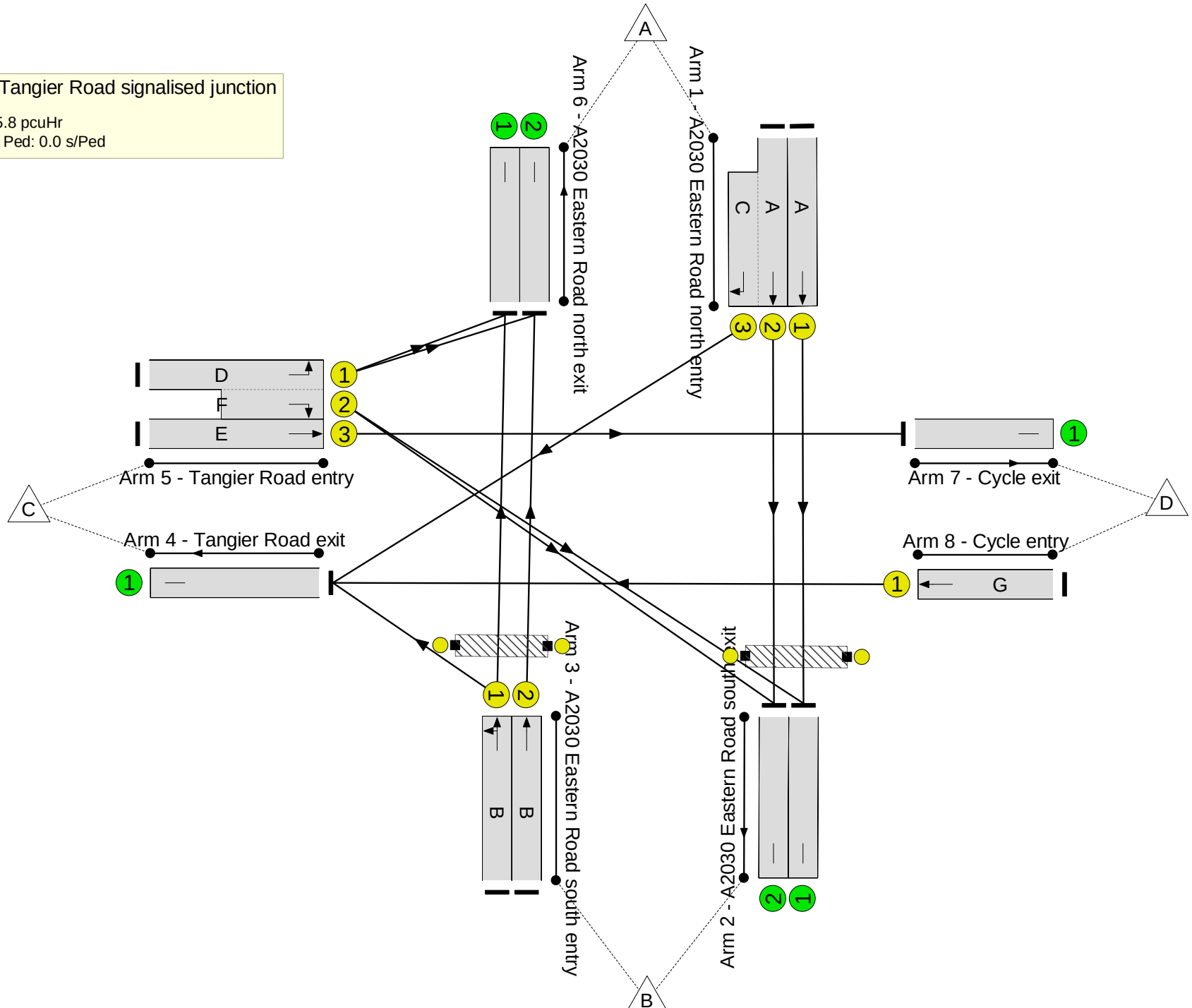
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction
PRC: 33.2 %
Total Traffic Delay: 15.8 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	658	1965	1326	49.6%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:7	-	694	1965:1747	1353	51.3%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	654	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	66	-	740	1962	1095	67.6%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	66	-	741	1965	1097	67.5%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	50	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	22:7	-	67	1709:1709	331	20.2%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	773	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	41	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

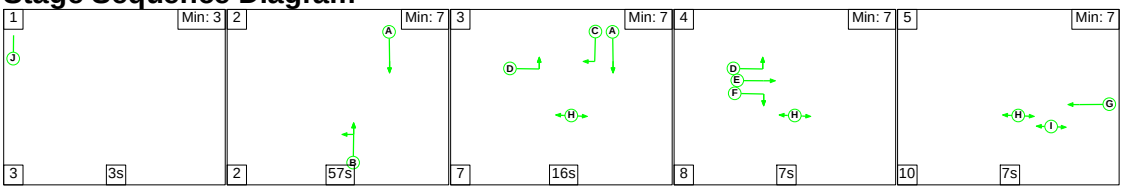
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**12.6**	**3.2**	**0.0**	**15.8**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**12.6**	**3.2**	**0.0**	**15.8**	**-**	**-**	**-**	**-**
1/1	658	658	-	-	-	1.7	0.5	-	2.2	12.2	10.6	0.5	11.1
1/2+1/3	694	694	-	-	-	2.3	0.5	-	2.9	14.8	10.5	0.5	11.0
2/1	660	660	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	654	654	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	740	740	-	-	-	3.9	1.0	-	4.9	23.8	17.5	1.0	18.5
3/2	741	741	-	-	-	3.9	1.0	-	4.9	23.8	17.5	1.0	18.5
4/1	50	50	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	67	67	-	-	-	0.8	0.1	-	0.9	48.1	1.8	0.1	1.9
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	763	763	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	773	773	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 33.2 Total Delay for Signalled Lanes (pcuHr): 15.79 Cycle Time (s): 120
PRC Over All Lanes (%): 33.2 Total Delay Over All Lanes(pcuHr): 15.79

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

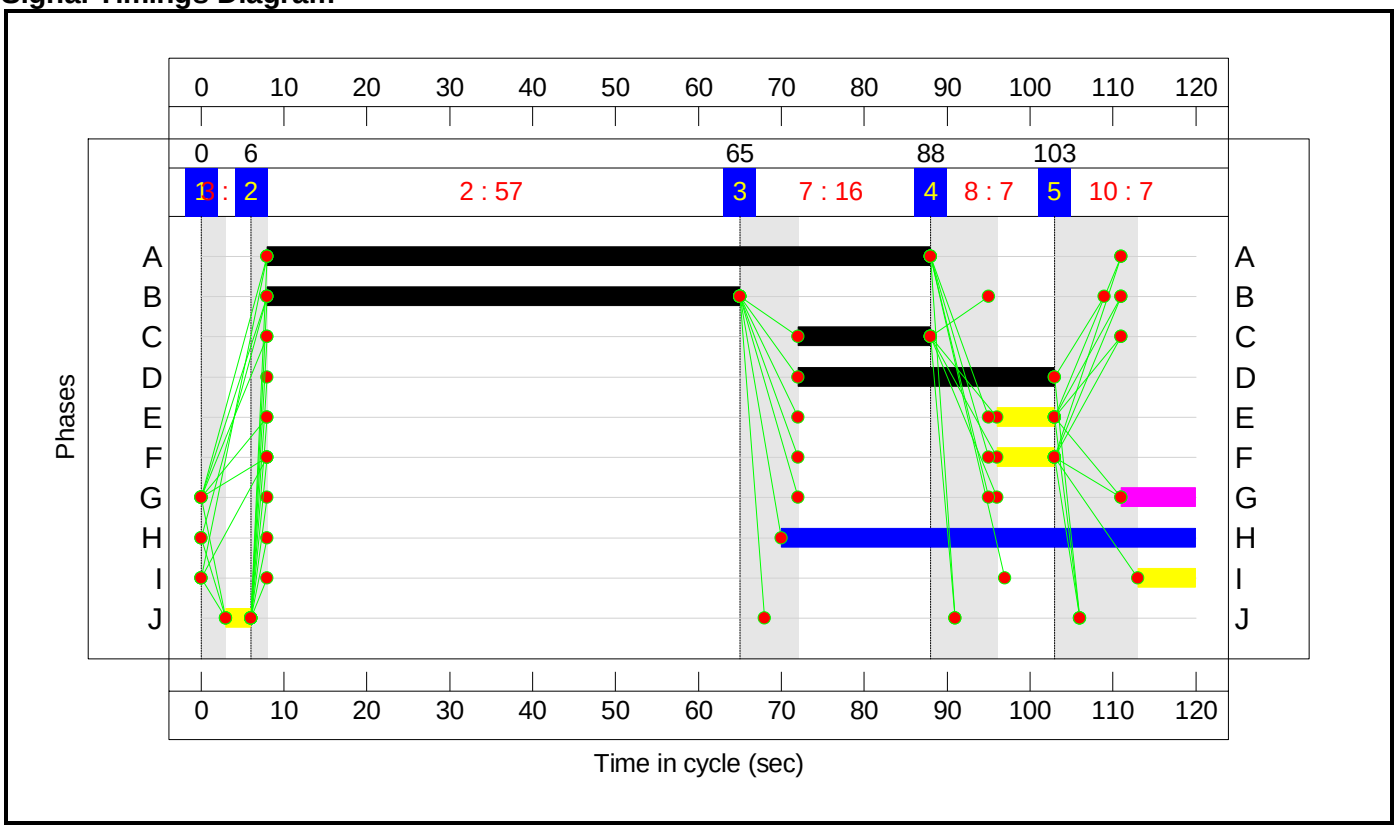
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	3	57	16	7	7
Change Point	0	6	65	88	103

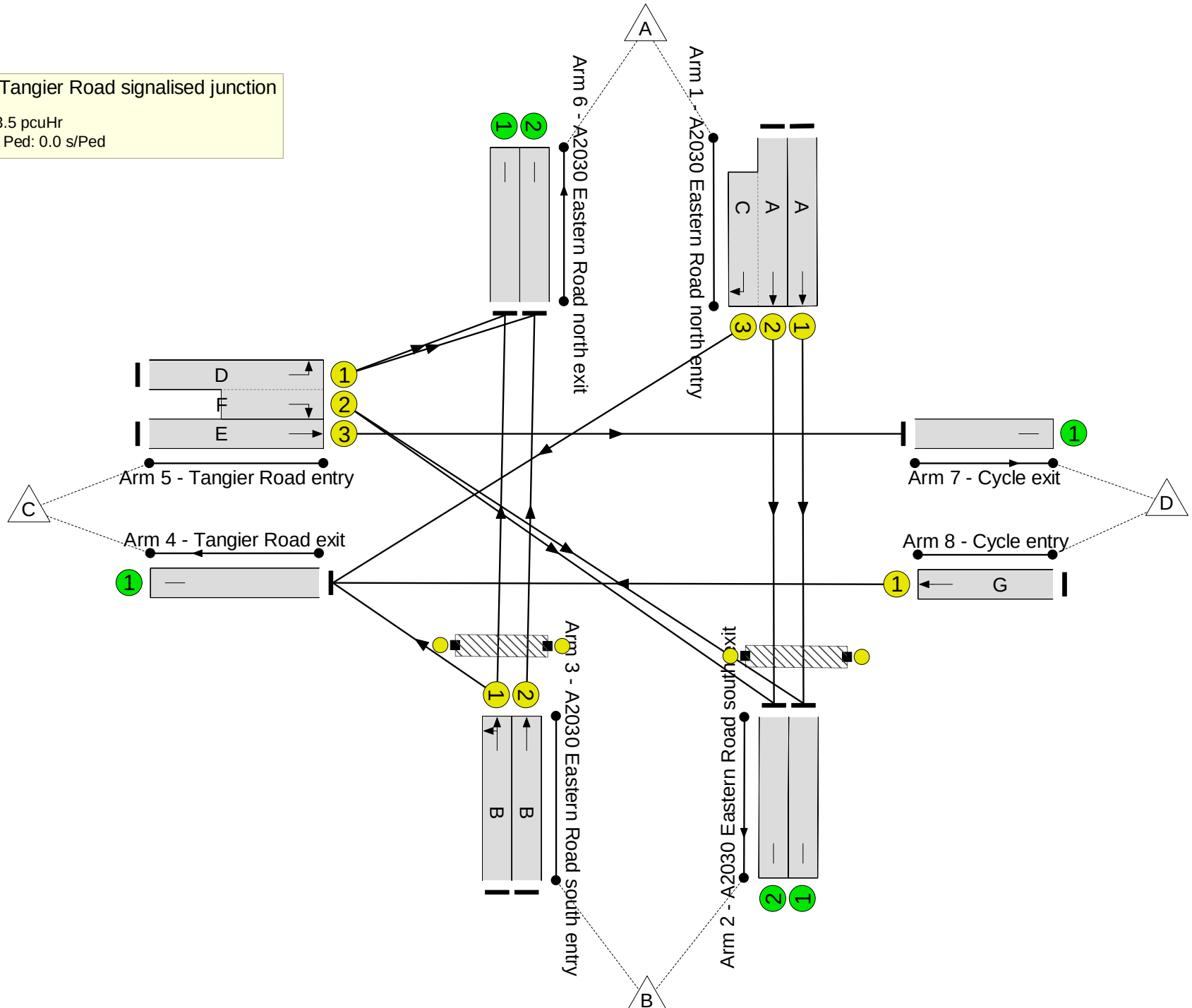
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

A2030 Eastern Road / Tangier Road signalised junction
PRC: 9.0 %
Total Traffic Delay: 23.5 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
1/1	A2030 Eastern Road north entry Ahead	U	N/A	N/A	A		1	80	-	1046	1965	1326	78.9%
1/2+1/3	A2030 Eastern Road north entry Ahead Right	U	N/A	N/A	A C		1	80:16	-	1158	1965:1747	1403	82.5%
2/1	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	1048	Inf	Inf	0.0%
2/2	A2030 Eastern Road south exit	U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%
3/1	A2030 Eastern Road south entry Left Ahead	U	N/A	N/A	B		1	57	-	529	1961	948	55.8%
3/2	A2030 Eastern Road south entry Ahead	U	N/A	N/A	B		1	57	-	530	1965	950	55.8%
4/1	Tangier Road exit	U	N/A	N/A	-		-	-	-	202	Inf	Inf	0.0%
5/1+5/2	Tangier Road entry Right Left	U	N/A	N/A	D F		1	31:7	-	141	1709:1709	456	30.9%
5/3	Tangier Road entry Ahead	U	N/A	N/A	E		1	7	-	0	1815	121	0.0%
6/1	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
6/2	A2030 Eastern Road north exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
7/1	Cycle exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
8/1	Cycle entry Ahead	U	N/A	N/A	G		1	9	-	0	1815	151	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	50	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	7	-	0	-	0	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**17.8**	**5.6**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
A2030 Eastern Road / Tangier Road signalised junction	**-**	**-**	**0**	**0**	**0**	**17.8**	**5.6**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
1/1	1046	1046	-	-	-	3.9	1.8	-	5.8	19.9	24.1	1.8	26.0
1/2+1/3	1158	1158	-	-	-	6.1	2.3	-	8.4	26.0	23.2	2.3	25.5
2/1	1048	1048	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	966	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	529	529	-	-	-	3.2	0.6	-	3.9	26.2	12.3	0.6	13.0
3/2	530	530	-	-	-	3.2	0.6	-	3.9	26.2	12.4	0.6	13.0
4/1	202	202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1+5/2	141	141	-	-	-	1.4	0.2	-	1.6	41.2	3.6	0.2	3.9
5/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

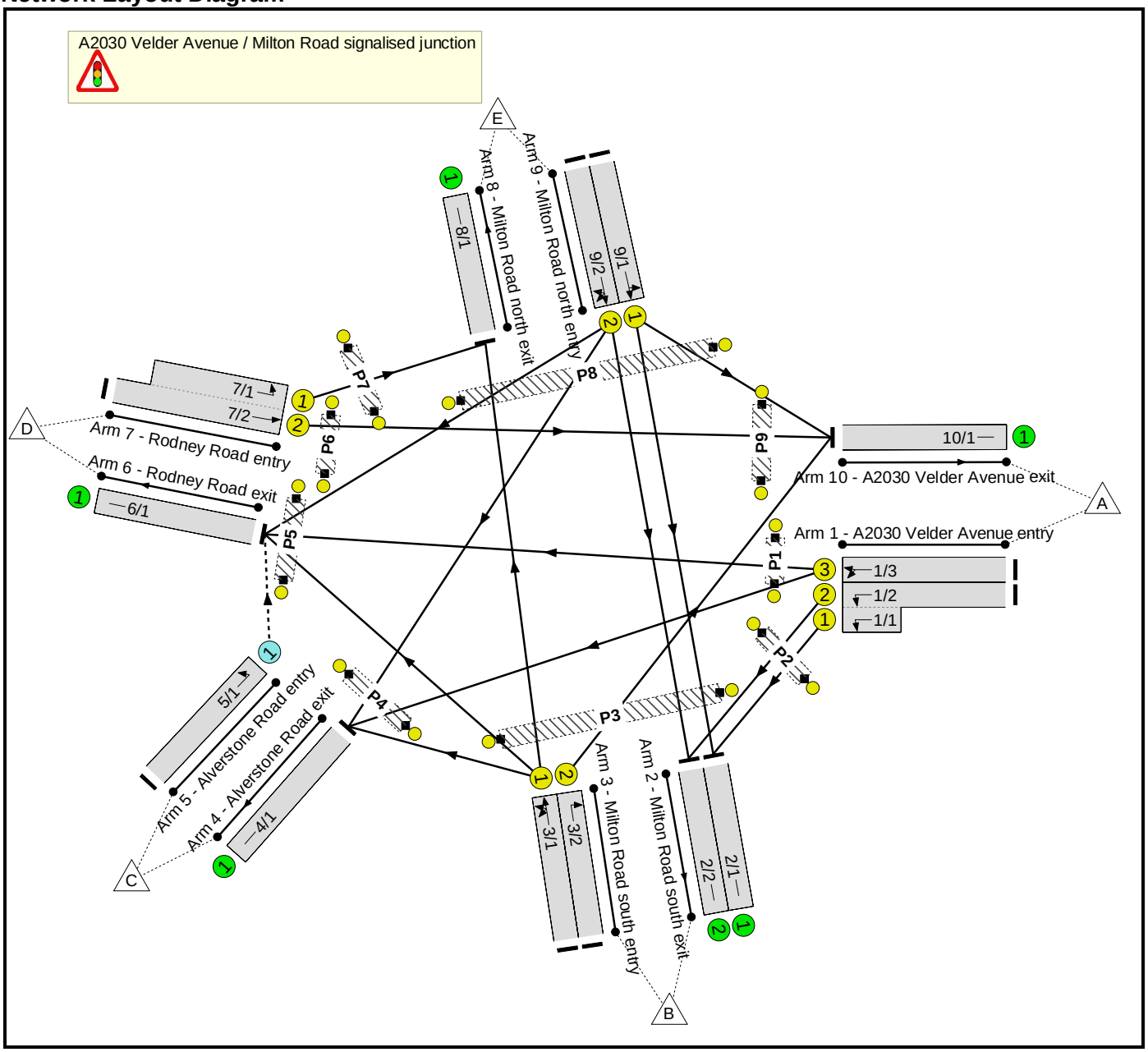
C1 PRC for Signalled Lanes (%): 9.0 Total Delay for Signalled Lanes (pcuHr): 23.48 Cycle Time (s): 120
PRC Over All Lanes (%): 9.0 Total Delay Over All Lanes(pcuHr): 23.48

Full Input Data And Results

User and Project Details

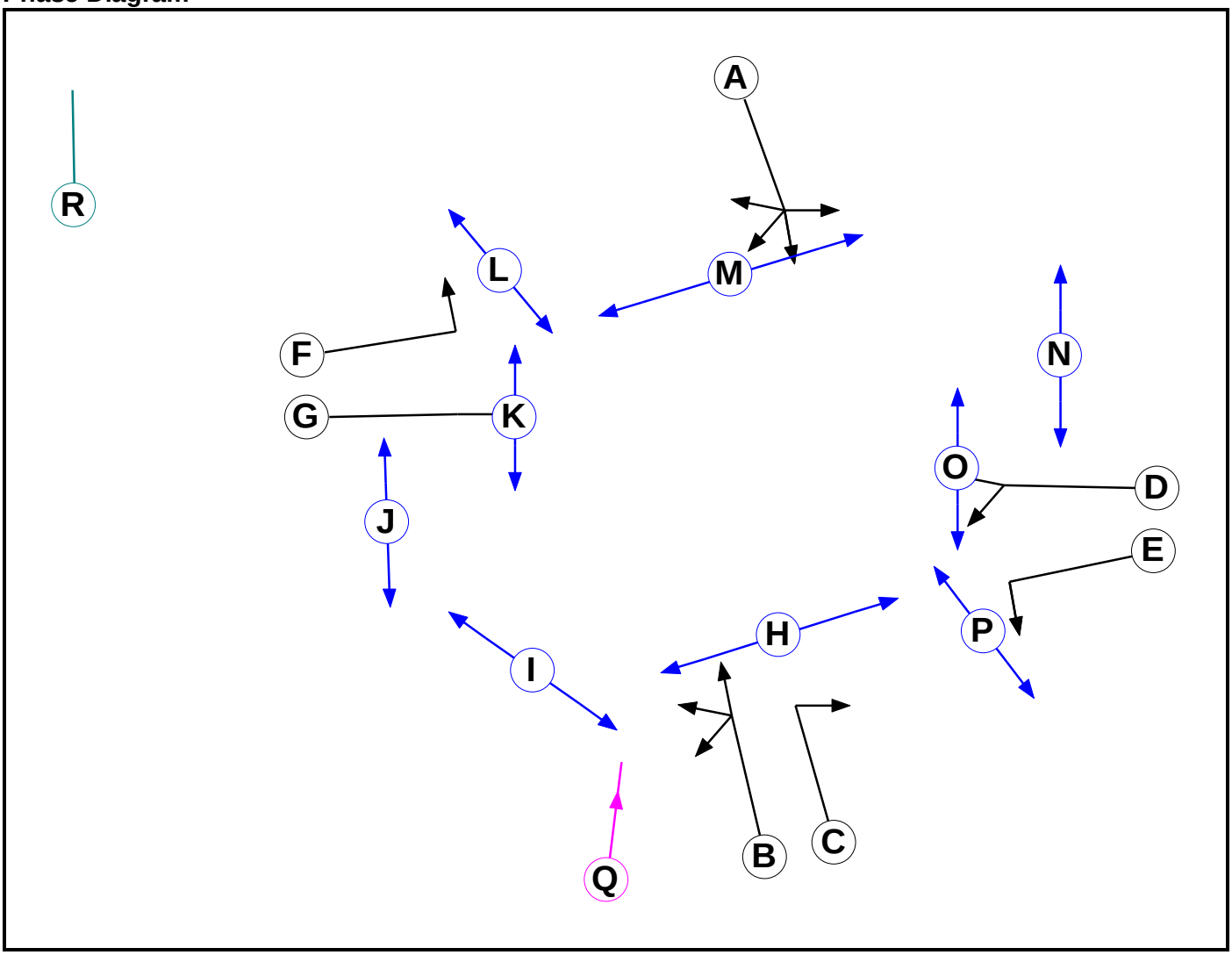
Project:	
Title:	**A2030 Velder Avenue / Milton Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030 Velder Ave_Milton Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Pedestrian		6	6
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Pedestrian		6	6
O	Pedestrian		6	6
P	Pedestrian		6	6
Q	Cycle		6	6
R	Dummy		3	3

Full Input Data And Results

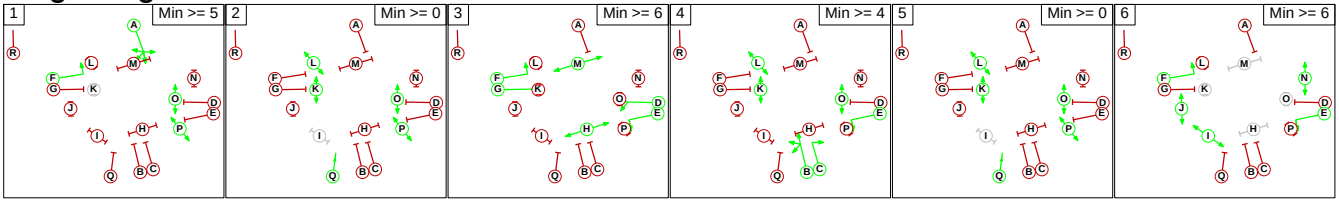
Phase Intergreens Matrix

		Starting Phase																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Terminating Phase	A		5	5	5	8	-	5	8	8	9	-	-	5	8	-	-	7	2
	B	6		-	5	-	8	6	5	8	8	-	-	8	-	-	-	5	2
	C	6	-		5	-	-	6	5	-	-	-	-	-	10	-	-	5	2
	D	5	5	5		-	-	-	-	9	9	-	-	-	-	5	-	6	2
	E	5	-	-	-		-	-	-	-	-	-	-	-	-	-	5	5	2
	F	-	5	-	-	-		-	-	-	-	-	5	-	-	-	-	5	2
	G	5	6	6	-	-	-		-	-	-	5	-	-	9	-	-	5	2
	H	14	14	14	-	-	-	-		-	-	-	-	-	-	-	-	14	2
	I	6	6	-	6	-	-	-	-		-	-	-	-	-	-	-	-	2
	J	7	7	-	7	-	-	-	-	-		-	-	-	-	-	-	7	2
	K	-	-	-	-	-	-	6	-	-	-		-	-	-	-	-	-	2
	L	-	-	-	-	-	6	-	-	-	-	-		-	-	-	-	-	2
	M	14	14	-	-	-	-	-	-	-	-	-	-		-	-	-	14	2
	N	7	-	7	-	-	-	7	-	-	-	-	-	-		-	-	7	2
	O	-	-	-	7	-	-	-	-	-	-	-	-	-	-		-	-	2
	P	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-		-	2
	Q	6	5	5	6	7	7	6	5	-	5	-	-	7	8	-	-		-
	R	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	-	

Phases in Stage

Stage No.	Phases in Stage
1	A F O P
2	K L O P Q
3	D E F G H M
4	B C E K L O
5	K L O P Q
6	E F I J N

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

		To Stage					
		1	2	3	4	5	6
From Stage	1		7	8	8	7	9
	2	7		7	7	0	8
	3	14	14		14	14	9
	4	8	5	8		5	10
	5	7	0	7	7		8
	6	7	7	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
5/1 (Alverstone Road entry)	6/1 (Left)	1439	0	1/3	1.09	To 6/1 (Ahead)	-	-	-	-	-
				3/1	1.09	To 6/1 (Left)					
				9/2	1.09	To 6/1 (Right)					

Full Input Data And Results

Lane Input Data

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A2030 Velder Avenue entry)	U	E	2	3	3.5	Geom	-	3.00	0.00	Y	Arm 2 Left	15.00
1/2 (A2030 Velder Avenue entry)	U	E	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Left	15.00
1/3 (A2030 Velder Avenue entry)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left Arm 6 Ahead	20.00 Inf
2/1 (Milton Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (Milton Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Milton Road south entry)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left Arm 6 Left Arm 8 Ahead	8.00 20.00 Inf
3/2 (Milton Road south entry)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 10 Right	10.00
4/1 (Alverstone Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Alverstone Road entry)	O		2	3	60.0	Geom	-	3.75	0.00	Y	Arm 6 Left	15.00
6/1 (Rodney Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Rodney Road entry)	U	F	2	3	18.3	Geom	-	2.75	0.00	Y	Arm 8 Left	15.00
7/2 (Rodney Road entry)	U	G	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 10 Ahead	Inf
8/1 (Milton Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Milton Road north entry)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead Arm 10 Left	Inf 12.00
9/2 (Milton Road	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead	Inf

north entry)											Arm 4 Right	20.00
											Arm 6 Right	12.00
10/1 (A2030 Velder Avenue exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	586	0	253	0	839
	B	616	0	0	0	611	1227
	C	0	0	0	0	0	0
	D	505	0	0	0	195	700
	E	1	395	0	150	0	546
	Tot.	1122	981	0	403	806	3312

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	293
1/2 (with short)	586(In) 293(Out)
1/3	253
2/1	574
2/2	407
3/1	611
3/2	616
4/1	0
5/1	0
6/1	403
7/1 (short)	195
7/2 (with short)	700(In) 505(Out)
8/1	806
9/1	282
9/2	264
10/1	1122

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.6 %	1939	1939
				Arm 10 Left	12.00	0.4 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	43.2 %	1811	1811
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	56.8 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	879	0	383	0	1262
	B	495	0	0	0	493	988
	C	0	0	0	0	0	0
	D	498	0	0	0	235	733
	E	2	598	0	140	0	740
	Tot.	995	1477	0	523	728	3723

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	440
1/2 (with short)	879(In) 439(Out)
1/3	383
2/1	817
2/2	660
3/1	493
3/2	495
4/1	0
5/1	0
6/1	523
7/1 (short)	235
7/2 (with short)	733(In) 498(Out)
8/1	728
9/1	379
9/2	361
10/1	995

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.5 %	1939	1939
				Arm 10 Left	12.00	0.5 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	61.2 %	1850	1850
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	38.8 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	523	0	251	0	774
	B	618	0	0	0	610	1228
	C	0	0	0	0	0	0
	D	519	0	0	0	179	698
	E	1	415	0	145	0	561
	Tot.	1138	938	0	396	789	3261

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	262
1/2 (with short)	523(In) 261(Out)
1/3	251
2/1	551
2/2	387
3/1	610
3/2	618
4/1	0
5/1	0
6/1	396
7/1 (short)	179
7/2 (with short)	698(In) 519(Out)
8/1	789
9/1	290
9/2	271
10/1	1138

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.7 %	1939	1939
				Arm 10 Left	12.00	0.3 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	46.5 %	1818	1818
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	53.5 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	779	0	280	0	1059
	B	484	0	0	0	485	969
	C	0	0	0	0	0	0
	D	506	0	0	0	223	729
	E	1	640	0	116	0	757
	Tot.	991	1419	0	396	708	3514

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	390
1/2 (with short)	779(In) 389(Out)
1/3	280
2/1	775
2/2	644
3/1	485
3/2	484
4/1	0
5/1	0
6/1	396
7/1 (short)	223
7/2 (with short)	729(In) 506(Out)
8/1	708
9/1	386
9/2	371
10/1	991

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.7 %	1939	1939
				Arm 10 Left	12.00	0.3 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	68.7 %	1867	1867
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	31.3 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	575	0	251	0	826
	B	605	0	0	0	618	1223
	C	0	0	0	0	0	0
	D	509	0	0	0	188	697
	E	1	397	0	147	0	545
	Tot.	1115	972	0	398	806	3291

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	288
1/2 (with short)	575(In) 287(Out)
1/3	251
2/1	569
2/2	403
3/1	618
3/2	605
4/1	0
5/1	0
6/1	398
7/1 (short)	188
7/2 (with short)	697(In) 509(Out)
8/1	806
9/1	282
9/2	263
10/1	1115

Full Input Data And Results

Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.6 %	1939	1939
				Arm 10 Left	12.00	0.4 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	44.1 %	1813	1813
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	55.9 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	873	0	377	0	1250
	B	483	0	0	0	496	979
	C	0	0	0	0	0	0
	D	477	0	0	0	241	718
	E	2	600	0	138	0	740
	Tot.	962	1473	0	515	737	3687

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A2030 Velder Avenue / Milton Road signalised junction	
1/1 (short)	437
1/2 (with short)	873(In) 436(Out)
1/3	377
2/1	814
2/2	659
3/1	496
3/2	483
4/1	0
5/1	0
6/1	515
7/1 (short)	241
7/2 (with short)	718(In) 477(Out)
8/1	737
9/1	379
9/2	361
10/1	962

Full Input Data And Results

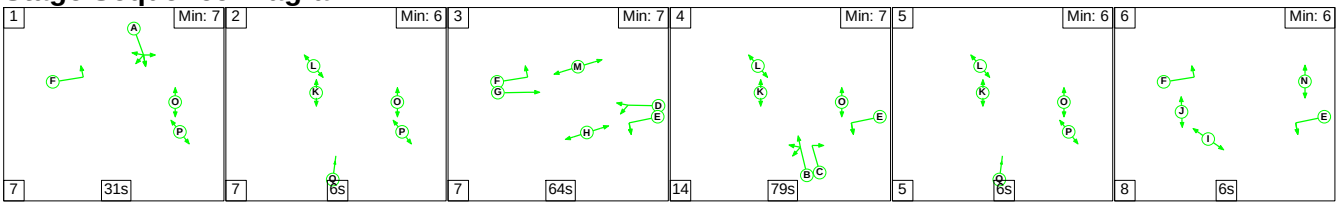
Lane Saturation Flows

Junction: A2030 Velder Avenue / Milton Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/2 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
1/3 (A2030 Velder Avenue entry)	3.00	0.00	Y	Arm 4 Left	20.00	0.0 %	1915	1915
				Arm 6 Ahead	Inf	100.0 %		
2/1 (Milton Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Milton Road south exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Milton Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.0 %	1915	1915
				Arm 6 Left	20.00	0.0 %		
				Arm 8 Ahead	Inf	100.0 %		
3/2 (Milton Road south entry)	3.00	0.00	Y	Arm 10 Right	10.00	100.0 %	1665	1665
4/1 (Alverstone Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Alverstone Road entry)	3.75	0.00	Y	Arm 6 Left	15.00	0.0 %	1990	1990
6/1 (Rodney Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Rodney Road entry)	2.75	0.00	Y	Arm 8 Left	15.00	100.0 %	1718	1718
7/2 (Rodney Road entry)	2.75	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1890	1890
8/1 (Milton Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	99.5 %	1939	1939
				Arm 10 Left	12.00	0.5 %		
9/2 (Milton Road north entry)	3.25	0.00	Y	Arm 2 Ahead	Inf	61.8 %	1852	1852
				Arm 4 Right	20.00	0.0 %		
				Arm 6 Right	12.00	38.2 %		
10/1 (A2030 Velder Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

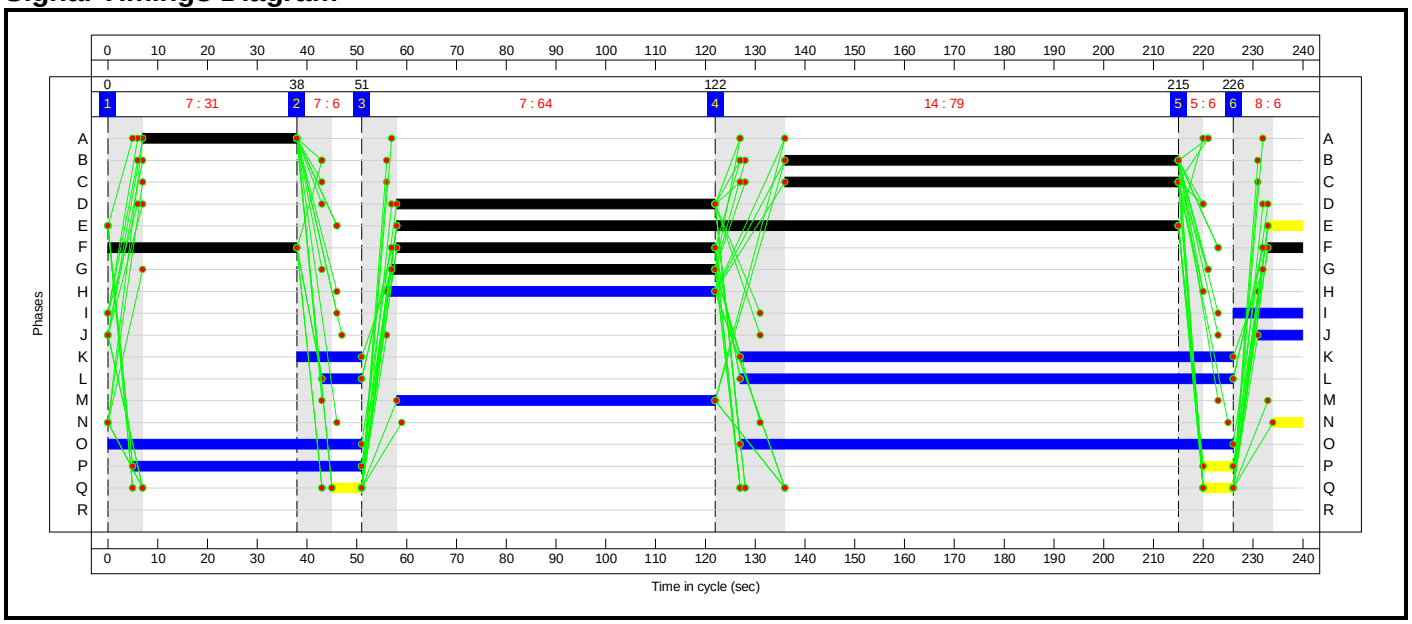


Full Input Data And Results

Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	64	79	6	6
Change Point	0	38	51	122	215	226

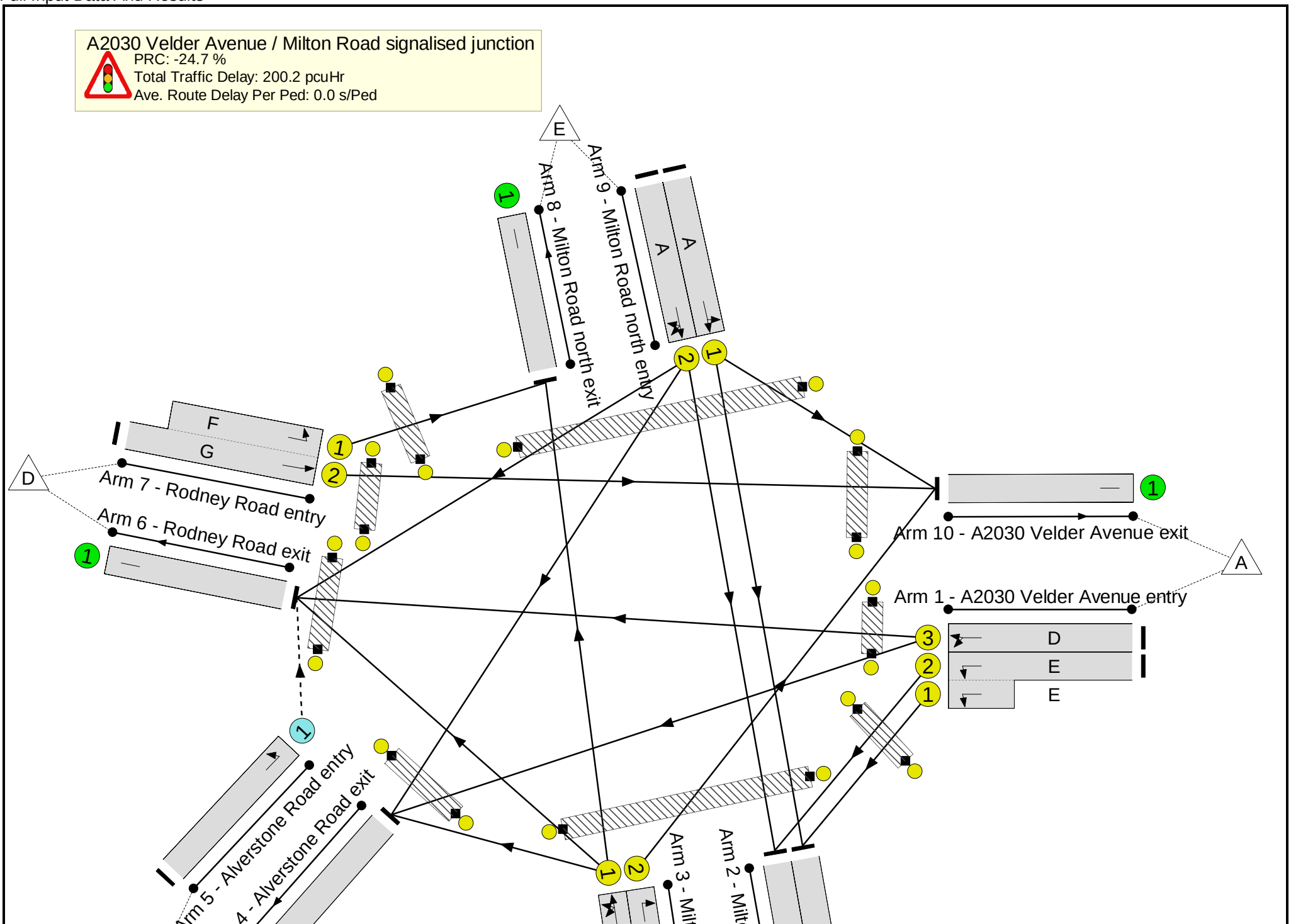
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**112.2%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**112.2%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	164	-	586	1741:1741	1320	44.4%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	64	-	253	1915	519	48.8%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	79	-	611	1915	638	95.7%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	79	-	616	1665	555	111.0%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1301	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	65:109	-	700	1890:1718	624	112.2%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	806	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	31	-	282	1939	259	109.1%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	31	-	264	1811	241	109.3%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	1122	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	150	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	52	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	66	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	112	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	107	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	64	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**83.3**	**116.9**	**0.0**	**200.2**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**83.3**	**116.9**	**0.0**	**200.2**	**-**	**-**	**-**	**-**
1/2+1/1	586	586	-	-	-	1.5	0.4	-	1.9	11.5	8.4	0.4	8.8
1/3	253	253	-	-	-	5.2	0.5	-	5.6	80.3	14.1	0.5	14.6
2/1	551	551	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	397	397	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	611	611	-	-	-	13.3	7.3	-	20.6	121.3	39.7	7.3	47.0
3/2	616	555	-	-	-	19.1	34.9	-	54.0	315.7	45.4	34.9	80.3
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	390	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	700	624	-	-	-	22.6	42.2	-	64.8	333.4	47.8	42.2	90.0
8/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	282	259	-	-	-	11.1	16.1	-	27.2	347.6	20.4	16.1	36.5
9/2	264	241	-	-	-	10.5	15.5	-	26.0	354.5	19.1	15.5	34.6
10/1	1006	1006	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

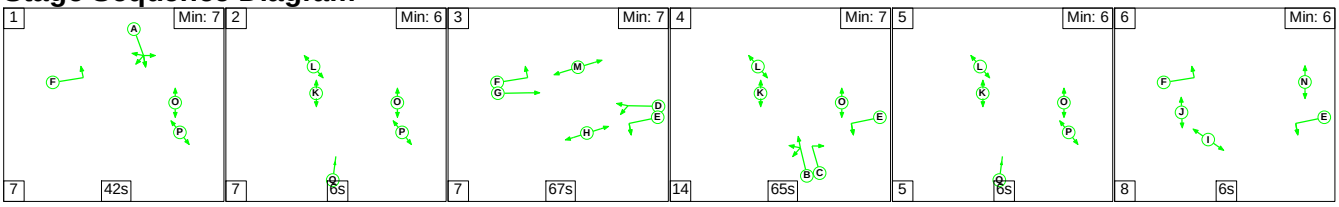
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-24.7	Total Delay for Signalled Lanes (pcuHr):	200.17	Cycle Time (s):	240
	PRC Over All Lanes (%):	-24.7	Total Delay Over All Lanes(pcuHr):	200.17		

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

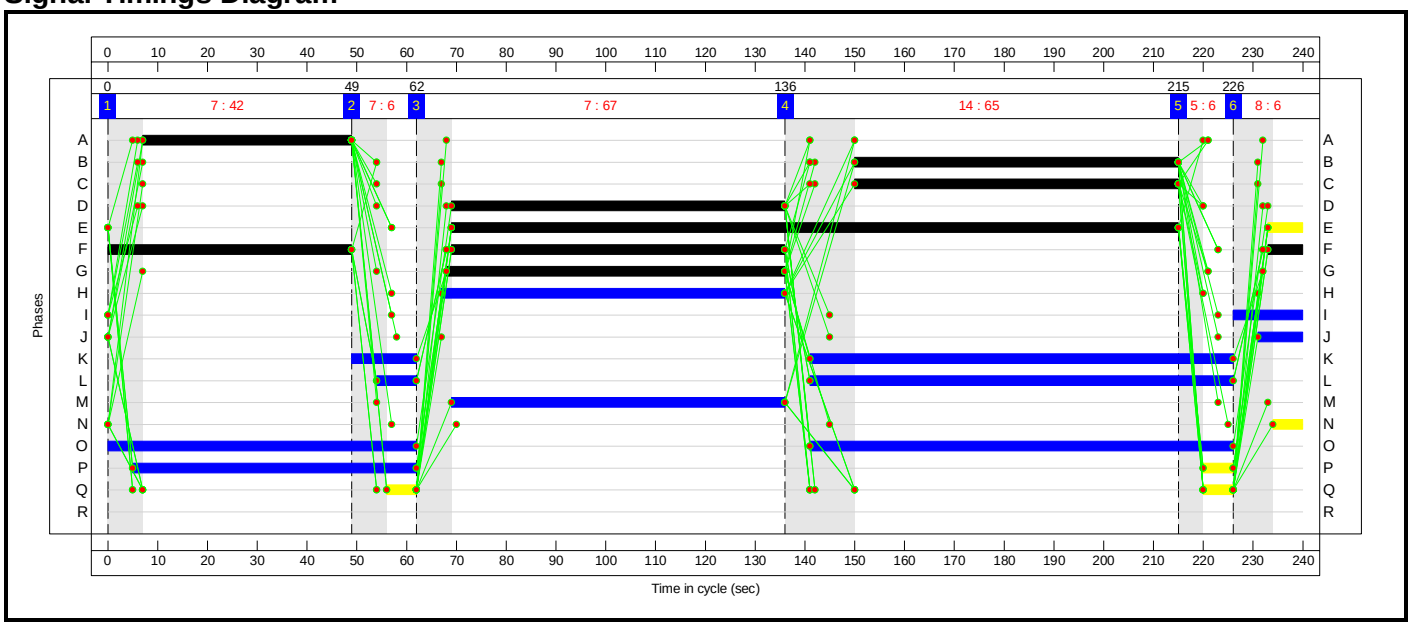
Stage Sequence Diagram



Stage Timings

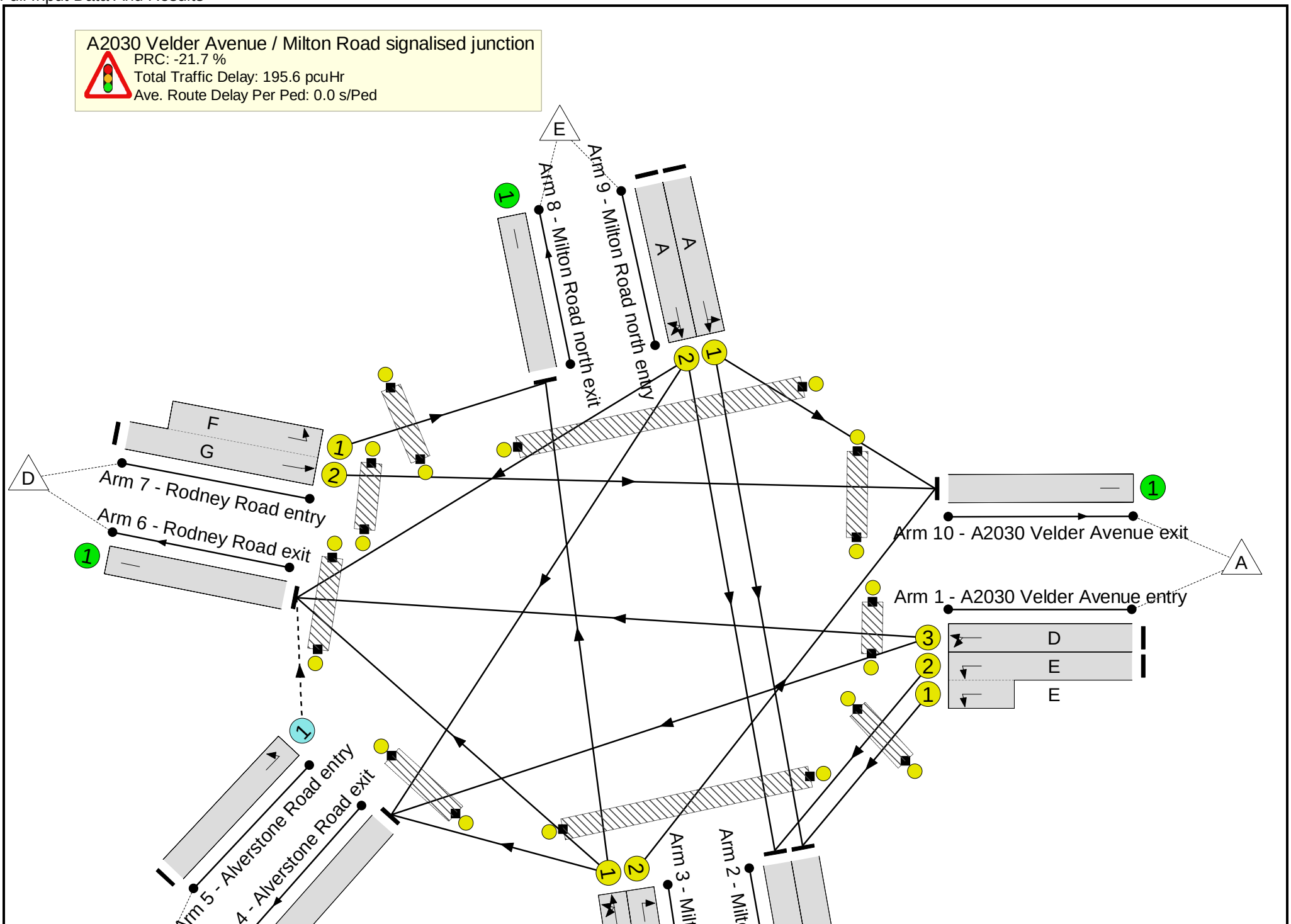
Stage	1	2	3	4	5	6
Duration	42	6	67	65	6	6
Change Point	0	49	62	136	215	226

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Velder Avenue / Milton Road signalised junction
PRC: -21.7 %
Total Traffic Delay: 195.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
E
Arm 8 - Milton Road north exit
Arm 9 - Milton Road north entry
A
A
F
G
D
Arm 7 - Rodney Road entry
Arm 6 - Rodney Road exit
Arm 10 - A2030 Velder Avenue exit
A
Arm 1 - A2030 Velder Avenue entry
D
E
E
Arm 5 - Alverstone Road entry
Arm 4 - Alverstone Road exit
Arm 3 - Milt
Arm 2 - Milt

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.5%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.5%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	153	-	879	1741:1741	1240	70.9%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	67	-	383	1915	543	70.6%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	817	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	65	-	493	1915	527	93.6%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	65	-	495	1665	458	108.1%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1215	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	523	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	68:123	-	733	1890:1718	669	109.5%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	728	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	42	-	379	1939	347	109.1%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	42	-	361	1850	331	108.9%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	995	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	147	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	63	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	69	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	98	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	93	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	67	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**87.3**	**108.3**	**0.0**	**195.6**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**87.3**	**108.3**	**0.0**	**195.6**	**-**	**-**	**-**	**-**
1/2+1/1	879	879	-	-	-	4.0	1.2	-	5.2	21.4	26.1	1.2	27.3
1/3	383	383	-	-	-	8.2	1.2	-	9.4	88.2	22.9	1.2	24.1
2/1	786	786	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	642	642	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	493	493	-	-	-	11.6	5.5	-	17.2	125.2	32.0	5.5	37.6
3/2	495	458	-	-	-	15.0	23.8	-	38.8	282.0	35.5	23.8	59.2
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	733	669	-	-	-	20.5	36.8	-	57.3	281.5	47.7	36.8	84.5
8/1	708	708	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	379	347	-	-	-	14.3	20.4	-	34.8	330.1	27.4	20.4	47.8
9/2	361	331	-	-	-	13.6	19.4	-	33.0	329.0	26.0	19.4	45.5
10/1	915	915	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

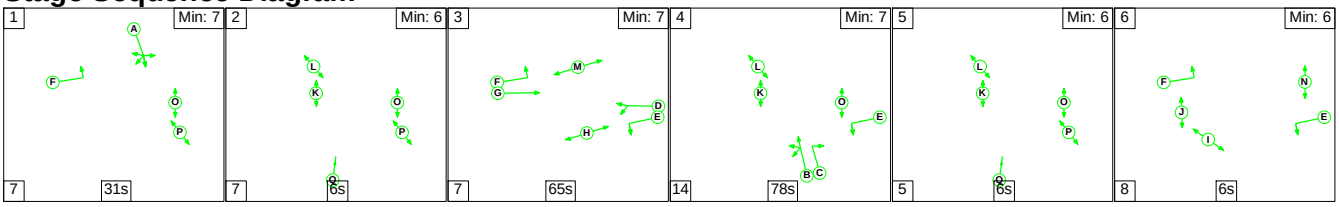
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-21.7	Total Delay for Signalled Lanes (pcuHr):	195.60	Cycle Time (s):	240
	PRC Over All Lanes (%):	-21.7	Total Delay Over All Lanes(pcuHr):	195.60		

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

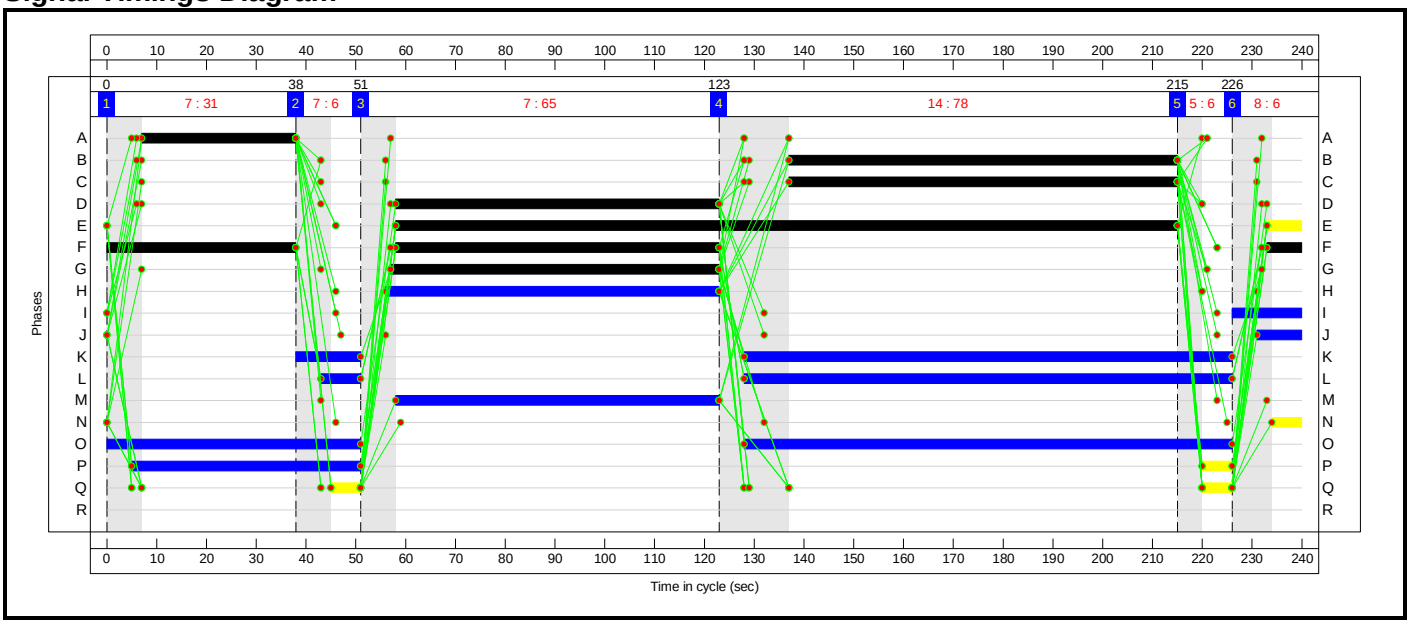
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	65	78	6	6
Change Point	0	38	51	123	215	226

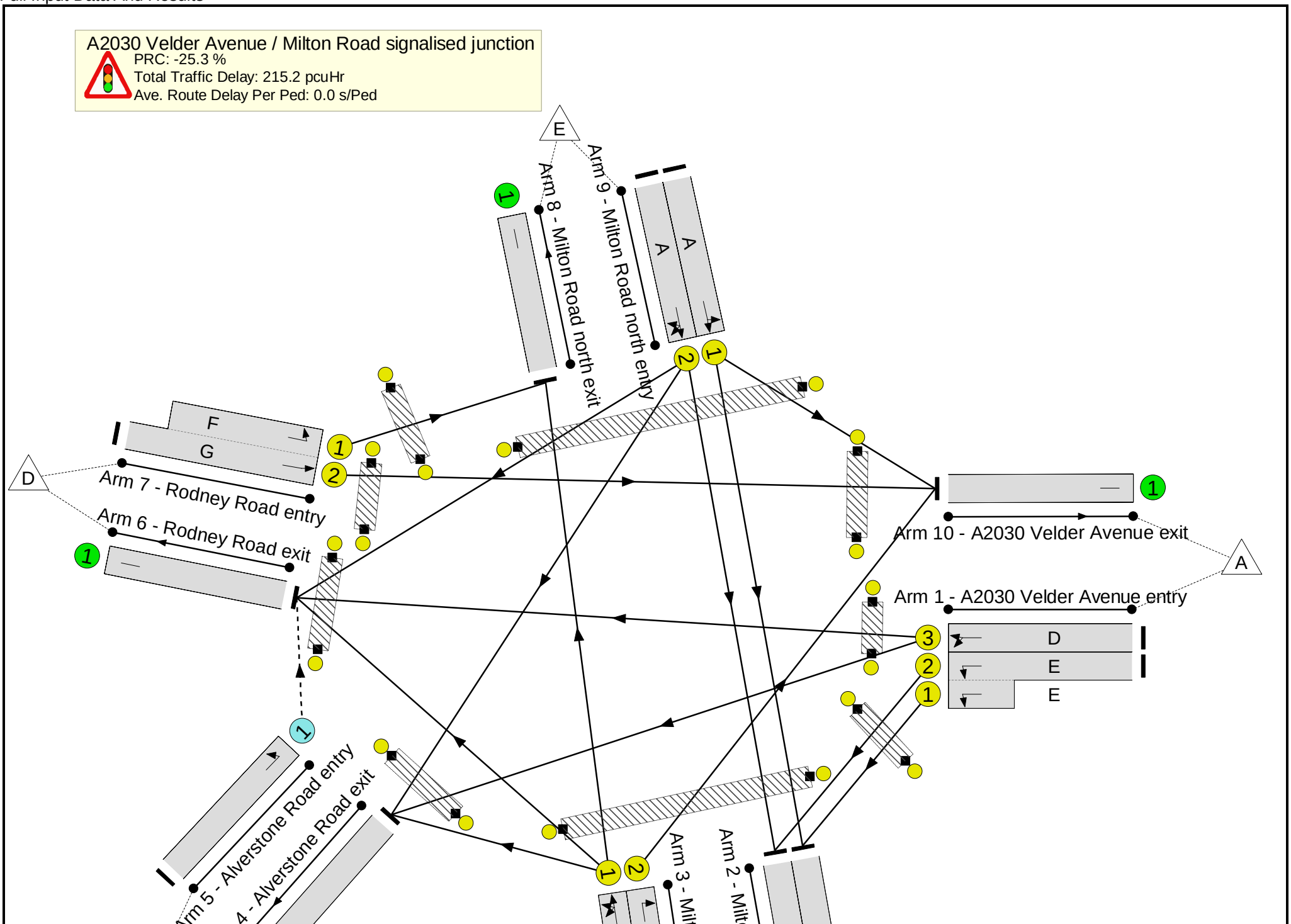
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**112.8%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**112.8%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	164	-	523	1741:1741	1320	39.6%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	65	-	251	1915	527	47.7%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	78	-	610	1915	630	96.8%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	78	-	618	1665	548	112.8%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1316	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	66:110	-	698	1890:1718	621	112.4%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	789	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	31	-	290	1939	259	112.2%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	31	-	271	1818	242	111.8%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	1138	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	149	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	52	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	111	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	106	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	65	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**87.0**	**128.2**	**0.0**	**215.2**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**87.0**	**128.2**	**0.0**	**215.2**	**-**	**-**	**-**	**-**
1/2+1/1	523	523	-	-	-	1.3	0.3	-	1.6	11.0	6.7	0.3	7.0
1/3	251	251	-	-	-	5.1	0.5	-	5.5	79.1	13.9	0.5	14.4
2/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	374	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	610	610	-	-	-	13.4	8.3	-	21.7	128.0	40.0	8.3	48.3
3/2	618	548	-	-	-	20.6	38.9	-	59.5	346.7	46.7	38.9	85.7
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	381	381	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	698	621	-	-	-	22.8	42.7	-	65.5	338.0	48.5	42.7	91.2
8/1	769	769	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	290	259	-	-	-	12.4	19.5	-	31.8	395.0	21.4	19.5	40.9
9/2	271	242	-	-	-	11.4	18.1	-	29.5	391.9	20.0	18.1	38.0
10/1	1010	1010	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

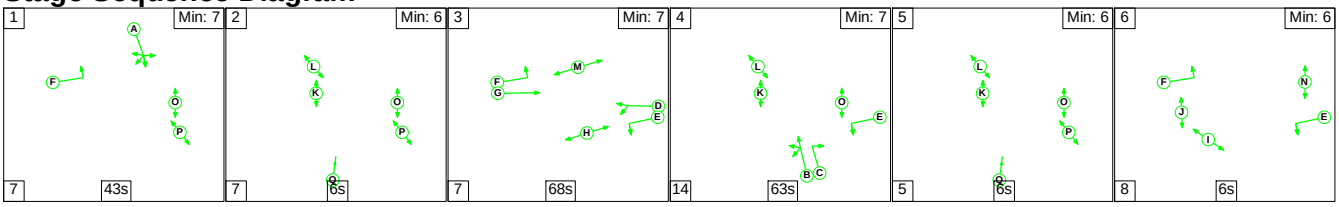
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-25.3	Total Delay for Signalled Lanes (pcuHr):	215.18	Cycle Time (s):	240	
	PRC Over All Lanes (%):	-25.3	Total Delay Over All Lanes(pcuHr):	215.18			

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

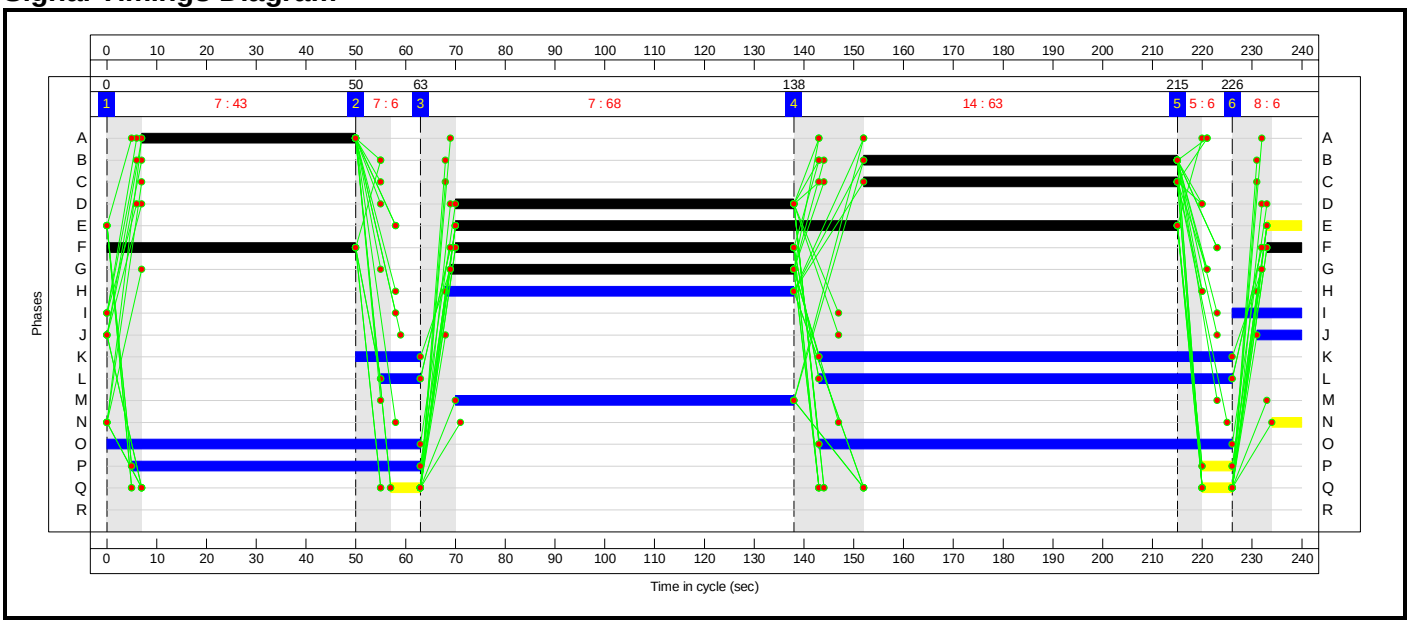
Stage Sequence Diagram



Stage Timings

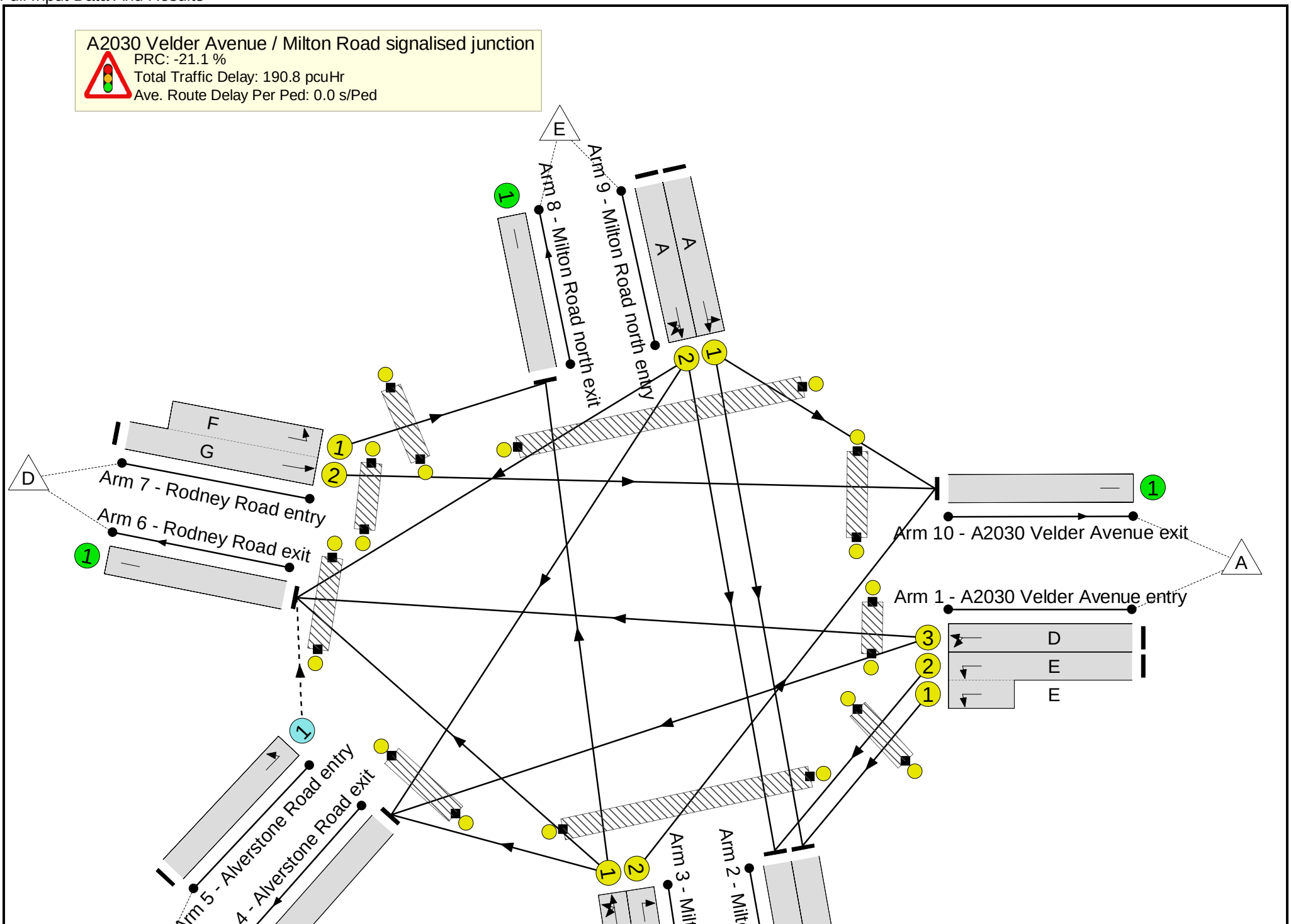
Stage	1	2	3	4	5	6
Duration	43	6	68	63	6	6
Change Point	0	50	63	138	215	226

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Velder Avenue / Milton Road signalised junction
PRC: -21.1 %
Total Traffic Delay: 190.8 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
E
Arm 8 - Milton Road north exit
Arm 9 - Milton Road north entry
A
A
F
G
D
Arm 7 - Rodney Road entry
Arm 6 - Rodney Road exit
Arm 10 - A2030 Velder Avenue exit
A
Arm 1 - A2030 Velder Avenue entry
D
E
E
Arm 5 - Alverstone Road entry
Arm 4 - Alverstone Road exit
Arm 3 - Milt
Arm 2 - Milt

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.0%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.0%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	152	-	779	1741:1741	1233	63.2%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	68	-	280	1915	551	50.9%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	644	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	63	-	485	1915	511	95.0%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	63	-	484	1665	444	109.0%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1332	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	69:125	-	729	1890:1718	669	109.0%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	708	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	43	-	386	1939	355	108.6%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	43	-	371	1867	342	108.4%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	991	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	146	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	64	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	70	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	96	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	91	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	68	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**83.7**	**107.1**	**0.0**	**190.8**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**83.7**	**107.1**	**0.0**	**190.8**	**-**	**-**	**-**	**-**
1/2+1/1	779	779	-	-	-	3.3	0.9	-	4.2	19.4	20.3	0.9	21.2
1/3	280	280	-	-	-	5.5	0.5	-	6.1	78.0	15.6	0.5	16.1
2/1	745	745	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	624	624	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	485	485	-	-	-	11.6	6.3	-	18.0	133.4	31.7	6.3	38.0
3/2	484	444	-	-	-	15.1	24.9	-	40.0	297.3	34.9	24.9	59.8
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	387	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	729	669	-	-	-	20.1	35.3	-	55.4	273.4	47.8	35.3	83.0
8/1	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	386	355	-	-	-	14.3	20.1	-	34.4	320.7	27.8	20.1	47.8
9/2	371	342	-	-	-	13.7	19.2	-	32.9	319.0	26.6	19.2	45.8
10/1	909	909	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

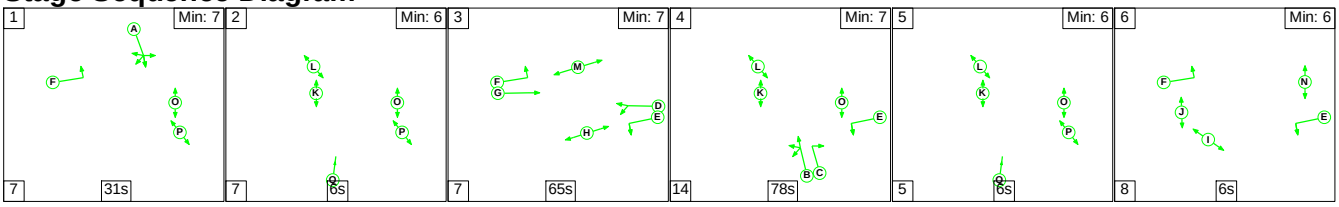
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-21.1	Total Delay for Signalled Lanes (pcuHr):	190.82	Cycle Time (s):	240
	PRC Over All Lanes (%):	-21.1	Total Delay Over All Lanes(pcuHr):	190.82		

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

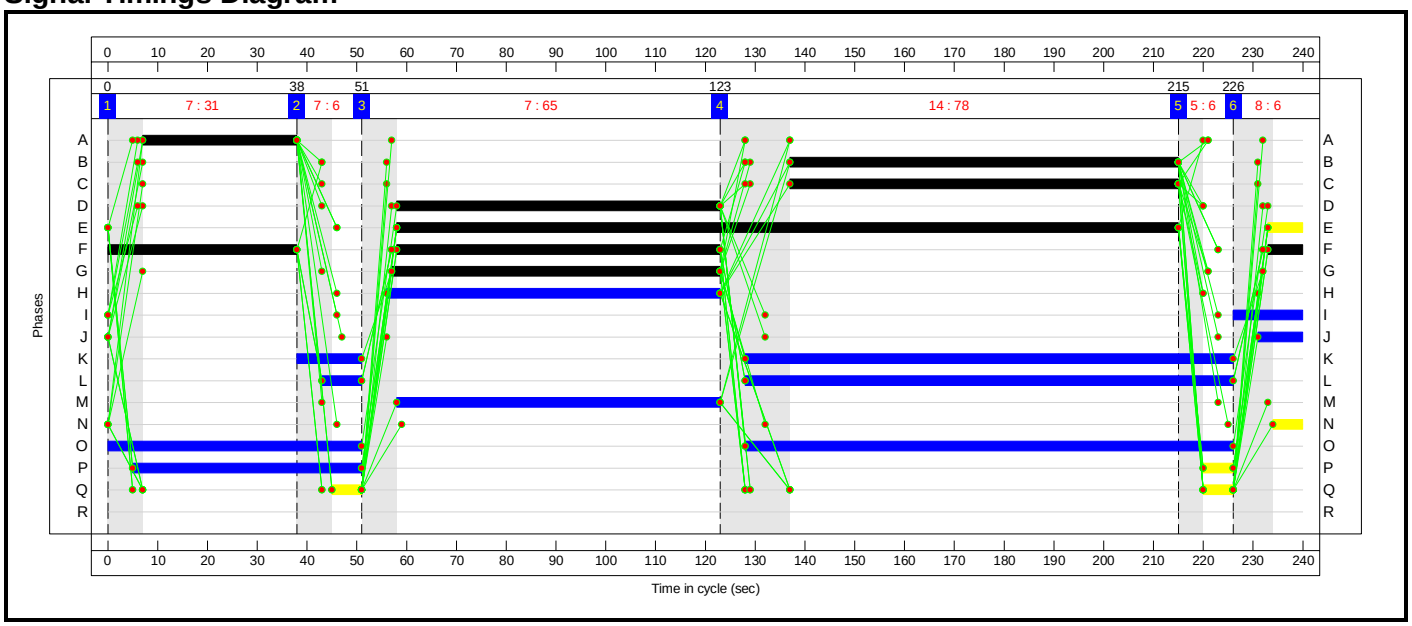
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	6
Duration	31	6	65	78	6	6
Change Point	0	38	51	123	215	226

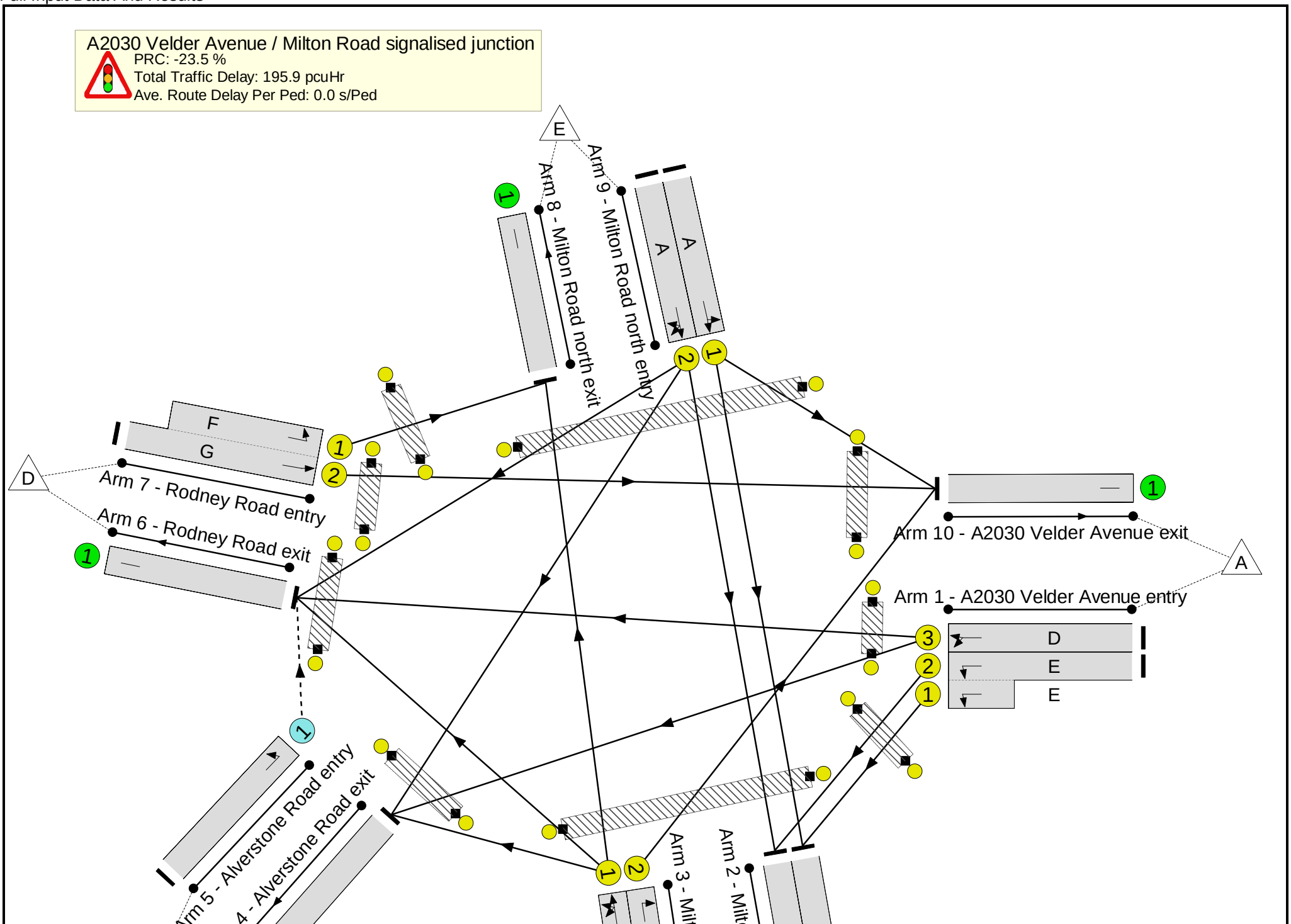
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.1%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**111.1%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	164	-	575	1741:1741	1320	43.6%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	65	-	251	1915	527	47.7%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	78	-	618	1915	630	98.0%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	78	-	605	1665	548	110.4%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1308	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	66:110	-	697	1890:1718	627	111.1%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	806	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	31	-	282	1939	259	109.1%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	31	-	263	1813	242	108.8%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	1115	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	149	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	52	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	111	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	106	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	65	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**81.8**	**114.1**	**0.0**	**195.9**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**81.8**	**114.1**	**0.0**	**195.9**	**-**	**-**	**-**	**-**
1/2+1/1	575	575	-	-	-	1.4	0.4	-	1.8	11.4	8.2	0.4	8.6
1/3	251	251	-	-	-	5.1	0.5	-	5.5	79.1	13.9	0.5	14.4
2/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	618	618	-	-	-	13.7	9.7	-	23.4	136.4	40.7	9.7	50.4
3/2	605	548	-	-	-	18.4	33.0	-	51.4	306.1	44.2	33.0	77.3
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	697	627	-	-	-	21.8	39.4	-	61.2	316.1	47.5	39.4	86.8
8/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	282	259	-	-	-	11.1	16.1	-	27.2	347.6	20.4	16.1	36.5
9/2	263	242	-	-	-	10.3	15.0	-	25.3	346.3	19.0	15.0	34.0
10/1	1007	1007	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

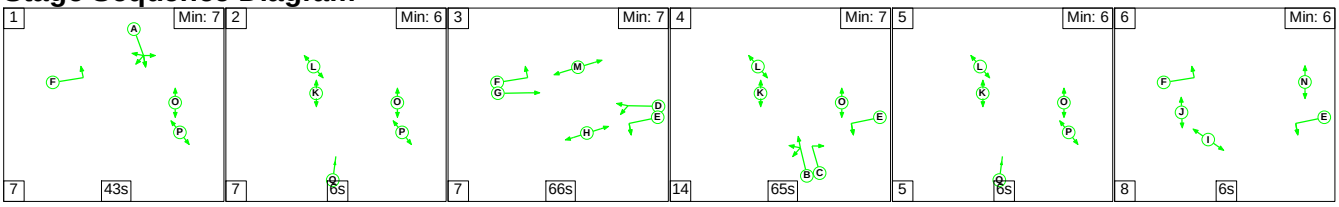
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-23.5	Total Delay for Signalled Lanes (pcuHr):	195.93	Cycle Time (s):	240
	PRC Over All Lanes (%):	-23.5	Total Delay Over All Lanes(pcuHr):	195.93		

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

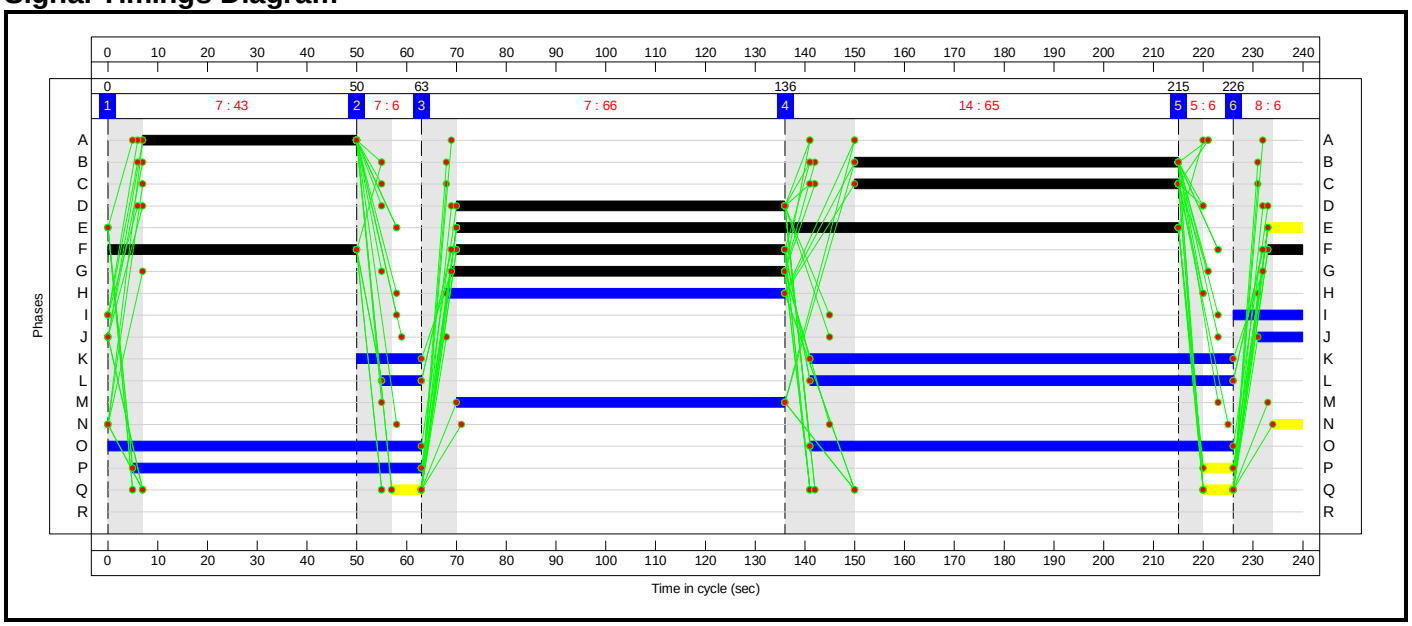
Stage Sequence Diagram



Stage Timings

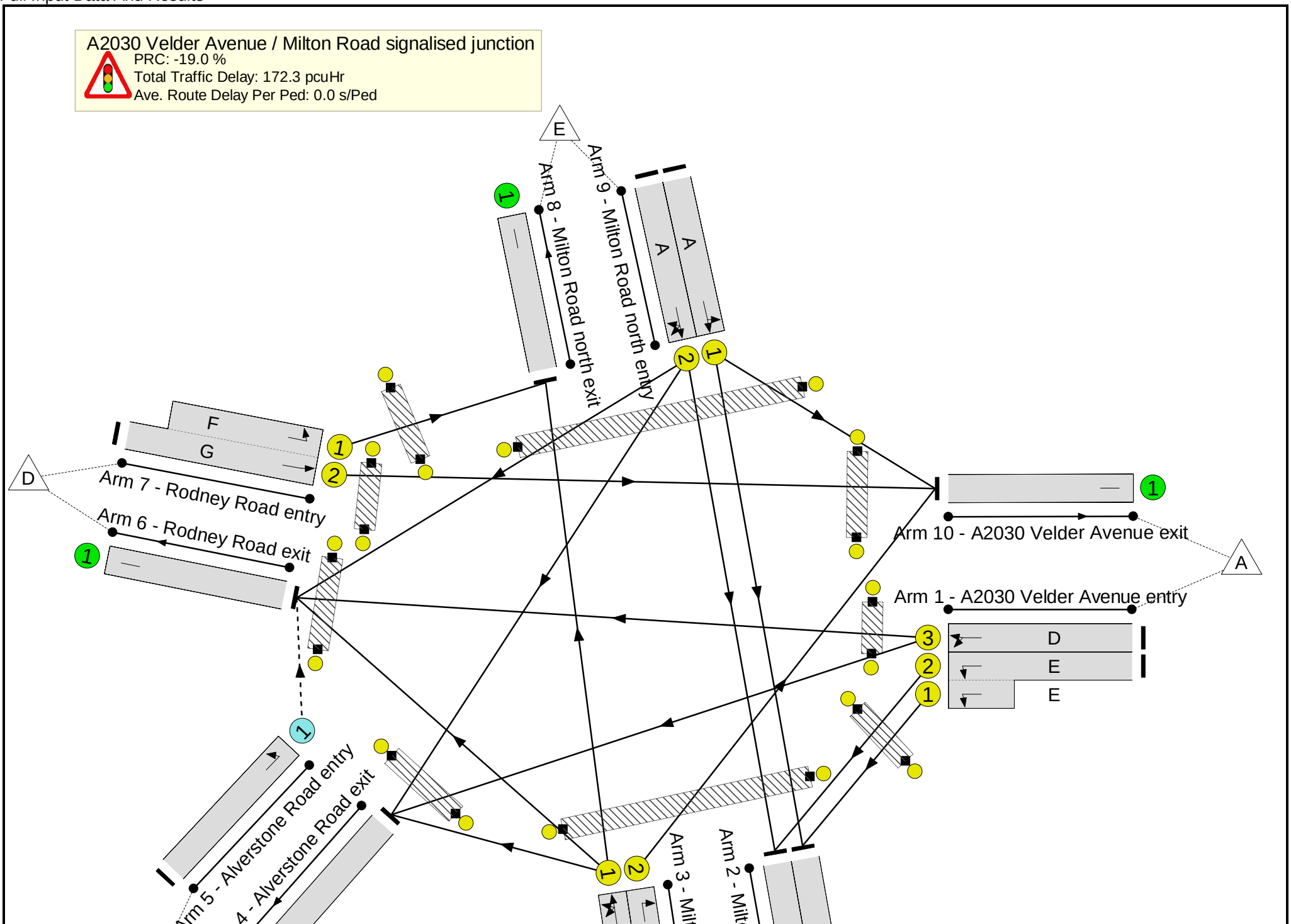
Stage	1	2	3	4	5	6
Duration	43	6	66	65	6	6
Change Point	0	50	63	136	215	226

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


A2030 Velder Avenue / Milton Road signalised junction
PRC: -19.0 %
Total Traffic Delay: 172.3 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
E
Arm 8 - Milton Road north exit
Arm 9 - Milton Road north entry
A
A
F
G
D
Arm 7 - Rodney Road entry
Arm 6 - Rodney Road exit
Arm 10 - A2030 Velder Avenue exit
A
Arm 1 - A2030 Velder Avenue entry
D
E
E
Arm 5 - Alverstone Road entry
Arm 4 - Alverstone Road exit
Arm 3 - Milt
Arm 2 - Milt

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.1%**
A2030 Velder Avenue / Milton Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.1%**
1/2+1/1	A2030 Velder Avenue entry Left	U	N/A	N/A	E		2	152	-	873	1741:1741	1233	70.8%
1/3	A2030 Velder Avenue entry Left Ahead	U	N/A	N/A	D		1	66	-	377	1915	535	70.5%
2/1	Milton Road south exit	U	N/A	N/A	-		-	-	-	814	Inf	Inf	0.0%
2/2	Milton Road south exit	U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
3/1	Milton Road south entry Left Left2 Ahead	U	N/A	N/A	B		1	65	-	496	1915	527	94.2%
3/2	Milton Road south entry Right	U	N/A	N/A	C		1	65	-	483	1665	458	105.5%
4/1	Alverstone Road exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
5/1	Alverstone Road entry Left	O	N/A	N/A	-		-	-	-	0	1990	1219	0.0%
6/1	Rodney Road exit	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%
7/2+7/1	Rodney Road entry Left Ahead	U	N/A	N/A	G F		1:2	67:123	-	718	1890:1718	671	107.1%
8/1	Milton Road north exit	U	N/A	N/A	-		-	-	-	737	Inf	Inf	0.0%
9/1	Milton Road north entry Ahead Left	U	N/A	N/A	A		1	43	-	379	1939	355	106.6%
9/2	Milton Road north entry Ahead Right Right2	U	N/A	N/A	A		1	43	-	361	1852	340	106.3%

Full Input Data And Results

10/1	A2030 Velder Avenue exit	U	N/A	N/A	-		-	-	-	962	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	O		2	148	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	P		2	64	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	68	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	I		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	J		1	9	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	K		2	98	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		2	93	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		1	66	-	0	-	0	0.0%
Ped Link: P9	Unnamed Ped Link	-	N/A	-	N		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**81.8**	**90.4**	**0.0**	**172.3**	**-**	**-**	**-**	**-**
A2030 Velder Avenue / Milton Road signalised junction	**-**	**-**	**0**	**0**	**0**	**81.8**	**90.4**	**0.0**	**172.3**	**-**	**-**	**-**	**-**
1/2+1/1	873	873	-	-	-	4.1	1.2	-	5.3	21.9	26.1	1.2	27.3
1/3	377	377	-	-	-	8.1	1.2	-	9.3	88.9	22.5	1.2	23.7
2/1	791	791	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	646	646	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	496	496	-	-	-	11.7	5.9	-	17.6	127.6	32.2	5.9	38.1
3/2	483	458	-	-	-	13.7	18.9	-	32.7	243.5	33.9	18.9	52.8
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	507	507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2+7/1	718	671	-	-	-	18.4	29.7	-	48.1	241.2	45.0	29.7	74.7
8/1	721	721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	379	355	-	-	-	13.3	17.3	-	30.5	289.8	26.8	17.3	44.1
9/2	361	340	-	-	-	12.5	16.3	-	28.8	287.1	25.5	16.3	41.8
10/1	905	905	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P9	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

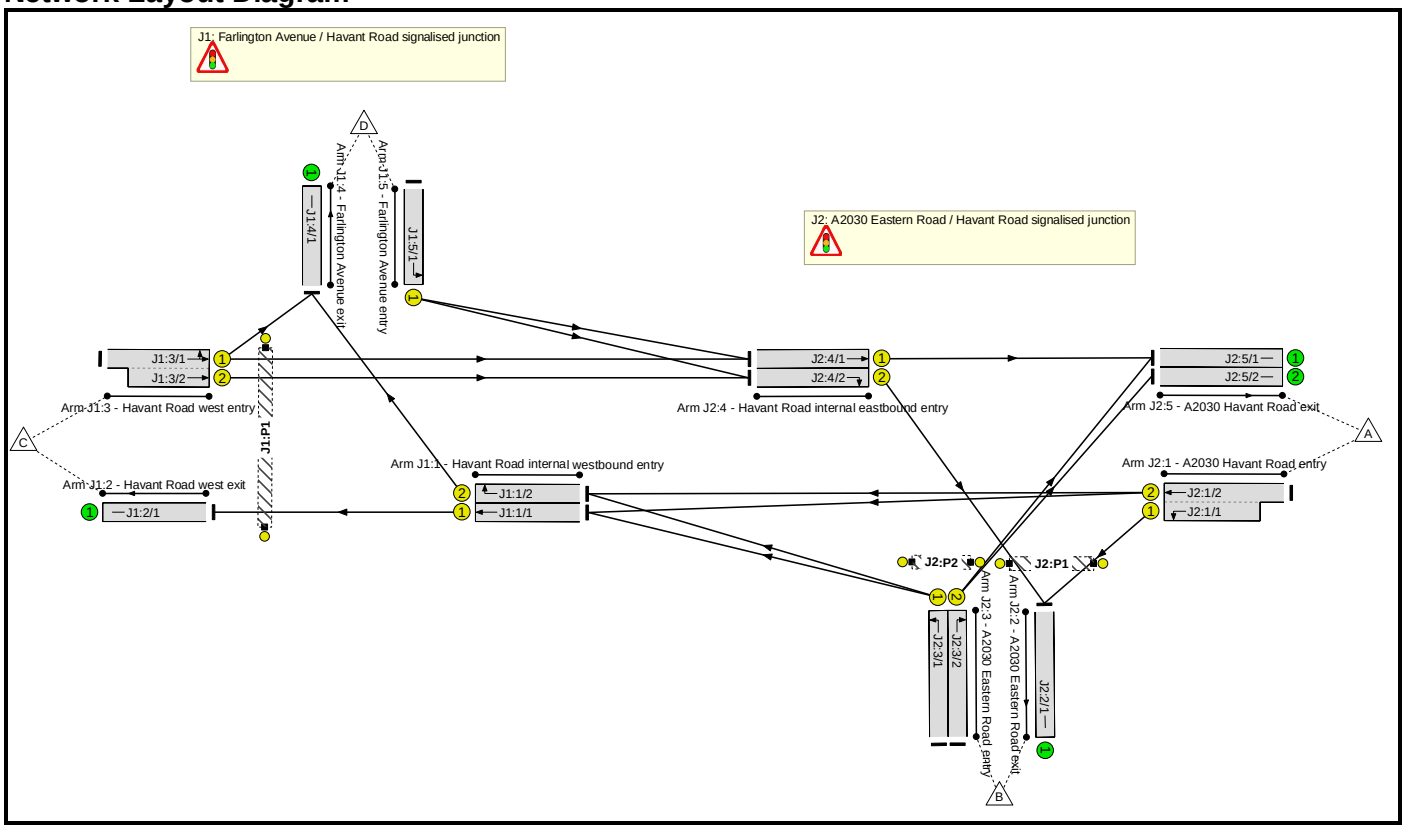
C1	PRC for Signalled Lanes (%):	-19.0	Total Delay for Signalled Lanes (pcuHr):	172.26	Cycle Time (s):	240
	PRC Over All Lanes (%):	-19.0	Total Delay Over All Lanes(pcuHr):	172.26		

Full Input Data And Results

User and Project Details

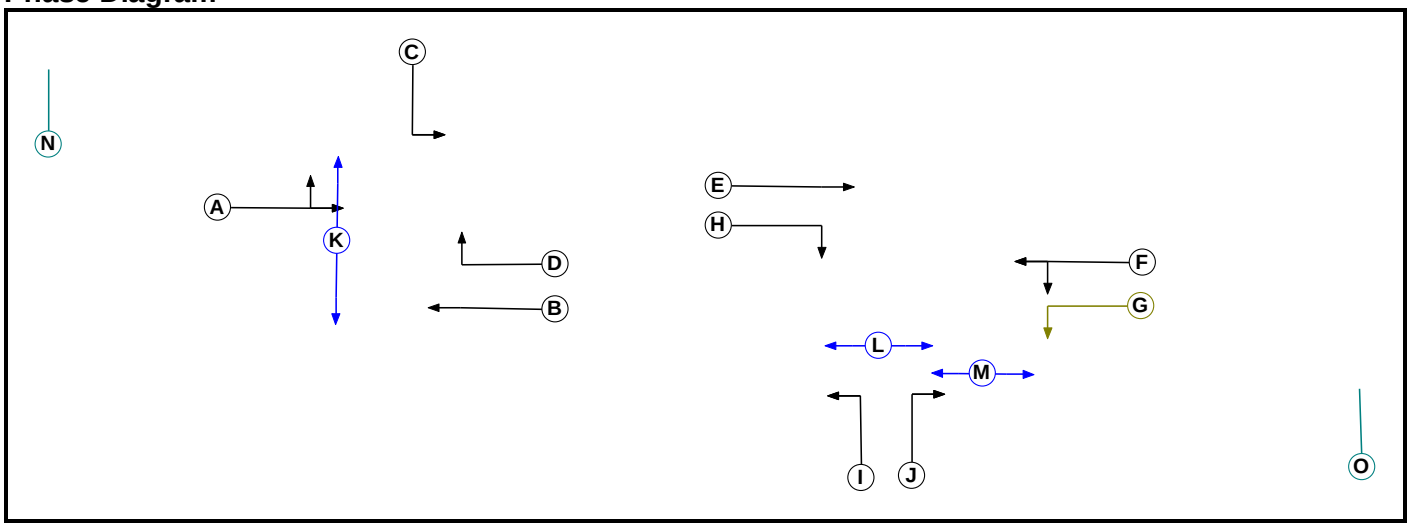
Project:	
Title:	**A2030 / Farlington Avenue / A2030 Eastern Road / Havant Road traffic signal junction**
Location:	
Additional detail:	
File name:	A2030_Farlington Ave_A2030 Eastern Rd_Havant Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Filter	2	F	4	0
H	Traffic	2		7	7
I	Traffic	2		7	7
J	Traffic	2		7	7
K	Pedestrian	1		7	7
L	Pedestrian	2		7	7
M	Pedestrian	2		7	7
N	Dummy	1		3	3
O	Dummy	2		3	3

Full Input Data And Results

Phase Intergreens Matrix

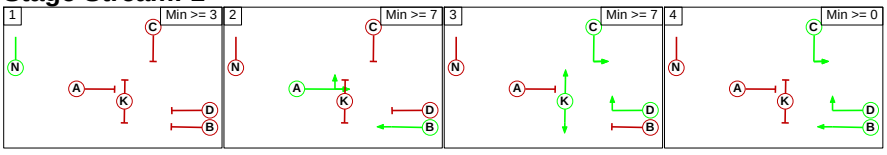
		Starting Phase														
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Terminating Phase	A		-	6	5	-	-	-	-	-	-	5	-	-	3	-
	B	-		-	-	-	-	-	-	-	-	6	-	-	3	-
	C	6	-		-	-	-	-	-	-	-	-	-	-	3	-
	D	5	-	-		-	-	-	-	-	-	-	-	-	3	-
	E	-	-	-	-		-	-	-	-	5	-	-	-	-	3
	F	-	-	-	-	-		-	7	7	7	-	-	-	-	3
	G	-	-	-	-	-	-		5	-	-	-	-	7	-	3
	H	-	-	-	-	-	6	6		-	6	-	-	9	-	3
	I	-	-	-	-	-	5	-	-		-	-	5	-	-	3
	J	-	-	-	-	5	5	-	5	-		-	5	-	-	3
	K	0	0	-	-	-	-	-	-	-	-		-	-	3	-
	L	-	-	-	-	-	-	-	-	0	0	-		-	-	3
	M	-	-	-	-	-	-	0	0	-	-	-	-		-	3
	N	2	2	2	2	-	-	-	-	-	-	2	-	-		-
	O	-	-	-	-	2	2	2	2	2	2	-	2	2	-	

Phases in Stage

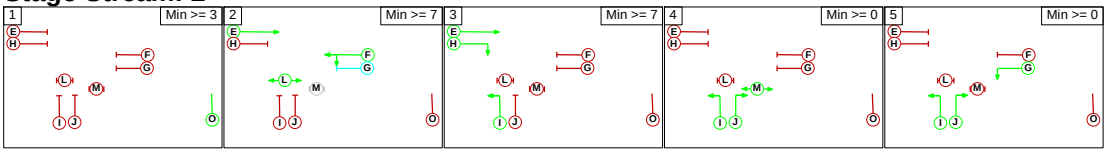
Stream	Stage No.	Phases in Stage
1	1	N
1	2	A B
1	3	C D K
1	4	B C D
2	1	O
2	2	E F L
2	3	E H I
2	4	I J M
2	5	G I J

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Full Input Data And Results

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

From Stage \ To Stage	1	2	3	4
1		2	2	2
2	3		6	6
3	3	6		2
4	3	6	6	

Stage Stream: 2

From Stage \ To Stage	1	2	3	4	5
1		2	2	2	2
2	3		7	7	7
3	3	6		9	6
4	3	5	5		0
5	X	5	X	X	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Farlington Avenue / Havant Road signalised junction
There are no Opposed Lanes in this Junction

Junction: J2: A2030 Eastern Road / Havant Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (Havant Road internal westbound entry)	U	B	2	3	16.5	Geom	-	3.00	0.00	Y	Arm J1:2 Ahead	Inf
J1:1/2 (Havant Road internal westbound entry)	U	D	2	3	16.5	Geom	-	3.00	0.00	Y	Arm J1:4 Right	8.00
J1:2/1 (Havant Road west exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:3/1 (Havant Road west entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:4 Left	6.00
											Arm J2:4 Ahead	Inf
J1:3/2 (Havant Road west entry)	U	A	2	3	7.0	Geom	-	3.00	0.00	Y	Arm J2:4 Ahead	Inf
J1:4/1 (Farlington Avenue exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/1 (Farlington Avenue entry)	U	C	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J2:4 Left	10.00

Full Input Data And Results

Junction: J2: A2030 Eastern Road / Havant Road signalised junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J2:1/1 (A2030 Havant Road entry)	U	F G	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J2:2 Left	18.00
J2:1/2 (A2030 Havant Road entry)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:1 Ahead	Inf
J2:2/1 (A2030 Eastern Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1 (A2030 Eastern Road entry)	U	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:1 Left	12.00
J2:3/2 (A2030 Eastern Road entry)	U	J	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:5 Right	12.00
J2:4/1 (Havant Road internal eastbound entry)	U	E	2	3	15.7	Geom	-	3.00	0.00	Y	Arm J2:5 Ahead	Inf
J2:4/2 (Havant Road internal eastbound entry)	U	H	2	3	15.7	Geom	-	3.00	0.00	Y	Arm J2:2 Right	15.00
J2:5/1 (A2030 Havant Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/2 (A2030 Havant Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	145	431	132	708
	B	106	0	114	35	255
	C	564	131	0	60	755
	D	237	55	0	0	292
	Tot.	907	331	545	227	2010

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	545
J1:1/2	167
J1:2/1	545
J1:3/1 (with short)	755(In) 624(Out)
J1:3/2 (short)	131
J1:4/1	227
J1:5/1	292
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	145
J2:1/2 (with short)	708(In) 563(Out)
J2:2/1	331
J2:3/1	149
J2:3/2	106
J2:4/1	801
J2:4/2	186
J2:5/1	854
J2:5/2	53

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	100.0 %	1613	1613
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	9.6 %	1870	1870
				Arm J2:4 Ahead	Inf	90.4 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1741	1741
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	142	411	157	710
	B	200	0	170	65	435
	C	688	118	0	73	879
	D	146	25	0	0	171
	Tot.	1034	285	581	295	2195

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	581
J1:1/2	222
J1:2/1	581
J1:3/1 (with short)	879(In) 761(Out)
J1:3/2 (short)	118
J1:4/1	295
J1:5/1	171
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	142
J2:1/2 (with short)	710(In) 568(Out)
J2:2/1	285
J2:3/1	235
J2:3/2	200
J2:4/1	834
J2:4/2	143
J2:5/1	934
J2:5/2	100

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	100.0 %	1613	1613
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	9.6 %	1870	1870
				Arm J2:4 Ahead	Inf	90.4 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	100.0 %	1741	1741
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	238	577	0	815
	B	112	0	3	0	115
	C	679	0	0	177	856
	D	45	0	0	0	45
	Tot.	836	238	580	177	1831

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	580
J1:1/2	0
J1:2/1	580
J1:3/1 (with short)	856(In) 856(Out)
J1:3/2 (short)	0
J1:4/1	177
J1:5/1	45
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	238
J2:1/2 (with short)	815(In) 577(Out)
J2:2/1	238
J2:3/1	3
J2:3/2	112
J2:4/1	724
J2:4/2	0
J2:5/1	780
J2:5/2	56

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	0.0 %	1915	1915
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	20.7 %	1821	1821
				Arm J2:4 Ahead	Inf	79.3 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	0.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	0.0 %	1915	1915
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	193	619	0	812
	B	194	0	3	0	197
	C	791	0	0	282	1073
	D	37	0	0	0	37
	Tot.	1022	193	622	282	2119

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	622
J1:1/2	0
J1:2/1	622
J1:3/1 (with short)	1073(In) 1073(Out)
J1:3/2 (short)	0
J1:4/1	282
J1:5/1	37
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	193
J2:1/2 (with short)	812(In) 619(Out)
J2:2/1	193
J2:3/1	3
J2:3/2	194
J2:4/1	828
J2:4/2	0
J2:5/1	925
J2:5/2	97

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	0.0 %	1915	1915
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	26.3 %	1797	1797
				Arm J2:4 Ahead	Inf	73.7 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	0.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	0.0 %	1915	1915
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	238	587	0	825
	B	115	0	3	0	118
	C	678	0	0	175	853
	D	45	0	0	0	45
	Tot.	838	238	590	175	1841

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	590
J1:1/2	0
J1:2/1	590
J1:3/1 (with short)	853(In) 853(Out)
J1:3/2 (short)	0
J1:4/1	175
J1:5/1	45
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	238
J2:1/2 (with short)	825(In) 587(Out)
J2:2/1	238
J2:3/1	3
J2:3/2	115
J2:4/1	723
J2:4/2	0
J2:5/1	781
J2:5/2	57

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	0.0 %	1915	1915
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	20.5 %	1822	1822
				Arm J2:4 Ahead	Inf	79.5 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	0.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	0.0 %	1915	1915
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	212	615	0	827
	B	194	0	3	0	197
	C	790	0	0	275	1065
	D	38	0	0	0	38
	Tot.	1022	212	618	275	2127

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: J1: Farlington Avenue / Havant Road signalised junction	
J1:1/1	618
J1:1/2	0
J1:2/1	618
J1:3/1 (with short)	1065(In) 1065(Out)
J1:3/2 (short)	0
J1:4/1	275
J1:5/1	38
Junction: J2: A2030 Eastern Road / Havant Road signalised junction	
J2:1/1 (short)	212
J2:1/2 (with short)	827(In) 615(Out)
J2:2/1	212
J2:3/1	3
J2:3/2	194
J2:4/1	828
J2:4/2	0
J2:5/1	925
J2:5/2	97

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Farlington Avenue / Havant Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:2 Ahead	Inf	100.0 %	1915	1915
J1:1/2 (Havant Road internal westbound entry)	3.00	0.00	Y	Arm J1:4 Right	8.00	0.0 %	1915	1915
J1:2/1 (Havant Road west exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:3/1 (Havant Road west entry)	3.00	0.00	Y	Arm J1:4 Left	6.00	25.8 %	1799	1799
				Arm J2:4 Ahead	Inf	74.2 %		
J1:3/2 (Havant Road west entry)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	0.0 %	1915	1915
J1:4/1 (Farlington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Farlington Avenue entry)	2.75	0.00	Y	Arm J2:4 Left	10.00	100.0 %	1643	1643

Junction: J2: A2030 Eastern Road / Havant Road signalised junction

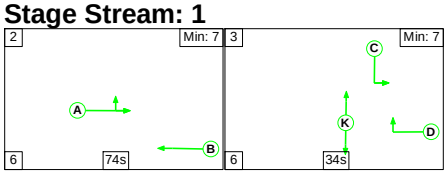
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J2:2 Left	18.00	100.0 %	1768	1768
J2:1/2 (A2030 Havant Road entry)	3.00	0.00	Y	Arm J1:1 Ahead	Inf	100.0 %	1915	1915
J2:2/1 (A2030 Eastern Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J1:1 Left	12.00	100.0 %	1702	1702
J2:3/2 (A2030 Eastern Road entry)	3.00	0.00	Y	Arm J2:5 Right	12.00	100.0 %	1702	1702
J2:4/1 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1915	1915
J2:4/2 (Havant Road internal eastbound entry)	3.00	0.00	Y	Arm J2:2 Right	15.00	0.0 %	1915	1915
J2:5/1 (A2030 Havant Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/2 (A2030 Havant Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

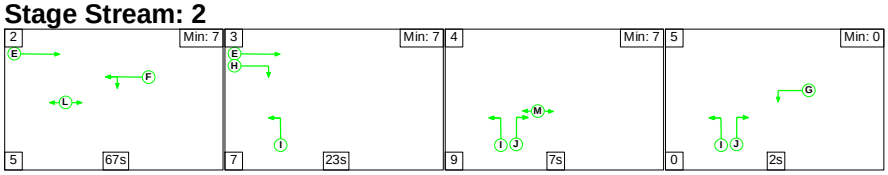
Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

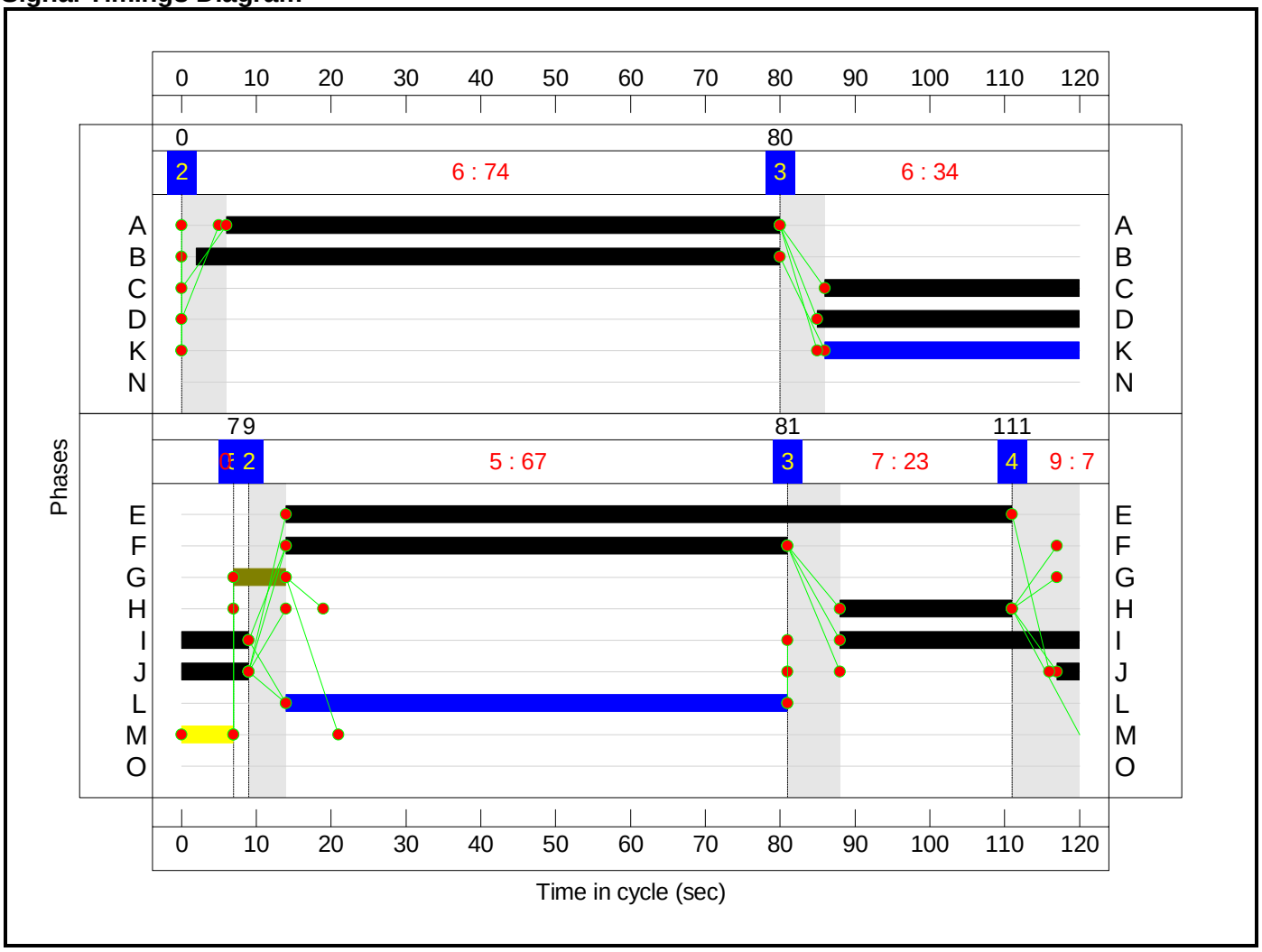
Stage	2	3
Duration	74	34
Change Point	0	80

Stage Stream: 2

Stage	2	3	4	5
Duration	67	23	7	2
Change Point	9	81	111	7

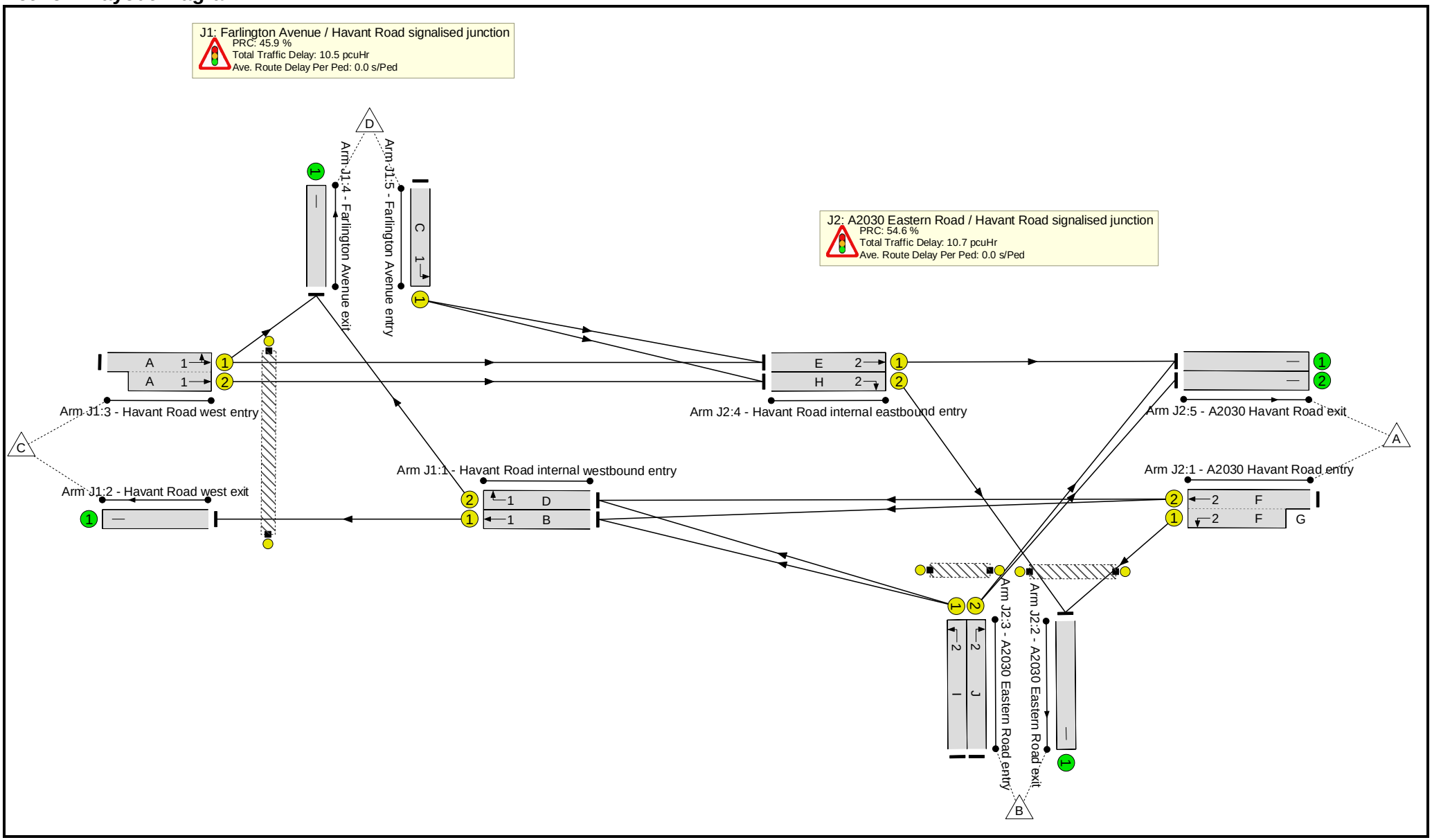
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.7%**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.7%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	78	-	545	1915	1261	43.2%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	35	-	167	1613	484	34.5%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	545	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	74	-	755	1870:1915	1224	61.7%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	227	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	34	-	292	1643	479	60.9%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	34	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**58.2%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	67:74	7	708	1915:1768	1216	58.2%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	331	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	41	-	149	1702	596	25.0%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	12	-	106	1702	184	57.5%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	97	-	801	1915	1564	51.2%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	23	-	186	1741	348	53.4%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	854	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	53	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	67	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**16.3**	**4.8**	**0.0**	**21.2**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**8.3**	**2.2**	**0.0**	**10.5**	**-**	**-**	**-**	**-**
1/1	545	545	-	-	-	1.1	0.4	-	1.4	9.5	4.9	0.4	5.3
1/2	167	167	-	-	-	1.6	0.3	-	1.9	41.1	4.6	0.3	4.8
2/1	545	545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	755	755	-	-	-	2.6	0.8	-	3.4	16.3	13.0	0.8	13.8
4/1	227	227	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	292	292	-	-	-	3.0	0.8	-	3.7	46.2	8.4	0.8	9.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**8.1**	**2.6**	**0.0**	**10.7**	**-**	**-**	**-**	**-**
1/2+1/1	708	708	-	-	-	2.9	0.7	-	3.6	18.1	11.4	0.7	12.1
2/1	331	331	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	149	149	-	-	-	1.2	0.2	-	1.3	31.8	3.5	0.2	3.7
3/2	106	106	-	-	-	1.5	0.7	-	2.2	73.5	3.4	0.7	4.0
4/1	801	801	-	-	-	0.3	0.5	-	0.9	3.8	9.1	0.5	9.6
4/2	186	186	-	-	-	2.2	0.6	-	2.8	53.8	5.0	0.6	5.6
5/1	854	854	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	53	53	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

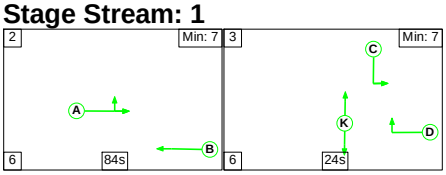
C1	Stream: 1 PRC for Signalled Lanes (%):	45.9	Total Delay for Signalled Lanes (pcuHr):	10.51	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	54.6	Total Delay for Signalled Lanes (pcuHr):	10.68	Cycle Time (s):	120
	PRC Over All Lanes (%):	45.9	Total Delay Over All Lanes(pcuHr):	21.19		

Full Input Data And Results

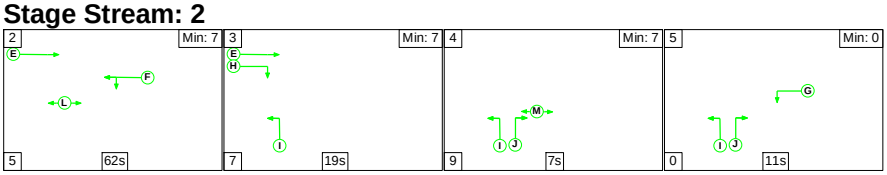
Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

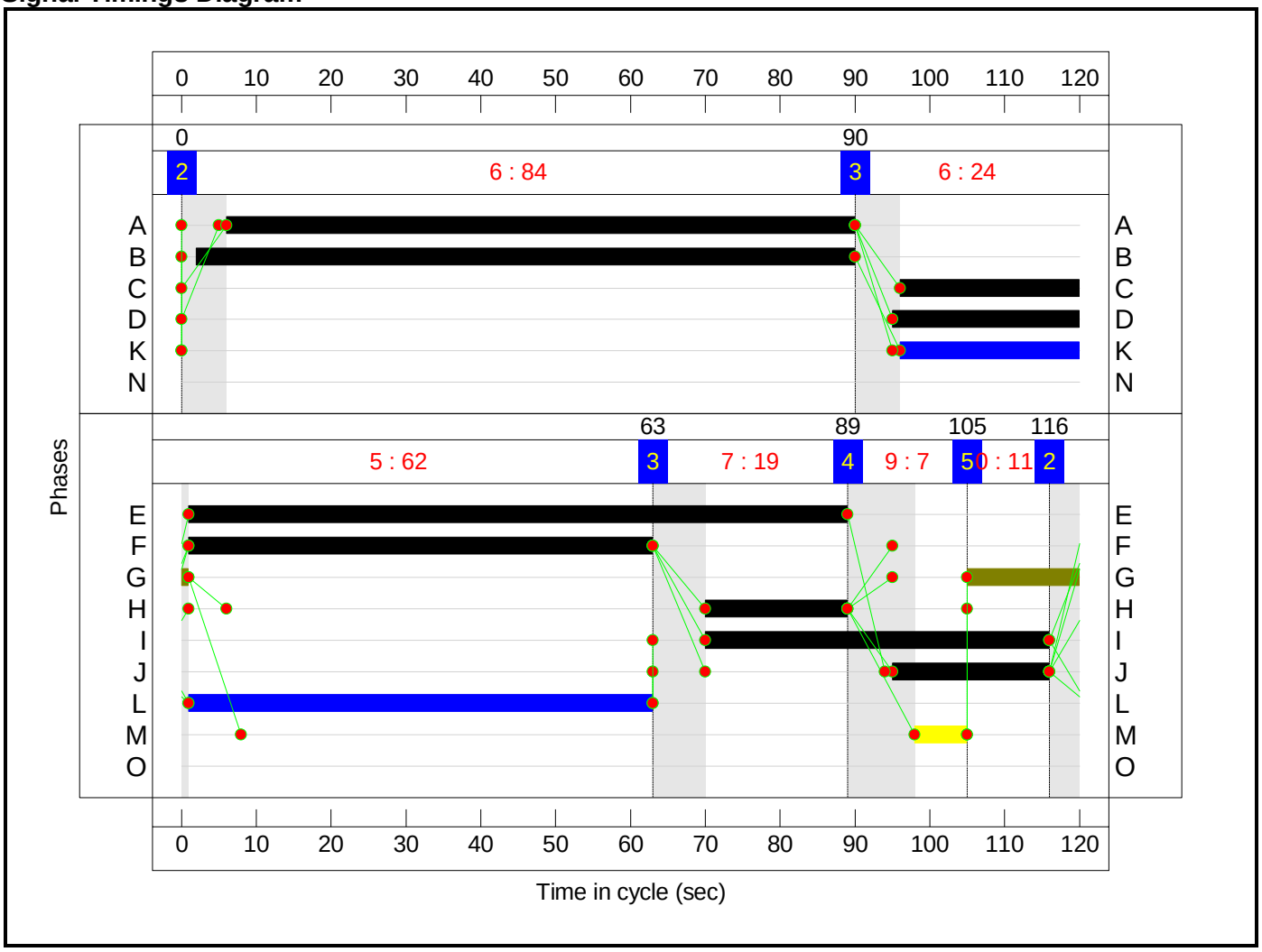
Stage	2	3
Duration	84	24
Change Point	0	90

Stage Stream: 2

Stage	2	3	4	5
Duration	62	19	7	11
Change Point	116	63	89	105

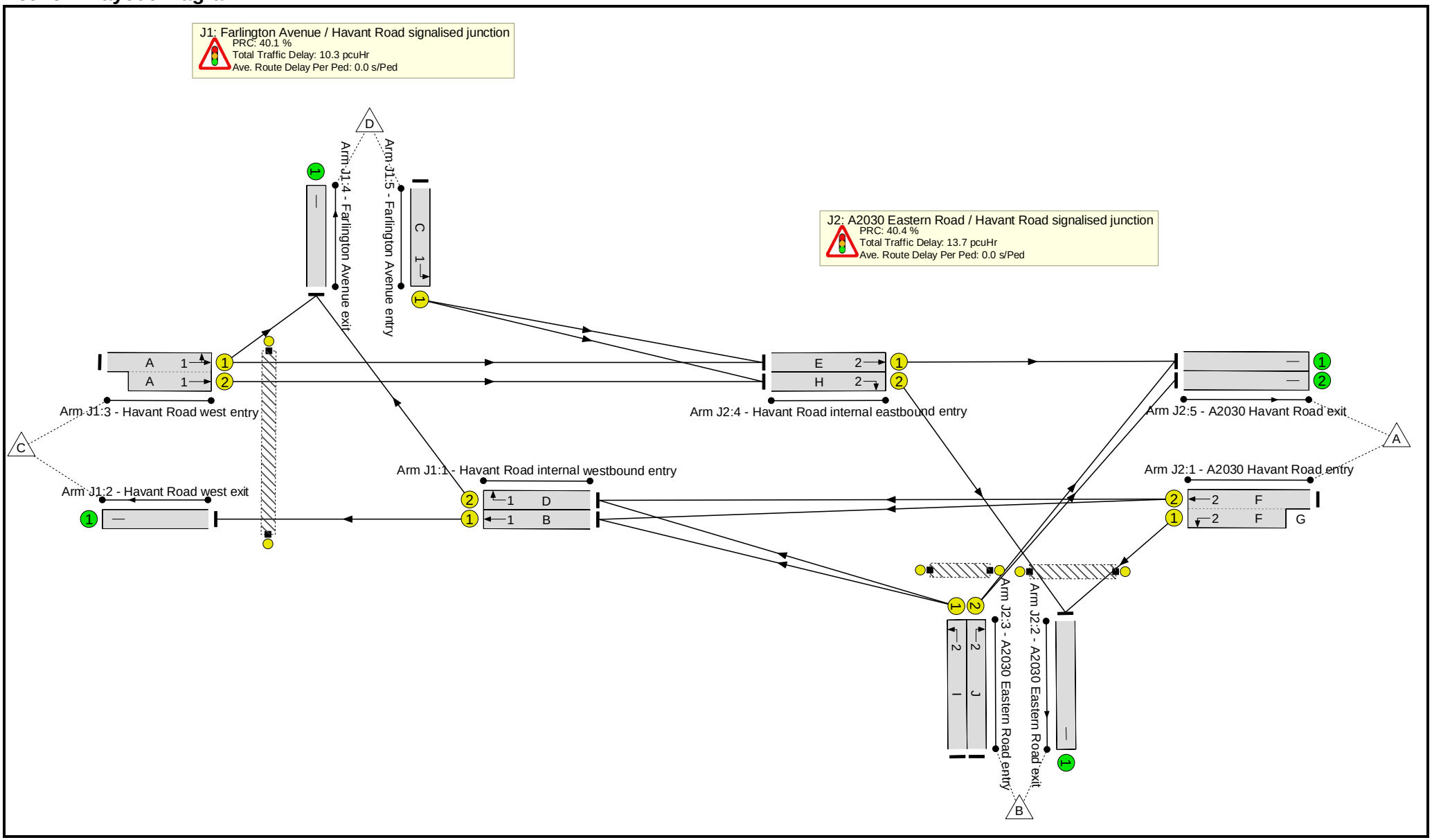
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.2%**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.2%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	88	-	581	1915	1420	40.9%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	25	-	222	1613	349	63.5%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	84	-	879	1870:1915	1368	64.2%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	24	-	171	1643	342	50.0%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	24	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.1%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	62:78	16	710	1915:1768	1134	62.6%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	285	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	46	-	235	1702	667	35.3%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	21	-	200	1702	312	64.1%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	88	-	834	1915	1420	58.7%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	19	-	143	1741	290	49.3%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	934	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	62	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**18.2**	**5.8**	**0.0**	**24.0**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**7.7**	**2.6**	**0.0**	**10.3**	**-**	**-**	**-**	**-**
1/1	581	581	-	-	-	0.3	0.3	-	0.7	4.3	2.2	0.3	2.5
1/2	222	222	-	-	-	3.3	0.9	-	4.2	67.8	7.2	0.9	8.1
2/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	879	879	-	-	-	2.1	0.9	-	3.0	12.2	13.8	0.9	14.7
4/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	171	171	-	-	-	2.0	0.5	-	2.5	52.4	5.0	0.5	5.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**10.5**	**3.2**	**0.0**	**13.7**	**-**	**-**	**-**	**-**
1/2+1/1	710	710	-	-	-	3.3	0.8	-	4.2	21.2	12.8	0.8	13.6
2/1	285	285	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	235	235	-	-	-	1.7	0.3	-	2.0	29.9	5.5	0.3	5.8
3/2	200	200	-	-	-	2.5	0.9	-	3.4	61.2	6.2	0.9	7.0
4/1	834	834	-	-	-	1.1	0.7	-	1.8	8.0	7.0	0.7	7.7
4/2	143	143	-	-	-	1.8	0.5	-	2.3	58.2	4.4	0.5	4.9
5/1	934	934	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

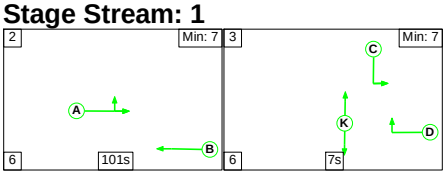
C1	Stream: 1 PRC for Signalled Lanes (%):	40.1	Total Delay for Signalled Lanes (pcuHr):	10.34	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	40.4	Total Delay for Signalled Lanes (pcuHr):	13.68	Cycle Time (s):	120
	PRC Over All Lanes (%):	40.1	Total Delay Over All Lanes(pcuHr):	24.02		

Full Input Data And Results

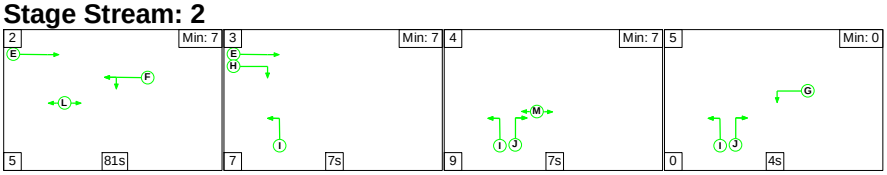
Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

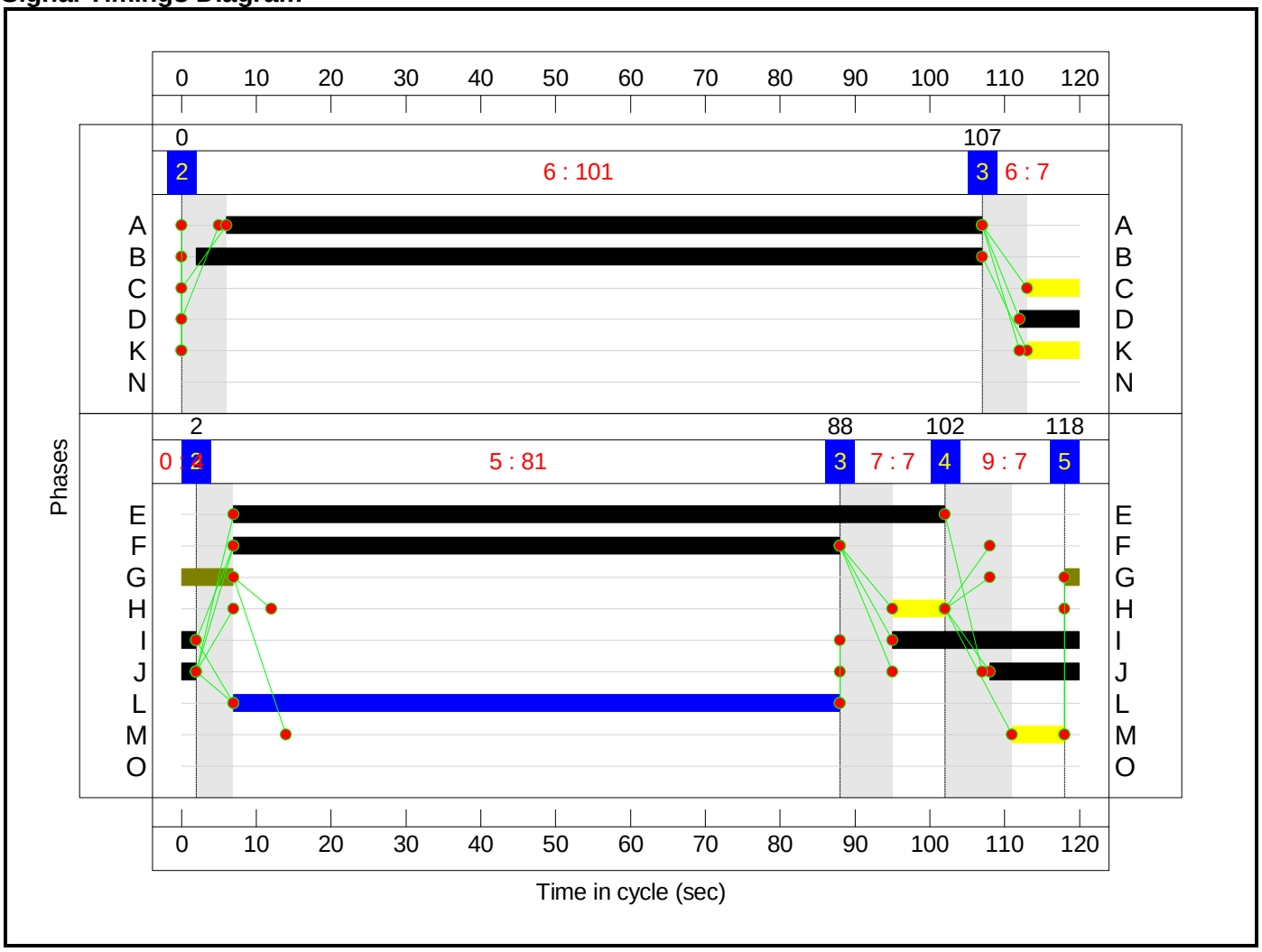
Stage	2	3
Duration	101	7
Change Point	0	107

Stage Stream: 2

Stage	2	3	4	5
Duration	81	7	7	4
Change Point	2	88	102	118

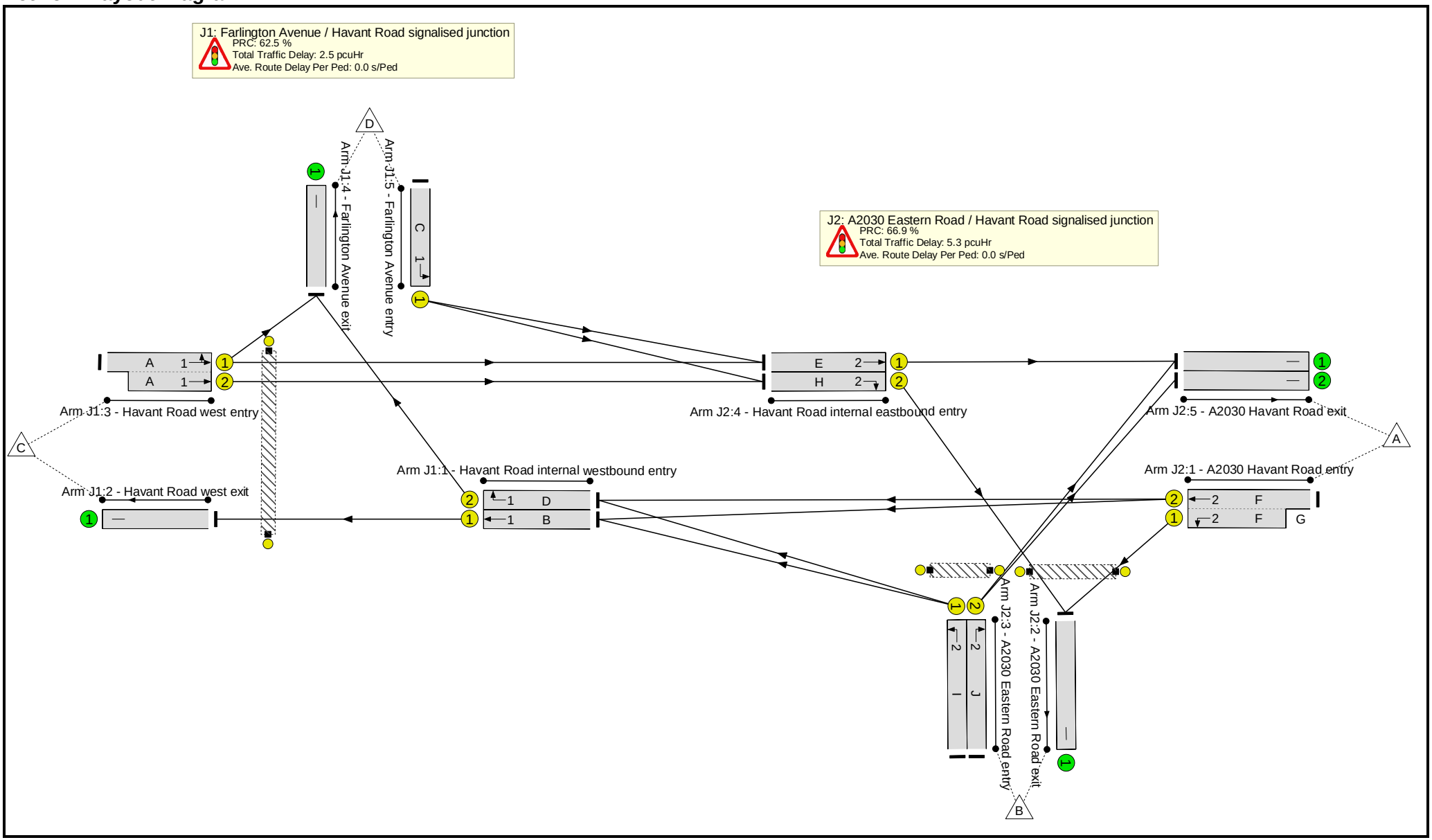
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.4%**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.4%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	105	-	580	1915	1692	34.3%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	8	-	0	1915	144	0.0%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	101	-	856	1821:1915	1545	55.4%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	177	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	7	-	45	1643	110	41.1%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	7	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**53.9%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	81:90	9	815	1915:1768	1511	53.9%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	27	-	3	1702	397	0.8%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	14	-	112	1702	213	52.6%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	95	-	724	1915	1532	47.3%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	7	-	0	1915	128	0.0%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	780	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	56	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	81	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.0**	**2.8**	**0.0**	**7.9**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**1.3**	**1.2**	**0.0**	**2.5**	**-**	**-**	**-**	**-**
1/1	580	580	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
1/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	856	856	-	-	-	0.6	0.6	-	1.2	5.2	8.2	0.6	8.8
4/1	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	45	45	-	-	-	0.7	0.3	-	1.0	81.4	1.4	0.3	1.8
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**3.8**	**1.6**	**0.0**	**5.3**	**-**	**-**	**-**	**-**
1/2+1/1	815	815	-	-	-	1.6	0.6	-	2.2	9.9	8.7	0.6	9.2
2/1	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	3	3	-	-	-	0.0	0.0	-	0.0	40.2	0.1	0.0	0.1
3/2	112	112	-	-	-	1.5	0.5	-	2.1	66.9	3.5	0.5	4.0
4/1	724	724	-	-	-	0.6	0.4	-	1.0	5.0	4.5	0.4	5.0
4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	780	780	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	56	56	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

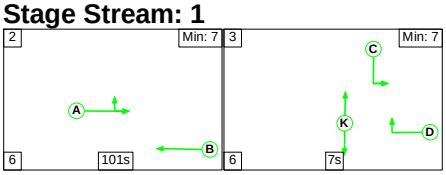
C1	Stream: 1 PRC for Signalled Lanes (%):	62.5	Total Delay for Signalled Lanes (pcuHr):	2.51	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	66.9	Total Delay for Signalled Lanes (pcuHr):	5.35	Cycle Time (s): 120
	PRC Over All Lanes (%):	62.5	Total Delay Over All Lanes(pcuHr):	7.86	

Full Input Data And Results

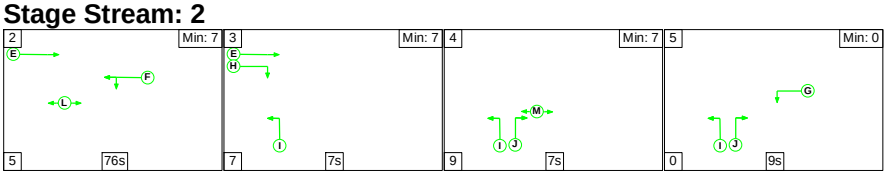
Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

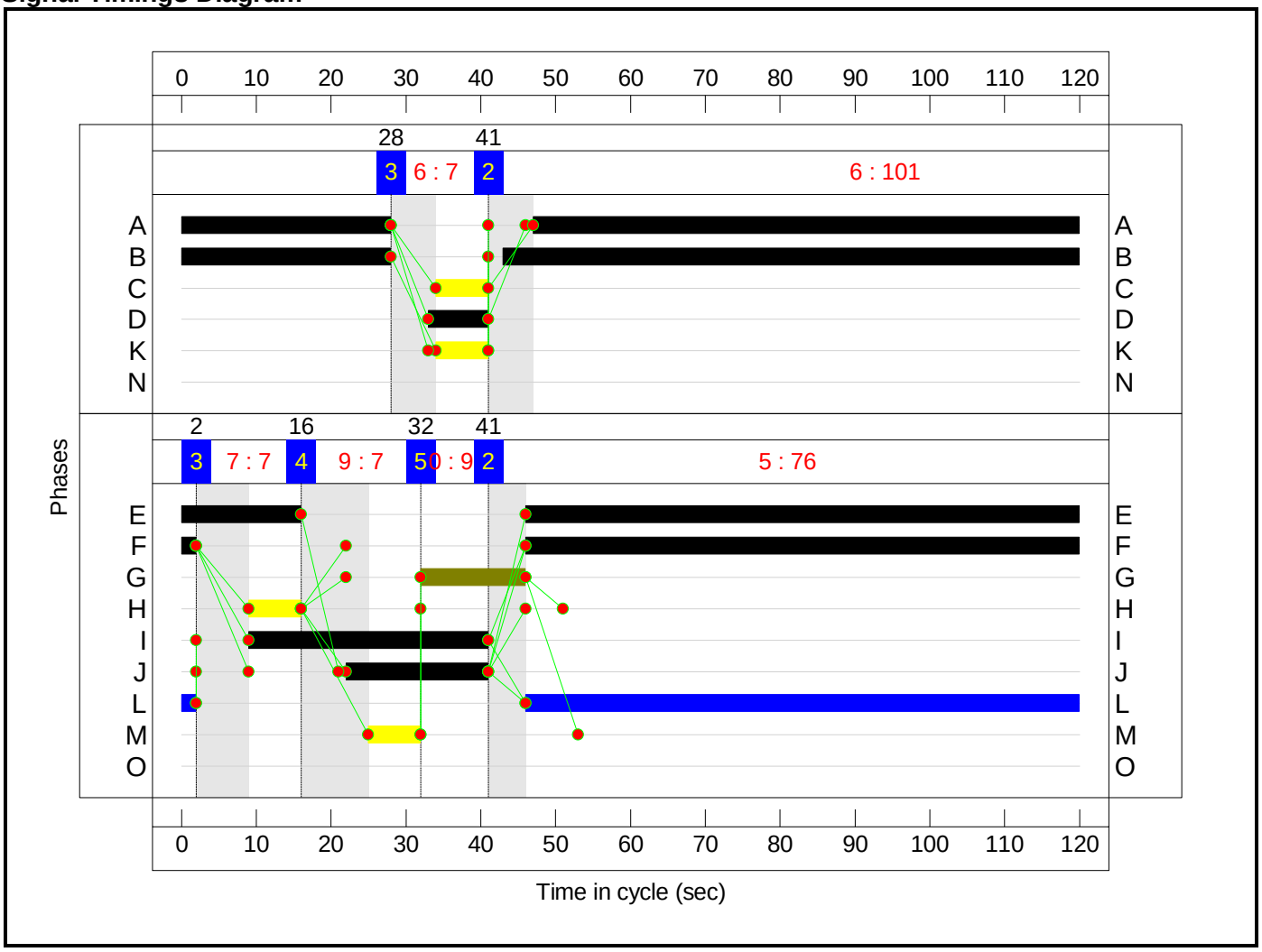
Stage	2	3
Duration	101	7
Change Point	41	28

Stage Stream: 2

Stage	2	3	4	5
Duration	76	7	7	9
Change Point	41	2	16	32

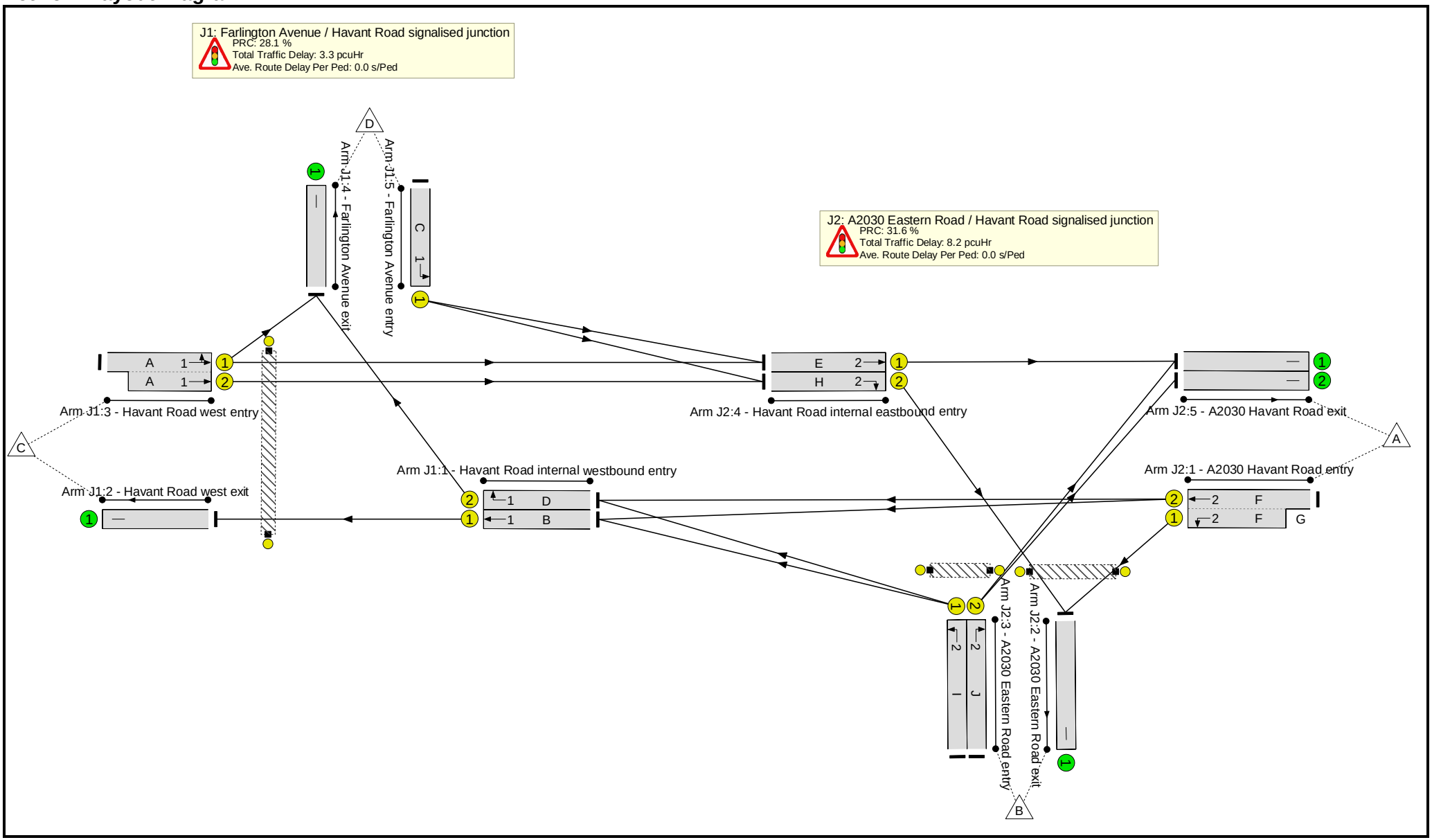
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.2%**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.2%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	105	-	622	1915	1692	36.8%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	8	-	0	1915	144	0.0%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	622	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	101	-	1073	1797:1915	1527	70.2%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	282	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	7	-	37	1643	110	33.8%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	7	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.4%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	76:90	14	812	1915:1768	1384	58.7%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	32	-	3	1702	468	0.6%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	19	-	194	1702	284	68.4%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	90	-	828	1915	1452	57.0%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	7	-	0	1915	128	0.0%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	97	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	76	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**7.3**	**4.1**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**1.5**	**1.7**	**0.0**	**3.3**	**-**	**-**	**-**	**-**
1/1	622	622	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
1/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	622	622	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	1073	1073	-	-	-	1.0	1.2	-	2.2	7.3	13.1	1.2	14.3
4/1	282	282	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	37	37	-	-	-	0.6	0.3	-	0.8	78.2	1.2	0.3	1.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.7**	**2.4**	**0.0**	**8.2**	**-**	**-**	**-**	**-**
1/2+1/1	812	812	-	-	-	2.2	0.7	-	2.9	12.8	10.8	0.7	11.5
2/1	193	193	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	3	3	-	-	-	0.0	0.0	-	0.0	35.8	0.1	0.0	0.1
3/2	194	194	-	-	-	2.5	1.1	-	3.6	66.6	6.0	1.1	7.1
4/1	828	828	-	-	-	1.0	0.7	-	1.7	7.3	7.0	0.7	7.7
4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	97	97	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

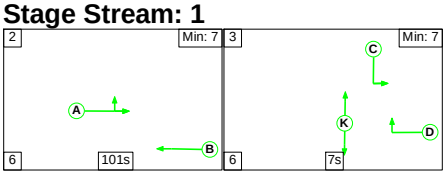
C1	Stream: 1 PRC for Signalled Lanes (%):	28.1	Total Delay for Signalled Lanes (pcuHr):	3.27	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	31.6	Total Delay for Signalled Lanes (pcuHr):	8.17	Cycle Time (s): 120
	PRC Over All Lanes (%):	28.1	Total Delay Over All Lanes(pcuHr):	11.44	

Full Input Data And Results

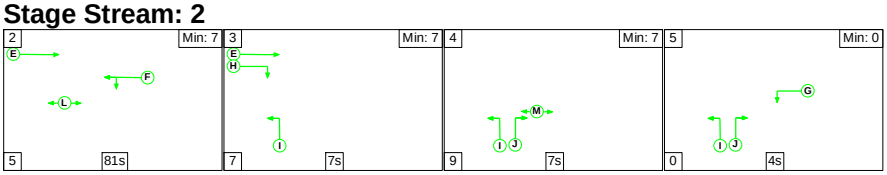
Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

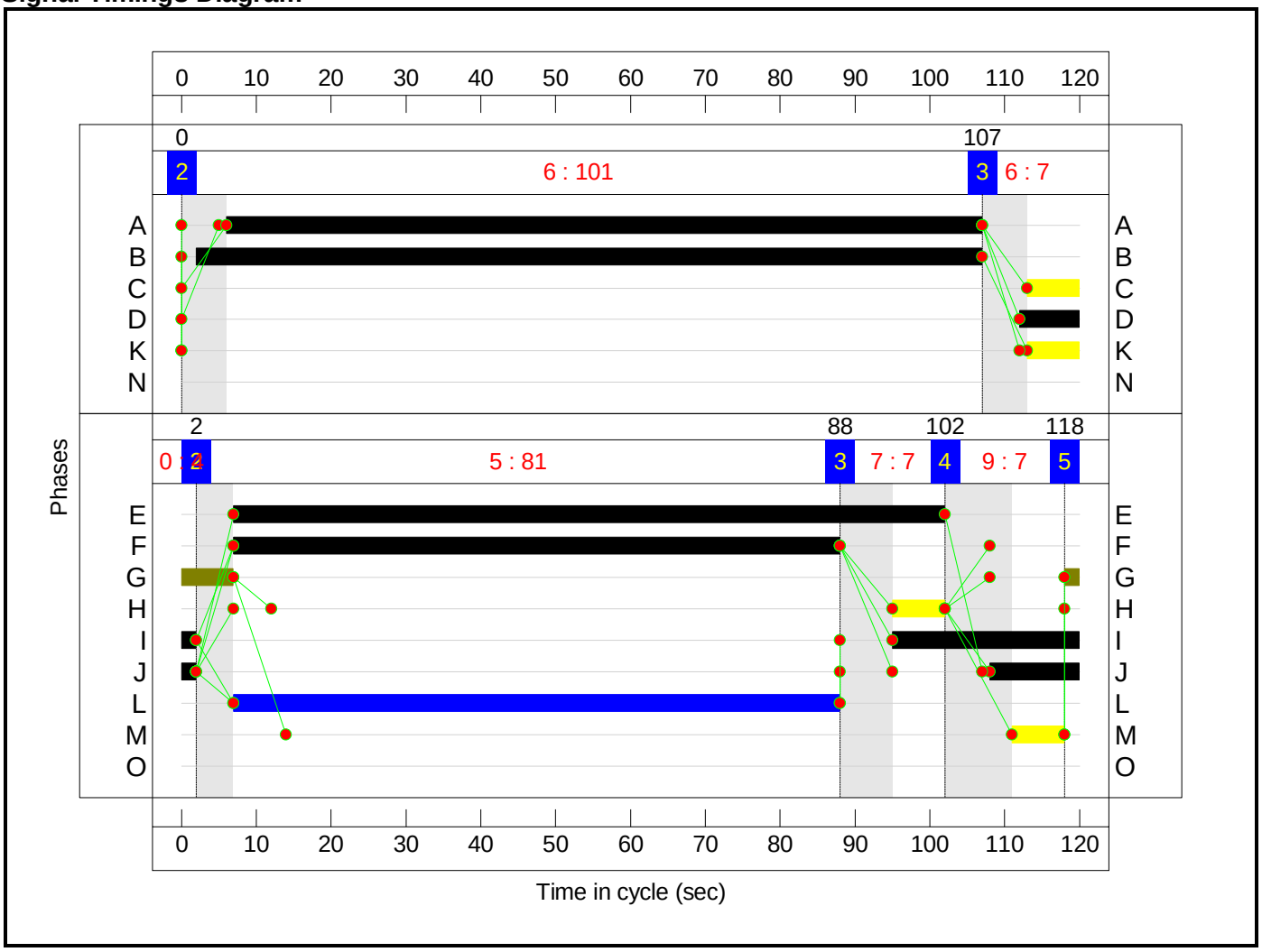
Stage	2	3
Duration	101	7
Change Point	0	107

Stage Stream: 2

Stage	2	3	4	5
Duration	81	7	7	4
Change Point	2	88	102	118

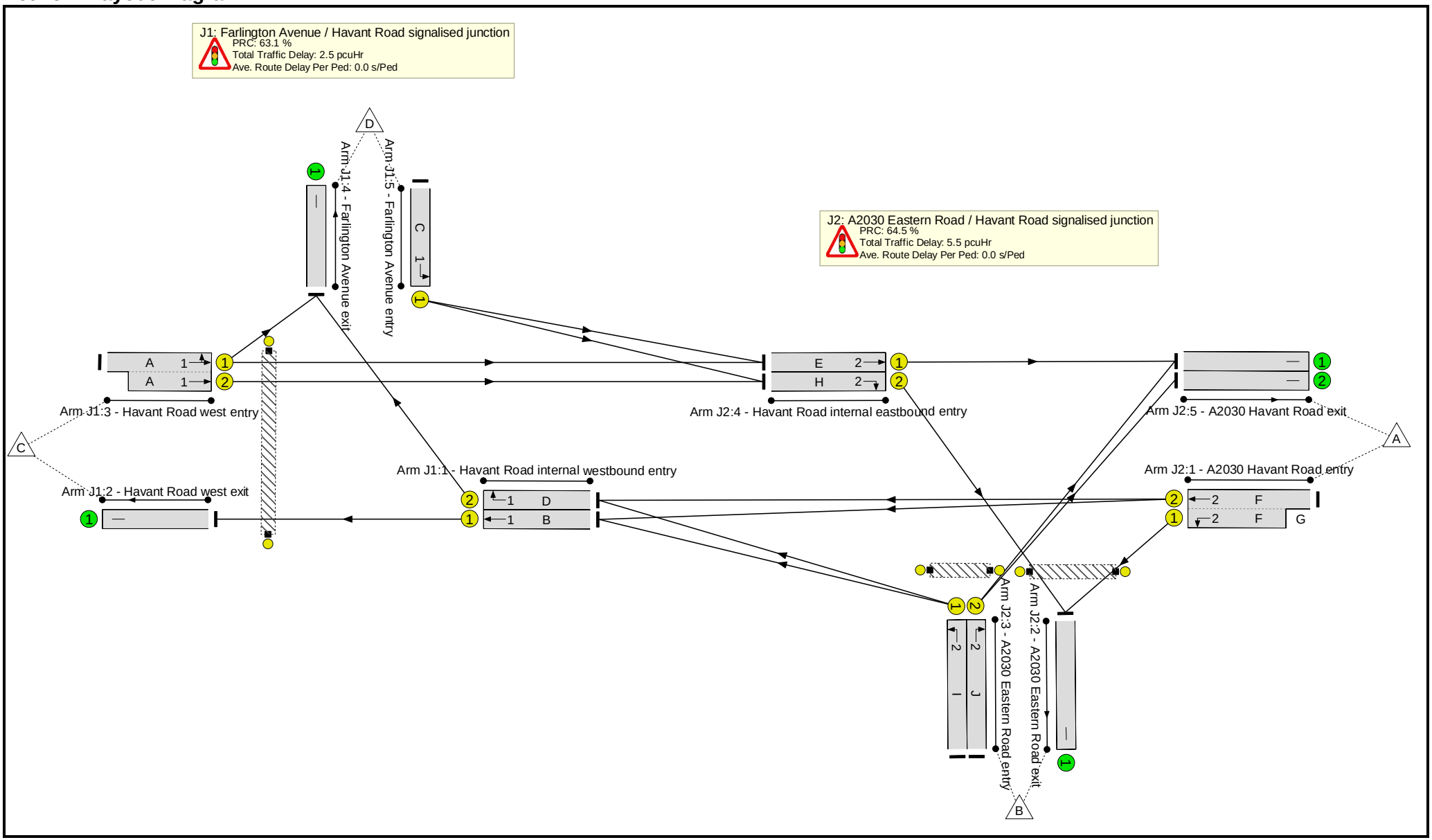
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.2%**
J1: Farlington Avenue / Havant Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.2%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	105	-	590	1915	1692	34.9%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	8	-	0	1915	144	0.0%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	590	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	101	-	853	1822:1915	1546	55.2%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	175	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	7	-	45	1643	110	41.1%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	7	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**54.7%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	81:90	9	825	1915:1768	1508	54.7%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	27	-	3	1702	397	0.8%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	14	-	115	1702	213	54.1%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	95	-	723	1915	1532	47.2%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	7	-	0	1915	128	0.0%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	781	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	57	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	81	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.1**	**2.9**	**0.0**	**8.0**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**1.3**	**1.2**	**0.0**	**2.5**	**-**	**-**	**-**	**-**
1/1	590	590	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
1/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	590	590	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	853	853	-	-	-	0.6	0.6	-	1.2	5.1	8.2	0.6	8.8
4/1	175	175	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	45	45	-	-	-	0.7	0.3	-	1.0	81.4	1.4	0.3	1.8
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**3.8**	**1.6**	**0.0**	**5.5**	**-**	**-**	**-**	**-**
1/2+1/1	825	825	-	-	-	1.7	0.6	-	2.3	10.0	8.8	0.6	9.4
2/1	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	3	3	-	-	-	0.0	0.0	-	0.0	40.2	0.1	0.0	0.1
3/2	115	115	-	-	-	1.6	0.6	-	2.2	67.5	3.6	0.6	4.2
4/1	723	723	-	-	-	0.6	0.4	-	1.0	5.0	4.5	0.4	5.0
4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	781	781	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

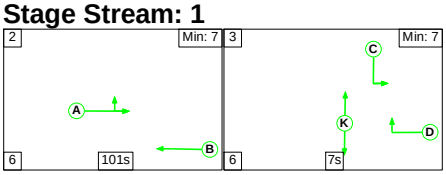
C1	Stream: 1 PRC for Signalled Lanes (%):	63.1	Total Delay for Signalled Lanes (pcuHr):	2.51	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	64.5	Total Delay for Signalled Lanes (pcuHr):	5.47	Cycle Time (s):	120
	PRC Over All Lanes (%):	63.1	Total Delay Over All Lanes(pcuHr):	7.98		

Full Input Data And Results

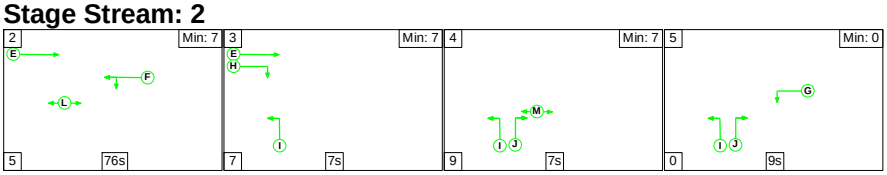
Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

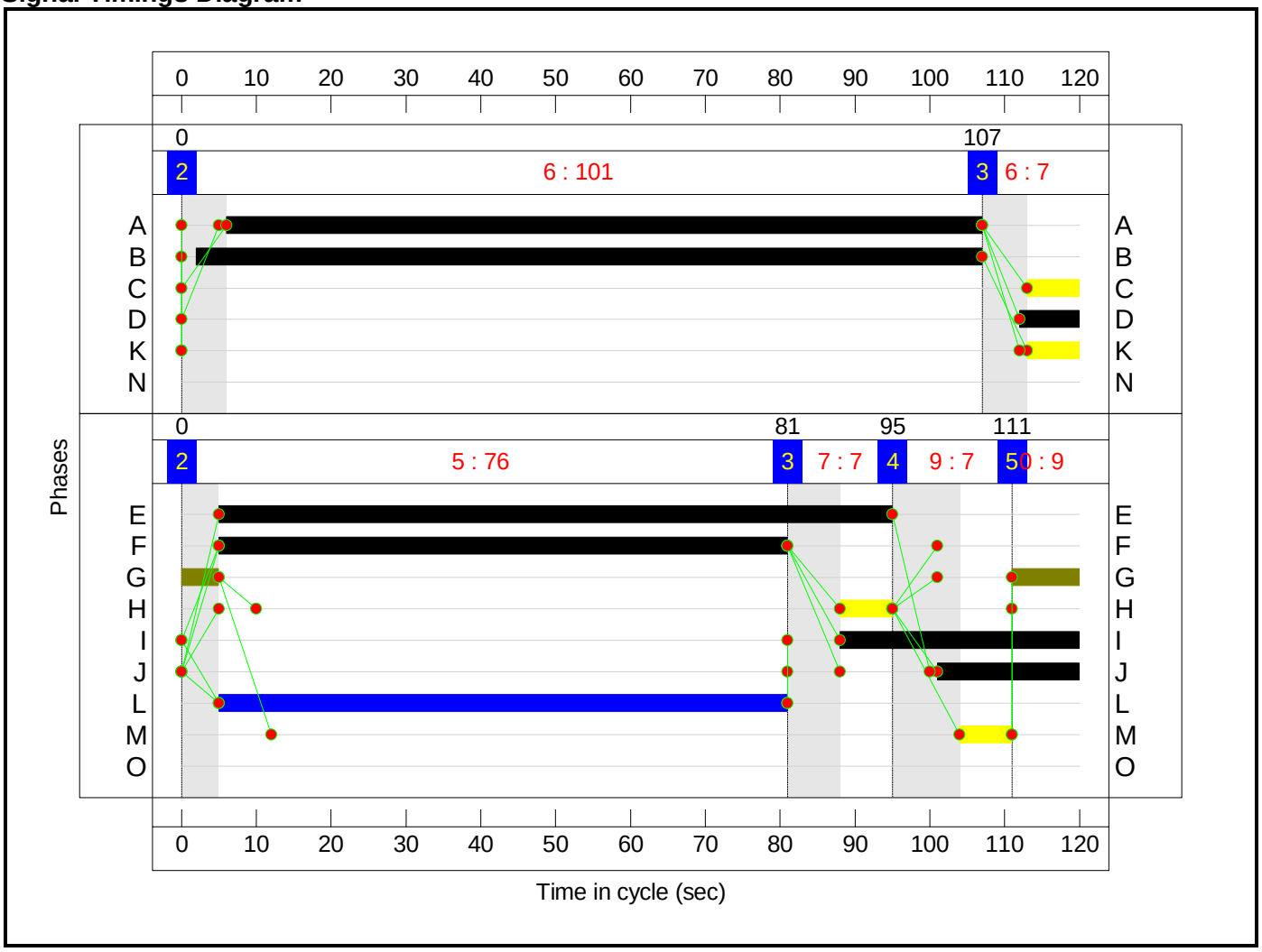
Stage	2	3
Duration	101	7
Change Point	0	107

Stage Stream: 2

Stage	2	3	4	5
Duration	76	7	7	9
Change Point	0	81	95	111

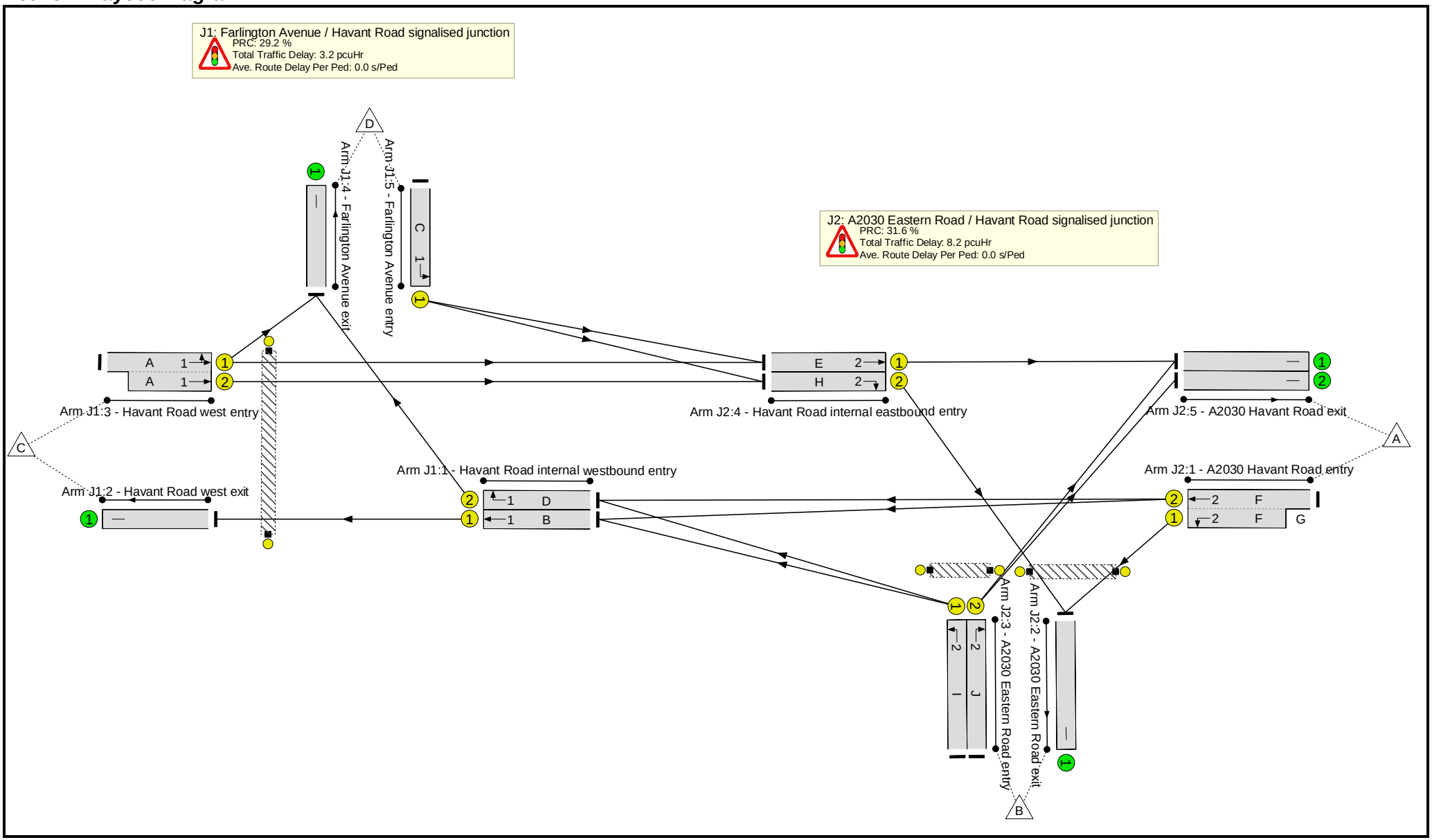
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.6%**
J1: Farlington Avenue / Havant Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.6%**
1/1	Havant Road internal westbound entry Ahead	U	1	N/A	B		1	105	-	618	1915	1692	36.5%
1/2	Havant Road internal westbound entry Right	U	1	N/A	D		1	8	-	0	1915	144	0.0%
2/1	Havant Road west exit	U	N/A	N/A	-		-	-	-	618	Inf	Inf	0.0%
3/1+3/2	Havant Road west entry Left Ahead	U	1	N/A	A		1	101	-	1065	1799:1915	1529	69.6%
4/1	Farlington Avenue exit	U	N/A	N/A	-		-	-	-	275	Inf	Inf	0.0%
5/1	Farlington Avenue entry Left	U	1	N/A	C		1	7	-	38	1643	110	34.7%
Ped Link: P1	Unnamed Ped Link	-	1	-	K		1	7	-	0	-	0	0.0%
J2: A2030 Eastern Road / Havant Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**68.4%**
1/2+1/1	A2030 Havant Road entry Ahead Left	U	2	N/A	F	G	1	76:90	14	827	1915:1768	1400	59.1%
2/1	A2030 Eastern Road exit	U	N/A	N/A	-		-	-	-	212	Inf	Inf	0.0%
3/1	A2030 Eastern Road entry Left	U	2	N/A	I		1	32	-	3	1702	468	0.6%
3/2	A2030 Eastern Road entry Right	U	2	N/A	J		1	19	-	194	1702	284	68.4%

Full Input Data And Results

4/1	Havant Road internal eastbound entry Ahead	U	2	N/A	E		1	90	-	828	1915	1452	57.0%
4/2	Havant Road internal eastbound entry Right	U	2	N/A	H		1	7	-	0	1915	128	0.0%
5/1	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
5/2	A2030 Havant Road exit	U	N/A	N/A	-		-	-	-	97	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	M		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	2	-	L		1	76	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**7.3**	**4.1**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
J1: Farlington Avenue / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**1.5**	**1.7**	**0.0**	**3.2**	**-**	**-**	**-**	**-**
1/1	618	618	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
1/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	618	618	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	1065	1065	-	-	-	1.0	1.1	-	2.1	7.2	13.0	1.1	14.2
4/1	275	275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	38	38	-	-	-	0.6	0.3	-	0.8	78.5	1.2	0.3	1.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: A2030 Eastern Road / Havant Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.7**	**2.4**	**0.0**	**8.2**	**-**	**-**	**-**	**-**
1/2+1/1	827	827	-	-	-	2.2	0.7	-	2.9	12.6	10.8	0.7	11.5
2/1	212	212	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	3	3	-	-	-	0.0	0.0	-	0.0	35.8	0.1	0.0	0.1
3/2	194	194	-	-	-	2.5	1.1	-	3.6	66.6	6.0	1.1	7.1
4/1	828	828	-	-	-	1.0	0.7	-	1.7	7.3	7.1	0.7	7.7
4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	97	97	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	29.2	Total Delay for Signalled Lanes (pcuHr):	3.24	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	31.6	Total Delay for Signalled Lanes (pcuHr):	8.19	Cycle Time (s): 120
	PRC Over All Lanes (%):	29.2	Total Delay Over All Lanes(pcuHr):	11.43	

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: A27 Western Rd_A3 London Rd_A397 Northern Rd_M27.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 09:56:21

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	10.0	47.51	0.93	E	9.4	48.32	0.92	E
Arm 2	16.4	28.45	0.95	D	6.6	11.30	0.86	B
Arm 3	5.9	22.46	0.85	C	5.5	20.26	0.84	C
Arm 4	2.7	5.99	0.71	A	2.7	5.74	0.71	A
	EMM - DS1							
Arm 1	11.3	53.96	0.94	F	16.3	79.88	0.98	F
Arm 2	15.3	26.54	0.95	D	5.7	9.96	0.84	A
Arm 3	5.8	22.29	0.85	C	5.8	20.72	0.85	C
Arm 4	3.0	6.53	0.74	A	3.1	6.50	0.74	A
	EML - DS2							
Arm 1	11.3	52.78	0.94	F	11.4	58.62	0.94	F
Arm 2	16.7	28.94	0.95	D	6.7	11.51	0.87	B
Arm 3	5.5	21.22	0.84	C	5.7	20.60	0.85	C
Arm 4	2.7	6.07	0.72	A	3.0	6.16	0.73	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

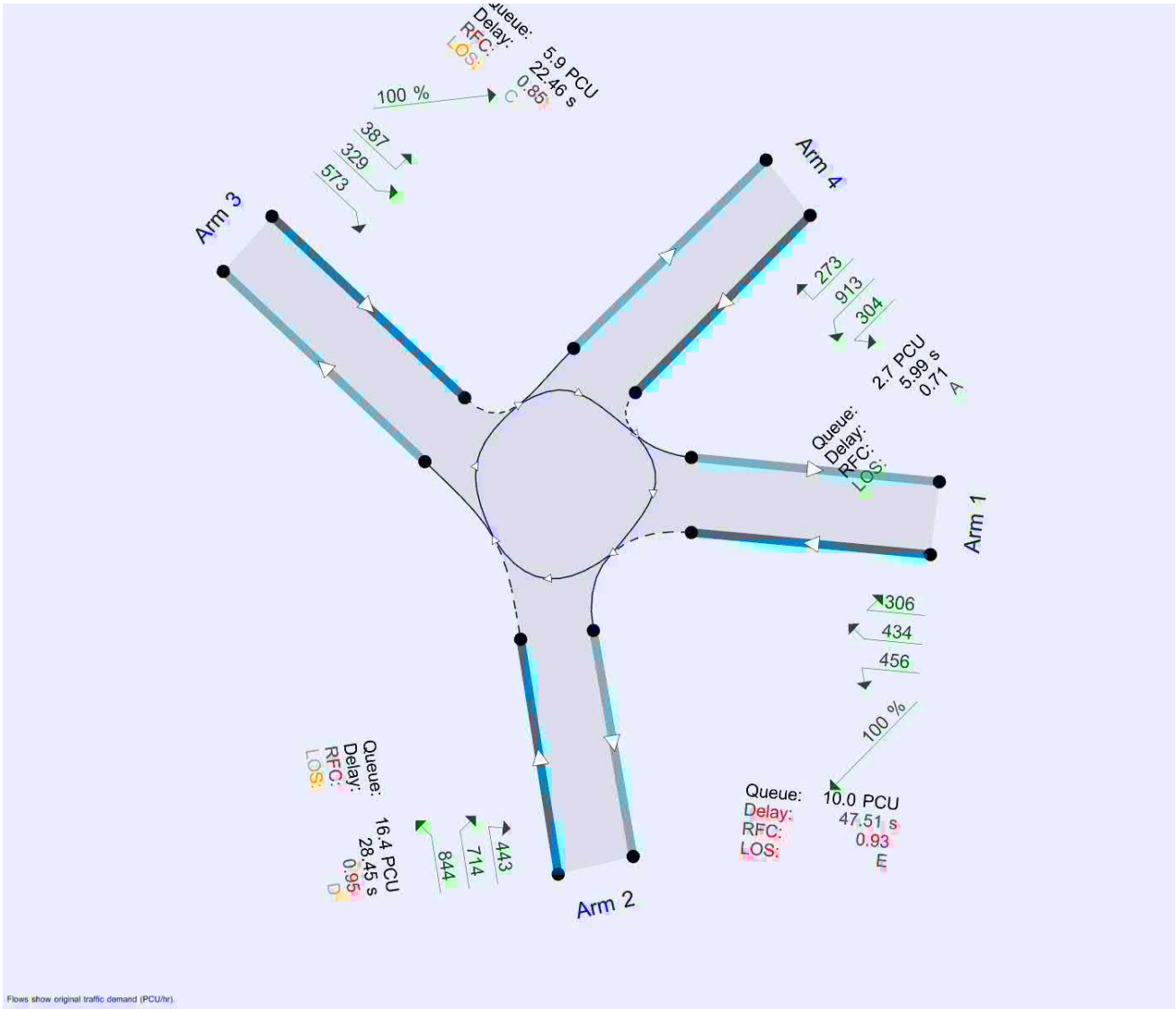
File summary

File Description

Title	A27 Western Road / A3 London Road / A397 Northern Road / M27 (Portsbridge Roundabout)
Location	
Site number	
Date	25/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	25.37	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	M27 offslip	
2	A3 London Road	
3	A27 Western Road	
4	A397 Northern Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.90	7.50	21.2	25.0	196.0	46.0	
2	9.00	9.00	0.0	25.0	196.0	20.0	
3	5.50	6.00	12.0	20.0	196.0	39.0	
4	10.40	10.40	0.0	20.0	196.0	20.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

Arm	Arm has bypass	Bypass utilisation (%)
1	✓	100
2		
3	✓	100
4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.582	2007
2	0.934	3345
3	0.642	2190
4	0.943	3692

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1196	100.000
2		ONE HOUR	✓	2001	100.000
3		ONE HOUR	✓	1289	100.000
4		ONE HOUR	✓	1490	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	456	434	306
	2	443	0	844	714
	3	329	573	0	387
	4	304	913	273	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.93	47.51	10.0	E	1097	1019
2	0.95	28.45	16.4	D	1836	2754
3	0.85	22.46	5.9	C	1183	1242
4	0.71	5.99	2.7	A	1367	2051

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	900	557	139	343	0	1320	1238	0.450	554	807	0.0	0.9	5.752	A
2	1506	1506	377	0	343	759	2637	0.571	1501	1115	0.0	1.5	3.467	A
3	970	679	170	291	0	1097	1486	0.457	675	1163	0.0	0.9	4.867	A
4	1122	1122	280	0	291	1008	2742	0.409	1119	764	0.0	0.8	2.435	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1075	665	166	410	0	1578	1088	0.612	662	965	0.9	1.7	9.232	A
2	1799	1799	450	0	410	907	2499	0.720	1794	1333	1.5	2.8	5.576	A
3	1159	811	203	348	0	1311	1348	0.602	808	1390	0.9	1.6	7.296	A
4	1339	1339	335	0	348	1205	2556	0.524	1338	914	0.8	1.2	3.247	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1317	815	204	502	0	1923	887	0.919	788	1169	1.7	8.3	33.946	D
2	2203	2203	551	0	502	1088	2330	0.946	2161	1624	2.8	13.3	19.920	C
3	1419	993	248	426	0	1576	1178	0.843	979	1674	1.6	5.2	18.691	C
4	1641	1641	410	0	426	1457	2318	0.708	1635	1097	1.2	2.6	5.750	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1317	815	204	502	0	1935	880	0.926	808	1181	8.3	10.0	47.507	E
2	2203	2203	551	0	502	1108	2311	0.953	2190	1634	13.3	16.4	28.452	D
3	1419	993	248	426	0	1600	1162	0.855	990	1698	5.2	5.9	22.460	C
4	1641	1641	410	0	426	1475	2301	0.713	1640	1116	2.6	2.7	5.988	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1075	665	166	410	0	1596	1077	0.618	698	986	10.0	1.8	11.319	B
2	1799	1799	450	0	410	945	2464	0.730	1852	1350	16.4	3.1	7.033	A
3	1159	811	203	348	0	1360	1317	0.616	827	1437	5.9	1.8	8.348	A
4	1339	1339	335	0	348	1237	2526	0.530	1345	950	2.7	1.3	3.373	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	900	557	139	343	0	1328	1233	0.452	561	813	1.8	0.9	5.919	A
2	1506	1506	377	0	343	767	2630	0.573	1513	1122	3.1	1.5	3.563	A
3	970	679	170	291	0	1107	1479	0.459	683	1173	1.8	0.9	4.992	A
4	1122	1122	280	0	291	1017	2733	0.410	1124	772	1.3	0.8	2.463	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	20.41	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1465	100.000
2		ONE HOUR	✓	1968	100.000
3		ONE HOUR	✓	1660	100.000
4		ONE HOUR	✓	1546	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	787	375	303
	2	315	1	901	751
	3	350	589	0	721
	4	271	1136	139	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.92	48.32	9.4	E	1344	933
2	0.86	11.30	6.6	B	1806	2709
3	0.84	20.26	5.5	C	1523	1292
4	0.71	5.74	2.7	A	1419	2128

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1103	510	128	592	0	1399	1192	0.428	507	702	0.0	0.8	5.765	A
2	1482	1482	370	0	592	612	2775	0.534	1477	1295	0.0	1.3	3.040	A
3	1250	707	177	543	0	1027	1530	0.462	703	1061	0.0	0.9	4.768	A
4	1164	1164	291	0	543	940	2806	0.415	1161	790	0.0	0.8	2.404	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1317	610	152	707	0	1673	1032	0.590	607	840	0.8	1.5	9.238	A
2	1769	1769	442	0	707	731	2663	0.664	1766	1549	1.3	2.1	4.396	A
3	1492	844	211	648	0	1228	1401	0.603	841	1269	0.9	1.6	7.040	A
4	1390	1390	347	0	648	1125	2631	0.528	1388	945	0.8	1.2	3.181	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1613	746	187	867	0	2040	819	0.912	722	1022	1.5	7.7	34.708	D
2	2167	2167	542	0	867	874	2529	0.857	2151	1888	2.1	6.1	10.075	B
3	1828	1034	258	794	0	1489	1234	0.838	1020	1537	1.6	5.1	17.522	C
4	1702	1702	426	0	794	1365	2405	0.708	1697	1143	1.2	2.6	5.551	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1613	746	187	867	0	2052	812	0.920	740	1030	7.7	9.4	48.318	E
2	2167	2167	542	0	867	893	2512	0.863	2165	1899	6.1	6.6	11.297	B
3	1828	1034	258	794	0	1504	1224	0.845	1032	1553	5.1	5.5	20.261	C
4	1702	1702	426	0	794	1380	2391	0.712	1702	1157	2.6	2.7	5.739	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1317	610	152	707	0	1691	1022	0.596	640	851	9.4	1.7	11.175	B
2	1769	1769	442	0	707	766	2631	0.673	1786	1565	6.6	2.3	4.782	A
3	1492	844	211	648	0	1255	1384	0.610	859	1297	5.5	1.8	7.754	A
4	1390	1390	347	0	648	1146	2611	0.532	1395	968	2.7	1.3	3.273	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1103	510	128	592	0	1408	1187	0.430	514	707	1.7	0.8	5.909	A
2	1482	1482	370	0	592	619	2768	0.535	1486	1303	2.3	1.3	3.099	A
3	1250	707	177	543	0	1035	1525	0.464	710	1069	1.8	1.0	4.876	A
4	1164	1164	291	0	543	949	2798	0.416	1166	797	1.3	0.8	2.429	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	25.98	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1187	100.000
2		ONE HOUR	✓	2005	100.000
3		ONE HOUR	✓	1268	100.000
4		ONE HOUR	✓	1525	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	455	440	292
	2	463	0	830	712
	3	354	544	0	370
	4	275	984	266	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.94	53.96	11.3	F	1089	1008
2	0.95	26.54	15.3	D	1840	2760
3	0.85	22.29	5.8	C	1164	1236
4	0.74	6.53	3.0	A	1399	2099

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	894	551	138	343	0	1346	1223	0.451	548	819	0.0	0.9	5.832	A
2	1509	1509	377	0	343	747	2648	0.570	1504	1146	0.0	1.4	3.444	A
3	955	676	169	279	0	1100	1484	0.456	672	1151	0.0	0.9	4.860	A
4	1148	1148	287	0	279	1020	2731	0.420	1145	752	0.0	0.8	2.491	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1067	658	165	409	0	1609	1070	0.615	655	979	0.9	1.7	9.473	A
2	1802	1802	451	0	409	894	2511	0.718	1797	1371	1.4	2.7	5.507	A
3	1140	807	202	333	0	1314	1346	0.600	804	1376	0.9	1.6	7.279	A
4	1371	1371	343	0	333	1219	2542	0.539	1369	899	0.8	1.3	3.369	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1307	806	201	501	0	1961	865	0.932	777	1187	1.7	9.0	36.966	E
2	2208	2208	552	0	501	1068	2348	0.940	2168	1670	2.7	12.5	18.967	C
3	1396	989	247	407	0	1581	1175	0.842	975	1656	1.6	5.2	18.605	C
4	1679	1679	420	0	407	1475	2301	0.730	1673	1080	1.3	2.9	6.238	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1307	806	201	501	0	1973	858	0.940	797	1199	9.0	11.3	53.958	F
2	2208	2208	552	0	501	1090	2328	0.948	2196	1681	12.5	15.3	26.544	D
3	1396	989	247	407	0	1605	1159	0.853	986	1681	5.2	5.8	22.285	C
4	1679	1679	420	0	407	1493	2284	0.735	1679	1098	2.9	3.0	6.532	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1067	658	165	409	0	1628	1059	0.622	696	1001	11.3	1.9	12.020	B
2	1802	1802	451	0	409	936	2471	0.729	1852	1388	15.3	3.0	6.883	A
3	1140	807	202	333	0	1363	1315	0.614	823	1425	5.8	1.8	8.311	A
4	1371	1371	343	0	333	1251	2513	0.546	1378	935	3.0	1.3	3.511	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	894	551	138	343	0	1354	1218	0.452	555	825	1.9	0.9	6.003	A
2	1509	1509	377	0	343	755	2640	0.572	1516	1154	3.0	1.5	3.542	A
3	955	676	169	279	0	1110	1477	0.458	679	1162	1.8	0.9	4.985	A
4	1148	1148	287	0	279	1029	2721	0.422	1150	760	1.3	0.8	2.525	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	27.25	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1475	100.000
2		ONE HOUR	✓	1941	100.000
3		ONE HOUR	✓	1657	100.000
4		ONE HOUR	✓	1602	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	795	373	307
	2	315	1	896	729
	3	362	596	0	699
	4	257	1215	130	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.98	79.88	16.3	F	1353	936
2	0.84	9.96	5.7	A	1781	2672
3	0.85	20.72	5.8	C	1520	1319
4	0.74	6.50	3.1	A	1470	2205

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1110	512	128	599	0	1457	1158	0.442	508	700	0.0	0.9	6.062	A
2	1461	1461	365	0	599	606	2780	0.526	1456	1359	0.0	1.2	2.981	A
3	1247	721	180	526	0	1014	1539	0.469	717	1049	0.0	1.0	4.799	A
4	1206	1206	302	0	526	955	2792	0.432	1203	777	0.0	0.8	2.486	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1326	611	153	715	0	1742	992	0.616	608	838	0.9	1.7	10.215	B
2	1745	1745	436	0	715	725	2669	0.654	1742	1626	1.2	2.0	4.254	A
3	1490	861	215	628	0	1212	1411	0.610	858	1254	1.0	1.7	7.122	A
4	1440	1440	360	0	628	1142	2615	0.551	1438	929	0.8	1.3	3.358	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1624	749	187	875	0	2124	770	0.972	709	1020	1.7	11.6	48.437	E
2	2137	2137	534	0	875	852	2550	0.838	2124	1981	2.0	5.4	9.015	A
3	1824	1055	264	770	0	1464	1250	0.844	1040	1512	1.7	5.3	17.815	C
4	1764	1764	441	0	770	1386	2385	0.740	1757	1118	1.3	3.0	6.239	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1624	749	187	875	0	2137	762	0.982	730	1027	11.6	16.3	79.878	F
2	2137	2137	534	0	875	873	2530	0.845	2136	1994	5.4	5.7	9.958	A
3	1824	1055	264	770	0	1479	1240	0.851	1053	1529	5.3	5.8	20.721	C
4	1764	1764	441	0	770	1400	2372	0.744	1763	1132	3.0	3.1	6.504	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1326	611	153	715	0	1762	981	0.623	669	849	16.3	1.9	15.037	C
2	1745	1745	436	0	715	786	2611	0.668	1759	1644	5.7	2.2	4.719	A
3	1490	861	215	628	0	1249	1388	0.621	877	1296	5.8	1.8	7.980	A
4	1440	1440	360	0	628	1163	2595	0.555	1447	963	3.1	1.4	3.471	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1110	512	128	599	0	1466	1153	0.444	516	705	1.9	0.9	6.254	A
2	1461	1461	365	0	599	614	2772	0.527	1465	1368	2.2	1.2	3.040	A
3	1247	721	180	526	0	1022	1534	0.470	725	1057	1.8	1.0	4.914	A
4	1206	1206	302	0	526	963	2784	0.433	1208	783	1.4	0.8	2.518	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	26.32	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1192	100.000
2		ONE HOUR	✓	2001	100.000
3		ONE HOUR	✓	1269	100.000
4		ONE HOUR	✓	1497	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	448	457	287
	2	460	0	815	726
	3	335	551	0	383
	4	278	945	274	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.94	52.78	11.3	F	1094	1024
2	0.95	28.94	16.7	D	1836	2754
3	0.84	21.22	5.5	C	1164	1220
4	0.72	6.07	2.7	A	1374	2061

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	897	560	140	337	0	1328	1234	0.454	557	805	0.0	0.9	5.820	A
2	1506	1506	377	0	337	762	2634	0.572	1501	1122	0.0	1.5	3.478	A
3	955	667	167	288	0	1104	1481	0.450	663	1159	0.0	0.9	4.823	A
4	1127	1127	282	0	288	1008	2741	0.411	1124	759	0.0	0.8	2.445	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1072	669	167	403	0	1588	1082	0.618	666	962	0.9	1.7	9.432	A
2	1799	1799	450	0	403	912	2495	0.721	1794	1342	1.5	2.8	5.607	A
3	1141	796	199	344	0	1320	1342	0.593	794	1385	0.9	1.6	7.183	A
4	1346	1346	336	0	344	1206	2555	0.527	1344	907	0.8	1.2	3.266	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1312	819	205	493	0	1936	879	0.932	790	1166	1.7	9.0	36.422	E
2	2203	2203	551	0	493	1091	2327	0.947	2161	1635	2.8	13.4	20.093	C
3	1397	976	244	422	0	1585	1172	0.833	962	1666	1.6	4.9	17.891	C
4	1648	1648	412	0	422	1459	2316	0.712	1642	1089	1.2	2.7	5.826	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1312	819	205	493	0	1947	873	0.938	810	1177	9.0	11.3	52.784	F
2	2203	2203	551	0	493	1112	2308	0.955	2190	1645	13.4	16.7	28.937	D
3	1397	976	244	422	0	1610	1156	0.844	973	1691	4.9	5.5	21.218	C
4	1648	1648	412	0	422	1477	2300	0.717	1648	1107	2.7	2.7	6.069	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1072	669	167	403	0	1605	1072	0.624	706	984	11.3	1.9	11.908	B
2	1799	1799	450	0	403	954	2455	0.733	1853	1358	16.7	3.1	7.162	A
3	1141	796	199	344	0	1371	1309	0.608	811	1436	5.5	1.7	8.178	A
4	1346	1346	336	0	344	1237	2525	0.533	1352	945	2.7	1.3	3.392	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	897	560	140	337	0	1336	1229	0.456	564	811	1.9	0.9	5.989	A
2	1506	1506	377	0	337	771	2626	0.574	1513	1130	3.1	1.5	3.579	A
3	955	667	167	288	0	1114	1474	0.452	670	1169	1.7	0.9	4.946	A
4	1127	1127	282	0	288	1018	2732	0.413	1129	766	1.3	0.8	2.474	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	22.77	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	2207	70.00
2	1617	0.00
3	1818	0.00
4	1907	0.00

Bypass

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	1457	100.000
2		ONE HOUR	✓	1977	100.000
3		ONE HOUR	✓	1653	100.000
4		ONE HOUR	✓	1589	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	781	377	299
	2	309	1	909	758
	3	360	585	0	708
	4	275	1173	141	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.94	58.62	11.4	F	1337	930
2	0.87	11.51	6.7	B	1814	2721
3	0.85	20.60	5.7	C	1517	1301
4	0.73	6.16	3.0	A	1458	2187

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1097	509	127	588	0	1425	1177	0.432	506	708	0.0	0.8	5.873	A
2	1488	1488	372	0	588	611	2775	0.536	1483	1320	0.0	1.3	3.056	A
3	1244	711	178	533	0	1025	1532	0.464	708	1070	0.0	0.9	4.784	A
4	1196	1196	299	0	533	940	2806	0.426	1193	792	0.0	0.8	2.450	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1310	608	152	702	0	1705	1014	0.599	605	847	0.8	1.6	9.600	A
2	1777	1777	444	0	702	731	2663	0.667	1774	1578	1.3	2.2	4.434	A
3	1486	850	212	636	0	1226	1403	0.606	847	1279	0.9	1.7	7.083	A
4	1428	1428	357	0	636	1125	2632	0.543	1427	947	0.8	1.3	3.280	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1604	744	186	860	0	2078	797	0.934	715	1030	1.6	8.9	39.421	E
2	2177	2177	544	0	860	870	2534	0.859	2161	1923	2.2	6.2	10.203	B
3	1820	1040	260	780	0	1483	1237	0.841	1026	1547	1.7	5.2	17.726	C
4	1750	1750	437	0	780	1365	2405	0.728	1743	1145	1.3	2.9	5.948	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1604	744	186	860	0	2090	789	0.943	734	1038	8.9	11.4	58.625	F
2	2177	2177	544	0	860	890	2515	0.866	2175	1935	6.2	6.7	11.509	B
3	1820	1040	260	780	0	1500	1227	0.848	1038	1565	5.2	5.7	20.602	C
4	1750	1750	437	0	780	1380	2391	0.732	1749	1159	2.9	3.0	6.161	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1310	608	152	702	0	1723	1003	0.606	646	858	11.4	1.7	12.259	B
2	1777	1777	444	0	702	774	2623	0.678	1795	1596	6.7	2.3	4.878	A
3	1486	850	212	636	0	1255	1384	0.614	865	1313	5.7	1.8	7.856	A
4	1428	1428	357	0	636	1146	2611	0.547	1435	974	3.0	1.3	3.384	A

18:00 - 18:15

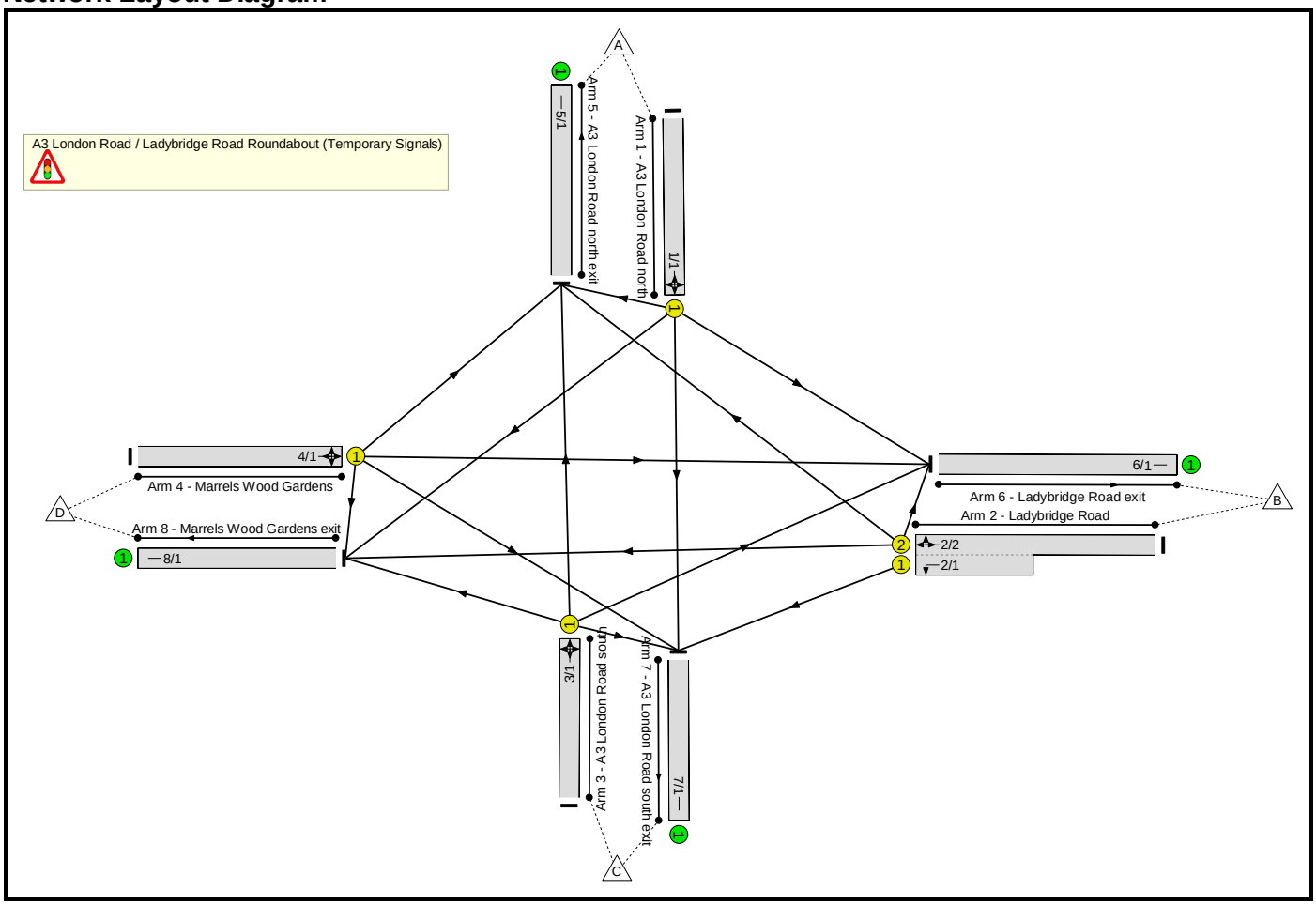
Arm	Total Demand (PCU/hr)	Junction demand (PCU/hr)	Junction Arrivals (PCU)	Bypass demand (PCU/hr)	Bypass exit flow (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1097	509	127	588	0	1434	1172	0.434	512	713	1.7	0.9	6.038	A
2	1488	1488	372	0	588	619	2768	0.538	1493	1328	2.3	1.3	3.117	A
3	1244	711	178	533	0	1033	1526	0.466	715	1078	1.8	1.0	4.897	A
4	1196	1196	299	0	533	949	2798	0.428	1198	799	1.3	0.8	2.478	A

Full Input Data And Results

User and Project Details

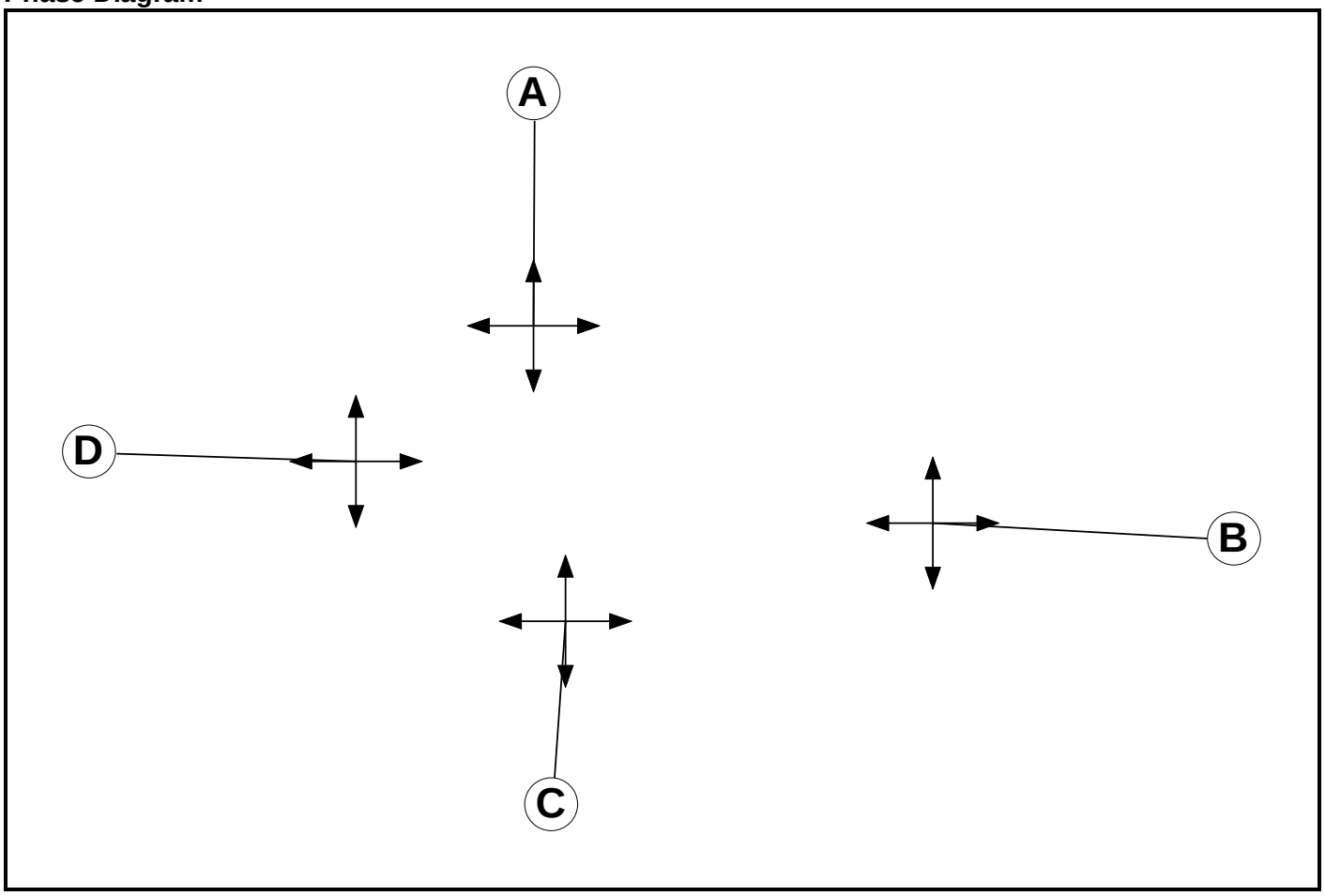
Project:	
Title:	**A3 London Road / Ladybridge Road temporary signals**
Location:	
Additional detail:	
File name:	A3 London Rd_Ladybridge Rd temporary signals.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7

Full Input Data And Results

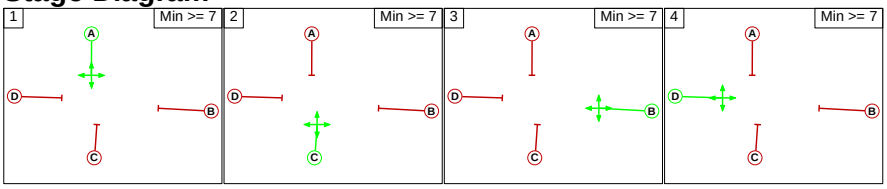
Phase Intergreens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	A		6	7	9
	B	9		6	7
	C	7	9		6
	D	6	7	9	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	C
3	B
4	D

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		7	6	9
	2	7		9	6
	3	9	6		7
	4	6	9	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A3 London Road north)	U	A	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 U-Turn	12.00
											Arm 6 Left	20.00
											Arm 7 Ahead	65.00
											Arm 8 Right	12.00
2/1 (Ladybridge Road)	U	B	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 7 Left	30.00
2/2 (Ladybridge Road)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Right	12.00
											Arm 6 U-Turn	12.00
											Arm 8 Ahead	65.00
3/1 (A3 London Road south)	U	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 Ahead	65.00
											Arm 6 Right	12.00
											Arm 7 U-Turn	12.00
											Arm 8 Left	20.00
4/1 (Marrels Wood Gardens)	U	D	2	3	60.0	Geom	-	2.50	0.00	Y	Arm 5 Left	20.00
											Arm 6 Ahead	65.00
											Arm 7 Right	12.00
											Arm 8 U-Turn	12.00
5/1 (A3 London Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Ladybridge Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A3 London Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Marrels Wood Gardens exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM'	08:00	09:00	01:00	
2: 'EMM - DS1 PM'	17:00	18:00	01:00	
3: 'EML - DS2 AM'	08:00	09:00	01:00	
4: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	92	515	0	607
	B	40	0	59	0	99
	C	411	127	0	0	538
	D	0	0	0	0	0
	Tot.	451	219	574	0	1244

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	
1/1	607
2/1 (short)	59
2/2 (with short)	99(In) 40(Out)
3/1	538
4/1	0
5/1	451
6/1	219
7/1	574
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road north)	4.00	0.00	Y	Arm 5 U-Turn	12.00	0.0 %	1955	1955
				Arm 6 Left	20.00	15.2 %		
				Arm 7 Ahead	65.00	84.8 %		
				Arm 8 Right	12.00	0.0 %		
2/1 (Ladybridge Road)	3.50	0.00	Y	Arm 7 Left	30.00	100.0 %	1871	1871
2/2 (Ladybridge Road)	3.50	0.00	Y	Arm 5 Right	12.00	100.0 %	1747	1747
				Arm 6 U-Turn	12.00	0.0 %		
				Arm 8 Ahead	65.00	0.0 %		
3/1 (A3 London Road south)	4.00	0.00	Y	Arm 5 Ahead	65.00	76.4 %	1924	1924
				Arm 6 Right	12.00	23.6 %		
				Arm 7 U-Turn	12.00	0.0 %		
				Arm 8 Left	20.00	0.0 %		
4/1 (Marrels Wood Gardens)	2.50	0.00	Y	Arm 5 Left	20.00	0.0 %	1865	1865
				Arm 6 Ahead	65.00	0.0 %		
				Arm 7 Right	12.00	0.0 %		
				Arm 8 U-Turn	12.00	0.0 %		
5/1 (A3 London Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ladybridge Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A3 London Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Marrels Wood Gardens exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	465	0	514
	B	59	0	84	0	143
	C	504	101	0	0	605
	D	0	0	0	0	0
	Tot.	563	150	549	0	1262

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	
1/1	514
2/1 (short)	84
2/2 (with short)	143(In) 59(Out)
3/1	605
4/1	0
5/1	563
6/1	150
7/1	549
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road north)	4.00	0.00	Y	Arm 5 U-Turn	12.00	0.0 %	1960	1960
				Arm 6 Left	20.00	9.5 %		
				Arm 7 Ahead	65.00	90.5 %		
				Arm 8 Right	12.00	0.0 %		
2/1 (Ladybridge Road)	3.50	0.00	Y	Arm 7 Left	30.00	100.0 %	1871	1871
				Arm 5 Right	12.00	100.0 %		
2/2 (Ladybridge Road)	3.50	0.00	Y	Arm 6 U-Turn	12.00	0.0 %	1747	1747
				Arm 8 Ahead	65.00	0.0 %		
3/1 (A3 London Road south)	4.00	0.00	Y	Arm 5 Ahead	65.00	83.3 %	1937	1937
				Arm 6 Right	12.00	16.7 %		
				Arm 7 U-Turn	12.00	0.0 %		
				Arm 8 Left	20.00	0.0 %		
4/1 (Marrels Wood Gardens)	2.50	0.00	Y	Arm 5 Left	20.00	0.0 %	1865	1865
				Arm 6 Ahead	65.00	0.0 %		
				Arm 7 Right	12.00	0.0 %		
				Arm 8 U-Turn	12.00	0.0 %		
5/1 (A3 London Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ladybridge Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A3 London Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Marrels Wood Gardens exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	93	527	0	620
	B	40	0	59	0	99
	C	407	126	0	0	533
	D	0	0	0	0	0
	Tot.	447	219	586	0	1252

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	
1/1	620
2/1 (short)	59
2/2 (with short)	99(In) 40(Out)
3/1	533
4/1	0
5/1	447
6/1	219
7/1	586
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road north)	4.00	0.00	Y	Arm 5 U-Turn	12.00	0.0 %	1955	1955
				Arm 6 Left	20.00	15.0 %		
				Arm 7 Ahead	65.00	85.0 %		
				Arm 8 Right	12.00	0.0 %		
2/1 (Ladybridge Road)	3.50	0.00	Y	Arm 7 Left	30.00	100.0 %	1871	1871
				Arm 5 Right	12.00	100.0 %		
2/2 (Ladybridge Road)	3.50	0.00	Y	Arm 6 U-Turn	12.00	0.0 %	1747	1747
				Arm 8 Ahead	65.00	0.0 %		
3/1 (A3 London Road south)	4.00	0.00	Y	Arm 5 Ahead	65.00	76.4 %	1924	1924
				Arm 6 Right	12.00	23.6 %		
				Arm 7 U-Turn	12.00	0.0 %		
				Arm 8 Left	20.00	0.0 %		
4/1 (Marrels Wood Gardens)	2.50	0.00	Y	Arm 5 Left	20.00	0.0 %	1865	1865
				Arm 6 Ahead	65.00	0.0 %		
				Arm 7 Right	12.00	0.0 %		
				Arm 8 U-Turn	12.00	0.0 %		
5/1 (A3 London Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ladybridge Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A3 London Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Marrels Wood Gardens exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	465	0	514
	B	64	0	93	0	157
	C	495	101	0	0	596
	D	0	0	0	0	0
	Tot.	559	150	558	0	1267

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	
1/1	514
2/1 (short)	93
2/2 (with short)	157(In) 64(Out)
3/1	596
4/1	0
5/1	559
6/1	150
7/1	558
8/1	0

Full Input Data And Results

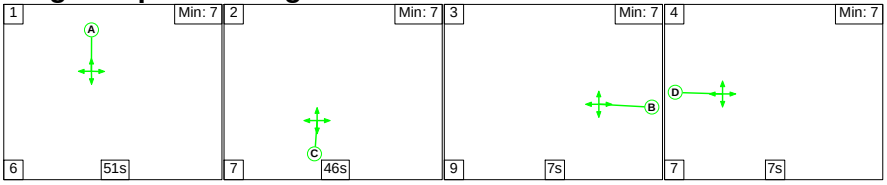
Lane Saturation Flows

Junction: A3 London Road / Ladybridge Road Roundabout (Temporary Signals)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road north)	4.00	0.00	Y	Arm 5 U-Turn	12.00	0.0 %	1960	1960
				Arm 6 Left	20.00	9.5 %		
				Arm 7 Ahead	65.00	90.5 %		
				Arm 8 Right	12.00	0.0 %		
2/1 (Ladybridge Road)	3.50	0.00	Y	Arm 7 Left	30.00	100.0 %	1871	1871
				Arm 5 Right	12.00	100.0 %		
2/2 (Ladybridge Road)	3.50	0.00	Y	Arm 6 U-Turn	12.00	0.0 %	1747	1747
				Arm 8 Ahead	65.00	0.0 %		
3/1 (A3 London Road south)	4.00	0.00	Y	Arm 5 Ahead	65.00	83.1 %	1937	1937
				Arm 6 Right	12.00	16.9 %		
				Arm 7 U-Turn	12.00	0.0 %		
				Arm 8 Left	20.00	0.0 %		
4/1 (Marrels Wood Gardens)	2.50	0.00	Y	Arm 5 Left	20.00	0.0 %	1865	1865
				Arm 6 Ahead	65.00	0.0 %		
				Arm 7 Right	12.00	0.0 %		
				Arm 8 U-Turn	12.00	0.0 %		
5/1 (A3 London Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Ladybridge Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A3 London Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Marrels Wood Gardens exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

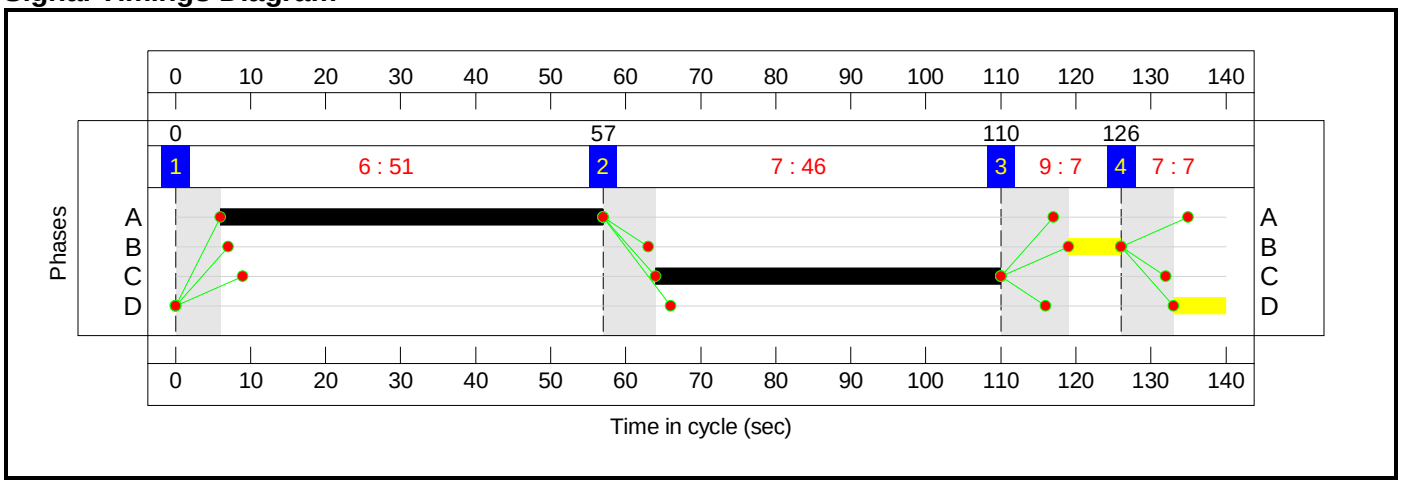


Full Input Data And Results

Stage Timings

Stage	1	2	3	4
Duration	51	46	7	7
Change Point	0	57	110	126

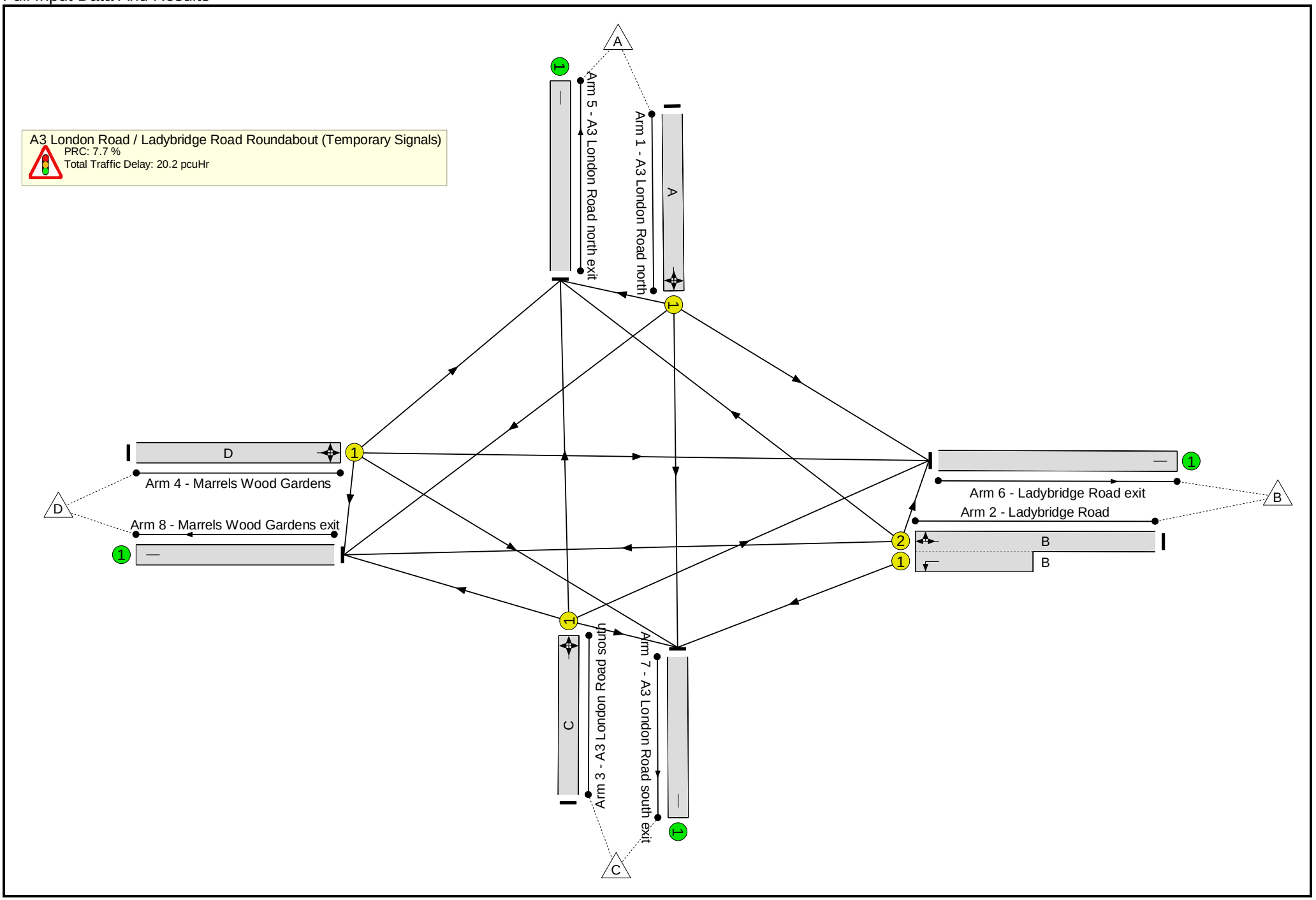
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.6%**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.6%**
1/1	A3 London Road north U-Turn Left Ahead Right	U	N/A	N/A	A		1	51	-	607	1955	726	83.6%
2/2+2/1	Ladybridge Road Right U-Turn Left Ahead	U	N/A	N/A	B		1	7	-	99	1747:1871	97+107	41.2 : 55.2%
3/1	A3 London Road south Ahead Right U-Turn Left	U	N/A	N/A	C		1	46	-	538	1924	646	83.3%
4/1	Marrels Wood Gardens Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1865	107	0.0%
5/1	A3 London Road north exit	U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
6/1	Ladybridge Road exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
7/1	A3 London Road south exit	U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
8/1	Marrels Wood Gardens exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

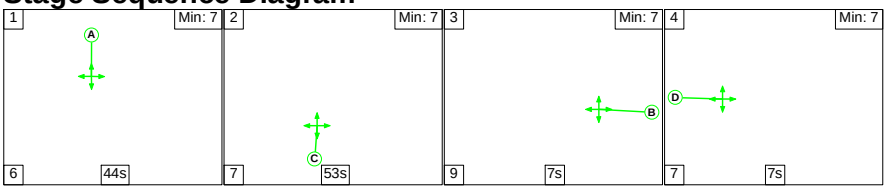
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.9**	**5.3**	**0.0**	**20.2**	**-**	**-**	**-**	**-**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**0**	**0**	**0**	**14.9**	**5.3**	**0.0**	**20.2**	**-**	**-**	**-**	**-**
1/1	607	607	-	-	-	6.8	2.4	-	9.2	54.6	21.4	2.4	23.9
2/2+2/1	99	99	-	-	-	1.8	0.5	-	2.2	81.1	2.2	0.5	2.7
3/1	538	538	-	-	-	6.4	2.4	-	8.8	58.9	19.3	2.4	21.7
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	574	574	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 7.7 Total Delay for Signalled Lanes (pcuHr): 20.23 Cycle Time (s): 140
PRC Over All Lanes (%): 7.7 Total Delay Over All Lanes(pcuHr): 20.23

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

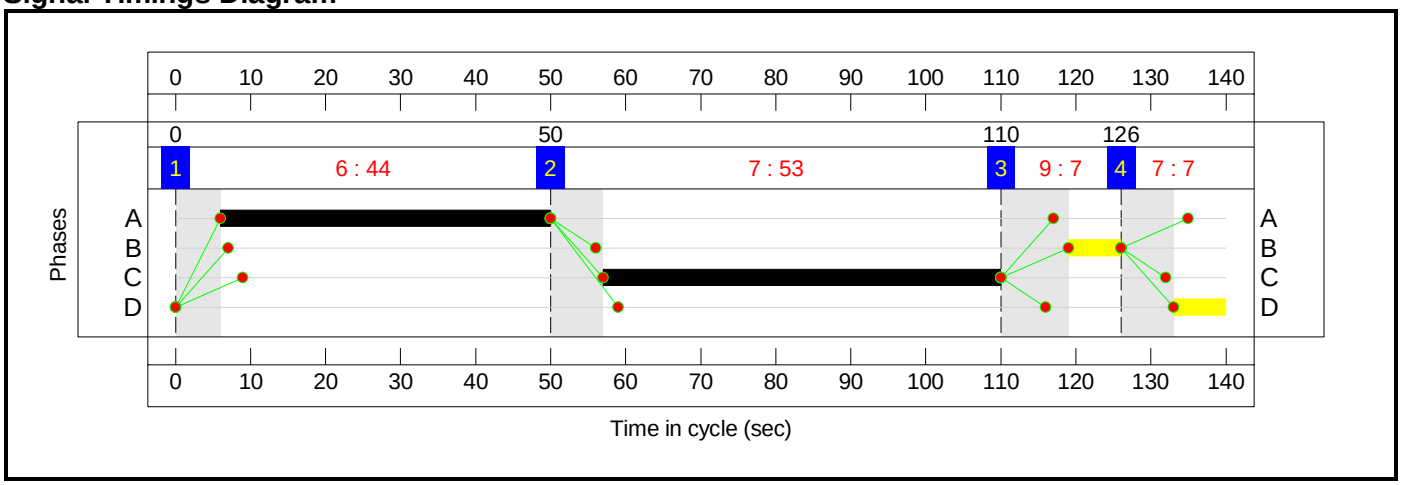
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	44	53	7	7
Change Point	0	50	110	126

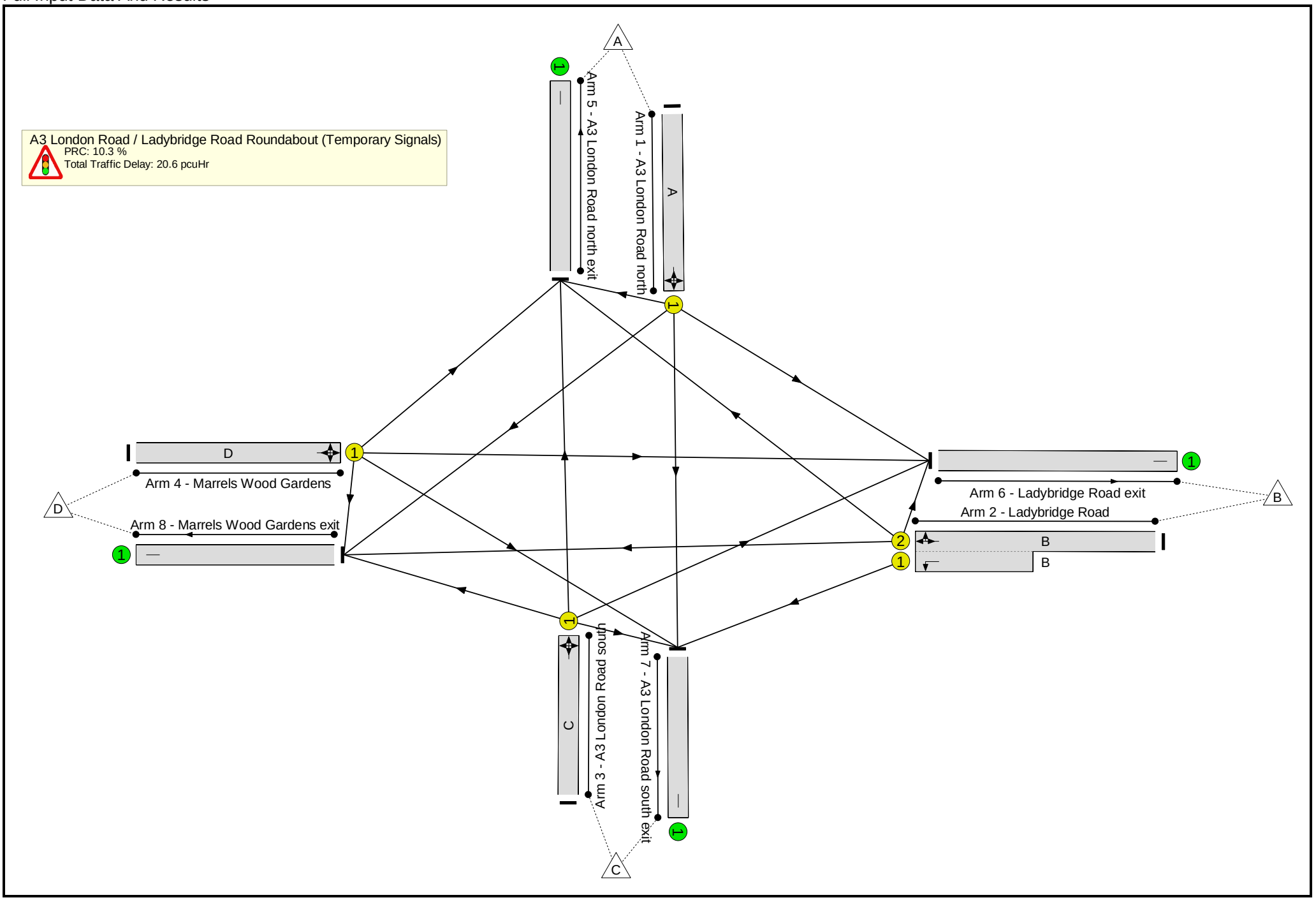
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
1/1	A3 London Road north U-Turn Left Ahead Right	U	N/A	N/A	A		1	44	-	514	1960	630	81.6%
2/2+2/1	Ladybridge Road Right U-Turn Left Ahead	U	N/A	N/A	B		1	7	-	143	1747:1871	100+107	59.1 : 78.6%
3/1	A3 London Road south Ahead Right U-Turn Left	U	N/A	N/A	C		1	53	-	605	1937	747	81.0%
4/1	Marrels Wood Gardens Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1865	107	0.0%
5/1	A3 London Road north exit	U	N/A	N/A	-		-	-	-	563	Inf	Inf	0.0%
6/1	Ladybridge Road exit	U	N/A	N/A	-		-	-	-	150	Inf	Inf	0.0%
7/1	A3 London Road south exit	U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
8/1	Marrels Wood Gardens exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

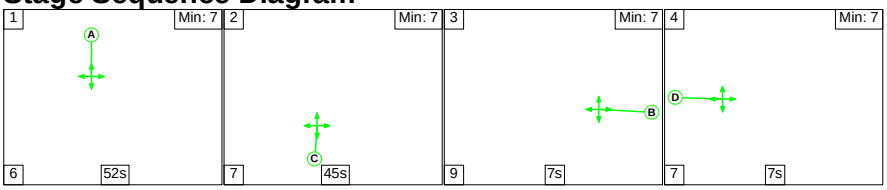
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.3**	**5.3**	**0.0**	**20.6**	**-**	**-**	**-**	**-**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**0**	**0**	**0**	**15.3**	**5.3**	**0.0**	**20.6**	**-**	**-**	**-**	**-**
1/1	514	514	-	-	-	6.2	2.1	-	8.4	58.7	18.3	2.1	20.4
2/2+2/1	143	143	-	-	-	2.6	1.1	-	3.7	92.2	3.2	1.1	4.3
3/1	605	605	-	-	-	6.5	2.1	-	8.5	50.7	21.0	2.1	23.1
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	563	563	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	150	150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 10.3 Total Delay for Signalled Lanes (pcuHr): 20.56 Cycle Time (s): 140
PRC Over All Lanes (%): 10.3 Total Delay Over All Lanes(pcuHr): 20.56

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

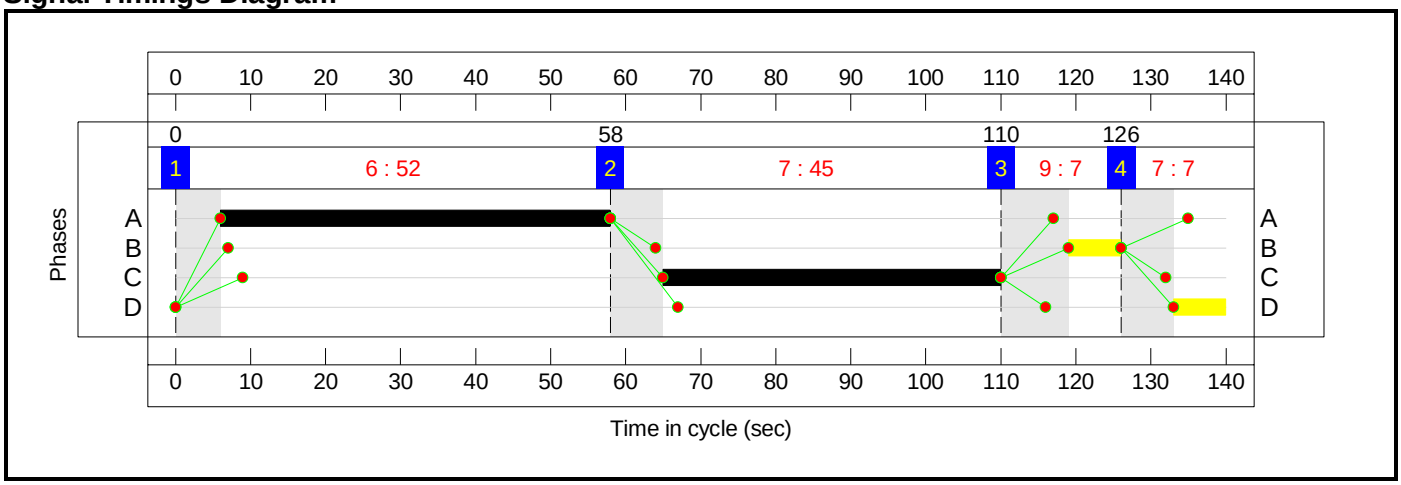
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	52	45	7	7
Change Point	0	58	110	126

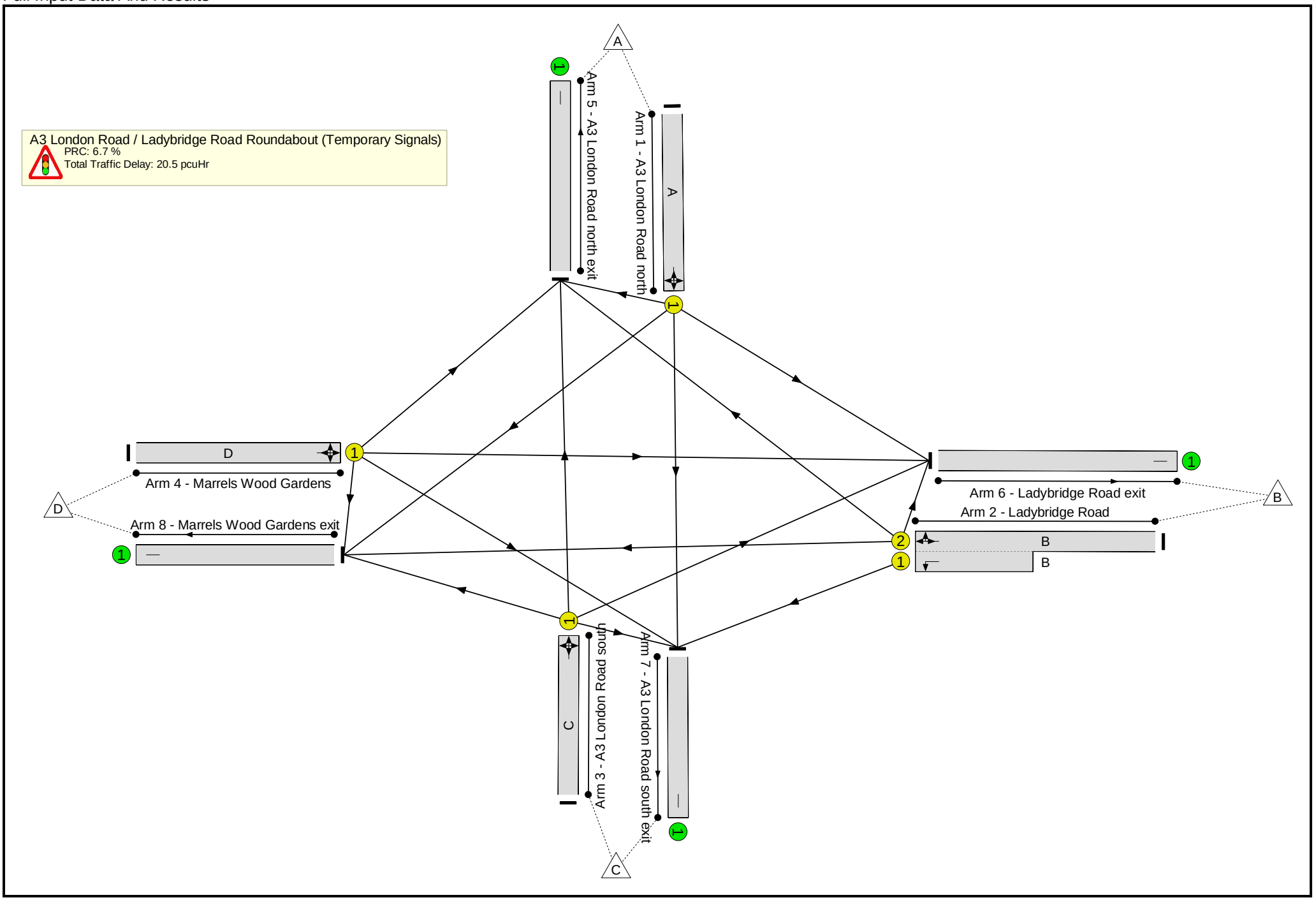
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.3%**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.3%**
1/1	A3 London Road north U-Turn Left Ahead Right	U	N/A	N/A	A		1	52	-	620	1955	740	83.8%
2/2+2/1	Ladybridge Road Right U-Turn Left Ahead	U	N/A	N/A	B		1	7	-	99	1747:1871	97+107	41.2 : 55.2%
3/1	A3 London Road south Ahead Right U-Turn Left	U	N/A	N/A	C		1	45	-	533	1924	632	84.3%
4/1	Marrels Wood Gardens Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1865	107	0.0%
5/1	A3 London Road north exit	U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
6/1	Ladybridge Road exit	U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
7/1	A3 London Road south exit	U	N/A	N/A	-		-	-	-	586	Inf	Inf	0.0%
8/1	Marrels Wood Gardens exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

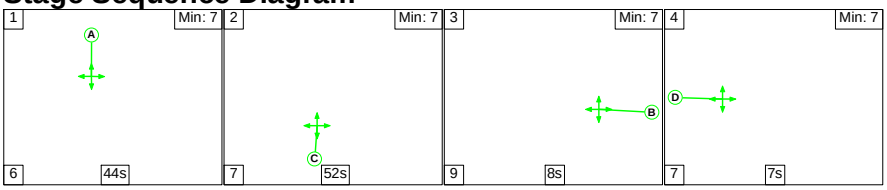
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.0**	**5.5**	**0.0**	**20.5**	**-**	**-**	**-**	**-**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**0**	**0**	**0**	**15.0**	**5.5**	**0.0**	**20.5**	**-**	**-**	**-**	**-**
1/1	620	620	-	-	-	6.8	2.5	-	9.3	54.0	21.9	2.5	24.4
2/2+2/1	99	99	-	-	-	1.8	0.5	-	2.2	81.1	2.2	0.5	2.7
3/1	533	533	-	-	-	6.5	2.6	-	9.0	60.9	19.2	2.6	21.8
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	586	586	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.7 Total Delay for Signalled Lanes (pcuHr): 20.54 Cycle Time (s): 140
PRC Over All Lanes (%): 6.7 Total Delay Over All Lanes(pcuHr): 20.54

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

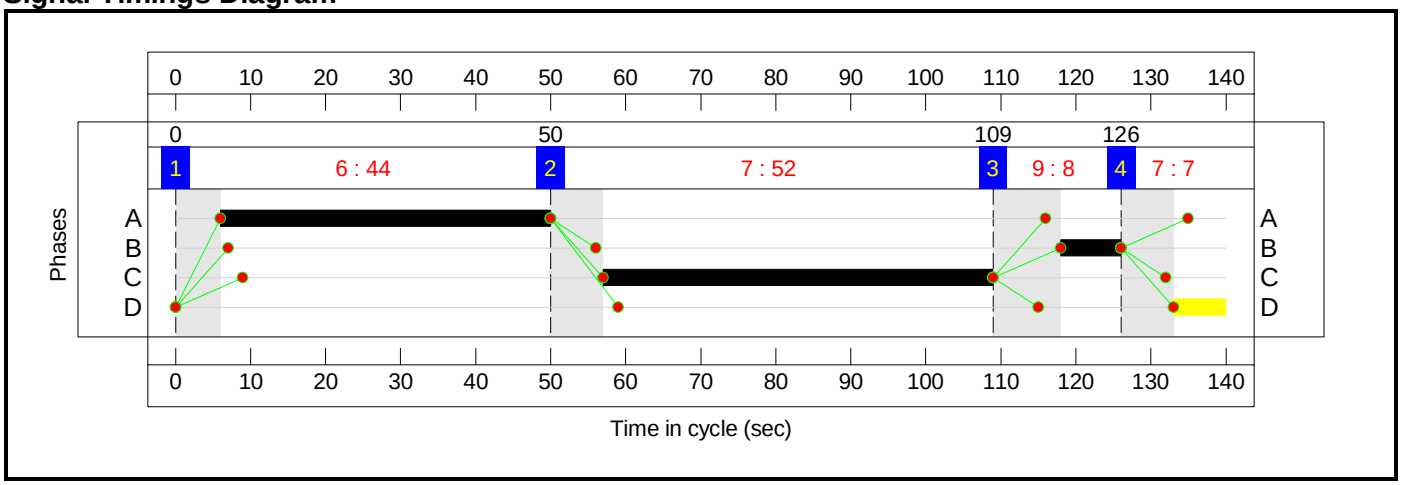
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	44	52	8	7
Change Point	0	50	109	126

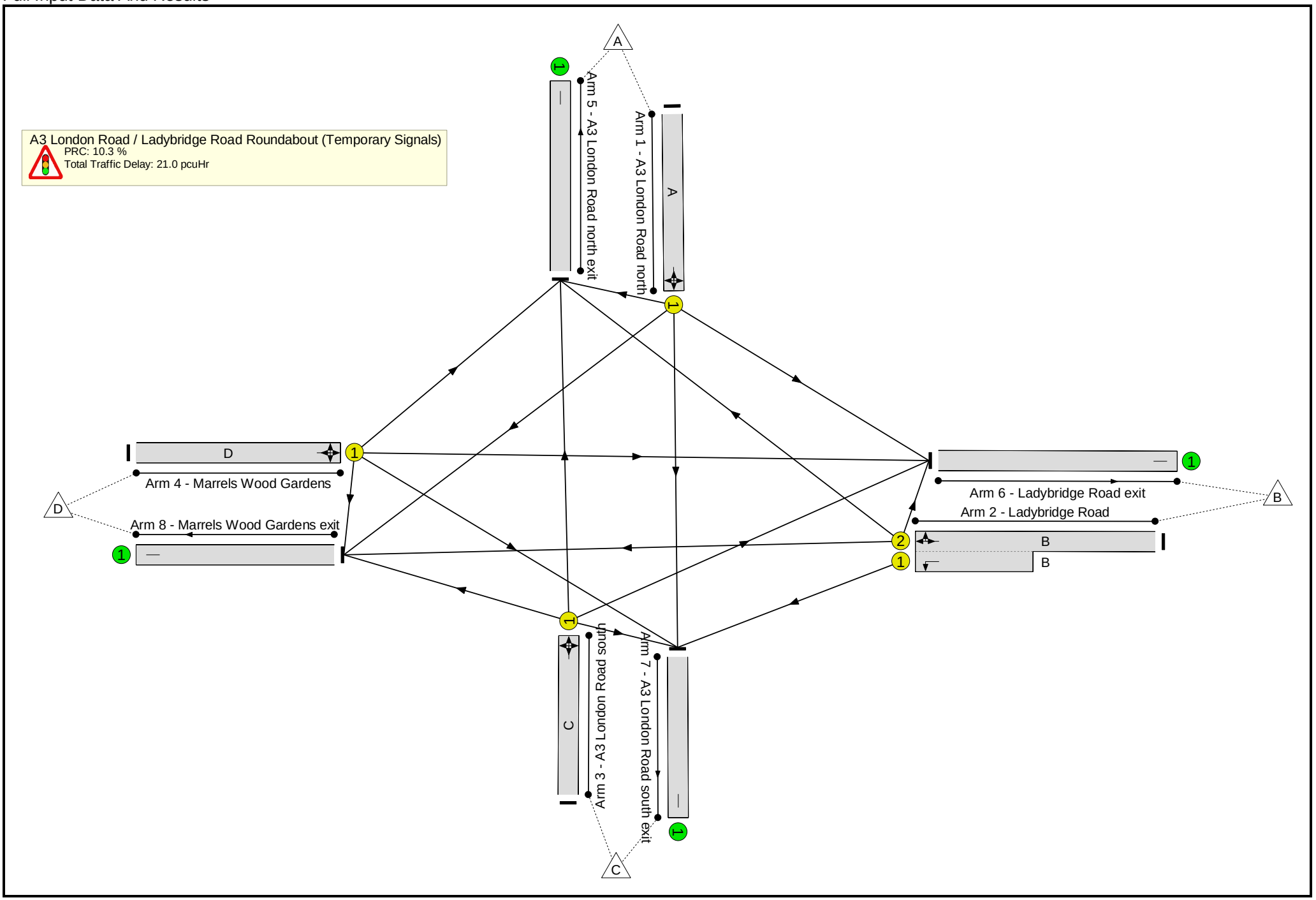
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**81.6%**
1/1	A3 London Road north U-Turn Left Ahead Right	U	N/A	N/A	A		1	44	-	514	1960	630	81.6%
2/2+2/1	Ladybridge Road Right U-Turn Left Ahead	U	N/A	N/A	B		1	8	-	157	1747:1871	95+120	67.5 : 77.3%
3/1	A3 London Road south Ahead Right U-Turn Left	U	N/A	N/A	C		1	52	-	596	1937	733	81.3%
4/1	Marrels Wood Gardens Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1865	107	0.0%
5/1	A3 London Road north exit	U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%
6/1	Ladybridge Road exit	U	N/A	N/A	-		-	-	-	150	Inf	Inf	0.0%
7/1	A3 London Road south exit	U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
8/1	Marrels Wood Gardens exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.5**	**5.5**	**0.0**	**21.0**	**-**	**-**	**-**	**-**
A3 London Road / Ladybridge Road Roundabout (Temporary Signals)	**-**	**-**	**0**	**0**	**0**	**15.5**	**5.5**	**0.0**	**21.0**	**-**	**-**	**-**	**-**
1/1	514	514	-	-	-	6.2	2.1	-	8.4	58.7	18.3	2.1	20.4
2/2+2/1	157	157	-	-	-	2.8	1.3	-	4.1	93.8	3.5	1.3	4.8
3/1	596	596	-	-	-	6.5	2.1	-	8.6	51.8	20.7	2.1	22.8
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	150	150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 10.3 Total Delay for Signalled Lanes (pcuHr): 21.04 Cycle Time (s): 140
PRC Over All Lanes (%): 10.3 Total Delay Over All Lanes(pcuHr): 21.04

Junctions 9

ARCADY 9 - Roundabout Module

Filename: A3 London Rd_Ladybridge Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:39:29

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.8	4.59	0.43	A	0.6	3.93	0.35	A
Arm 2	1.9	8.10	0.64	A	13.3	39.93	0.94	E
Arm 3	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 4	11.3	47.48	0.93	E	35.5	129.79	1.05	F

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

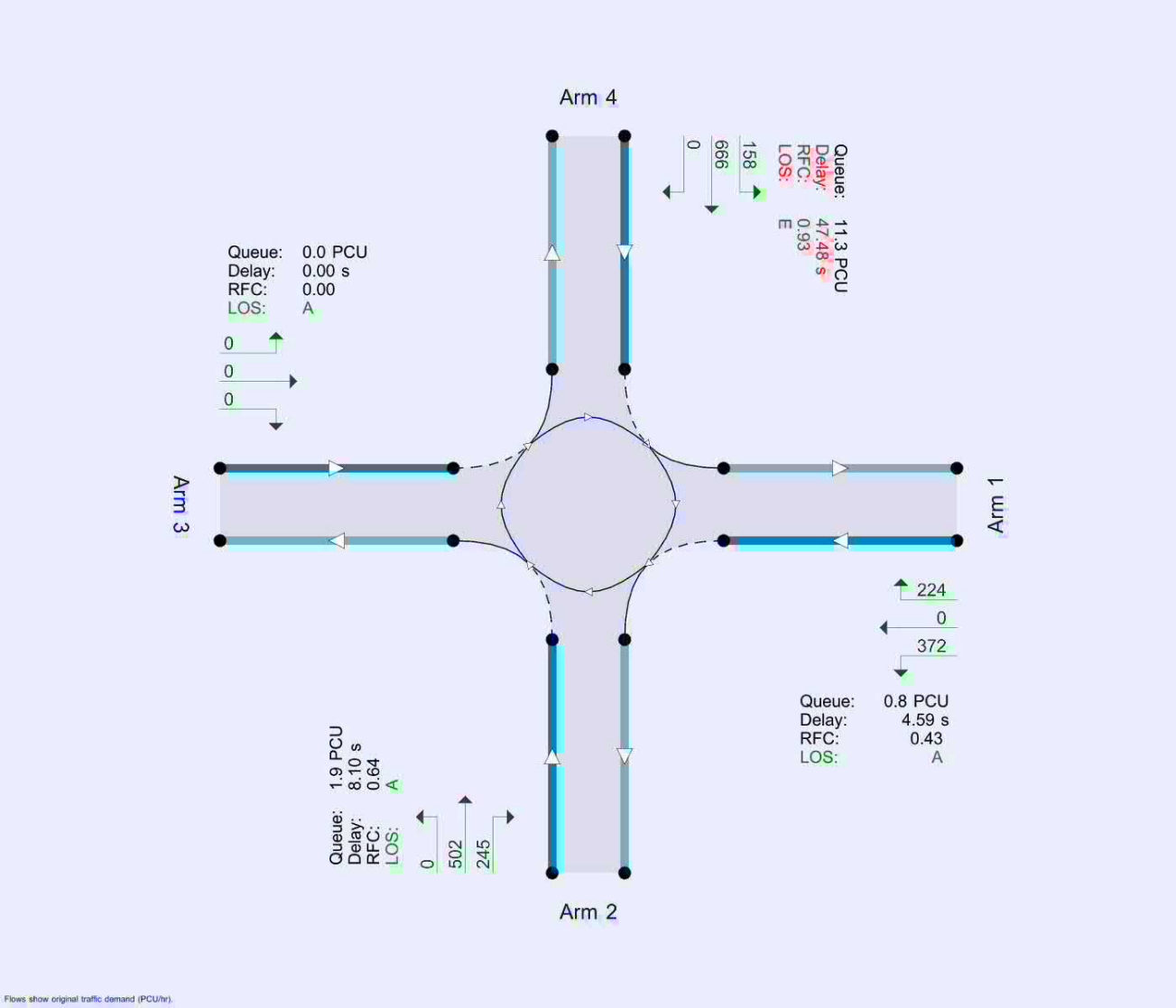
File summary

File Description

Title	A3 London Road / Ladybridge Road Roundabout
Location	
Site number	
Date	07/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	21.90	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Ladybridge Road	
2	A3 London Road south	
3	Marrels Wood Gardens	
4	A3 London Road north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.70	8.40	36.0	20.0	22.0	33.0	
2	4.00	5.80	9.0	15.0	22.0	30.0	
3	3.10	6.80	2.5	15.0	22.0	33.0	
4	3.90	4.10	1.0	10.0	22.0	32.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.744	2103
2	0.621	1519
3	0.532	1104
4	0.533	1151

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	596	100.000
2		✓	793	100.000
3		✓	0	100.000
4		✓	831	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	372	0	224
	2	245	46	0	502
	3	0	0	0	0
	4	158	666	0	7

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.43	4.59	0.8	A
2	0.64	8.10	1.9	A
3	0.00	0.00	0.0	A
4	0.93	47.48	11.3	E

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	449	536	1705	0.263	447	0.4	3.143	A
2	597	173	1412	0.423	594	0.8	4.823	A
3	0	767	696	0.000	0	0.0	0.000	A
4	626	218	1035	0.605	619	1.6	9.391	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	642	1626	0.330	535	0.5	3.628	A
2	713	207	1391	0.513	712	1.1	5.820	A
3	0	919	615	0.000	0	0.0	0.000	A
4	747	261	1012	0.739	742	2.9	14.405	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	656	770	1531	0.429	655	0.8	4.517	A
2	873	254	1362	0.641	870	1.9	8.001	A
3	0	1124	506	0.000	0	0.0	0.000	A
4	915	319	981	0.933	889	9.5	35.671	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	656	786	1519	0.432	656	0.8	4.589	A
2	873	254	1361	0.641	873	1.9	8.104	A
3	0	1127	504	0.000	0	0.0	0.000	A
4	915	320	980	0.934	908	11.3	47.477	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	672	1603	0.334	537	0.6	3.715	A
2	713	208	1390	0.513	716	1.2	5.903	A
3	0	924	612	0.000	0	0.0	0.000	A
4	747	263	1011	0.739	779	3.3	19.090	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	449	547	1697	0.264	449	0.4	3.174	A
2	597	174	1411	0.423	598	0.8	4.882	A
3	0	773	693	0.000	0	0.0	0.000	A
4	626	220	1034	0.605	632	1.7	10.010	B

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	63.40	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	488	100.000
2		✓	1165	100.000
3		✓	0	100.000
4		✓	849	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	260	0	228
	2	371	74	0	720
	3	0	0	0	0
	4	201	643	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.35	3.93	0.6	A
2	0.94	39.93	13.3	E
3	0.00	0.00	0.0	A
4	1.05	129.79	35.5	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	537	1704	0.216	366	0.3	2.957	A
2	877	175	1411	0.622	870	1.8	7.233	A
3	0	1045	548	0.000	0	0.0	0.000	A
4	639	332	974	0.657	631	2.0	11.311	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	439	642	1626	0.270	438	0.4	3.333	A
2	1047	209	1389	0.754	1042	3.2	11.194	B
3	0	1251	439	0.000	0	0.0	0.000	A
4	763	398	939	0.813	754	4.3	20.500	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	537	739	1554	0.346	537	0.6	3.890	A
2	1283	256	1360	0.943	1250	11.3	29.732	D
3	0	1506	303	0.000	0	0.0	0.000	A
4	935	478	896	1.043	864	21.9	69.621	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	537	753	1543	0.348	537	0.6	3.935	A
2	1283	256	1360	0.943	1274	13.3	39.929	E
3	0	1531	290	0.000	0	0.0	0.000	A
4	935	487	891	1.049	881	35.5	129.793	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	439	740	1553	0.282	439	0.4	3.555	A
2	1047	210	1389	0.754	1086	3.6	14.615	B
3	0	1297	414	0.000	0	0.0	0.000	A
4	763	415	930	0.821	879	6.5	84.009	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	557	1689	0.218	368	0.3	3.000	A
2	877	176	1410	0.622	884	1.8	7.617	A
3	0	1060	540	0.000	0	0.0	0.000	A
4	639	338	971	0.658	657	2.2	13.246	B

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: A3 Maurepas Way_A3 London Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:25:48

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 2	450.3	1552.58	1.60	F	431.3	1604.01	1.65	F
Arm 4	1.6	5.33	0.59	A	9.7	25.86	0.91	D
Arm 5	1.2	4.79	0.53	A	1.8	7.70	0.63	A
	EMM - DS1							
Arm 1	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 2	442.8	1486.32	1.57	F	328.8	1126.50	1.48	F
Arm 4	0.5	3.33	0.33	A	0.9	4.73	0.45	A
Arm 5	0.9	3.57	0.46	A	0.8	3.60	0.44	A
	EML - DS2							
Arm 1	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 2	435.6	1463.49	1.56	F	326.8	1119.74	1.48	F
Arm 4	0.5	3.34	0.33	A	0.9	4.72	0.45	A
Arm 5	0.9	3.58	0.46	A	0.8	3.61	0.44	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

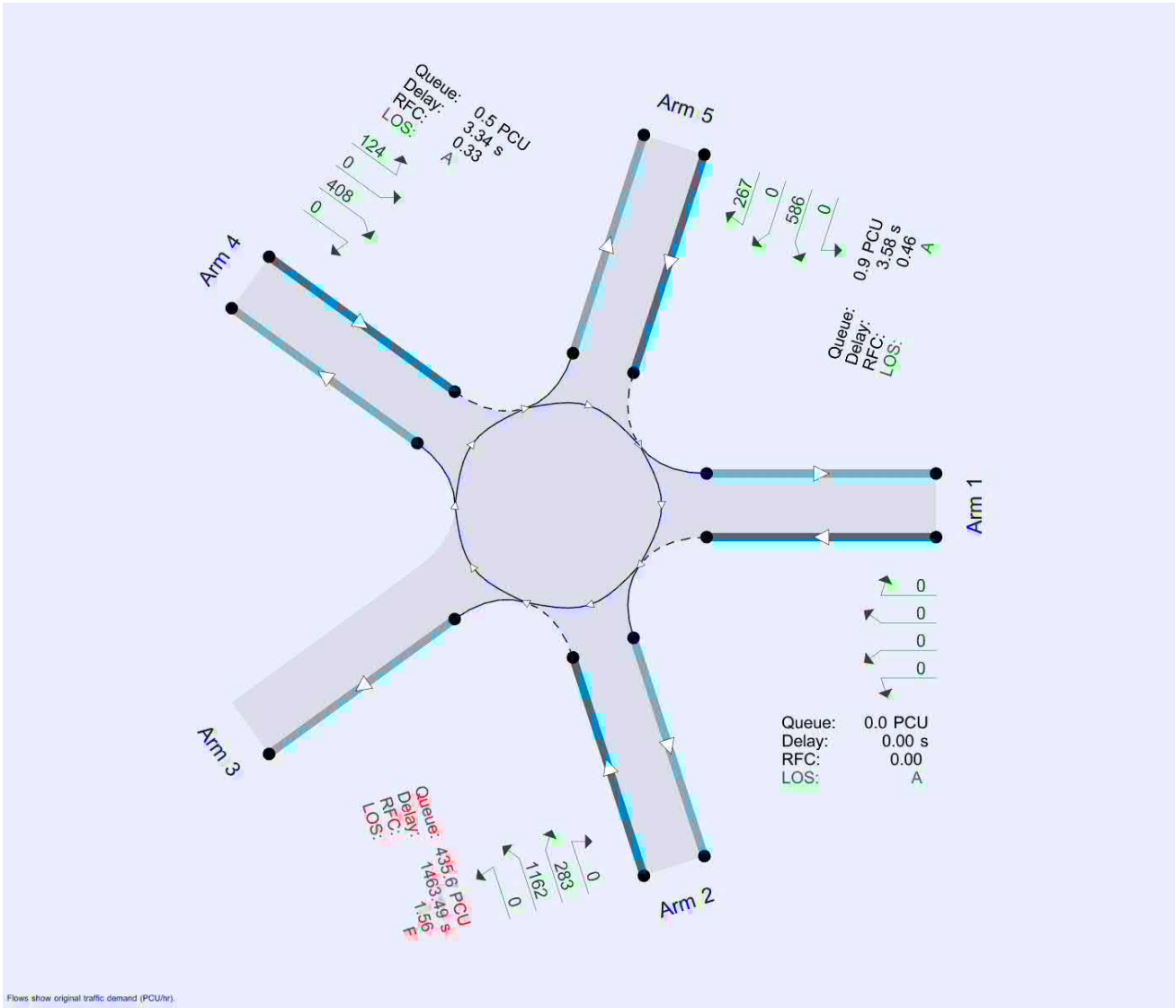
File summary

File Description

Title	A3 Maurepas Way / A3 London Road Roundabout
Location	
Site number	
Date	08/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	681.25	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Shopping Centre	
2	Rockville Drive	
3	PFS	
4	A3 London Road	
5	A3 Maurepas Way	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.80	10.40	3.0	8.0	32.0	50.0	
2	3.70	4.60	2.0	10.0	32.0	29.0	
3							✓
4	5.20	8.20	7.0	25.0	32.0	40.0	
5	7.00	8.90	11.0	15.0	32.0	36.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.510	1200
2	0.535	1177
3		
4	0.691	1910
5	0.787	2399

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1417	100.000
3				
4		✓	977	100.000
5		✓	849	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	1224	193
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	735	0	1	241
	5	0	509	0	340	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.60	1552.58	450.3	F
3				
4	0.59	5.33	1.6	A
5	0.53	4.79	1.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1189	594	0.000	0	0.0	0.000	A
2	1067	256	1040	1.026	986	20.2	49.884	E
3		1242						
4	736	134	1817	0.405	733	0.7	3.642	A
5	639	552	1965	0.325	637	0.5	2.976	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1423	475	0.000	0	0.0	0.000	A
2	1274	306	1013	1.257	1010	86.0	201.830	F
3		1317						
4	878	138	1815	0.484	877	1.0	4.217	A
5	763	661	1879	0.406	762	0.7	3.541	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1742	313	0.000	0	0.0	0.000	A
2	1560	375	976	1.598	976	232.0	593.368	F
3		1351						
4	1076	133	1818	0.592	1074	1.6	5.301	A
5	935	809	1763	0.530	933	1.2	4.760	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1745	311	0.000	0	0.0	0.000	A
2	1560	375	976	1.598	976	378.0	1104.266	F
3		1351						
4	1076	133	1818	0.592	1076	1.6	5.332	A
5	935	810	1762	0.531	935	1.2	4.788	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1428	472	0.000	0	0.0	0.000	A
2	1274	307	1012	1.258	1012	443.4	1450.827	F
3		1320						
4	878	138	1815	0.484	880	1.0	4.249	A
5	763	663	1877	0.407	765	0.8	3.565	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1195	591	0.000	0	0.0	0.000	A
2	1067	257	1039	1.026	1039	450.3	1552.582	F
3		1296						
4	736	142	1812	0.406	737	0.8	3.684	A
5	639	555	1963	0.326	640	0.5	2.995	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	625.87	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1306	100.000
3				
4		✓	1310	100.000
5		✓	795	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	597	709
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	1169	0	0	141
	5	0	273	0	522	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.65	1604.01	431.3	F
3				
4	0.91	25.86	9.7	D
5	0.63	7.70	1.8	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1470	451	0.000	0	0.0	0.000	A
2	983	391	967	1.016	912	17.9	49.125	E
3		1303						
4	986	495	1568	0.629	979	1.8	6.641	A
5	599	874	1712	0.350	596	0.6	3.541	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1759	304	0.000	0	0.0	0.000	A
2	1174	468	926	1.268	924	80.6	206.711	F
3		1392						
4	1178	501	1564	0.753	1172	3.2	9.968	A
5	715	1046	1576	0.453	713	0.9	4.583	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	2139	110	0.000	0	0.0	0.000	A
2	1438	572	871	1.652	870	222.4	634.446	F
3		1443						
4	1442	473	1584	0.911	1420	8.9	21.646	C
5	875	1267	1402	0.624	872	1.8	7.415	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	2159	100	0.000	0	0.0	0.000	A
2	1438	575	869	1.654	869	364.5	1221.337	F
3		1444						
4	1442	472	1584	0.911	1439	9.7	25.863	D
5	875	1284	1389	0.630	875	1.8	7.698	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1791	287	0.000	0	0.0	0.000	A
2	1174	472	925	1.270	925	426.9	1518.608	F
3		1396						
4	1178	502	1563	0.753	1203	3.5	11.665	B
5	715	1073	1555	0.460	718	0.9	4.755	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1485	443	0.000	0	0.0	0.000	A
2	983	394	966	1.018	966	431.3	1604.011	F
3		1360						
4	986	524	1548	0.637	992	2.0	7.208	A
5	599	886	1702	0.352	600	0.6	3.595	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	762.17	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1450	100.000
3				
4		✓	531	100.000
5		✓	853	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	1168	282
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	406	0	0	125
	5	0	585	0	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.57	1486.32	442.8	F
3				
4	0.33	3.33	0.5	A
5	0.46	3.57	0.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	945	719	0.000	0	0.0	0.000	A
2	1092	201	1069	1.021	1013	19.7	47.966	E
3		1214						
4	400	197	1774	0.225	398	0.3	2.876	A
5	642	305	2160	0.297	640	0.5	2.603	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1131	624	0.000	0	0.0	0.000	A
2	1304	241	1048	1.244	1045	84.3	191.277	F
3		1286						
4	477	203	1770	0.270	477	0.4	3.063	A
5	767	365	2112	0.363	766	0.6	2.940	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1385	495	0.000	0	0.0	0.000	A
2	1596	295	1019	1.566	1019	228.7	559.706	F
3		1314						
4	585	198	1773	0.330	584	0.5	3.328	A
5	939	447	2048	0.459	938	0.9	3.565	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1386	494	0.000	0	0.0	0.000	A
2	1596	295	1019	1.567	1019	373.0	1050.272	F
3		1314						
4	585	198	1773	0.330	585	0.5	3.330	A
5	939	447	2048	0.459	939	0.9	3.571	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1133	623	0.000	0	0.0	0.000	A
2	1304	241	1048	1.244	1048	437.0	1386.801	F
3		1289						
4	477	204	1769	0.270	478	0.4	3.069	A
5	767	365	2112	0.363	768	0.6	2.951	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	949	717	0.000	0	0.0	0.000	A
2	1092	202	1069	1.021	1069	442.8	1486.324	F
3		1271						
4	400	208	1767	0.226	400	0.3	2.898	A
5	642	306	2159	0.298	643	0.5	2.615	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	545.18	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1304	100.000
3				
4		✓	630	100.000
5		✓	771	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	564	740
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	522	0	0	108
	5	0	418	0	353	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.48	1126.50	328.8	F
3				
4	0.45	4.73	0.9	A
5	0.44	3.60	0.8	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	970	706	0.000	0	0.0	0.000	A
2	982	265	1035	0.948	939	10.7	32.919	D
3		1204						
4	474	533	1542	0.308	472	0.5	3.696	A
5	580	391	2091	0.278	579	0.4	2.616	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1161	608	0.000	0	0.0	0.000	A
2	1172	317	1007	1.164	999	54.0	130.425	F
3		1316						
4	566	567	1518	0.373	566	0.6	4.154	A
5	693	469	2030	0.341	693	0.6	2.958	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1422	476	0.000	0	0.0	0.000	A
2	1436	388	969	1.481	969	170.7	425.504	F
3		1357						
4	694	550	1530	0.453	693	0.9	4.721	A
5	849	574	1948	0.436	848	0.8	3.597	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1424	475	0.000	0	0.0	0.000	A
2	1436	389	969	1.482	969	287.4	840.758	F
3		1358						
4	694	550	1530	0.453	694	0.9	4.732	A
5	849	575	1947	0.436	849	0.8	3.605	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1164	607	0.000	0	0.0	0.000	A
2	1172	318	1007	1.164	1007	328.8	1101.577	F
3		1325						
4	566	571	1515	0.374	567	0.7	4.180	A
5	693	470	2029	0.342	694	0.6	2.969	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	975	704	0.000	0	0.0	0.000	A
2	982	266	1035	0.949	1031	316.4	1126.497	F
3		1297						
4	474	585	1506	0.315	475	0.5	3.843	A
5	580	393	2090	0.278	581	0.4	2.627	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	748.97	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1445	100.000
3				
4		✓	532	100.000
5		✓	853	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	1162	283
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	408	0	0	124
	5	0	586	0	267	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.56	1463.49	435.6	F
3				
4	0.33	3.34	0.5	A
5	0.46	3.58	0.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	947	718	0.000	0	0.0	0.000	A
2	1088	200	1070	1.017	1011	19.1	46.946	E
3		1212						
4	401	198	1773	0.226	399	0.3	2.879	A
5	642	306	2158	0.298	640	0.5	2.605	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1133	623	0.000	0	0.0	0.000	A
2	1299	240	1049	1.239	1046	82.5	187.111	F
3		1285						
4	478	205	1769	0.270	478	0.4	3.068	A
5	767	367	2111	0.363	766	0.6	2.943	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1387	493	0.000	0	0.0	0.000	A
2	1591	294	1020	1.560	1020	225.3	550.350	F
3		1313						
4	586	200	1772	0.331	585	0.5	3.334	A
5	939	449	2046	0.459	938	0.9	3.570	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1388	493	0.000	0	0.0	0.000	A
2	1591	294	1020	1.560	1020	368.2	1035.775	F
3		1314						
4	586	200	1772	0.331	586	0.5	3.337	A
5	939	449	2046	0.459	939	0.9	3.577	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1135	622	0.000	0	0.0	0.000	A
2	1299	240	1048	1.239	1048	430.9	1367.785	F
3		1289						
4	478	205	1768	0.270	479	0.4	3.071	A
5	767	367	2110	0.363	768	0.6	2.952	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	950	716	0.000	0	0.0	0.000	A
2	1088	201	1069	1.017	1069	435.6	1463.493	F
3		1270						
4	401	209	1765	0.227	401	0.3	2.902	A
5	642	307	2157	0.298	643	0.5	2.615	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	541.28	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	0	100.000
2		✓	1301	100.000
3				
4		✓	628	100.000
5		✓	773	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	561	740
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	0	520	0	0	108
	5	0	418	0	355	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	0.00	0.0	A
2	1.48	1119.74	326.8	F
3				
4	0.45	4.72	0.9	A
5	0.44	3.61	0.8	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	970	706	0.000	0	0.0	0.000	A
2	979	266	1034	0.947	937	10.6	32.685	D
3		1204						
4	473	533	1542	0.307	471	0.5	3.691	A
5	582	390	2092	0.278	580	0.4	2.616	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1161	608	0.000	0	0.0	0.000	A
2	1170	319	1006	1.162	998	53.4	129.423	F
3		1317						
4	565	568	1518	0.372	564	0.6	4.148	A
5	695	467	2032	0.342	694	0.6	2.958	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1422	476	0.000	0	0.0	0.000	A
2	1432	390	968	1.480	968	169.6	423.121	F
3		1358						
4	691	550	1530	0.452	690	0.9	4.711	A
5	851	572	1949	0.437	850	0.8	3.598	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1424	475	0.000	0	0.0	0.000	A
2	1432	391	968	1.480	968	285.8	836.939	F
3		1359						
4	691	550	1530	0.452	691	0.9	4.722	A
5	851	573	1949	0.437	851	0.8	3.606	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1164	607	0.000	0	0.0	0.000	A
2	1170	320	1006	1.163	1006	326.8	1096.318	F
3		1325						
4	565	572	1515	0.373	566	0.7	4.176	A
5	695	468	2031	0.342	696	0.6	2.970	A

18:00 - 18:15

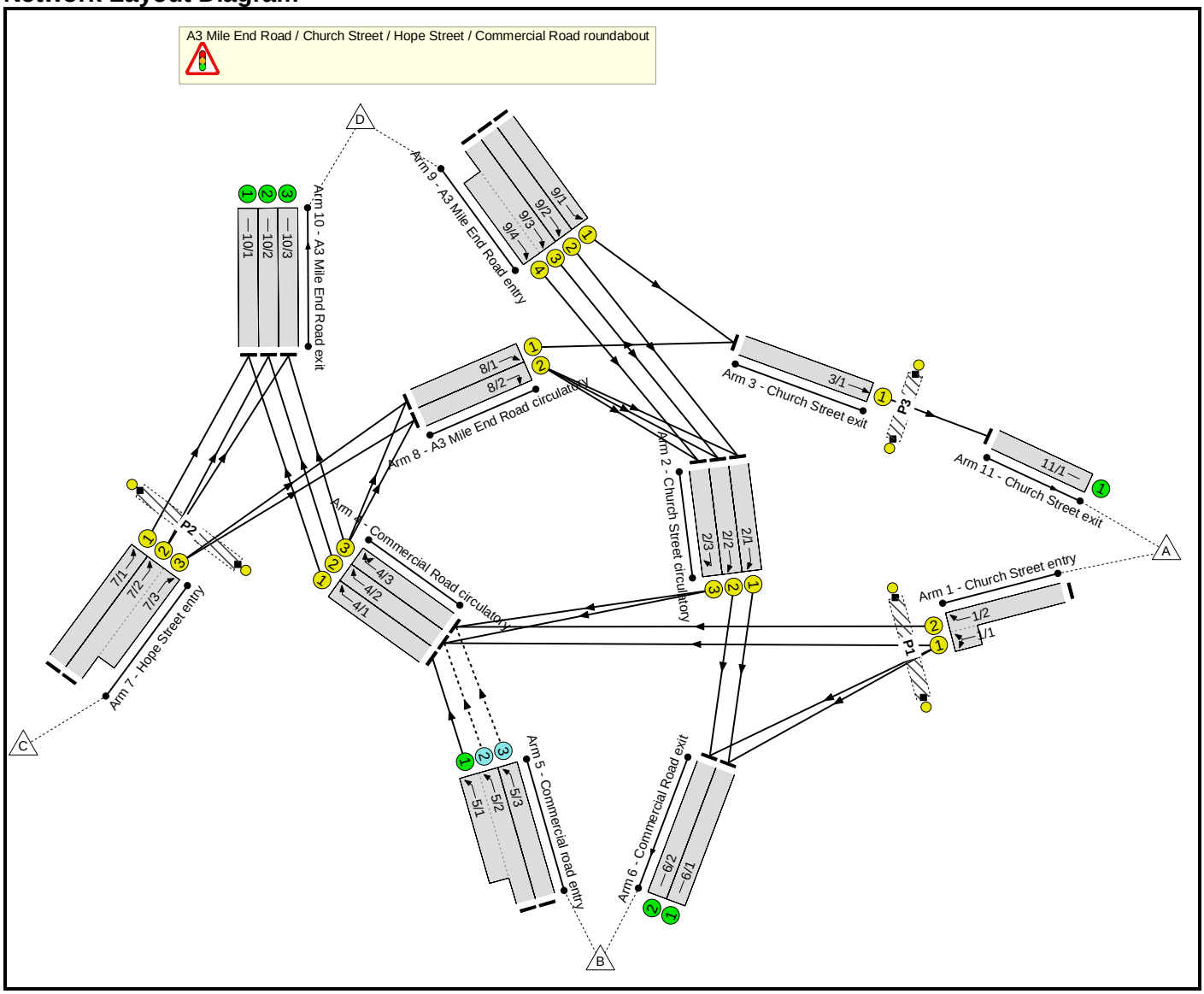
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	975	704	0.000	0	0.0	0.000	A
2	979	268	1034	0.948	1030	314.1	1119.736	F
3		1298						
4	473	586	1505	0.314	473	0.5	3.841	A
5	582	392	2091	0.278	583	0.4	2.626	A

Full Input Data And Results

User and Project Details

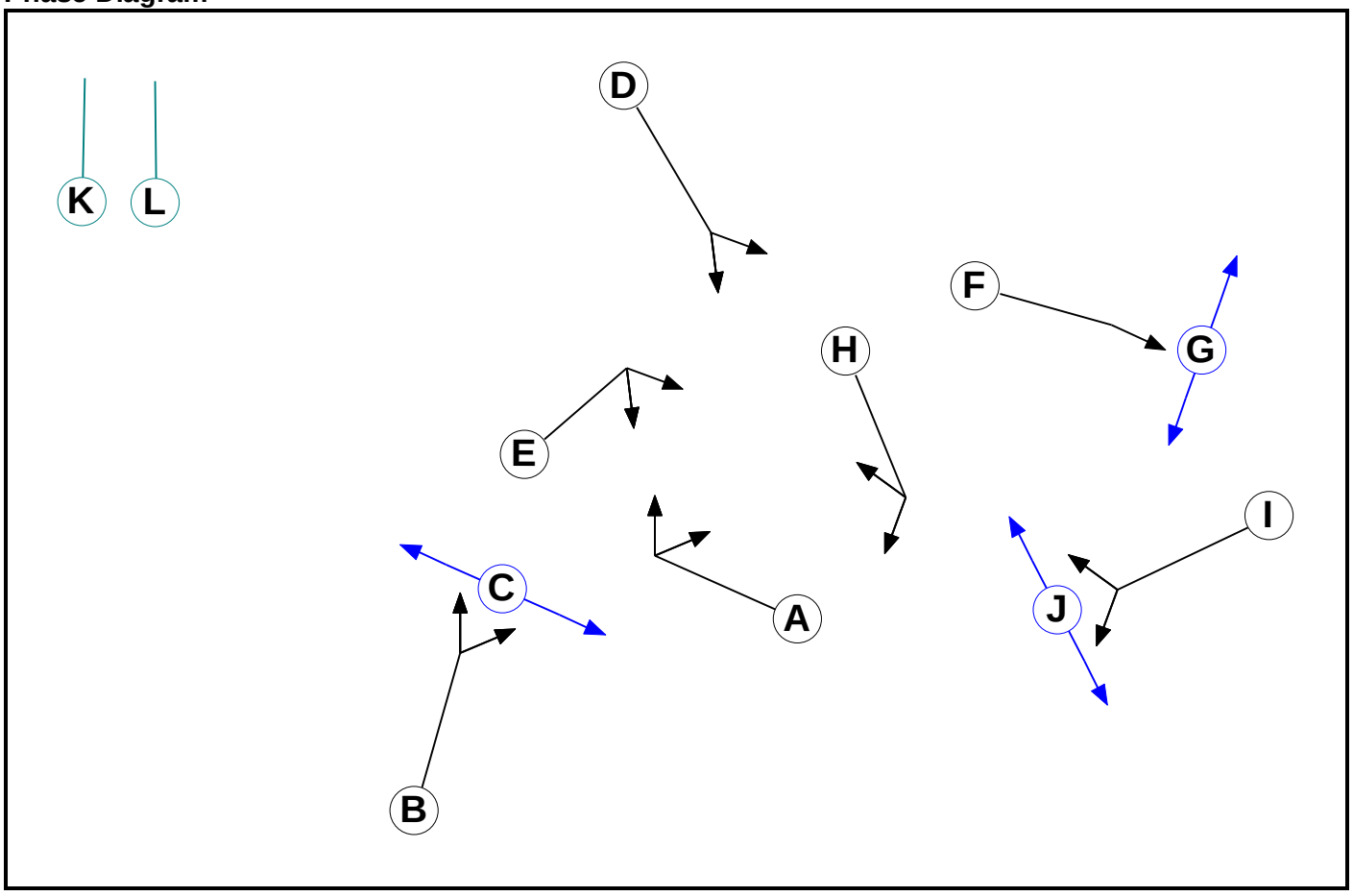
Project:	
Title:	**A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout**
Location:	
Additional detail:	
File name:	A3 Mile End Rd_Church St_Hope St_Commercial Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Pedestrian	1		6	6
D	Traffic	2		7	7
E	Traffic	2		7	7
F	Traffic	3		7	7
G	Pedestrian	3		5	5
H	Traffic	2		7	7
I	Traffic	2		7	7
J	Pedestrian	2		6	6
K	Dummy	1		3	3
L	Dummy	2		3	3

Full Input Data And Results

Phase Intergreens Matrix

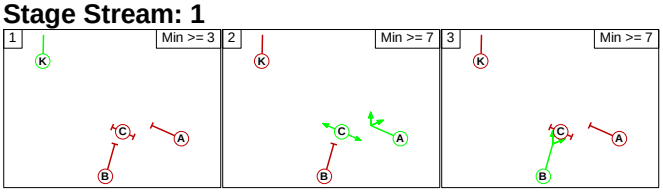
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L
A		6	-	-	-	-	-	-	-	-	2	-
B	6		5	-	-	-	-	-	-	-	2	-
C	-	0		-	-	-	-	-	-	-	2	-
D	-	-	-		10	-	-	-	-	-	-	2
E	-	-	-	5		-	-	-	-	-	-	2
F	-	-	-	-	-		0	-	-	-	-	-
G	-	-	-	-	-	0		-	-	-	-	-
H	-	-	-	-	-	-	-		6	-	-	2
I	-	-	-	-	-	-	-	6		5	-	2
J	-	-	-	-	-	-	-	-	0		-	2
K	3	3	3	-	-	-	-	-	-	-		-
L	-	-	-	3	3	-	-	3	3	3	-	

Phases in Stage

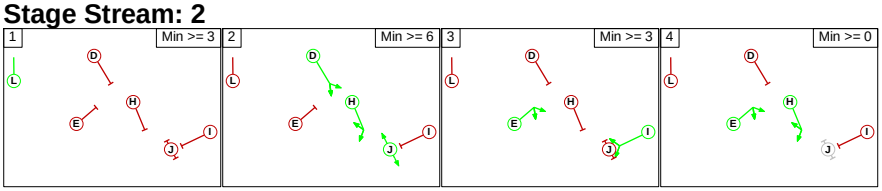
Stream	Stage No.	Phases in Stage
1	1	K
1	2	A C
1	3	B
2	1	L
2	2	D H J
2	3	E I
2	4	E H
3	1	F
3	2	G

Stage Diagram

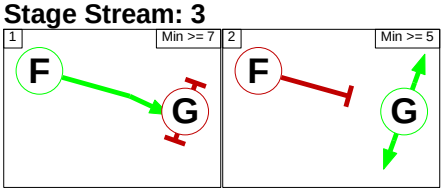
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Full Input Data And Results

Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage		
		1	2	3
From Stage	1		3	3
	2	2		6
	3	2	6	

Stage Stream: 2

		To Stage			
		1	2	3	4
From Stage	1		3	3	3
	2	2		10	10
	3	2	6		6
	4	2	5	6	

Stage Stream: 3

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
5/2 (Commercial road entry)	4/2 (Ahead)	1439	0	2/3	1.09	All	-	-	-	-	-
				1/1	1.09	To 4/2 (Right)					
				1/2	1.09	All					
5/3 (Commercial road entry)	4/3 (Ahead)	1439	0	2/3	1.09	All	-	-	-	-	-
				1/1	1.09	To 4/2 (Right)					
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Church Street entry)	U	I	2	3	2.1	Geom	-	3.00	0.00	Y	Arm 4 Right	50.00
											Arm 6 Left	30.00
1/2 (Church Street entry)	U	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Right	50.00
2/1 (Church Street circulatory)	U	H	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
2/2 (Church Street circulatory)	U	H	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
2/3 (Church Street circulatory)	U	H	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 4 Right	25.00
3/1 (Church Street exit)	U	F	2	3	9.6	Geom	-	3.25	0.00	Y	Arm 11 Ahead	Inf
4/1 (Commercial Road circulatory)	U	A	2	3	5.2	Geom	-	3.25	0.00	Y	Arm 10 Right	50.00
4/2 (Commercial Road circulatory)	U	A	2	3	5.2	Geom	-	3.25	0.00	Y	Arm 10 Right	50.00
4/3 (Commercial Road circulatory)	U	A	2	3	5.2	Geom	-	3.25	0.00	Y	Arm 8 Right	50.00
											Arm 10 Right	50.00
5/1 (Commercial road entry)	U		2	3	10.4	Geom	-	3.25	0.00	Y	Arm 4 Ahead	50.00
5/2 (Commercial road entry)	O		2	3	13.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	50.00
5/3 (Commercial road entry)	O		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	50.00
6/1 (Commercial Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (Commercial Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Hope Street entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 10 Ahead	100.00

7/2 (Hope Street entry)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 10 Ahead	100.00
7/3 (Hope Street entry)	U	B	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 8 Ahead	50.00
8/1 (A3 Mile End Road circulatory)	U	E	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 3 Ahead	30.00
8/2 (A3 Mile End Road circulatory)	U	E	2	3	8.7	Geom	-	3.50	0.00	Y	Arm 2 Right	30.00
9/1 (A3 Mile End Road entry)	U	D	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 3 Ahead	20.00
9/2 (A3 Mile End Road entry)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	50.00
9/3 (A3 Mile End Road entry)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Ahead	50.00
9/4 (A3 Mile End Road entry)	U	D	2	3	11.3	Geom	-	3.50	0.00	Y	Arm 2 Ahead	50.00
10/1 (A3 Mile End Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (A3 Mile End Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/3 (A3 Mile End Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Church Street exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	93	0	1495	1588
	B	6	3	0	1100	1109
	C	2	3	0	558	563
	D	1013	2092	0	0	3105
	Tot.	1021	2191	0	3153	6365

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	811
1/2 (with short)	1588(In) 777(Out)
2/1	1027
2/2	1068
2/3	0
3/1	1021
4/1	436
4/2	1057
4/3	1108
5/1 (short)	436
5/2 (with short)	775(In) 339(Out)
5/3	331
6/1	1074
6/2	1114
7/1	278
7/2 (with short)	285(In) 280(Out)
7/3 (short)	5
8/1	8
8/2	3
9/1	1013
9/2	1025
9/3 (with short)	1067(In) 1067(Out)
9/4 (short)	0
10/1	714
10/2	1197
10/3	1242
11/1	1021

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	88.5 %	1855	1855
				Arm 6 Left	30.00	11.5 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.5 %	1883	1883
				Arm 10 Right	50.00	99.5 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	100.0 %	1871	1871
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	139	0	945	1084
	B	3	0	0	1464	1467
	C	11	0	0	1236	1247
	D	960	1803	0	0	2763
	Tot.	974	1942	0	3645	6561

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	615
1/2 (with short)	1084(In) 469(Out)
2/1	886
2/2	917
2/3	0
3/1	974
4/1	548
4/2	935
4/3	929
5/1 (short)	548
5/2 (with short)	1007(In) 459(Out)
5/3	460
6/1	956
6/2	986
7/1	616
7/2 (with short)	631(In) 620(Out)
7/3 (short)	11
8/1	14
8/2	0
9/1	960
9/2	886
9/3 (with short)	917(In) 917(Out)
9/4 (short)	0
10/1	1164
10/2	1245
10/3	1236
11/1	974

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	77.4 %	1851	1851
				Arm 6 Left	30.00	22.6 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.3 %	1883	1883
				Arm 10 Right	50.00	99.7 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	0.0 %	1965	1965
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	93	0	1496	1589
	B	6	4	0	1092	1102
	C	1	2	0	557	560
	D	1037	2101	0	0	3138
	Tot.	1044	2200	0	3145	6389

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	807
1/2 (with short)	1589(In) 782(Out)
2/1	1030
2/2	1073
2/3	0
3/1	1044
4/1	433
4/2	1051
4/3	1110
5/1 (short)	433
5/2 (with short)	770(In) 337(Out)
5/3	328
6/1	1077
6/2	1119
7/1	277
7/2 (with short)	283(In) 280(Out)
7/3 (short)	3
8/1	7
8/2	2
9/1	1037
9/2	1029
9/3 (with short)	1072(In) 1072(Out)
9/4 (short)	0
10/1	710
10/2	1191
10/3	1244
11/1	1044

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	88.5 %	1855	1855
				Arm 6 Left	30.00	11.5 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.5 %	1883	1883
				Arm 10 Right	50.00	99.5 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	100.0 %	1871	1871
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	149	0	964	1113
	B	4	0	0	1442	1446
	C	10	0	0	1236	1246
	D	1004	1794	0	0	2798
	Tot.	1018	1943	0	3642	6603

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	636
1/2 (with short)	1113(In) 477(Out)
2/1	882
2/2	912
2/3	0
3/1	1018
4/1	540
4/2	939
4/3	931
5/1 (short)	540
5/2 (with short)	992(In) 452(Out)
5/3	454
6/1	957
6/2	986
7/1	616
7/2 (with short)	630(In) 620(Out)
7/3 (short)	10
8/1	14
8/2	0
9/1	1004
9/2	882
9/3 (with short)	912(In) 912(Out)
9/4 (short)	0
10/1	1156
10/2	1249
10/3	1237
11/1	1018

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	76.6 %	1851	1851
				Arm 6 Left	30.00	23.4 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.4 %	1883	1883
				Arm 10 Right	50.00	99.6 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	0.0 %	1965	1965
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	88	0	1501	1589
	B	5	4	0	1105	1114
	C	2	3	0	562	567
	D	1018	2103	0	0	3121
	Tot.	1025	2198	0	3168	6391

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	990
1/2 (with short)	1589(In) 599(Out)
2/1	1054
2/2	1052
2/3	0
3/1	1025
4/1	1105
4/2	902
4/3	604
5/1 (short)	1105
5/2 (with short)	1105(In) 0(Out)
5/3	5
6/1	1098
6/2	1096
7/1	280
7/2 (with short)	287(In) 282(Out)
7/3 (short)	5
8/1	7
8/2	3
9/1	1018
9/2	1052
9/3 (with short)	1051(In) 1051(Out)
9/4 (short)	0
10/1	1385
10/2	1043
10/3	740
11/1	1025

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	91.1 %	1856	1856
				Arm 6 Left	30.00	8.9 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.8 %	1883	1883
				Arm 10 Right	50.00	99.2 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	0.0 %	1940	1940
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	100.0 %	1871	1871
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	138	0	944	1082
	B	4	0	0	1465	1469
	C	12	0	0	1238	1250
	D	963	1805	0	0	2768
	Tot.	979	1943	0	3647	6569

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	
1/1 (short)	614
1/2 (with short)	1082(In) 468(Out)
2/1	887
2/2	918
2/3	0
3/1	979
4/1	548
4/2	936
4/3	929
5/1 (short)	548
5/2 (with short)	1008(In) 460(Out)
5/3	461
6/1	956
6/2	987
7/1	616
7/2 (with short)	634(In) 622(Out)
7/3 (short)	12
8/1	16
8/2	0
9/1	963
9/2	887
9/3 (with short)	918(In) 918(Out)
9/4 (short)	0
10/1	1164
10/2	1247
10/3	1236
11/1	979

Full Input Data And Results

Lane Saturation Flows

Junction: A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	77.5 %	1851	1851
				Arm 6 Left	30.00	22.5 %		
1/2 (Church Street entry)	3.00	0.00	Y	Arm 4 Right	50.00	100.0 %	1859	1859
2/1 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/2 (Church Street circulatory)	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
2/3 (Church Street circulatory)	3.50	0.00	Y	Arm 4 Right	25.00	0.0 %	1965	1965
3/1 (Church Street exit)	3.25	0.00	Y	Arm 11 Ahead	Inf	100.0 %	1940	1940
4/1 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/2 (Commercial Road circulatory)	3.25	0.00	Y	Arm 10 Right	50.00	100.0 %	1883	1883
4/3 (Commercial Road circulatory)	3.25	0.00	Y	Arm 8 Right	50.00	0.4 %	1883	1883
				Arm 10 Right	50.00	99.6 %		
5/1 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/2 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
5/3 (Commercial road entry)	3.25	0.00	Y	Arm 4 Ahead	50.00	100.0 %	1883	1883
6/1 (Commercial Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Commercial Road exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/2 (Hope Street entry)	3.50	0.00	Y	Arm 10 Ahead	100.00	100.0 %	1936	1936
7/3 (Hope Street entry)	3.50	0.00	Y	Arm 8 Ahead	50.00	100.0 %	1908	1908
8/1 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 3 Ahead	30.00	100.0 %	1871	1871
8/2 (A3 Mile End Road circulatory)	3.50	0.00	Y	Arm 2 Right	30.00	0.0 %	1965	1965
9/1 (A3 Mile End Road entry)	4.00	0.00	Y	Arm 3 Ahead	20.00	100.0 %	1874	1874
9/2 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/3 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	100.0 %	1908	1908
9/4 (A3 Mile End Road entry)	3.50	0.00	Y	Arm 2 Ahead	50.00	0.0 %	1965	1965

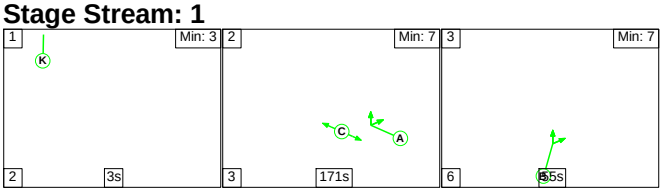
Full Input Data And Results

10/1 (A3 Mile End Road exit Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (A3 Mile End Road exit Lane 2)	Infinite Saturation Flow	Inf	Inf
10/3 (A3 Mile End Road exit Lane 3)	Infinite Saturation Flow	Inf	Inf
11/1 (Church Street exit Lane 1)	Infinite Saturation Flow	Inf	Inf

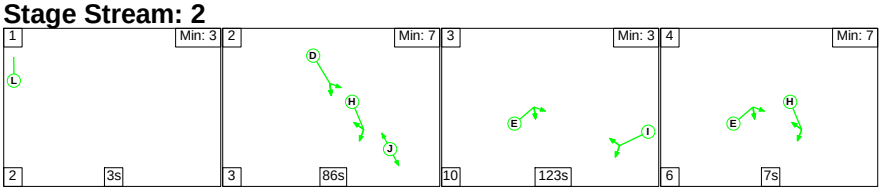
Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

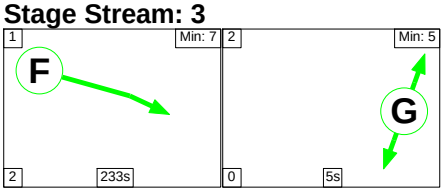
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	171	55
Change Point	0	5	179

Stage Stream: 2

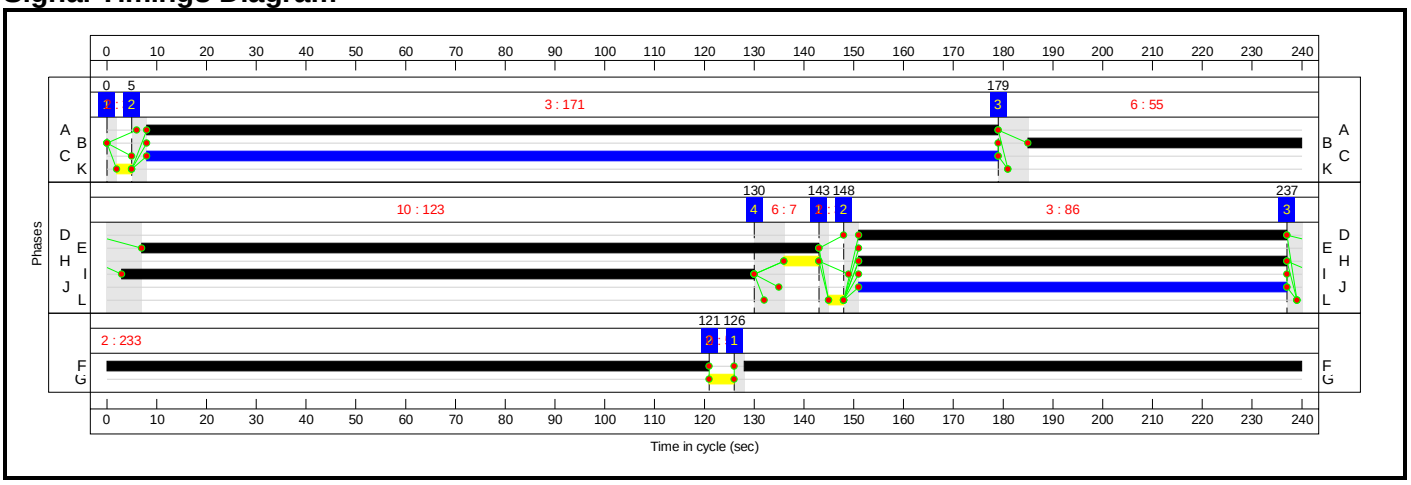
Stage	1	2	3	4
Duration	3	86	123	7
Change Point	143	148	237	130

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	126	121

Full Input Data And Results

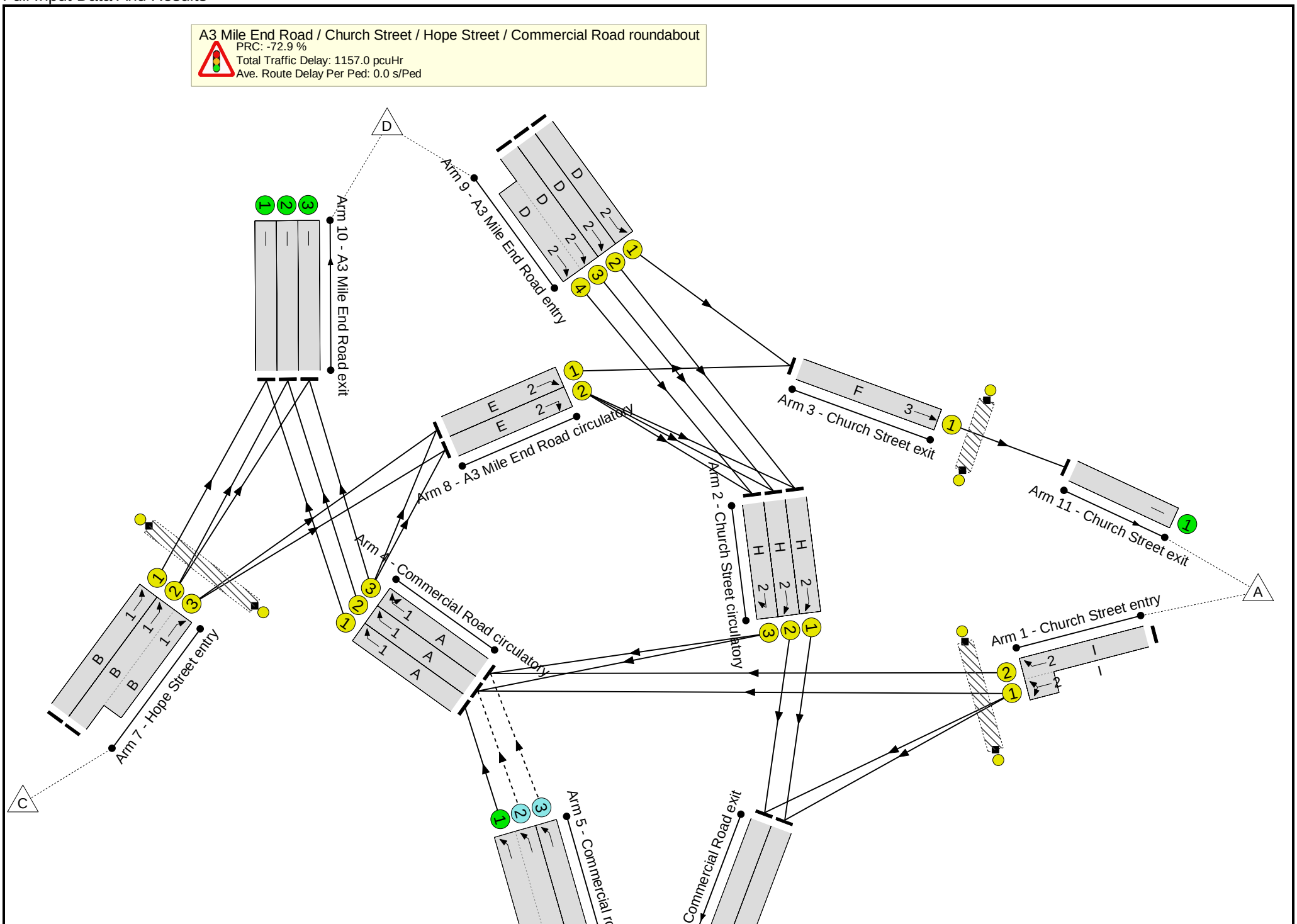
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.6%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.6%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	127	-	1588	1859:1855	1021	155.6%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	93	-	1027	1965	778	89.2%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	93	-	1068	1965	778	89.1%
2/3	Church Street circulatory Right	U	2	N/A	H		2	93	-	0	1965	-	-
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	1021	1940	1892	36.3%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	171	-	436	1883	1349	32.3%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	171	-	1057	1883	1349	59.3%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	171	-	1108	1883	1349	61.5%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	775	1883:1883	1085	71.5%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	331	1883	672	49.3%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	1074	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	1114	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	55	-	278	1936	452	61.5%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	55	-	285	1936:1908	458	62.2%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	136	-	8	1871	1068	0.7%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	136	-	3	1871	1068	0.3%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1013	1874	679	149.1%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1025	1908	692	148.2%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1067	1908:1965	692	154.3%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1197	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1242	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	1021	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	86	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	171	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**670**	**0**	**333.4**	**823.6**	**0.0**	**1157.0**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**670**	**0**	**333.4**	**823.6**	**0.0**	**1157.0**	**-**	**-**	**-**	**-**
1/2+1/1	1588	1021	-	-	-	89.0	285.0	-	374.1	848.0	142.6	285.0	427.6
2/1	694	694	-	-	-	1.7	3.8	-	5.5	28.5	3.0	3.8	6.8
2/2	693	693	-	-	-	1.7	3.7	-	5.4	28.1	2.9	3.7	6.7
2/3	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	687	687	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/1	436	436	-	-	-	1.6	0.2	-	1.8	14.9	10.8	0.2	11.0
4/2	800	800	-	-	-	1.4	0.7	-	2.1	9.5	14.2	0.7	14.9
4/3	830	830	-	-	-	1.4	0.8	-	2.2	9.3	14.9	0.8	15.7
5/2+5/1	775	775	0	339	0	4.8	1.2	-	6.0	28.1	23.7	1.2	25.0
5/3	331	331	0	331	0	4.1	0.5	-	4.6	49.6	15.3	0.5	15.7
6/1	724	724	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	278	278	-	-	-	6.4	0.8	-	7.2	92.6	16.5	0.8	17.3
7/2+7/3	285	285	-	-	-	6.5	0.8	-	7.3	92.7	16.8	0.8	17.6
8/1	8	8	-	-	-	0.1	0.0	-	0.1	54.4	0.4	0.0	0.4
8/2	3	3	-	-	-	0.0	0.0	-	0.0	44.0	0.2	0.0	0.2
9/1	1013	679	-	-	-	70.1	168.3	-	238.4	847.4	112.0	168.3	280.4
9/2	1025	692	-	-	-	70.3	168.2	-	238.5	837.7	112.8	168.2	281.0
9/3+9/4	1067	692	-	-	-	74.3	189.1	-	263.4	888.8	118.2	189.1	307.3
10/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	940	940	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	964	964	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	687	687	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

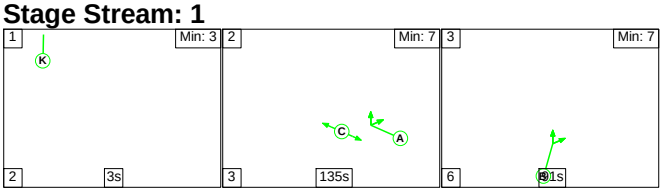
C1	Stream: 1 PRC for Signalled Lanes (%):	44.6	Total Delay for Signalled Lanes (pcuHr):	20.56	Cycle Time (s):	240
C1	Stream: 2 PRC for Signalled Lanes (%):	-72.9	Total Delay for Signalled Lanes (pcuHr):	1125.51	Cycle Time (s):	240
C1	Stream: 3 PRC for Signalled Lanes (%):	147.7	Total Delay for Signalled Lanes (pcuHr):	0.29	Cycle Time (s):	240
	PRC Over All Lanes (%):	-72.9	Total Delay Over All Lanes(pcuHr):	1156.96		

Full Input Data And Results

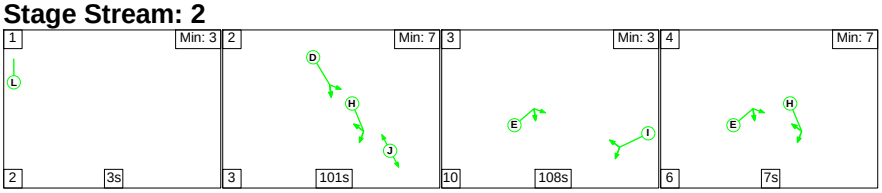
Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

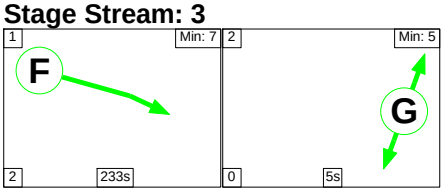
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	135	91
Change Point	0	5	143

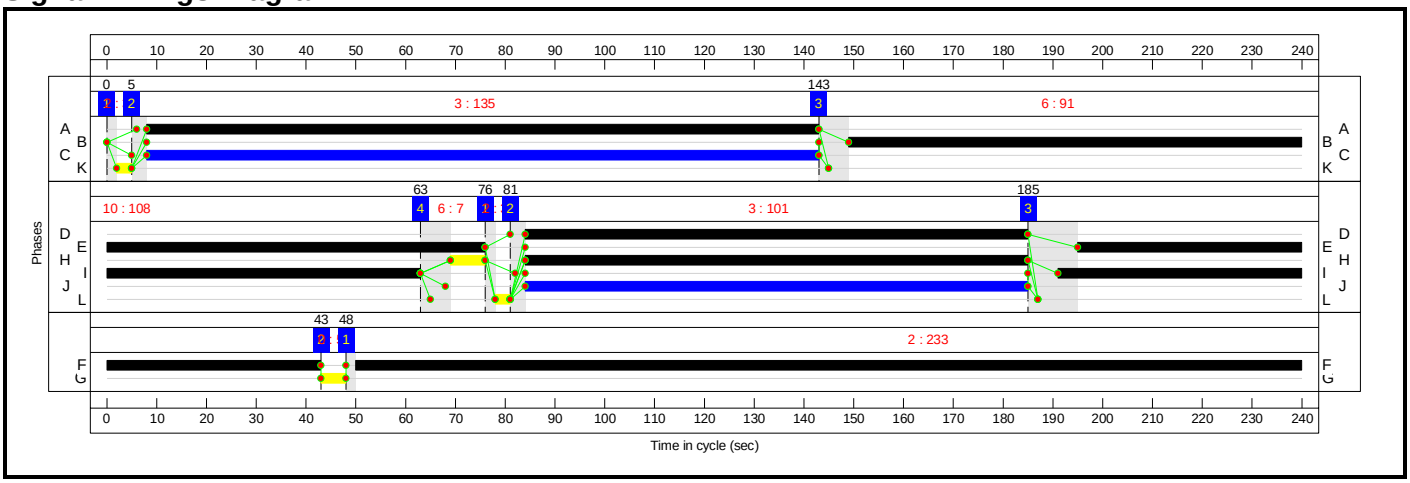
Stage Stream: 2

Stage	1	2	3	4
Duration	3	101	108	7
Change Point	76	81	185	63

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	48	43

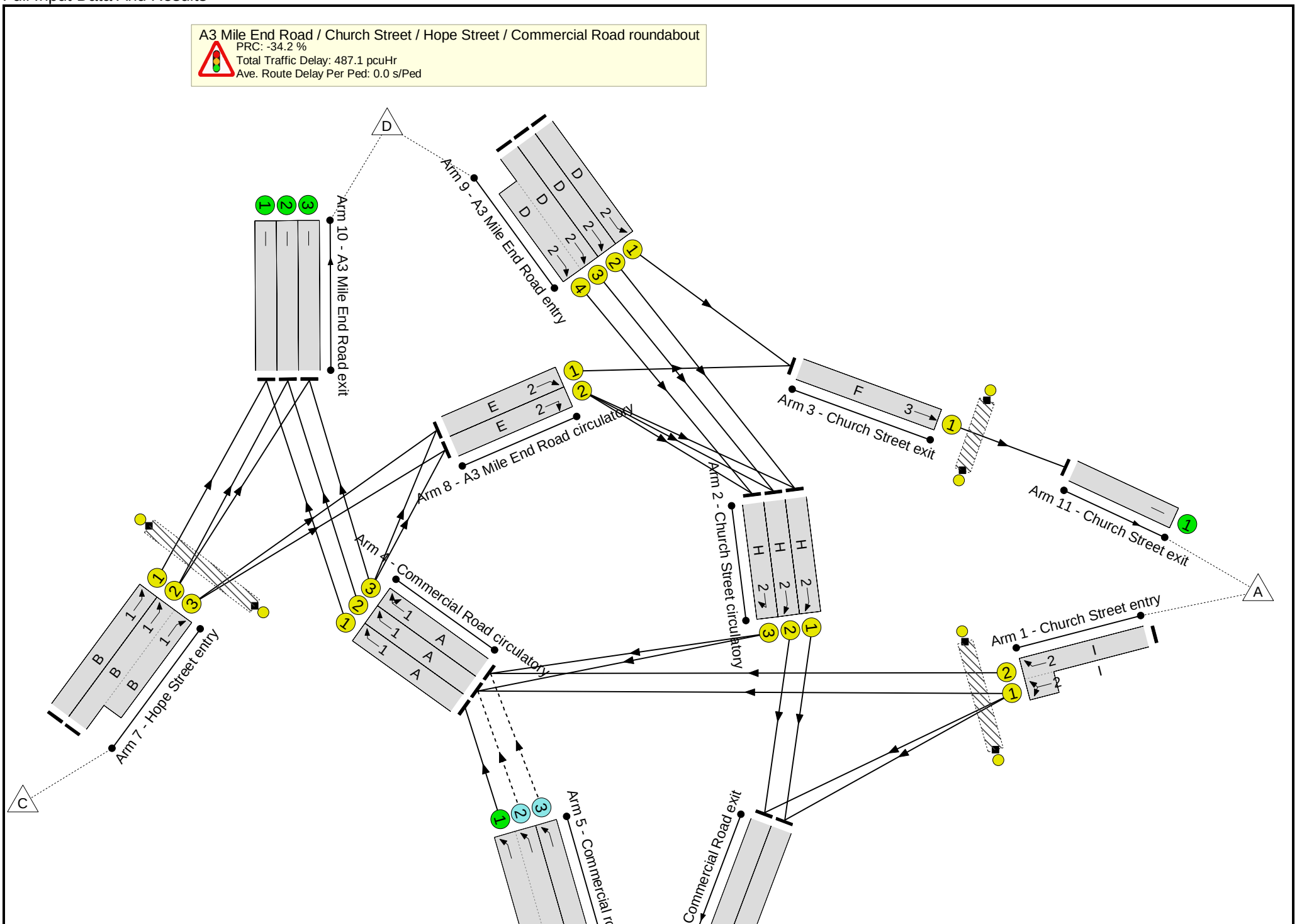
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.8%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.8%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	112	-	1084	1859:1851	897	120.8%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	108	-	886	1965	901	90.0%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	108	-	917	1965	901	90.0%
2/3	Church Street circulatory Right	U	2	N/A	H		2	108	-	0	1965	-	-
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	974	1940	1892	42.8%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	135	-	548	1883	1067	51.4%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	135	-	935	1883	1067	79.9%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	135	-	929	1883	1067	79.5%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	1007	1883:1883	1188	84.8%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	460	1883	761	60.4%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	956	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	986	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	91	-	616	1936	742	83.0%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	91	-	631	1936:1908	748	84.3%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	121	-	14	1871	951	1.5%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	121	-	0	1965	999	0.0%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	960	1874	796	120.5%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	886	1908	811	109.3%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	917	1908:1965	811	113.1%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1164	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1245	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1236	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	974	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	101	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	135	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**919**	**0**	**185.1**	**302.0**	**0.0**	**487.1**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**919**	**0**	**185.1**	**302.0**	**0.0**	**487.1**	**-**	**-**	**-**	**-**
1/2+1/1	1084	897	-	-	-	43.2	96.2	-	139.4	462.8	83.7	96.2	179.9
2/1	811	811	-	-	-	1.5	4.1	-	5.6	24.9	2.9	4.1	7.0
2/2	811	811	-	-	-	1.5	4.1	-	5.6	24.9	2.9	4.1	7.0
2/3	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	810	810	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
4/1	548	548	-	-	-	5.0	0.5	-	5.5	36.1	20.6	0.5	21.1
4/2	853	853	-	-	-	6.6	2.0	-	8.5	35.9	37.2	2.0	39.2
4/3	848	848	-	-	-	6.3	1.9	-	8.2	34.8	34.6	1.9	36.5
5/2+5/1	1007	1007	0	459	0	7.0	2.7	-	9.7	34.6	40.9	2.7	43.6
5/3	460	460	0	460	0	5.0	0.8	-	5.8	45.0	21.2	0.8	22.0
6/1	869	869	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	616	616	-	-	-	11.5	2.4	-	13.8	80.7	37.1	2.4	39.5
7/2+7/3	631	631	-	-	-	11.8	2.6	-	14.4	81.9	38.1	2.6	40.6
8/1	14	14	-	-	-	0.1	0.0	-	0.1	26.3	0.5	0.0	0.6
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	960	796	-	-	-	34.0	84.6	-	118.6	444.8	74.9	84.6	159.5
9/2	886	811	-	-	-	24.1	42.7	-	66.9	271.8	64.1	42.7	106.8
9/3+9/4	917	811	-	-	-	27.7	57.1	-	84.8	332.8	70.8	57.1	127.8
10/1	1164	1164	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1163	1163	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	1155	1155	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	810	810	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

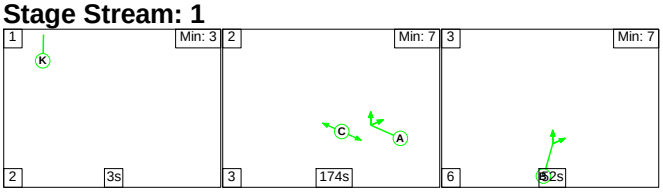
C1	Stream: 1	PRC for Signalled Lanes (%):	6.7	Total Delay for Signalled Lanes (pcuHr):	50.36	Cycle Time (s):	240	
C1	Stream: 2	PRC for Signalled Lanes (%):	-34.2	Total Delay for Signalled Lanes (pcuHr):	420.92	Cycle Time (s):	240	
C1	Stream: 3	PRC for Signalled Lanes (%):	110.0	Total Delay for Signalled Lanes (pcuHr):	0.37	Cycle Time (s):	240	
		PRC Over All Lanes (%):	-34.2	Total Delay Over All Lanes(pcuHr):	487.08			

Full Input Data And Results

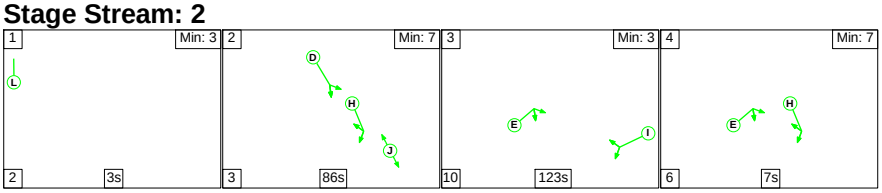
Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

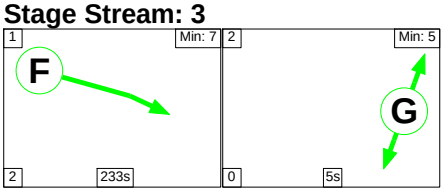
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	174	52
Change Point	0	5	182

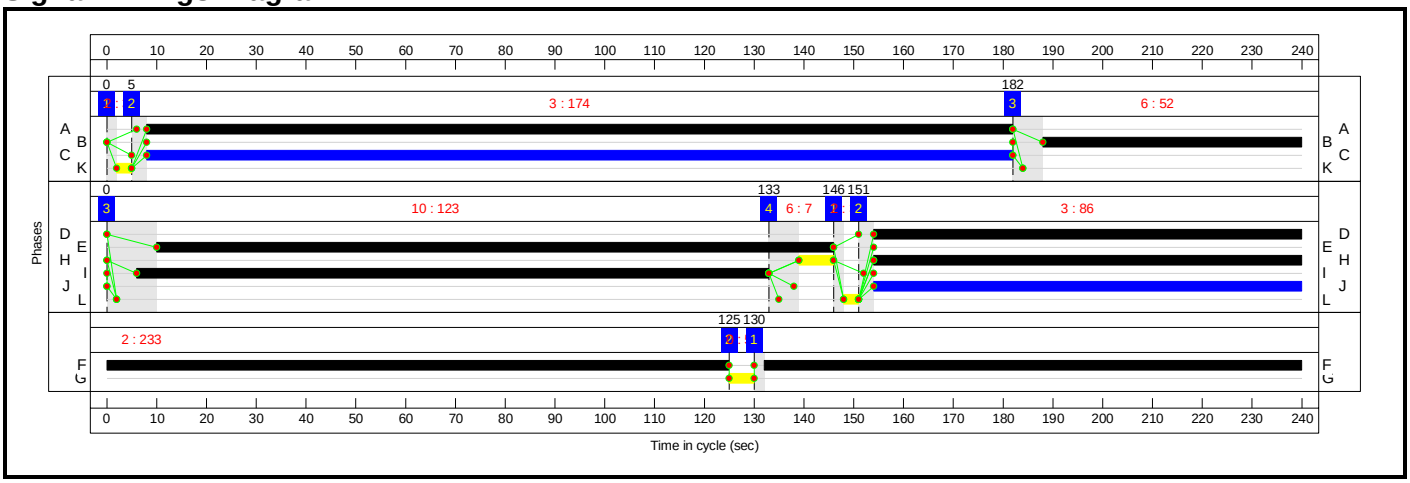
Stage Stream: 2

Stage	1	2	3	4
Duration	3	86	123	7
Change Point	146	151	0	133

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	130	125

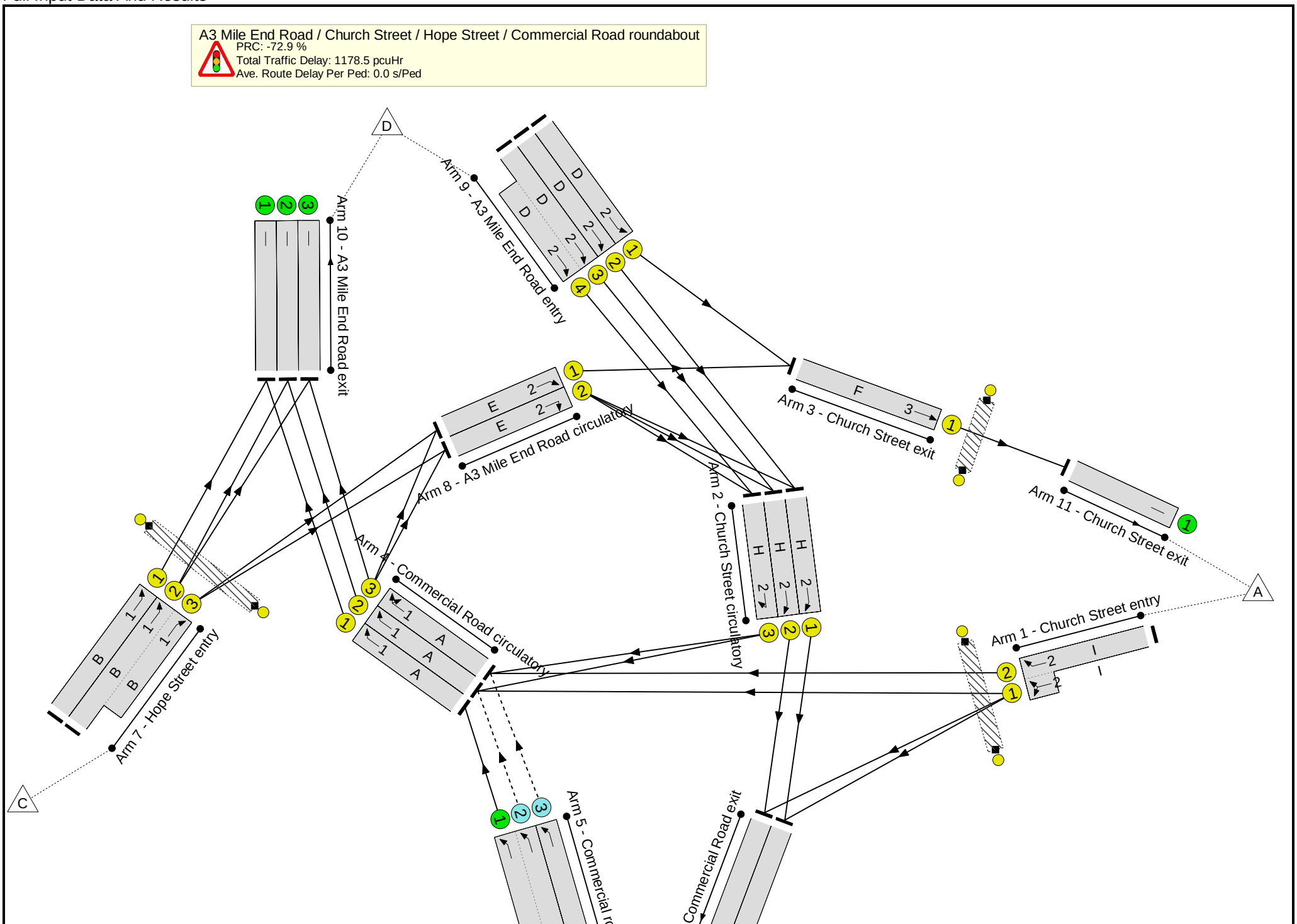
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.6%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.6%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	127	-	1589	1859:1855	1021	155.6%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	93	-	1030	1965	778	89.1%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	93	-	1073	1965	778	89.1%
2/3	Church Street circulatory Right	U	2	N/A	H		2	93	-	0	1965	-	-
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	1044	1940	1892	36.3%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	174	-	433	1883	1373	31.5%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	174	-	1051	1883	1373	58.0%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	174	-	1110	1883	1373	60.5%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	770	1883:1883	1084	71.0%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	328	1883	672	48.8%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	1077	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	1119	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	52	-	277	1936	428	64.8%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	52	-	283	1936:1908	432	65.5%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	136	-	7	1871	1068	0.7%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	136	-	2	1871	1068	0.2%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1037	1874	679	152.7%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1029	1908	692	148.8%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	86	-	1072	1908:1965	692	155.0%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	710	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1191	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1244	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	1044	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	86	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	174	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**665**	**0**	**338.1**	**840.4**	**0.0**	**1178.5**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**665**	**0**	**338.1**	**840.4**	**0.0**	**1178.5**	**-**	**-**	**-**	**-**
1/2+1/1	1589	1021	-	-	-	88.6	285.4	-	374.0	847.3	142.6	285.4	428.0
2/1	693	693	-	-	-	1.7	3.7	-	5.4	28.1	2.9	3.7	6.7
2/2	693	693	-	-	-	1.7	3.7	-	5.4	28.1	2.9	3.7	6.7
2/3	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	686	686	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/1	433	433	-	-	-	1.4	0.2	-	1.6	13.5	10.2	0.2	10.4
4/2	796	796	-	-	-	1.2	0.7	-	1.9	8.5	12.7	0.7	13.4
4/3	830	830	-	-	-	1.2	0.8	-	1.9	8.4	13.3	0.8	14.1
5/2+5/1	770	770	0	337	0	4.7	1.2	-	6.0	27.8	23.7	1.2	24.9
5/3	328	328	0	328	0	4.0	0.5	-	4.5	49.4	15.0	0.5	15.5
6/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	277	277	-	-	-	6.5	0.9	-	7.5	96.8	16.8	0.9	17.7
7/2+7/3	283	283	-	-	-	6.7	0.9	-	7.6	97.1	17.0	0.9	18.0
8/1	7	7	-	-	-	0.1	0.0	-	0.1	56.0	0.3	0.0	0.3
8/2	2	2	-	-	-	0.0	0.0	-	0.0	44.3	0.1	0.0	0.1
9/1	1037	679	-	-	-	73.8	180.3	-	254.1	882.0	116.0	180.3	296.2
9/2	1029	692	-	-	-	70.7	170.2	-	240.9	842.7	112.7	170.2	282.9
9/3+9/4	1072	692	-	-	-	75.7	191.6	-	267.3	897.7	119.2	191.6	310.8
10/1	710	710	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	936	936	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	964	964	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	686	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

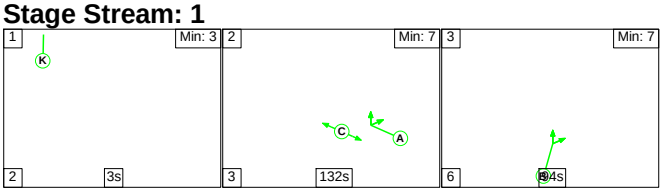
C1	Stream: 1 PRC for Signalled Lanes (%):	37.4	Total Delay for Signalled Lanes (pcuHr):	20.52	Cycle Time (s):	240
C1	Stream: 2 PRC for Signalled Lanes (%):	-72.9	Total Delay for Signalled Lanes (pcuHr):	1147.24	Cycle Time (s):	240
C1	Stream: 3 PRC for Signalled Lanes (%):	148.0	Total Delay for Signalled Lanes (pcuHr):	0.28	Cycle Time (s):	240
	PRC Over All Lanes (%):	-72.9	Total Delay Over All Lanes(pcuHr):	1178.50		

Full Input Data And Results

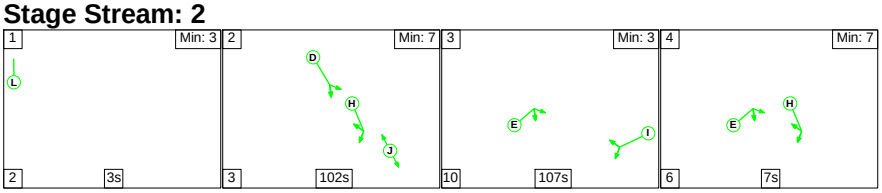
Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

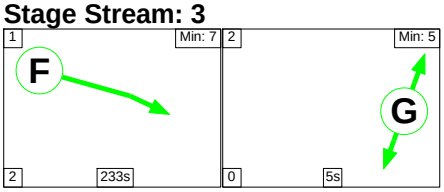
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	132	94
Change Point	0	5	140

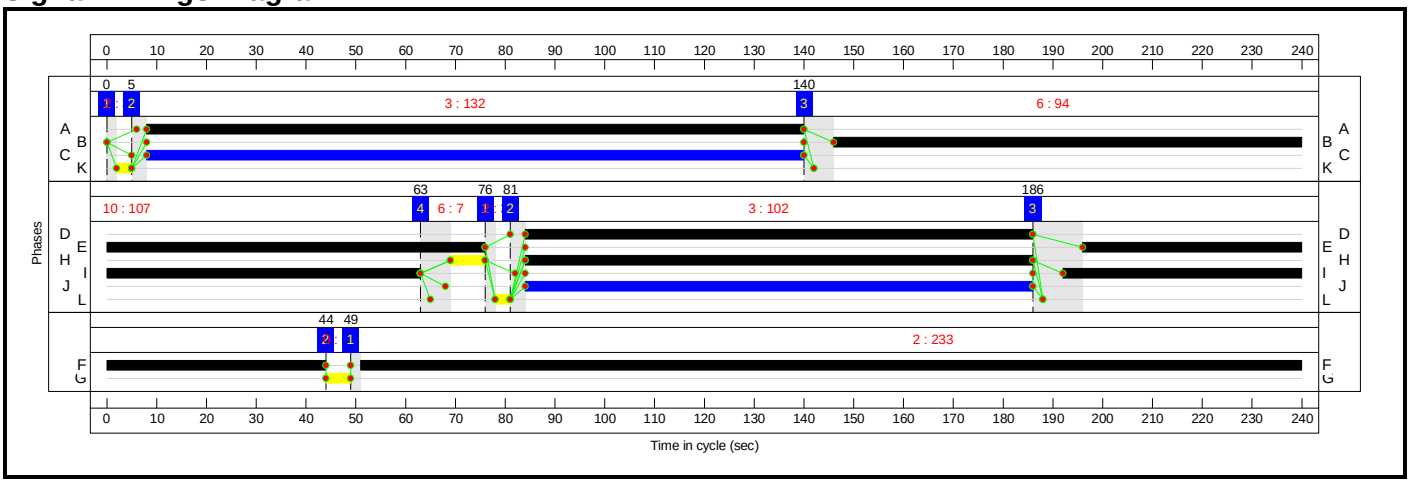
Stage Stream: 2

Stage	1	2	3	4
Duration	3	102	107	7
Change Point	76	81	186	63

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	49	44

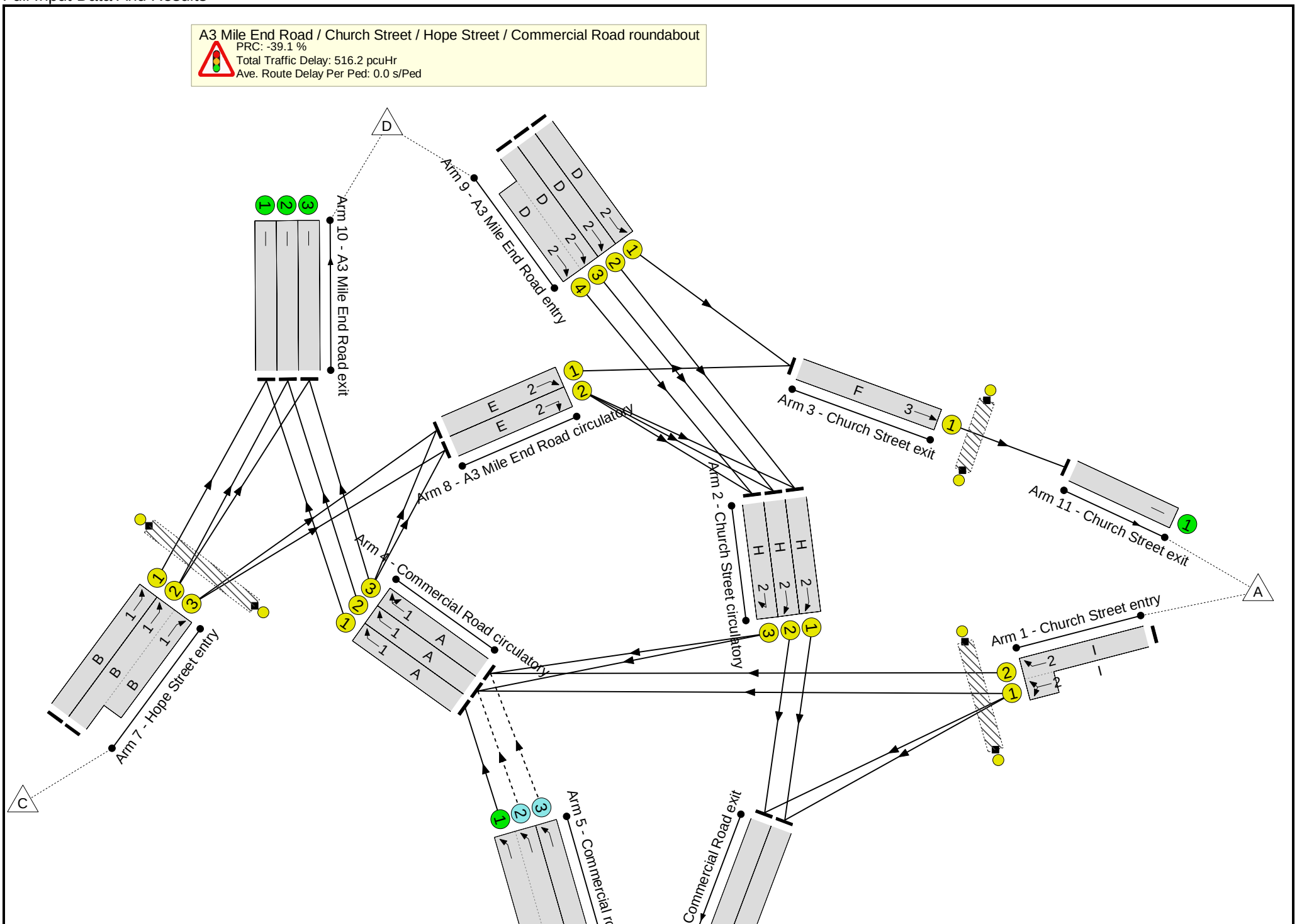
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**125.2%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**125.2%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	111	-	1113	1859:1851	889	125.2%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	109	-	882	1965	909	90.1%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	109	-	912	1965	909	90.1%
2/3	Church Street circulatory Right	U	2	N/A	H		2	109	-	0	1965	-	-
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	1018	1940	1892	43.3%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	132	-	540	1883	1043	51.7%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	132	-	939	1883	1043	80.6%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	132	-	931	1883	1043	80.0%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	992	1883:1883	1196	83.0%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	454	1883	767	59.2%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	957	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	986	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	94	-	616	1936	766	80.4%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	94	-	630	1936:1908	772	81.6%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	120	-	14	1871	943	1.5%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	120	-	0	1965	991	0.0%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	102	-	1004	1874	804	124.8%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	102	-	882	1908	819	107.7%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	102	-	912	1908:1965	819	111.4%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1156	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1249	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1237	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	1018	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	102	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	132	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**906**	**0**	**190.5**	**325.7**	**0.0**	**516.2**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**906**	**0**	**190.5**	**325.7**	**0.0**	**516.2**	**-**	**-**	**-**	**-**
1/2+1/1	1113	889	-	-	-	48.7	114.4	-	163.0	527.4	88.2	114.4	202.5
2/1	819	819	-	-	-	1.5	4.2	-	5.6	24.7	2.9	4.2	7.0
2/2	819	819	-	-	-	1.5	4.2	-	5.6	24.7	2.9	4.2	7.0
2/3	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	818	818	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
4/1	540	540	-	-	-	5.1	0.5	-	5.6	37.3	20.9	0.5	21.4
4/2	841	841	-	-	-	6.6	2.0	-	8.6	36.9	37.1	2.0	39.2
4/3	835	835	-	-	-	6.4	2.0	-	8.3	36.0	34.5	2.0	36.5
5/2+5/1	992	992	0	452	0	6.5	2.4	-	8.9	32.3	38.8	2.4	41.2
5/3	454	454	0	454	0	4.8	0.7	-	5.5	43.9	20.6	0.7	21.3
6/1	879	879	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	878	878	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	616	616	-	-	-	11.0	2.0	-	13.0	75.9	36.3	2.0	38.3
7/2+7/3	630	630	-	-	-	11.3	2.2	-	13.4	76.8	37.1	2.2	39.3
8/1	14	14	-	-	-	0.1	0.0	-	0.1	31.9	0.6	0.0	0.6
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	1004	804	-	-	-	38.1	102.3	-	140.5	503.6	80.2	102.3	182.6
9/2	882	819	-	-	-	22.8	37.5	-	60.3	246.0	63.0	37.5	100.5
9/3+9/4	912	819	-	-	-	26.2	51.0	-	77.3	305.0	69.5	51.0	120.6
10/1	1156	1156	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1151	1151	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	1141	1141	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	818	818	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

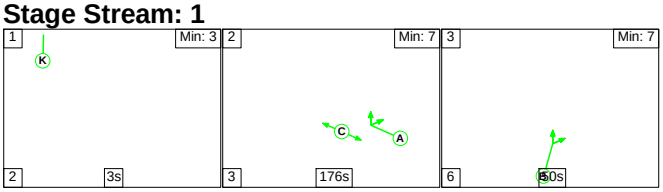
C1	Stream: 1	PRC for Signalled Lanes (%):	10.3	Total Delay for Signalled Lanes (pcuHr):	48.97	Cycle Time (s):	240	
C1	Stream: 2	PRC for Signalled Lanes (%):	-39.1	Total Delay for Signalled Lanes (pcuHr):	452.39	Cycle Time (s):	240	
C1	Stream: 3	PRC for Signalled Lanes (%):	108.0	Total Delay for Signalled Lanes (pcuHr):	0.38	Cycle Time (s):	240	
		PRC Over All Lanes (%):	-39.1	Total Delay Over All Lanes(pcuHr):	516.17			

Full Input Data And Results

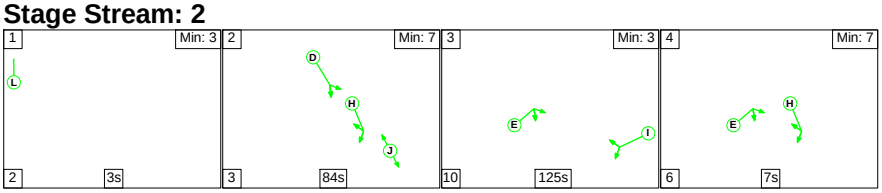
Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

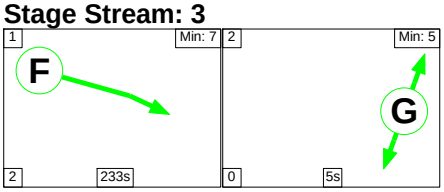
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	176	50
Change Point	39	44	223

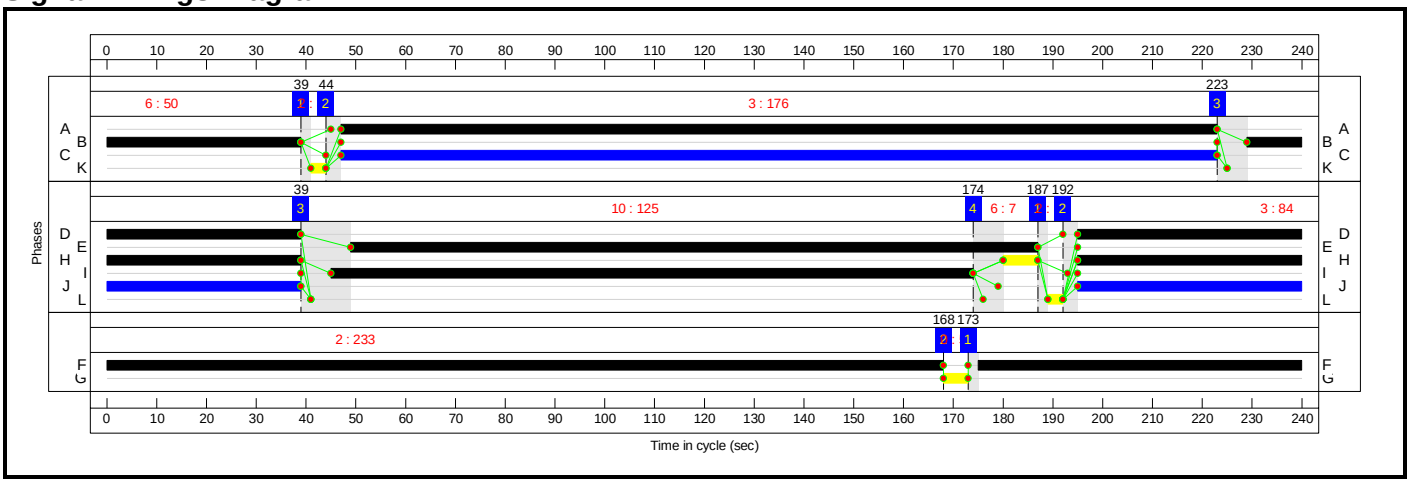
Stage Stream: 2

Stage	1	2	3	4
Duration	3	84	125	7
Change Point	187	192	39	174

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	173	168

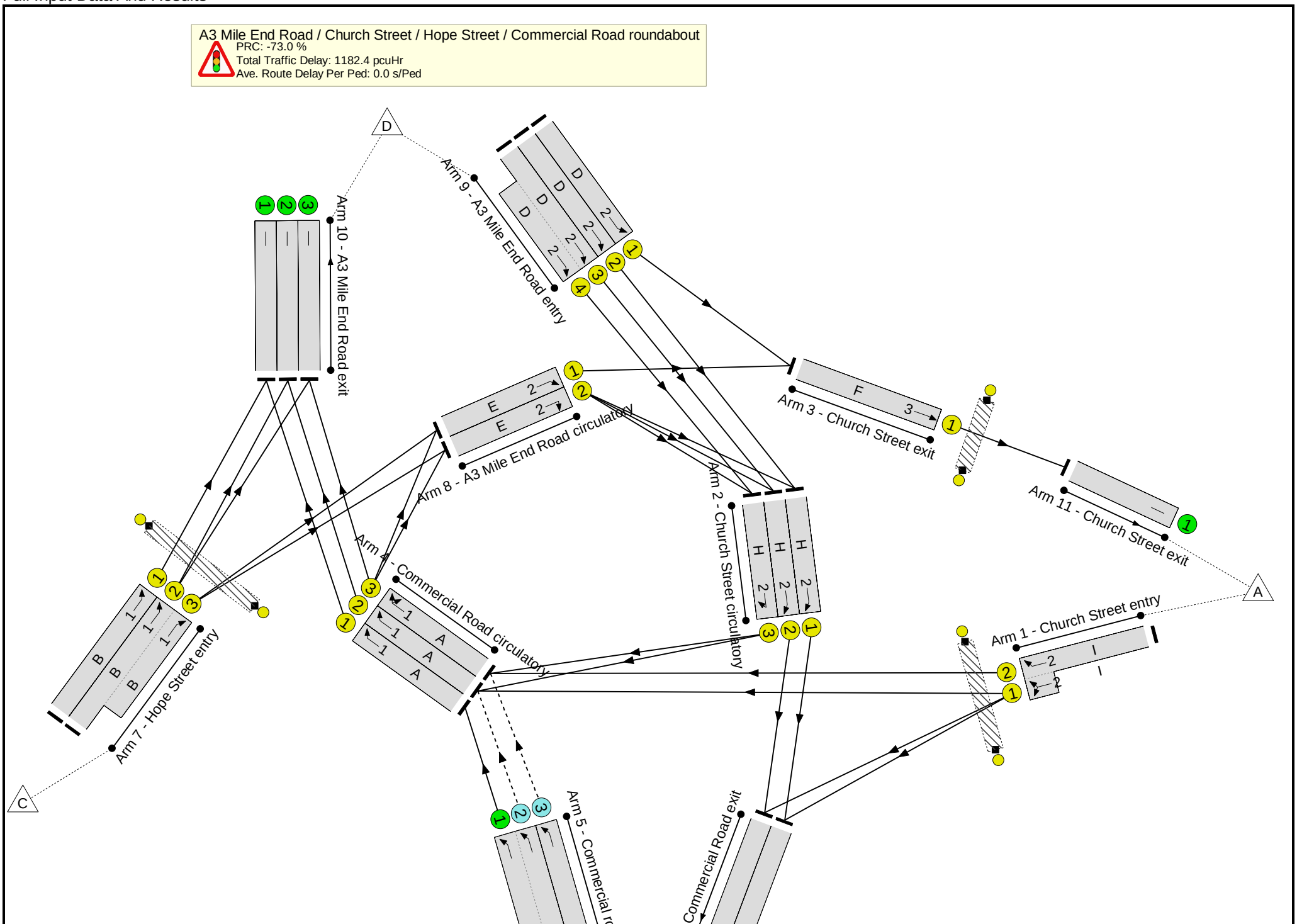
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.7%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**155.7%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	129	-	1589	1859:1856	1025	155.0%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	91	-	1054	1965	761	89.0%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	91	-	1052	1965	761	88.9%
2/3	Church Street circulatory Right	U	2	N/A	H		2	91	-	0	1965	-	-
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	1025	1940	1892	35.5%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	176	-	1105	1883	1389	79.6%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	176	-	902	1883	1389	41.9%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	176	-	604	1883	1389	28.2%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	1105	1940:1883	1883	58.7%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	5	1883	660	0.8%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	1098	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	50	-	280	1936	411	68.1%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	50	-	287	1936:1908	418	68.7%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	138	-	7	1871	1084	0.6%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	138	-	3	1871	1084	0.3%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	84	-	1018	1874	664	153.4%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	84	-	1052	1908	676	155.7%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	84	-	1051	1908:1965	676	155.5%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1385	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	740	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	1025	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	84	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	176	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**5**	**0**	**328.9**	**853.5**	**0.0**	**1182.4**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**5**	**0**	**328.9**	**853.5**	**0.0**	**1182.4**	**-**	**-**	**-**	**-**
1/2+1/1	1589	1025	-	-	-	90.6	283.4	-	373.9	847.2	152.0	283.4	435.4
2/1	678	678	-	-	-	1.7	3.7	-	5.5	29.0	3.0	3.7	6.7
2/2	677	677	-	-	-	1.7	3.7	-	5.4	28.6	2.9	3.7	6.6
2/3	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	671	671	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
4/1	1105	1105	-	-	-	6.1	1.9	-	8.1	26.3	46.7	1.9	48.6
4/2	582	582	-	-	-	0.0	0.4	-	0.4	2.2	0.0	0.4	0.4
4/3	391	391	-	-	-	0.0	0.2	-	0.2	1.9	0.1	0.2	0.3
5/2+5/1	1105	1105	0	0	0	0.0	0.7	-	0.7	2.3	0.0	0.7	0.7
5/3	5	5	0	5	0	0.0	0.0	-	0.1	38.2	0.2	0.0	0.2
6/1	706	706	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	705	705	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	280	280	-	-	-	6.8	1.0	-	7.8	100.5	17.1	1.0	18.2
7/2+7/3	287	287	-	-	-	6.9	1.1	-	8.0	100.6	17.4	1.1	18.5
8/1	7	7	-	-	-	0.1	0.0	-	0.1	27.9	0.2	0.0	0.2
8/2	3	3	-	-	-	0.0	0.0	-	0.0	42.3	0.2	0.0	0.2
9/1	1018	664	-	-	-	69.3	178.6	-	247.8	876.4	103.2	178.6	281.8
9/2	1052	676	-	-	-	72.9	189.5	-	262.4	898.1	108.0	189.5	297.5
9/3+9/4	1051	676	-	-	-	72.8	189.0	-	261.8	896.7	107.8	189.0	296.9
10/1	1385	1385	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	527	527	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

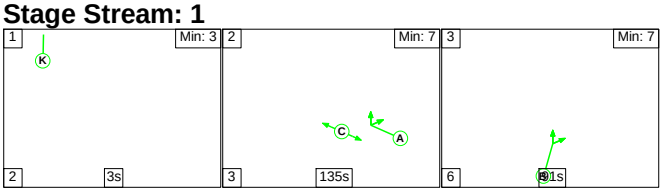
C1	Stream: 1 PRC for Signalled Lanes (%):	13.1	Total Delay for Signalled Lanes (pcuHr):	24.47	Cycle Time (s):	240
C1	Stream: 2 PRC for Signalled Lanes (%):	-73.0	Total Delay for Signalled Lanes (pcuHr):	1156.90	Cycle Time (s):	240
C1	Stream: 3 PRC for Signalled Lanes (%):	153.8	Total Delay for Signalled Lanes (pcuHr):	0.27	Cycle Time (s):	240
	PRC Over All Lanes (%):	-73.0	Total Delay Over All Lanes(pcuHr):	1182.41		

Full Input Data And Results

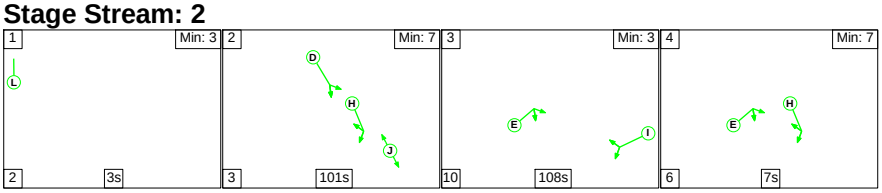
Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

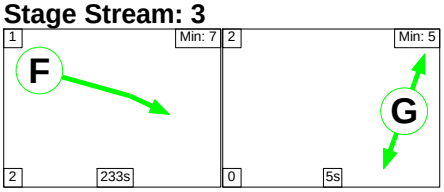
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2	3
Duration	3	135	91
Change Point	0	5	143

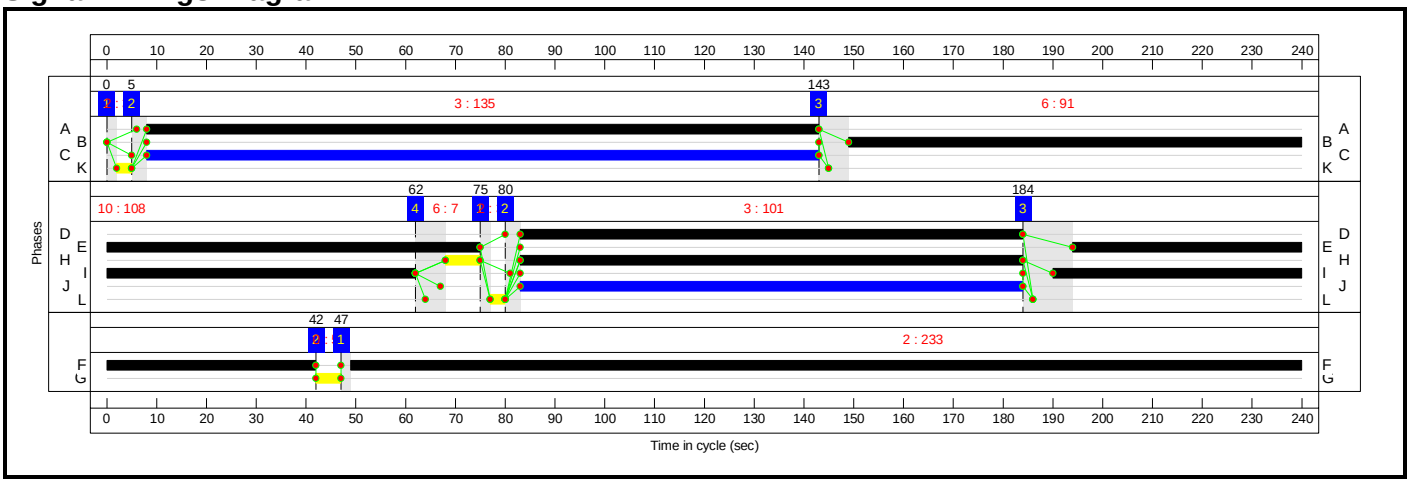
Stage Stream: 2

Stage	1	2	3	4
Duration	3	101	108	7
Change Point	75	80	184	62

Stage Stream: 3

Stage	1	2
Duration	233	5
Change Point	47	42

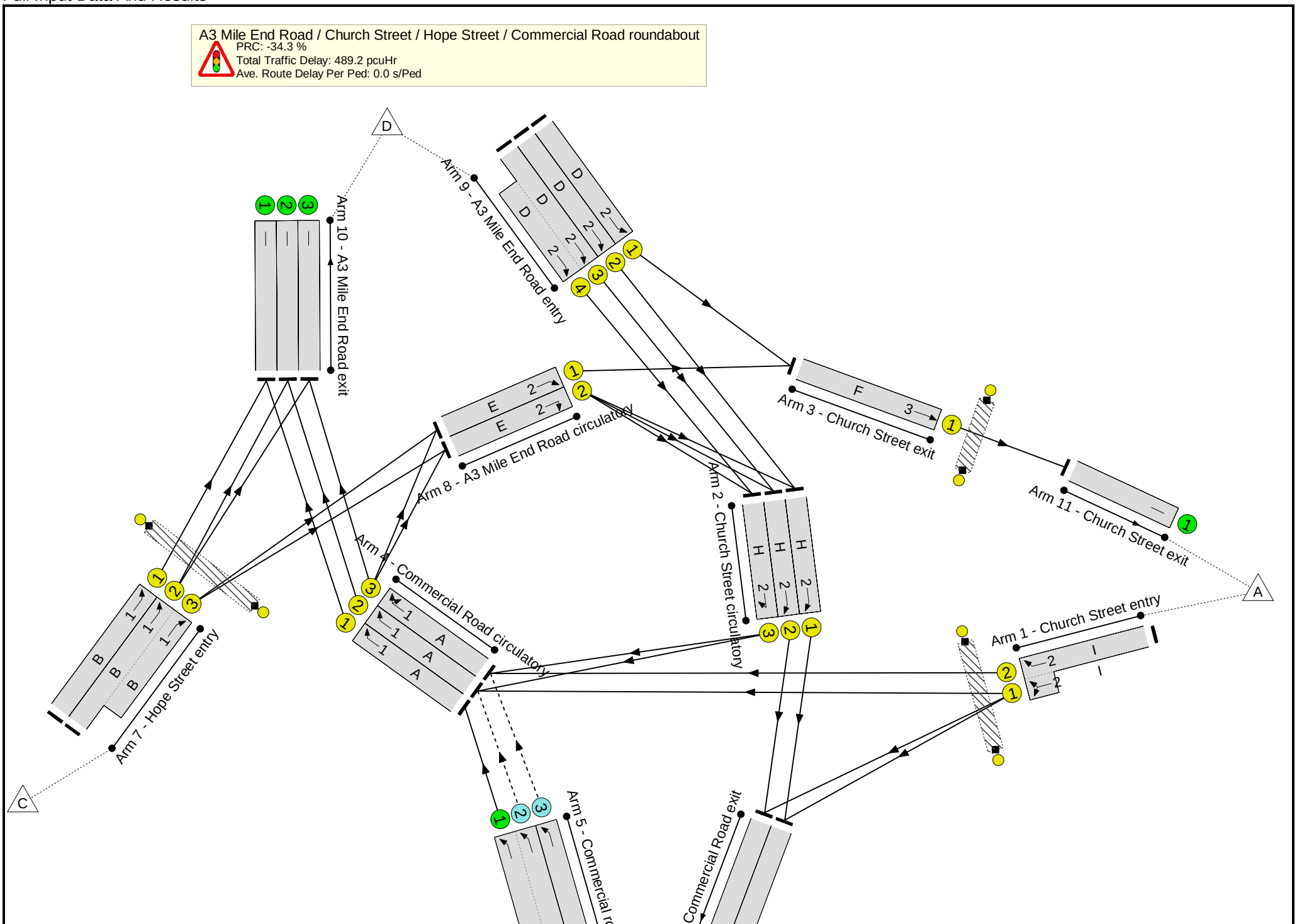
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.9%**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.9%**
1/2+1/1	Church Street entry Right Left	U	2	N/A	I		1	112	-	1082	1859:1851	897	120.6%
2/1	Church Street circulatory Ahead	U	2	N/A	H		2	108	-	887	1965	901	90.0%
2/2	Church Street circulatory Ahead	U	2	N/A	H		2	108	-	918	1965	901	90.0%
2/3	Church Street circulatory Right	U	2	N/A	H		2	108	-	0	1965	901	0.0%
3/1	Church Street exit Ahead	U	3	N/A	F		1	233	-	979	1940	1892	43.0%
4/1	Commercial Road circulatory Right	U	1	N/A	A		1	135	-	548	1883	1067	51.4%
4/2	Commercial Road circulatory Right	U	1	N/A	A		1	135	-	936	1883	1067	80.1%
4/3	Commercial Road circulatory Right Right2	U	1	N/A	A		1	135	-	929	1883	1067	79.6%
5/2+5/1	Commercial road entry Ahead	O+U	N/A	N/A	-		-	-	-	1008	1883:1883	1187	84.9%
5/3	Commercial road entry Ahead	O	N/A	N/A	-		-	-	-	461	1883	761	60.5%
6/1	Commercial Road exit	U	N/A	N/A	-		-	-	-	956	Inf	Inf	0.0%
6/2	Commercial Road exit	U	N/A	N/A	-		-	-	-	987	Inf	Inf	0.0%

Full Input Data And Results

7/1	Hope Street entry Ahead	U	1	N/A	B		1	91	-	616	1936	742	83.0%
7/2+7/3	Hope Street entry Ahead Ahead2	U	1	N/A	B		1	91	-	634	1936:1908	748	84.7%
8/1	A3 Mile End Road circulatory Ahead	U	2	N/A	E		1	121	-	16	1871	951	1.7%
8/2	A3 Mile End Road circulatory Right	U	2	N/A	E		1	121	-	0	1965	999	0.0%
9/1	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	963	1874	796	120.9%
9/2	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	887	1908	811	109.4%
9/3+9/4	A3 Mile End Road entry Ahead	U	2	N/A	D		1	101	-	918	1908:1965	811	113.2%
10/1	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1164	Inf	Inf	0.0%
10/2	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1247	Inf	Inf	0.0%
10/3	A3 Mile End Road exit	U	N/A	N/A	-		-	-	-	1236	Inf	Inf	0.0%
11/1	Church Street exit	U	N/A	N/A	-		-	-	-	979	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	2	-	J		1	101	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	1	-	C		1	135	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	3	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**921**	**0**	**185.7**	**303.6**	**0.0**	**489.2**	**-**	**-**	**-**	**-**
A3 Mile End Road / Church Street / Hope Street / Commercial Road roundabout	**-**	**-**	**0**	**921**	**0**	**185.7**	**303.6**	**0.0**	**489.2**	**-**	**-**	**-**	**-**
1/2+1/1	1082	897	-	-	-	42.9	95.2	-	138.1	459.6	83.4	95.2	178.6
2/1	811	811	-	-	-	1.5	4.1	-	5.6	24.9	2.9	4.1	7.0
2/2	811	811	-	-	-	1.5	4.1	-	5.6	24.9	2.9	4.1	7.0
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	812	812	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
4/1	548	548	-	-	-	4.9	0.5	-	5.4	35.7	20.3	0.5	20.8
4/2	855	855	-	-	-	6.6	2.0	-	8.6	36.1	38.3	2.0	40.3
4/3	849	849	-	-	-	6.3	1.9	-	8.3	35.0	35.7	1.9	37.6
5/2+5/1	1008	1008	0	460	0	7.0	2.7	-	9.7	34.7	41.2	2.7	43.9
5/3	461	461	0	461	0	5.0	0.8	-	5.8	45.1	21.3	0.8	22.0
6/1	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	616	616	-	-	-	11.5	2.4	-	13.8	80.7	37.1	2.4	39.5
7/2+7/3	634	634	-	-	-	11.9	2.6	-	14.5	82.4	38.2	2.6	40.9
8/1	16	16	-	-	-	0.1	0.0	-	0.1	28.2	0.6	0.0	0.6
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	963	796	-	-	-	34.4	86.1	-	120.5	450.3	75.3	86.1	161.4
9/2	887	811	-	-	-	24.3	43.2	-	67.5	273.8	64.2	43.2	107.4
9/3+9/4	918	811	-	-	-	27.8	57.5	-	85.4	334.8	70.9	57.5	128.4
10/1	1164	1164	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1166	1166	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	1156	1156	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	812	812	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1	Stream: 1 PRC for Signalled Lanes (%):	6.2	Total Delay for Signalled Lanes (pcuHr):	50.57	Cycle Time (s):	240
C1	Stream: 2 PRC for Signalled Lanes (%):	-34.3	Total Delay for Signalled Lanes (pcuHr):	422.78	Cycle Time (s):	240
C1	Stream: 3 PRC for Signalled Lanes (%):	109.5	Total Delay for Signalled Lanes (pcuHr):	0.38	Cycle Time (s):	240
	PRC Over All Lanes (%):	-34.3	Total Delay Over All Lanes(pcuHr):	489.23		

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: A3 Southampton Rd_A3 Northern Rd_Spur Rd_A397.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:25:44

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	1.9	6.96	0.63	A	0.8	4.23	0.43	A
Arm 2	2.4	7.19	0.69	A	2.2	5.70	0.67	A
Arm 3	1.3	3.85	0.55	A	3.5	9.29	0.76	A
Arm 4	2.7	7.41	0.71	A	2.9	9.07	0.73	A
	EMM - DS1							
Arm 1	2.0	7.50	0.65	A	1.1	4.80	0.50	A
Arm 2	2.3	6.98	0.68	A	2.2	5.66	0.67	A
Arm 3	1.3	3.81	0.55	A	3.5	9.31	0.77	A
Arm 4	2.9	7.88	0.73	A	2.9	8.96	0.73	A
	EML - DS2							
Arm 1	2.0	7.45	0.65	A	1.0	4.52	0.47	A
Arm 2	2.4	7.06	0.68	A	2.2	5.68	0.67	A
Arm 3	1.4	3.90	0.56	A	3.5	9.31	0.76	A
Arm 4	3.0	8.12	0.74	A	2.8	8.70	0.72	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

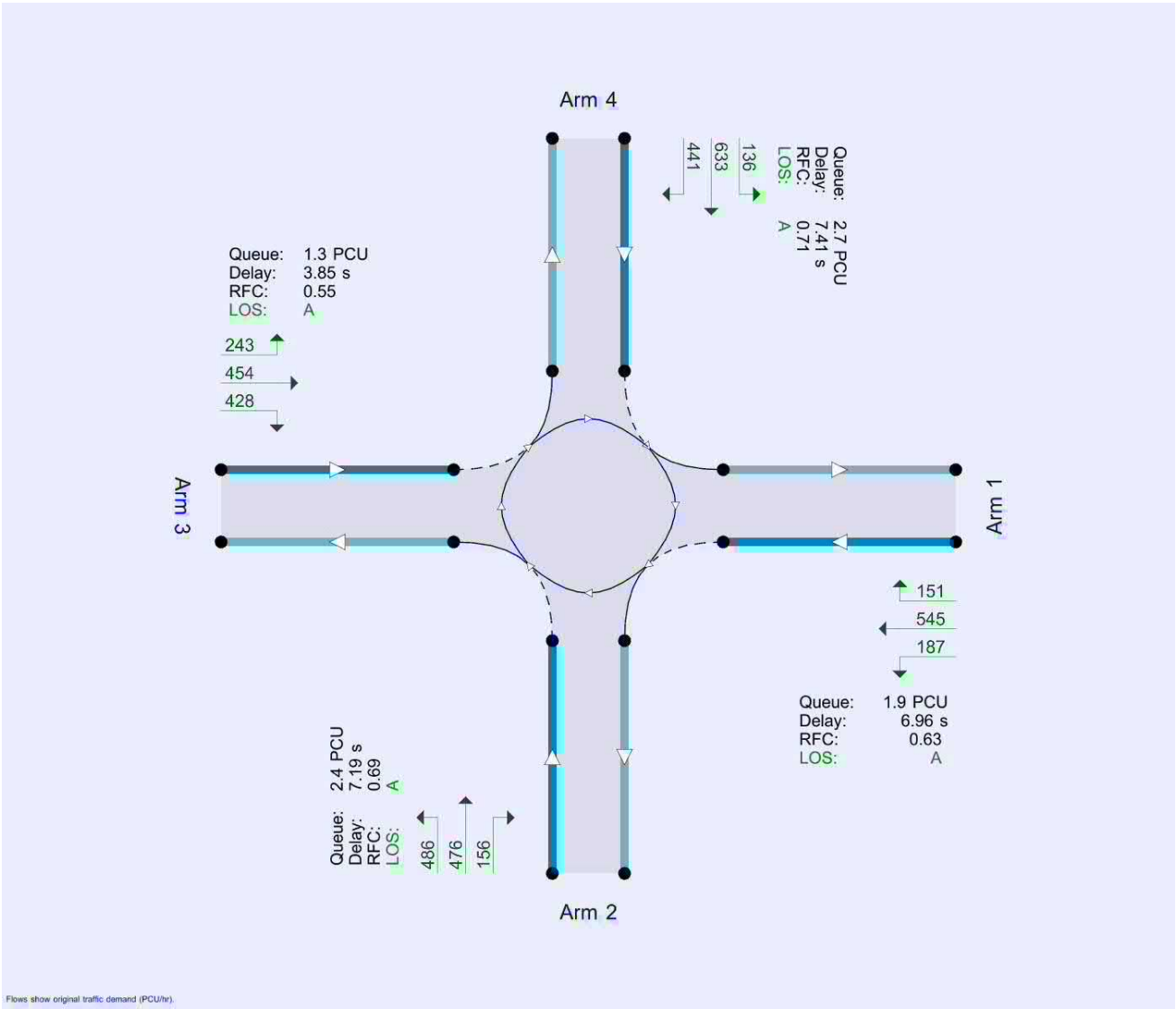
File summary

File Description

Title	A3 Southampton Road / A3 Northern Road / Spur Road / A397 roundabout
Location	
Site number	
Date	23/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Spur Road	
2	A397	
3	A3 Southampton Road	
4	A3 Northern Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	8.00	9.30	42.0	30.0	50.0	14.0	
2	6.70	11.70	17.5	10.0	50.0	18.0	
3	7.70	9.70	40.8	30.0	50.0	18.0	
4	9.00	9.00	0.0	20.0	50.0	21.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.872	2982
2	0.815	2801
3	0.875	3022
4	0.828	2812

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	883	100.000
2		✓	1118	100.000
3		✓	1125	100.000
4		✓	1210	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	187	545	151
	2	156	0	486	476
	3	454	428	0	243
	4	136	633	441	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.63	6.96	1.9	A
2	0.69	7.19	2.4	A
3	0.55	3.85	1.3	A
4	0.71	7.41	2.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	1127	2000	0.332	663	0.5	2.956	A
2	842	853	2106	0.400	839	0.7	3.119	A
3	847	587	2508	0.338	845	0.6	2.377	A
4	911	779	2167	0.420	908	0.8	3.137	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	794	1348	1807	0.439	793	0.9	3.900	A
2	1005	1021	1969	0.510	1003	1.1	4.093	A
3	1011	703	2407	0.420	1010	0.8	2.834	A
4	1088	932	2040	0.533	1086	1.2	4.142	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	972	1648	1546	0.629	968	1.8	6.814	A
2	1231	1247	1785	0.690	1226	2.4	7.019	A
3	1239	859	2271	0.545	1237	1.3	3.820	A
4	1332	1141	1868	0.713	1327	2.7	7.243	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	972	1654	1541	0.631	972	1.9	6.963	A
2	1231	1252	1781	0.691	1231	2.4	7.191	A
3	1239	862	2268	0.546	1239	1.3	3.847	A
4	1332	1143	1866	0.714	1332	2.7	7.410	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	794	1356	1800	0.441	798	0.9	3.966	A
2	1005	1027	1964	0.512	1010	1.2	4.173	A
3	1011	707	2403	0.421	1013	0.8	2.855	A
4	1088	935	2038	0.534	1093	1.3	4.219	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	1133	1995	0.333	666	0.6	2.985	A
2	842	858	2102	0.400	843	0.7	3.149	A
3	847	591	2505	0.338	848	0.6	2.392	A
4	911	782	2164	0.421	913	0.8	3.170	A

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	654	100.000
2		✓	1297	100.000
3		✓	1251	100.000
4		✓	1069	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	135	257	262
	2	204	0	293	800
	3	634	478	0	139
	4	166	666	237	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.43	4.23	0.8	A
2	0.67	5.70	2.2	A
3	0.76	9.29	3.5	A
4	0.73	9.07	2.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	492	1036	2079	0.237	491	0.3	2.491	A
2	976	567	2339	0.418	973	0.8	2.895	A
3	942	950	2191	0.430	939	0.8	3.155	A
4	805	987	1995	0.403	802	0.7	3.311	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	588	1239	1902	0.309	587	0.5	3.010	A
2	1166	679	2248	0.519	1164	1.2	3.650	A
3	1125	1137	2027	0.555	1122	1.4	4.365	A
4	961	1181	1834	0.524	959	1.2	4.516	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	720	1512	1664	0.433	719	0.8	4.182	A
2	1428	830	2125	0.672	1424	2.2	5.615	A
3	1377	1390	1805	0.763	1369	3.4	8.916	A
4	1177	1441	1619	0.727	1170	2.8	8.705	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	720	1520	1657	0.435	720	0.8	4.226	A
2	1428	832	2123	0.673	1428	2.2	5.696	A
3	1377	1394	1802	0.764	1377	3.5	9.294	A
4	1177	1449	1613	0.730	1177	2.9	9.067	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	588	1250	1892	0.311	589	0.5	3.042	A
2	1166	682	2245	0.519	1170	1.2	3.696	A
3	1125	1142	2023	0.556	1133	1.4	4.491	A
4	961	1191	1826	0.526	968	1.2	4.649	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	492	1042	2074	0.237	493	0.3	2.507	A
2	976	570	2337	0.418	978	0.8	2.917	A
3	942	955	2187	0.431	944	0.8	3.191	A
4	805	993	1990	0.404	807	0.8	3.351	A

EMM - DS1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	900	100.000
2		✓	1107	100.000
3		✓	1140	100.000
4		✓	1239	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	198	579	123
	2	159	0	474	474
	3	426	453	0	261
	4	167	642	430	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.65	7.50	2.0	A
2	0.68	6.98	2.3	A
3	0.55	3.81	1.3	A
4	0.73	7.88	2.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	678	1144	1985	0.341	675	0.6	3.019	A
2	833	849	2109	0.395	831	0.7	3.091	A
3	858	567	2526	0.340	856	0.6	2.368	A
4	933	779	2167	0.430	929	0.8	3.193	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	809	1369	1789	0.452	808	0.9	4.032	A
2	995	1016	1973	0.504	994	1.1	4.036	A
3	1025	679	2428	0.422	1024	0.8	2.818	A
4	1114	932	2040	0.546	1112	1.3	4.257	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	991	1673	1524	0.650	987	2.0	7.310	A
2	1219	1241	1790	0.681	1214	2.3	6.821	A
3	1255	829	2297	0.547	1253	1.3	3.786	A
4	1364	1141	1868	0.730	1358	2.9	7.673	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	991	1679	1519	0.653	991	2.0	7.498	A
2	1219	1246	1786	0.683	1219	2.3	6.980	A
3	1255	832	2294	0.547	1255	1.3	3.811	A
4	1364	1143	1866	0.731	1364	2.9	7.881	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	809	1377	1781	0.454	814	0.9	4.111	A
2	995	1023	1967	0.506	1000	1.1	4.113	A
3	1025	683	2425	0.423	1027	0.8	2.836	A
4	1114	935	2038	0.547	1120	1.3	4.345	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	678	1150	1979	0.342	679	0.6	3.047	A
2	833	854	2105	0.396	835	0.7	3.123	A
3	858	570	2523	0.340	859	0.6	2.382	A
4	933	782	2164	0.431	935	0.8	3.227	A

EMM - DS1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	751	100.000
2		✓	1287	100.000
3		✓	1255	100.000
4		✓	1080	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	203	282	266
	2	207	0	291	789
	3	628	462	0	165
	4	155	709	216	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.50	4.80	1.1	A
2	0.67	5.66	2.2	A
3	0.77	9.31	3.5	A
4	0.73	8.96	2.9	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	1040	2075	0.272	564	0.4	2.618	A
2	969	573	2334	0.415	966	0.8	2.889	A
3	945	947	2193	0.431	942	0.8	3.156	A
4	813	973	2006	0.405	810	0.7	3.301	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	675	1245	1897	0.356	674	0.6	3.237	A
2	1157	686	2242	0.516	1155	1.2	3.639	A
3	1128	1133	2031	0.556	1126	1.4	4.367	A
4	971	1164	1848	0.525	969	1.2	4.494	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	827	1519	1658	0.499	825	1.1	4.741	A
2	1417	838	2118	0.669	1413	2.2	5.586	A
3	1382	1386	1809	0.764	1374	3.4	8.924	A
4	1189	1420	1636	0.727	1183	2.8	8.609	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	827	1527	1651	0.501	827	1.1	4.803	A
2	1417	841	2116	0.670	1417	2.2	5.665	A
3	1382	1389	1806	0.765	1381	3.5	9.306	A
4	1189	1428	1630	0.730	1189	2.9	8.964	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	675	1256	1887	0.358	677	0.6	3.278	A
2	1157	690	2239	0.517	1161	1.2	3.688	A
3	1128	1138	2026	0.557	1137	1.4	4.494	A
4	971	1174	1840	0.528	978	1.2	4.625	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	1047	2070	0.273	566	0.4	2.636	A
2	969	576	2332	0.416	971	0.8	2.914	A
3	945	952	2189	0.432	947	0.8	3.192	A
4	813	979	2002	0.406	815	0.8	3.343	A

EML - DS2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	911	100.000
2		✓	1105	100.000
3		✓	1158	100.000
4		✓	1237	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	200	588	123
	2	159	0	469	477
	3	451	447	0	260
	4	175	631	431	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.65	7.45	2.0	A
2	0.68	7.06	2.4	A
3	0.56	3.90	1.4	A
4	0.74	8.12	3.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	686	1132	1995	0.344	684	0.6	3.014	A
2	832	857	2103	0.396	829	0.7	3.102	A
3	872	569	2524	0.345	869	0.6	2.390	A
4	931	794	2155	0.432	928	0.8	3.219	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	819	1354	1801	0.455	818	0.9	4.019	A
2	993	1025	1966	0.505	992	1.1	4.058	A
3	1041	681	2426	0.429	1040	0.8	2.856	A
4	1112	949	2026	0.549	1110	1.3	4.312	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1003	1655	1539	0.652	999	2.0	7.264	A
2	1217	1252	1781	0.683	1212	2.3	6.899	A
3	1275	832	2294	0.556	1273	1.4	3.871	A
4	1362	1161	1851	0.736	1355	3.0	7.894	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1003	1661	1534	0.654	1003	2.0	7.452	A
2	1217	1257	1777	0.685	1216	2.4	7.065	A
3	1275	836	2291	0.557	1275	1.4	3.897	A
4	1362	1164	1849	0.737	1362	3.0	8.124	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	819	1363	1794	0.457	823	0.9	4.100	A
2	993	1032	1960	0.507	998	1.1	4.140	A
3	1041	686	2422	0.430	1043	0.8	2.877	A
4	1112	953	2023	0.550	1119	1.4	4.410	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	686	1138	1990	0.345	687	0.6	3.042	A
2	832	862	2099	0.396	834	0.7	3.135	A
3	872	573	2521	0.346	873	0.6	2.403	A
4	931	797	2152	0.433	933	0.8	3.255	A

EML - DS2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.27	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	718	100.000
2		✓	1302	100.000
3		✓	1250	100.000
4		✓	1053	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	184	275	259
	2	213	0	293	796
	3	626	476	0	148
	4	157	683	213	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.47	4.52	1.0	A
2	0.67	5.68	2.2	A
3	0.76	9.31	3.5	A
4	0.72	8.70	2.8	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	541	1029	2085	0.259	539	0.4	2.559	A
2	980	561	2344	0.418	977	0.8	2.891	A
3	941	952	2189	0.430	938	0.8	3.156	A
4	793	987	1995	0.397	790	0.7	3.276	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	645	1231	1909	0.338	645	0.6	3.131	A
2	1170	671	2255	0.519	1169	1.2	3.643	A
3	1124	1138	2026	0.555	1122	1.4	4.368	A
4	947	1180	1835	0.516	945	1.2	4.439	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	791	1502	1672	0.473	789	1.0	4.473	A
2	1434	820	2133	0.672	1429	2.2	5.595	A
3	1376	1392	1804	0.763	1368	3.4	8.930	A
4	1159	1440	1620	0.716	1153	2.7	8.380	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	791	1510	1666	0.475	790	1.0	4.525	A
2	1434	822	2131	0.673	1433	2.2	5.675	A
3	1376	1396	1800	0.764	1376	3.5	9.313	A
4	1159	1448	1614	0.719	1159	2.8	8.700	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	645	1242	1899	0.340	647	0.6	3.167	A
2	1170	674	2252	0.520	1175	1.2	3.689	A
3	1124	1144	2021	0.556	1132	1.4	4.496	A
4	947	1190	1827	0.518	953	1.2	4.563	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	541	1035	2080	0.260	541	0.4	2.574	A
2	980	563	2342	0.419	982	0.8	2.916	A
3	941	956	2185	0.431	943	0.8	3.193	A
4	793	992	1991	0.398	795	0.7	3.315	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: A3_Hulbert Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 16:06:36

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	4.6	10.87	0.81	B	4.6	11.96	0.81	B
Arm 2	0.7	2.42	0.40	A	2.1	5.34	0.66	A
Arm 3	1.7	6.71	0.61	A	3.3	13.91	0.76	B
	EMM - DS1							
Arm 1	4.4	10.15	0.80	B	3.3	8.30	0.75	A
Arm 2	0.3	1.94	0.22	A	0.5	2.71	0.32	A
Arm 3	1.2	4.58	0.52	A	1.1	4.62	0.50	A
	EML - DS2							
Arm 1	4.3	9.99	0.80	A	3.2	8.27	0.75	A
Arm 2	0.3	1.95	0.22	A	0.5	2.71	0.32	A
Arm 3	1.2	4.59	0.52	A	1.1	4.63	0.50	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

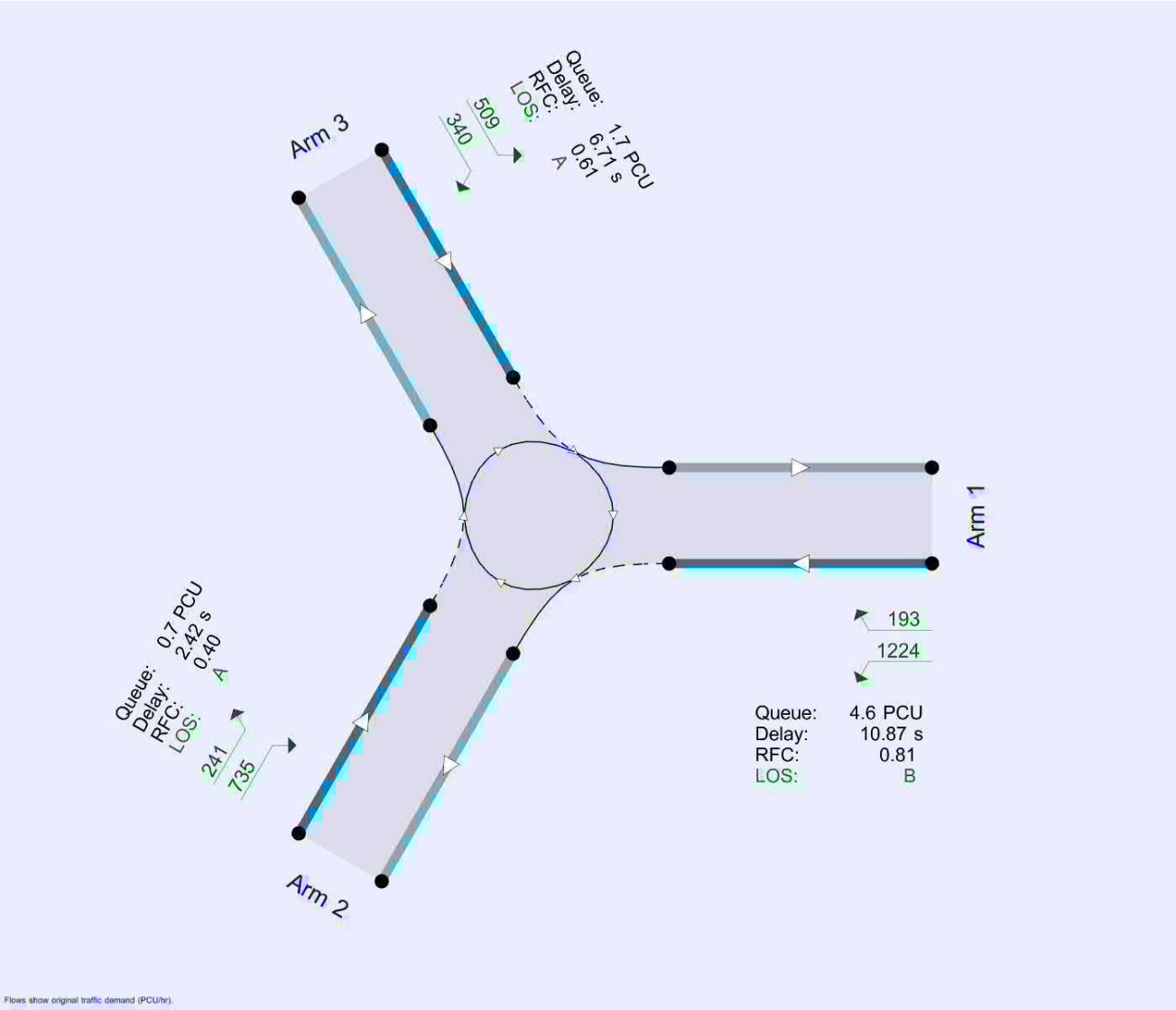
File summary

File Description

Title	A3 / Hulbert Road Roundabout
Location	
Site number	
Date	07/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hulbert Road	
2	A3 Maurepas Way	
3	A3 London Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	6.50	7.00	15.3	25.0	30.0	18.0	
2	7.70	9.40	12.4	50.0	30.0	15.0	
3	3.50	14.30	14.6	35.0	30.0	20.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.779	2215
2	0.931	2910
3	0.766	2145

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1417	100.000
2		✓	977	100.000
3		✓	849	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	1224	193
	2	735	1	241
	3	509	340	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.81	10.87	4.6	B
2	0.40	2.42	0.7	A
3	0.61	6.71	1.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1067	256	2016	0.529	1062	1.2	4.131	A
2	736	145	2776	0.265	734	0.4	1.939	A
3	639	553	1722	0.371	637	0.6	3.639	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1274	306	1976	0.645	1271	2.0	5.589	A
2	878	173	2749	0.319	878	0.5	2.116	A
3	763	661	1639	0.466	762	1.0	4.510	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1560	374	1923	0.811	1550	4.5	10.341	B
2	1076	211	2714	0.396	1075	0.7	2.415	A
3	935	810	1525	0.613	932	1.7	6.640	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1560	375	1922	0.812	1560	4.6	10.871	B
2	1076	212	2712	0.397	1076	0.7	2.418	A
3	935	810	1525	0.613	935	1.7	6.711	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1274	308	1975	0.645	1284	2.0	5.811	A
2	878	175	2747	0.320	879	0.5	2.121	A
3	763	662	1638	0.466	766	1.0	4.559	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1067	257	2015	0.530	1070	1.3	4.205	A
2	736	146	2775	0.265	736	0.4	1.944	A
3	639	554	1721	0.371	640	0.7	3.669	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1306	100.000
2		✓	1311	100.000
3		✓	795	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	597	709
	2	1169	1	141
	3	273	522	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.81	11.96	4.6	B
2	0.66	5.34	2.1	A
3	0.76	13.91	3.3	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	983	392	1910	0.515	979	1.2	4.232	A
2	987	531	2416	0.409	984	0.8	2.760	A
3	599	878	1473	0.406	596	0.7	4.500	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1174	469	1850	0.635	1171	1.9	5.813	A
2	1179	636	2318	0.508	1177	1.1	3.465	A
3	715	1050	1340	0.533	713	1.2	6.287	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1438	571	1770	0.812	1428	4.5	11.228	B
2	1443	775	2189	0.659	1440	2.1	5.258	A
3	875	1285	1161	0.754	868	3.2	13.160	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1438	576	1767	0.814	1437	4.6	11.964	B
2	1443	780	2184	0.661	1443	2.1	5.345	A
3	875	1288	1158	0.756	875	3.3	13.913	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1174	475	1845	0.637	1185	2.0	6.098	A
2	1179	643	2311	0.510	1182	1.2	3.518	A
3	715	1055	1337	0.535	723	1.3	6.529	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	983	395	1907	0.516	986	1.2	4.314	A
2	987	535	2412	0.409	989	0.8	2.784	A
3	599	882	1469	0.407	601	0.8	4.570	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1450	100.000
2		✓	531	100.000
3		✓	853	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	1168	282
	2	406	0	125
	3	585	268	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.80	10.15	4.4	B
2	0.22	1.94	0.3	A
3	0.52	4.58	1.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1092	201	2058	0.530	1087	1.2	4.056	A
2	400	211	2713	0.147	399	0.2	1.710	A
3	642	305	1912	0.336	640	0.6	3.108	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1304	241	2027	0.643	1301	1.9	5.426	A
2	477	253	2675	0.178	477	0.2	1.801	A
3	767	365	1866	0.411	766	0.8	3.599	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1596	295	1985	0.804	1587	4.3	9.718	A
2	585	309	2623	0.223	584	0.3	1.942	A
3	939	447	1803	0.521	937	1.2	4.564	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1596	295	1985	0.804	1596	4.4	10.146	B
2	585	310	2621	0.223	585	0.3	1.944	A
3	939	447	1803	0.521	939	1.2	4.584	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1304	241	2027	0.643	1313	2.0	5.619	A
2	477	255	2672	0.179	478	0.2	1.803	A
3	767	365	1866	0.411	768	0.8	3.614	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1092	202	2058	0.531	1095	1.3	4.126	A
2	400	213	2712	0.147	400	0.2	1.714	A
3	642	306	1911	0.336	643	0.6	3.126	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1304	100.000
2		✓	630	100.000
3		✓	771	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	564	740
	2	522	0	108
	3	418	353	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.75	8.30	3.3	A
2	0.32	2.71	0.5	A
3	0.50	4.62	1.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	982	265	2009	0.489	978	1.0	3.825	A
2	474	555	2394	0.198	473	0.3	2.061	A
3	580	392	1845	0.315	578	0.5	3.120	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1172	317	1968	0.596	1170	1.6	4.949	A
2	566	664	2292	0.247	566	0.4	2.294	A
3	693	469	1786	0.388	692	0.7	3.619	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1436	388	1913	0.751	1429	3.2	8.086	A
2	694	811	2155	0.322	693	0.5	2.706	A
3	849	574	1705	0.498	847	1.1	4.606	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1436	389	1912	0.751	1436	3.3	8.297	A
2	694	815	2152	0.322	694	0.5	2.714	A
3	849	575	1705	0.498	849	1.1	4.624	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1172	318	1967	0.596	1179	1.6	5.062	A
2	566	669	2288	0.248	567	0.4	2.303	A
3	693	470	1785	0.388	695	0.7	3.637	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	982	266	2008	0.489	984	1.1	3.878	A
2	474	558	2390	0.198	475	0.3	2.068	A
3	580	393	1844	0.315	581	0.5	3.139	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1445	100.000
2		✓	532	100.000
3		✓	853	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	1162	283
	2	408	0	124
	3	586	267	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.80	9.99	4.3	A
2	0.22	1.95	0.3	A
3	0.52	4.59	1.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1088	200	2059	0.528	1083	1.2	4.038	A
2	401	212	2713	0.148	400	0.2	1.711	A
3	642	307	1911	0.336	640	0.6	3.111	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1299	240	2028	0.641	1296	1.9	5.390	A
2	478	254	2674	0.179	478	0.2	1.802	A
3	767	367	1865	0.411	766	0.8	3.603	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1591	293	1986	0.801	1582	4.2	9.579	A
2	586	310	2622	0.223	585	0.3	1.944	A
3	939	449	1801	0.521	937	1.2	4.574	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1591	294	1986	0.801	1591	4.3	9.987	A
2	586	312	2620	0.224	586	0.3	1.946	A
3	939	449	1801	0.521	939	1.2	4.593	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1299	241	2028	0.641	1308	2.0	5.574	A
2	478	256	2672	0.179	479	0.2	1.804	A
3	767	367	1864	0.411	769	0.8	3.621	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1088	201	2058	0.529	1091	1.2	4.107	A
2	401	214	2711	0.148	401	0.2	1.715	A
3	642	307	1910	0.336	643	0.6	3.127	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1301	100.000
2		✓	628	100.000
3		✓	773	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	561	740
	2	520	0	108
	3	418	355	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.75	8.27	3.2	A
2	0.32	2.71	0.5	A
3	0.50	4.63	1.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	979	266	2007	0.488	975	1.0	3.821	A
2	473	555	2394	0.198	472	0.3	2.059	A
3	582	391	1846	0.315	580	0.5	3.121	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1170	319	1967	0.595	1167	1.6	4.940	A
2	565	664	2292	0.246	564	0.4	2.291	A
3	695	467	1787	0.389	694	0.7	3.620	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1432	390	1911	0.750	1426	3.2	8.061	A
2	691	811	2155	0.321	691	0.5	2.702	A
3	851	572	1707	0.499	850	1.1	4.609	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1432	391	1910	0.750	1432	3.2	8.269	A
2	691	815	2152	0.321	691	0.5	2.710	A
3	851	573	1707	0.499	851	1.1	4.627	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1170	320	1966	0.595	1176	1.6	5.053	A
2	565	669	2288	0.247	565	0.4	2.299	A
3	695	468	1787	0.389	696	0.7	3.638	A

18:00 - 18:15

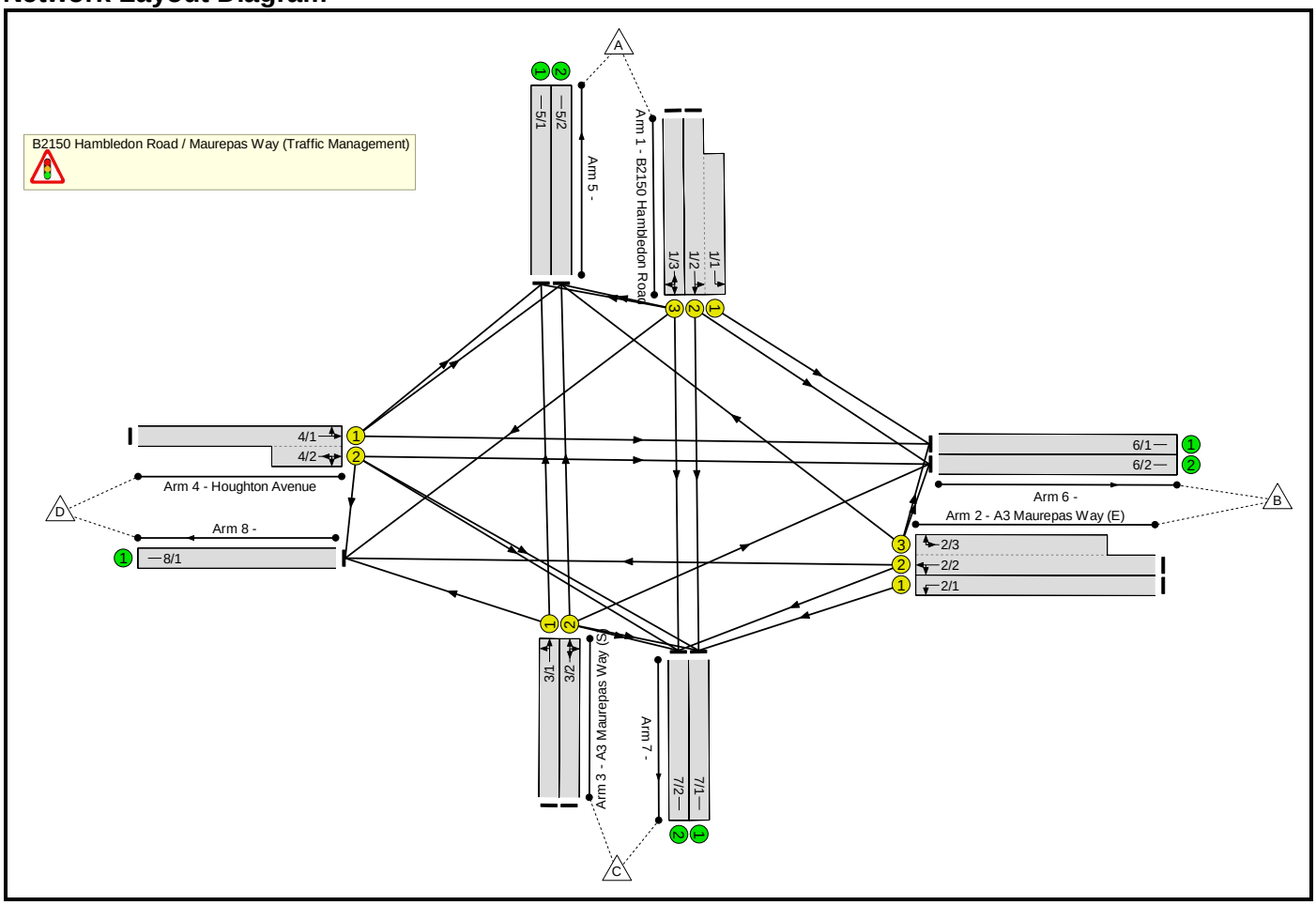
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	979	268	2006	0.488	982	1.1	3.874	A
2	473	558	2390	0.198	473	0.3	2.067	A
3	582	392	1845	0.315	583	0.5	3.140	A

Full Input Data And Results

User and Project Details

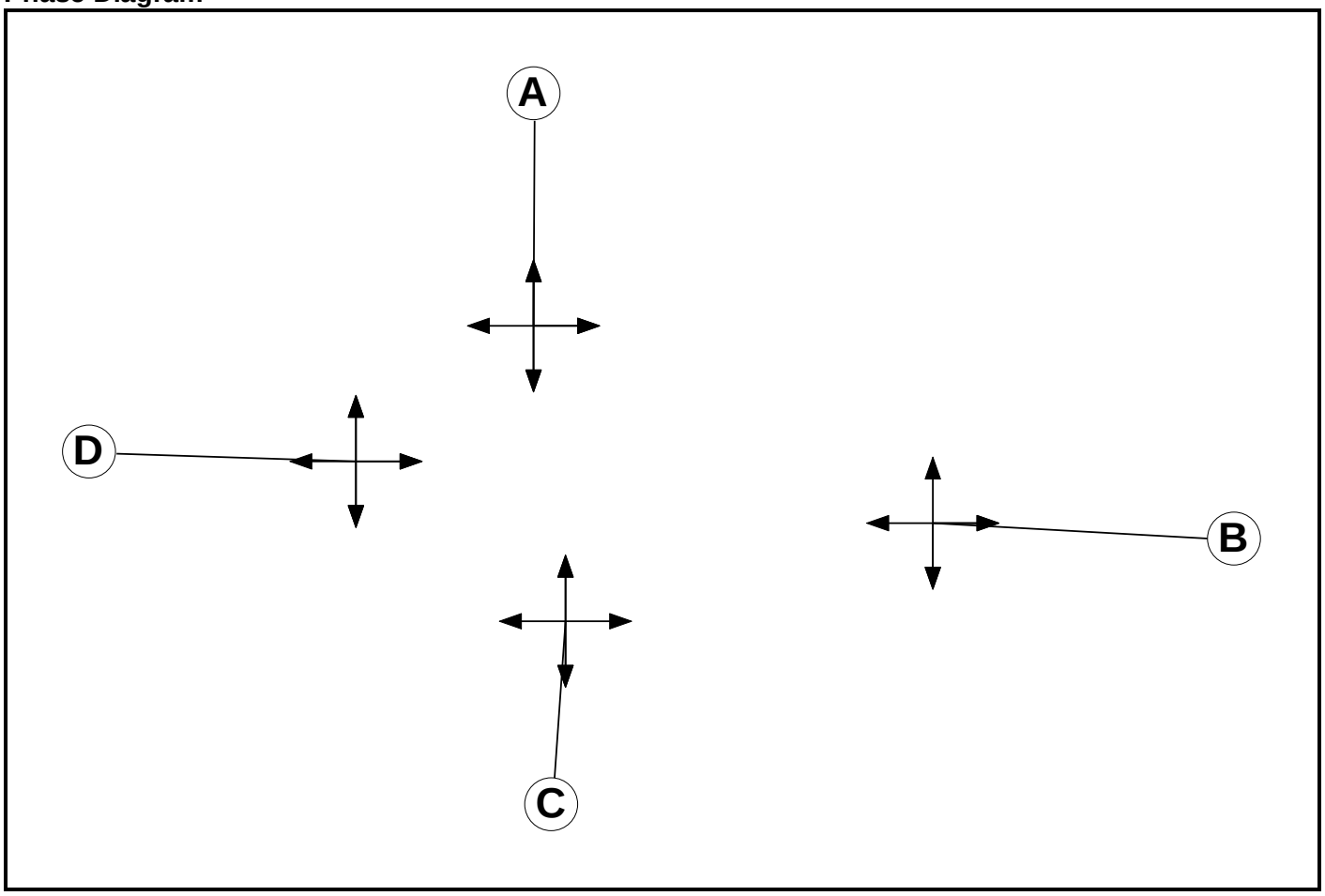
Project:	
Title:	**B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue traffic management signals**
Location:	
Additional detail:	
File name:	B2150 Hambledon Rd_A3 Maurepas Way_Houghton Ave TM signals.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7

Full Input Data And Results

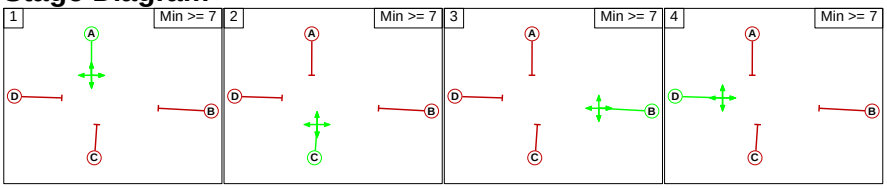
Phase Intergreens Matrix

		Starting Phase			
		A	B	C	D
Terminating Phase	A		10	14	19
	B	19		9	14
	C	14	19		9
	D	9	14	19	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	C
3	B
4	D

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		14	10	19
	2	14		19	9
	3	19	9		14
	4	9	19	14	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B2150 Hambledon Road)	U	A	2	3	23.5	Geom	-	4.00	0.00	Y	Arm 6 Left	85.00
1/2 (B2150 Hambledon Road)	U	A	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Left	85.00
											Arm 7 Ahead	30.00
1/3 (B2150 Hambledon Road)	U	A	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 5 U-Turn	30.00
											Arm 7 Ahead	30.00
											Arm 8 Right	30.00
2/1 (A3 Maurepas Way (E))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 7 Left	50.00
2/2 (A3 Maurepas Way (E))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 7 Left	50.00
											Arm 8 Ahead	30.00
2/3 (A3 Maurepas Way (E))	U	B	2	3	20.0	Geom	-	3.50	0.00	Y	Arm 5 Right	30.00
											Arm 6 U-Turn	30.00
3/1 (A3 Maurepas Way (S))	U	C	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 5 Ahead	30.00
											Arm 8 Left	50.00
3/2 (A3 Maurepas Way (S))	U	C	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 5 Ahead	30.00
											Arm 6 Right	30.00
											Arm 7 U-Turn	30.00
4/1 (Houghton Avenue)	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	30.00
											Arm 6 Ahead	30.00
4/2 (Houghton Avenue)	U	D	2	3	5.2	Geom	-	3.50	0.00	Y	Arm 6 Ahead	30.00
											Arm 7 Right	30.00
											Arm 8 U-Turn	30.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-

6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/2	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM'	08:00	09:00	01:00	
2: 'EMM - DS1 PM'	17:00	18:00	01:00	
3: 'EML - DS2 AM'	08:00	09:00	01:00	
4: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	333	402	0	735
	B	644	0	144	0	788
	C	251	222	0	0	473
	D	0	0	0	0	0
	Tot.	895	555	546	0	1996

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)	
1/1 (short)	271
1/2 (with short)	537(In) 266(Out)
1/3	198
2/1	144
2/2 (with short)	644(In) 0(Out)
2/3 (short)	644
3/1	236
3/2	237
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	236
5/2	659
6/1	271
6/2	284
7/1	348
7/2	198
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	100.0 %	1980	1980
1/2 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	23.3 %	1933	1933
				Arm 7 Ahead	30.00	76.7 %		
1/3 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 5 U-Turn	30.00	0.0 %	1919	1919
				Arm 7 Ahead	30.00	100.0 %		
				Arm 8 Right	30.00	0.0 %		
2/1 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	100.0 %	1908	1908
2/2 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	0.0 %	1965	1965
				Arm 8 Ahead	30.00	0.0 %		
2/3 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 5 Right	30.00	100.0 %	1871	1871
				Arm 6 U-Turn	30.00	0.0 %		
3/1 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	100.0 %	1900	1900
				Arm 8 Left	50.00	0.0 %		
3/2 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	6.3 %	1900	1900
				Arm 6 Right	30.00	93.7 %		
				Arm 7 U-Turn	30.00	0.0 %		
4/1 (Houghton Avenue)	3.50	0.00	Y	Arm 5 Left	30.00	0.0 %	1965	1965
				Arm 6 Ahead	30.00	0.0 %		
4/2 (Houghton Avenue)	3.50	0.00	Y	Arm 6 Ahead	30.00	0.0 %	1965	1965
				Arm 7 Right	30.00	0.0 %		
				Arm 8 U-Turn	30.00	0.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	389	479	0	868
	B	521	0	209	0	730
	C	268	265	0	0	533
	D	0	0	0	0	0
	Tot.	789	654	688	0	2131

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)	
1/1 (short)	315
1/2 (with short)	623(In) 308(Out)
1/3	245
2/1	209
2/2 (with short)	521(In) 0(Out)
2/3 (short)	521
3/1	266
3/2	267
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	266
5/2	523
6/1	315
6/2	339
7/1	443
7/2	245
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	100.0 %	1980	1980
1/2 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	24.0 %	1933	1933
				Arm 7 Ahead	30.00	76.0 %		
1/3 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 5 U-Turn	30.00	0.0 %	1919	1919
				Arm 7 Ahead	30.00	100.0 %		
				Arm 8 Right	30.00	0.0 %		
2/1 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	100.0 %	1908	1908
2/2 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	0.0 %	1965	1965
				Arm 8 Ahead	30.00	0.0 %		
2/3 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 5 Right	30.00	100.0 %	1871	1871
				Arm 6 U-Turn	30.00	0.0 %		
3/1 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	100.0 %	1900	1900
				Arm 8 Left	50.00	0.0 %		
3/2 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	0.7 %	1900	1900
				Arm 6 Right	30.00	99.3 %		
				Arm 7 U-Turn	30.00	0.0 %		
4/1 (Houghton Avenue)	3.50	0.00	Y	Arm 5 Left	30.00	0.0 %	1965	1965
				Arm 6 Ahead	30.00	0.0 %		
4/2 (Houghton Avenue)	3.50	0.00	Y	Arm 6 Ahead	30.00	0.0 %	1965	1965
				Arm 7 Right	30.00	0.0 %		
				Arm 8 U-Turn	30.00	0.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	334	407	0	741
	B	641	0	143	0	784
	C	248	222	0	0	470
	D	0	0	0	0	0
	Tot.	889	556	550	0	1995

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)	
1/1 (short)	273
1/2 (with short)	541(In) 268(Out)
1/3	200
2/1	143
2/2 (with short)	641(In) 0(Out)
2/3 (short)	641
3/1	235
3/2	235
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	235
5/2	654
6/1	273
6/2	283
7/1	350
7/2	200
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	100.0 %	1980	1980
1/2 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	22.8 %	1933	1933
				Arm 7 Ahead	30.00	77.2 %		
1/3 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 5 U-Turn	30.00	0.0 %	1919	1919
				Arm 7 Ahead	30.00	100.0 %		
				Arm 8 Right	30.00	0.0 %		
2/1 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	100.0 %	1908	1908
2/2 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	0.0 %	1965	1965
				Arm 8 Ahead	30.00	0.0 %		
2/3 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 5 Right	30.00	100.0 %	1871	1871
				Arm 6 U-Turn	30.00	0.0 %		
3/1 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	100.0 %	1900	1900
				Arm 8 Left	50.00	0.0 %		
3/2 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	5.5 %	1900	1900
				Arm 6 Right	30.00	94.5 %		
				Arm 7 U-Turn	30.00	0.0 %		
4/1 (Houghton Avenue)	3.50	0.00	Y	Arm 5 Left	30.00	0.0 %	1965	1965
				Arm 6 Ahead	30.00	0.0 %		
4/2 (Houghton Avenue)	3.50	0.00	Y	Arm 6 Ahead	30.00	0.0 %	1965	1965
				Arm 7 Right	30.00	0.0 %		
				Arm 8 U-Turn	30.00	0.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	389	479	0	868
	B	518	0	211	0	729
	C	267	263	0	0	530
	D	0	0	0	0	0
	Tot.	785	652	690	0	2127

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)	
1/1 (short)	315
1/2 (with short)	623(In) 308(Out)
1/3	245
2/1	211
2/2 (with short)	518(In) 0(Out)
2/3 (short)	518
3/1	265
3/2	265
4/1 (with short)	0(In) 0(Out)
4/2 (short)	0
5/1	265
5/2	520
6/1	315
6/2	337
7/1	445
7/2	245
8/1	0

Full Input Data And Results

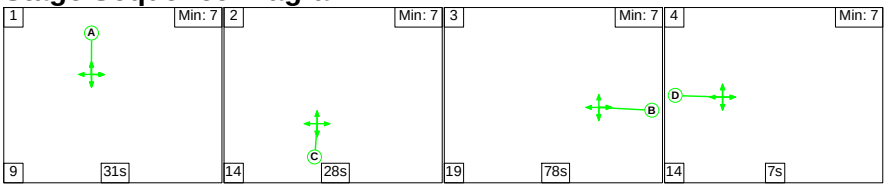
Lane Saturation Flows

Junction: B2150 Hambledon Road / Maurepas Way (Traffic Management)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	100.0 %	1980	1980
1/2 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 6 Left	85.00	24.0 %	1933	1933
				Arm 7 Ahead	30.00	76.0 %		
1/3 (B2150 Hambledon Road)	4.00	0.00	Y	Arm 5 U-Turn	30.00	0.0 %	1919	1919
				Arm 7 Ahead	30.00	100.0 %		
				Arm 8 Right	30.00	0.0 %		
2/1 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	100.0 %	1908	1908
2/2 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 7 Left	50.00	0.0 %	1965	1965
				Arm 8 Ahead	30.00	0.0 %		
2/3 (A3 Maurepas Way (E))	3.50	0.00	Y	Arm 5 Right	30.00	100.0 %	1871	1871
				Arm 6 U-Turn	30.00	0.0 %		
3/1 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	100.0 %	1900	1900
				Arm 8 Left	50.00	0.0 %		
3/2 (A3 Maurepas Way (S))	3.80	0.00	Y	Arm 5 Ahead	30.00	0.8 %	1900	1900
				Arm 6 Right	30.00	99.2 %		
				Arm 7 U-Turn	30.00	0.0 %		
4/1 (Houghton Avenue)	3.50	0.00	Y	Arm 5 Left	30.00	0.0 %	1965	1965
				Arm 6 Ahead	30.00	0.0 %		
4/2 (Houghton Avenue)	3.50	0.00	Y	Arm 6 Ahead	30.00	0.0 %	1965	1965
				Arm 7 Right	30.00	0.0 %		
				Arm 8 U-Turn	30.00	0.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
7/2	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

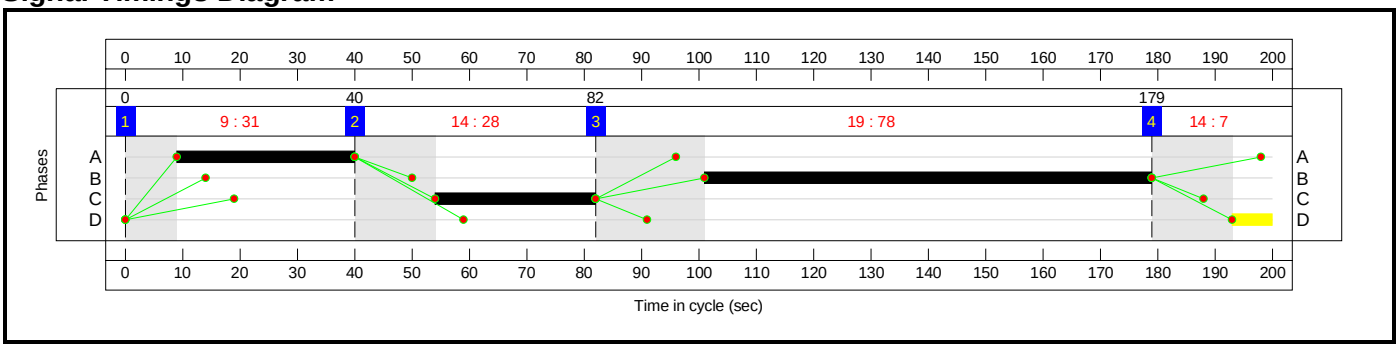


Full Input Data And Results

Stage Timings

Stage	1	2	3	4
Duration	31	28	78	7
Change Point	0	40	82	179

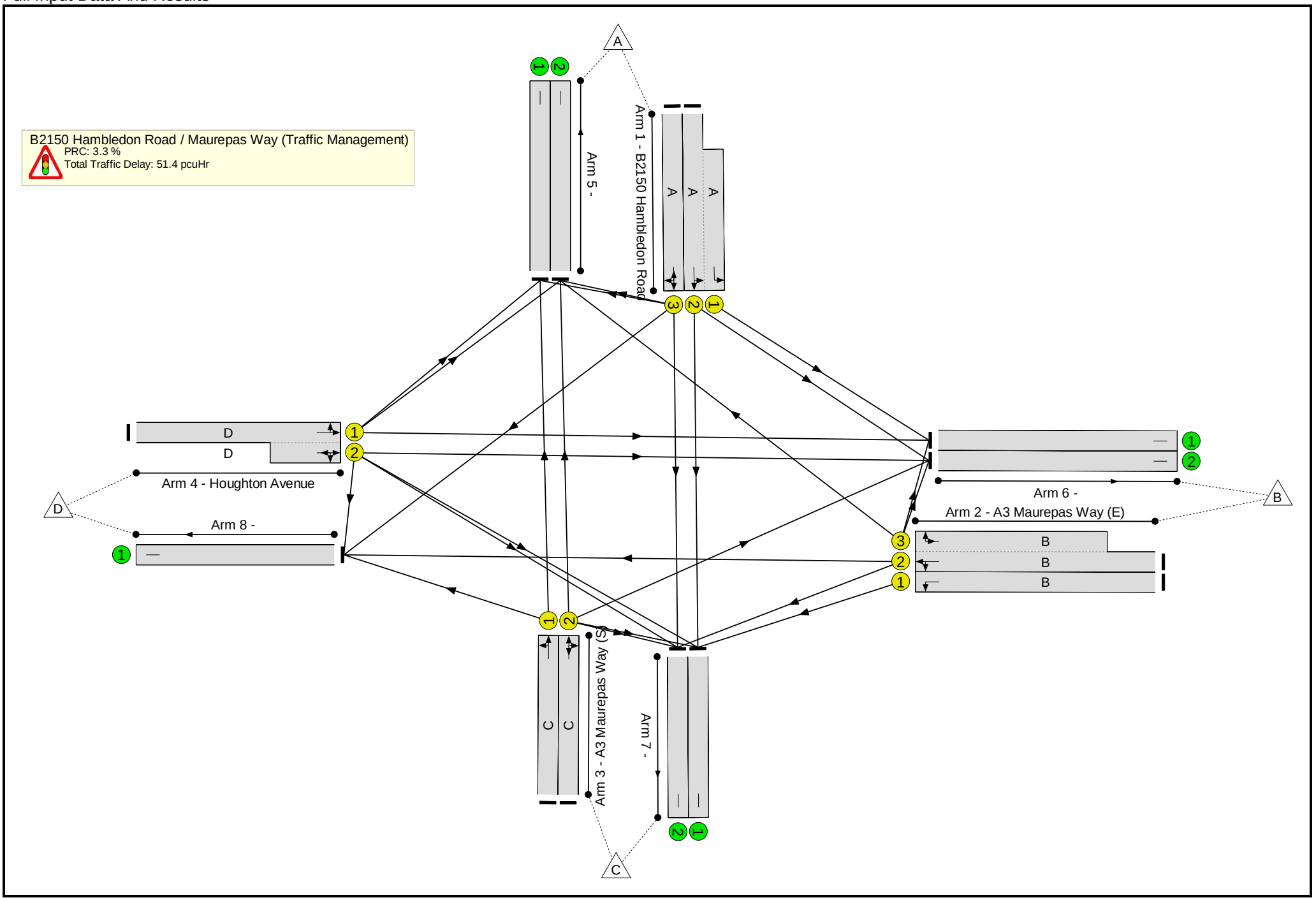
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.1%**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.1%**
1/2+1/1	B2150 Hambledon Road Left Ahead	U	N/A	N/A	A		1	31	-	537	1933:1980	309+317	86.0 : 85.5%
1/3	B2150 Hambledon Road U-Turn Ahead Right	U	N/A	N/A	A		1	31	-	198	1919	307	64.5%
2/1	A3 Maurepas Way (E) Left	U	N/A	N/A	B		1	78	-	144	1908	754	19.1%
2/2+2/3	A3 Maurepas Way (E) Right U-Turn Left Ahead	U	N/A	N/A	B		1	78	-	644	1965:1871	0+739	0.0 : 87.1%
3/1	A3 Maurepas Way (S) Ahead Left	U	N/A	N/A	C		1	28	-	236	1900	276	85.7%
3/2	A3 Maurepas Way (S) Ahead Right U-Turn	U	N/A	N/A	C		1	28	-	237	1900	276	86.0%
4/1+4/2	Houghton Avenue Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1965:1965	79+79	0.0 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	271	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	284	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	348	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	198	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

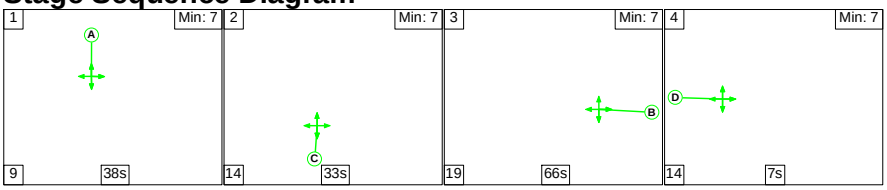
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**39.1**	**12.4**	**0.0**	**51.4**	**-**	**-**	**-**	**-**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	**-**	**-**	**0**	**0**	**0**	**39.1**	**12.4**	**0.0**	**51.4**	**-**	**-**	**-**	**-**
1/2+1/1	537	537	-	-	-	12.2	2.8	-	15.0	100.8	14.6	2.8	17.4
1/3	198	198	-	-	-	4.3	0.9	-	5.2	94.9	10.3	0.9	11.2
2/1	144	144	-	-	-	1.6	0.1	-	1.7	42.5	5.2	0.1	5.3
2/2+2/3	644	644	-	-	-	10.0	3.2	-	13.2	73.6	32.9	3.2	36.1
3/1	236	236	-	-	-	5.5	2.6	-	8.1	123.7	12.8	2.6	15.4
3/2	237	237	-	-	-	5.5	2.7	-	8.2	124.5	12.8	2.7	15.5
4/1+4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	659	659	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	271	271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	348	348	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	198	198	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.3 Total Delay for Signalled Lanes (pcuHr): 51.42 Cycle Time (s): 200
PRC Over All Lanes (%): 3.3 Total Delay Over All Lanes(pcuHr): 51.42

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

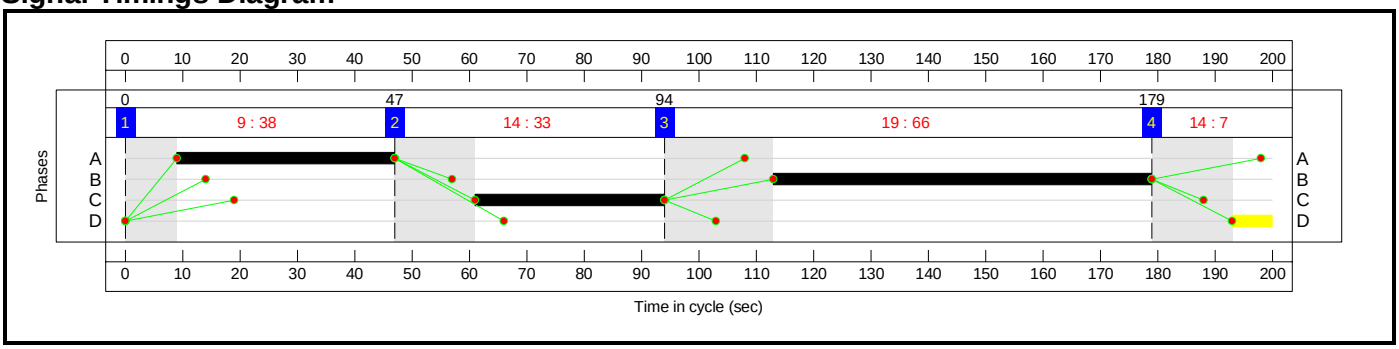
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	38	33	66	7
Change Point	0	47	94	179

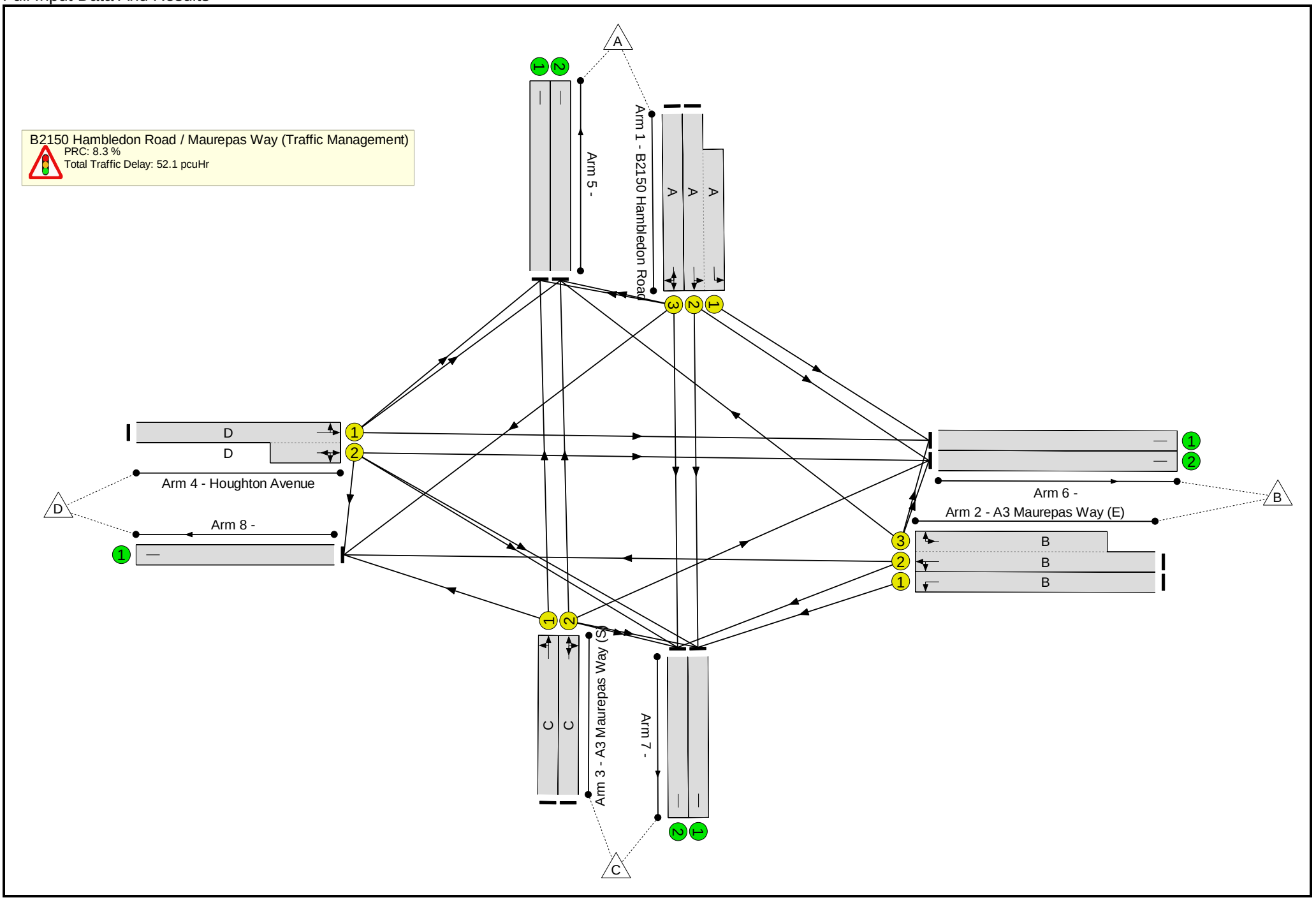
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.1%**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.1%**
1/2+1/1	B2150 Hambledon Road Left Ahead	U	N/A	N/A	A		1	38	-	623	1933:1980	377+386	81.7 : 81.6%
1/3	B2150 Hambledon Road U-Turn Ahead Right	U	N/A	N/A	A		1	38	-	245	1919	374	65.5%
2/1	A3 Maurepas Way (E) Left	U	N/A	N/A	B		1	66	-	209	1908	639	32.7%
2/2+2/3	A3 Maurepas Way (E) Right U-Turn Left Ahead	U	N/A	N/A	B		1	66	-	521	1965:1871	0+627	0.0 : 83.1%
3/1	A3 Maurepas Way (S) Ahead Left	U	N/A	N/A	C		1	33	-	266	1900	323	82.4%
3/2	A3 Maurepas Way (S) Ahead Right U-Turn	U	N/A	N/A	C		1	33	-	267	1900	323	82.7%
4/1+4/2	Houghton Avenue Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1965:1965	79+79	0.0 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	266	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	523	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	315	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	443	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

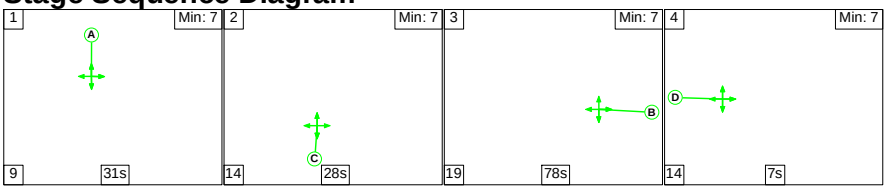
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**42.0**	**10.1**	**0.0**	**52.1**	**-**	**-**	**-**	**-**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	**-**	**-**	**0**	**0**	**0**	**42.0**	**10.1**	**0.0**	**52.1**	**-**	**-**	**-**	**-**
1/2+1/1	623	623	-	-	-	13.3	2.2	-	15.5	89.5	16.7	2.2	18.9
1/3	245	245	-	-	-	5.1	0.9	-	6.0	88.0	12.5	0.9	13.5
2/1	209	209	-	-	-	2.9	0.2	-	3.1	53.8	8.7	0.2	8.9
2/2+2/3	521	521	-	-	-	8.9	2.4	-	11.2	77.6	26.6	2.4	29.0
3/1	266	266	-	-	-	5.9	2.2	-	8.1	109.5	14.3	2.2	16.4
3/2	267	267	-	-	-	5.9	2.2	-	8.2	109.9	14.3	2.2	16.5
4/1+4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	266	266	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	523	523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	315	315	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	443	443	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 8.3 Total Delay for Signalled Lanes (pcuHr): 52.08 Cycle Time (s): 200
PRC Over All Lanes (%): 8.3 Total Delay Over All Lanes(pcuHr): 52.08

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

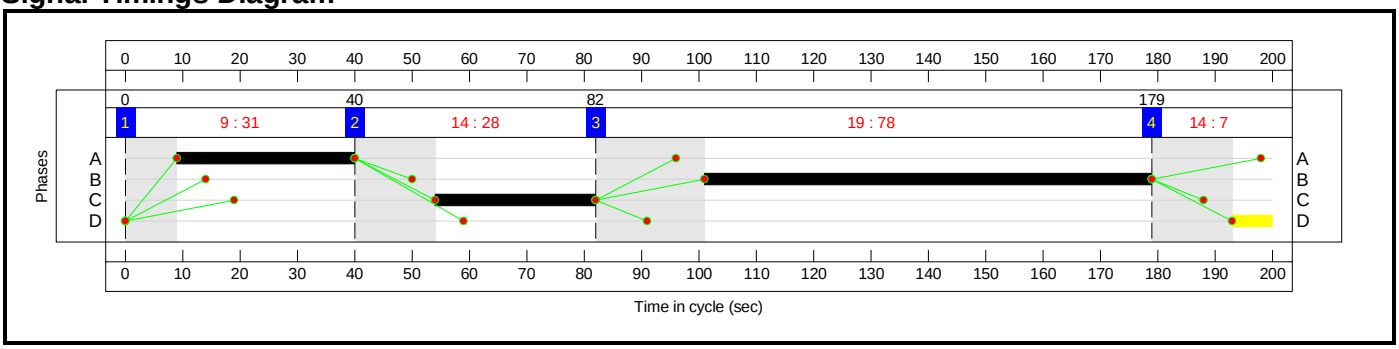
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	31	28	78	7
Change Point	0	40	82	179

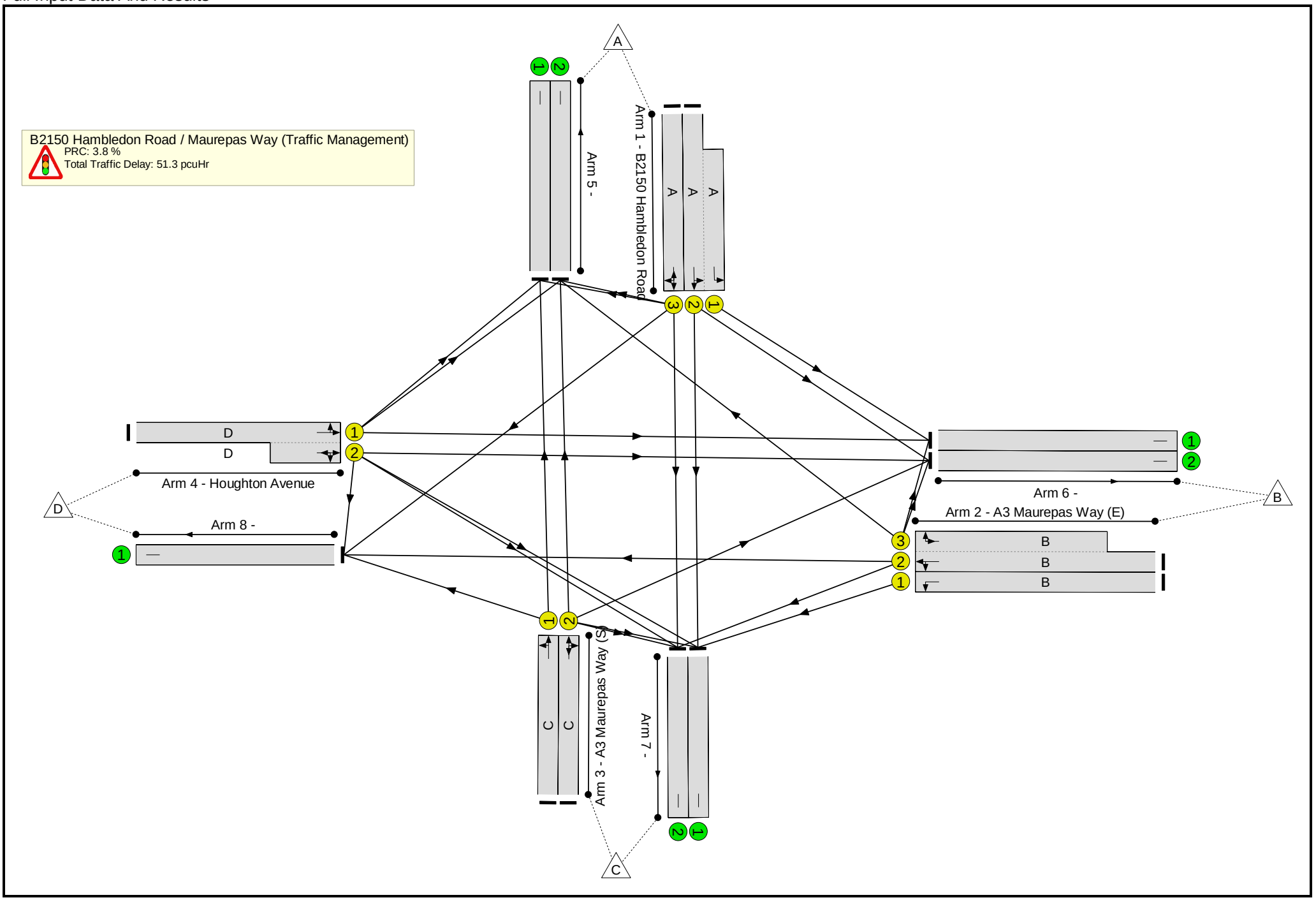
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.7%**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.7%**
1/2+1/1	B2150 Hambledon Road Left Ahead	U	N/A	N/A	A		1	31	-	541	1933:1980	309+317	86.7 : 86.2%
1/3	B2150 Hambledon Road U-Turn Ahead Right	U	N/A	N/A	A		1	31	-	200	1919	307	65.1%
2/1	A3 Maurepas Way (E) Left	U	N/A	N/A	B		1	78	-	143	1908	754	19.0%
2/2+2/3	A3 Maurepas Way (E) Right U-Turn Left Ahead	U	N/A	N/A	B		1	78	-	641	1965:1871	0+739	0.0 : 86.7%
3/1	A3 Maurepas Way (S) Ahead Left	U	N/A	N/A	C		1	28	-	235	1900	276	85.3%
3/2	A3 Maurepas Way (S) Ahead Right U-Turn	U	N/A	N/A	C		1	28	-	235	1900	276	85.3%
4/1+4/2	Houghton Avenue Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1965:1965	79+79	0.0 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	235	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	654	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	273	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	283	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	200	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

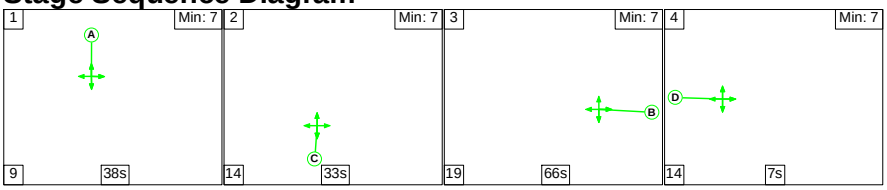
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**39.1**	**12.2**	**0.0**	**51.3**	**-**	**-**	**-**	**-**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	**-**	**-**	**0**	**0**	**0**	**39.1**	**12.2**	**0.0**	**51.3**	**-**	**-**	**-**	**-**
1/2+1/1	541	541	-	-	-	12.3	3.0	-	15.3	101.7	14.7	3.0	17.7
1/3	200	200	-	-	-	4.4	0.9	-	5.3	95.3	10.4	0.9	11.3
2/1	143	143	-	-	-	1.6	0.1	-	1.7	42.5	5.2	0.1	5.3
2/2+2/3	641	641	-	-	-	9.9	3.1	-	13.0	73.0	32.8	3.1	35.8
3/1	235	235	-	-	-	5.4	2.6	-	8.0	122.9	12.7	2.6	15.3
3/2	235	235	-	-	-	5.4	2.6	-	8.0	122.9	12.7	2.6	15.3
4/1+4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	235	235	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	654	654	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	273	273	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	283	283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	200	200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 3.8 Total Delay for Signalled Lanes (pcuHr): 51.29 Cycle Time (s): 200
PRC Over All Lanes (%): 3.8 Total Delay Over All Lanes(pcuHr): 51.29

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

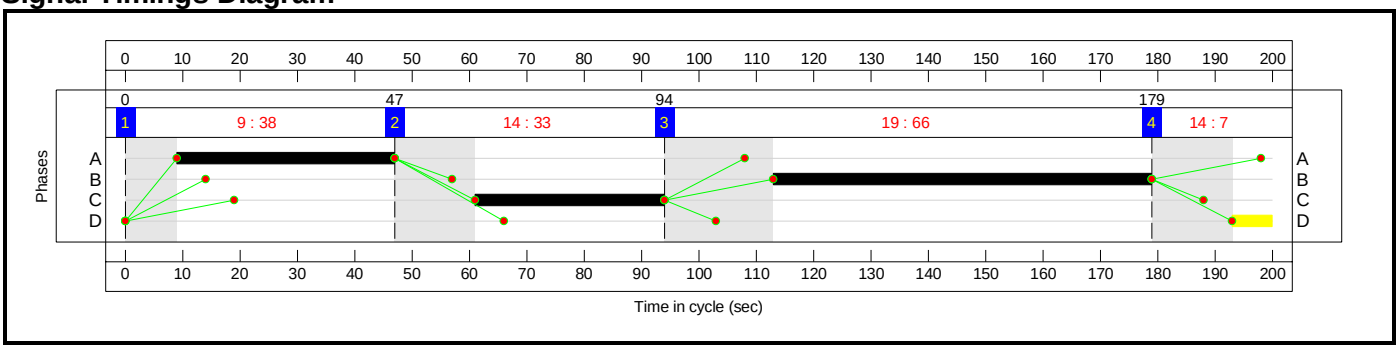
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	38	33	66	7
Change Point	0	47	94	179

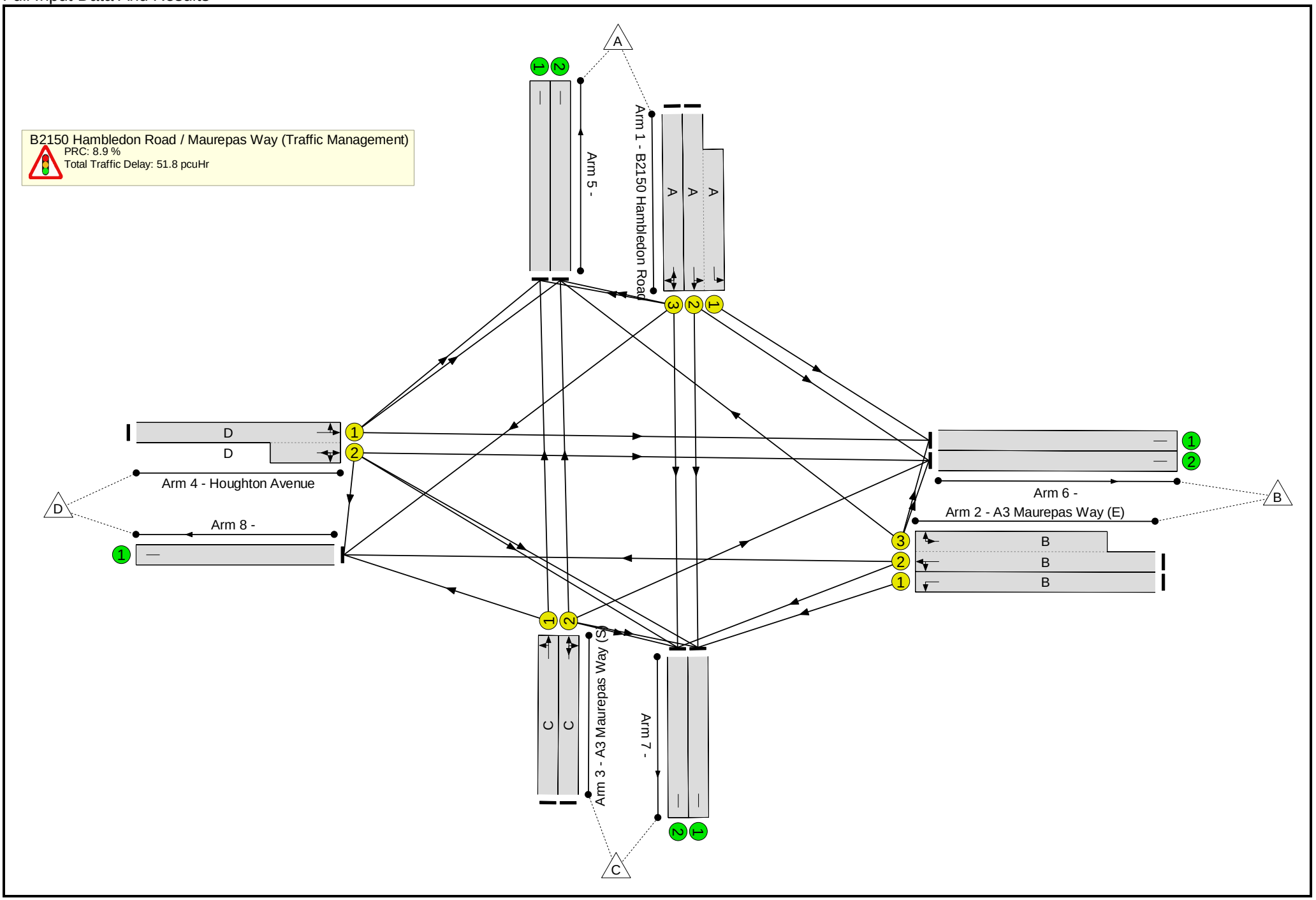
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.6%**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.6%**
1/2+1/1	B2150 Hambledon Road Left Ahead	U	N/A	N/A	A		1	38	-	623	1933:1980	377+386	81.7 : 81.6%
1/3	B2150 Hambledon Road U-Turn Ahead Right	U	N/A	N/A	A		1	38	-	245	1919	374	65.5%
2/1	A3 Maurepas Way (E) Left	U	N/A	N/A	B		1	66	-	211	1908	639	33.0%
2/2+2/3	A3 Maurepas Way (E) Right U-Turn Left Ahead	U	N/A	N/A	B		1	66	-	518	1965:1871	0+627	0.0 : 82.6%
3/1	A3 Maurepas Way (S) Ahead Left	U	N/A	N/A	C		1	33	-	265	1900	323	82.0%
3/2	A3 Maurepas Way (S) Ahead Right U-Turn	U	N/A	N/A	C		1	33	-	265	1900	323	82.0%
4/1+4/2	Houghton Avenue Left Ahead Right U-Turn	U	N/A	N/A	D		1	7	-	0	1965:1965	79+79	0.0 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	265	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	315	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	337	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	445	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**41.9**	**9.9**	**0.0**	**51.8**	**-**	**-**	**-**	**-**
B2150 Hambledon Road / Maurepas Way (Traffic Management)	**-**	**-**	**0**	**0**	**0**	**41.9**	**9.9**	**0.0**	**51.8**	**-**	**-**	**-**	**-**
1/2+1/1	623	623	-	-	-	13.3	2.2	-	15.5	89.5	16.7	2.2	18.9
1/3	245	245	-	-	-	5.1	0.9	-	6.0	88.0	12.5	0.9	13.5
2/1	211	211	-	-	-	2.9	0.2	-	3.2	53.9	8.7	0.2	9.0
2/2+2/3	518	518	-	-	-	8.8	2.3	-	11.1	77.0	26.3	2.3	28.6
3/1	265	265	-	-	-	5.9	2.1	-	8.0	109.0	14.1	2.1	16.3
3/2	265	265	-	-	-	5.9	2.1	-	8.0	109.0	14.1	2.1	16.3
4/1+4/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	315	315	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	337	337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	445	445	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 8.9 Total Delay for Signalled Lanes (pcuHr): 51.77 Cycle Time (s): 200

PRC Over All Lanes (%): 8.9 Total Delay Over All Lanes(pcuHr): 51.77

Junctions 9

ARCADY 9 - Roundabout Module

Filename: B2177 Portsdown Hill Rd_Maylands Rd_Bedhampton Rd_Bedhampton Hill.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:19:27

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	1.9	5.27	0.63	A	1.4	4.46	0.56	A
Arm 2	3.7	19.90	0.78	C	5.6	27.38	0.85	D
Arm 3	1.3	14.11	0.55	B	11.8	79.97	0.96	F
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
	EMM - DS1							
Arm 1	1.9	5.33	0.63	A	1.4	4.55	0.57	A
Arm 2	2.8	15.65	0.72	C	5.6	27.66	0.85	D
Arm 3	2.9	22.67	0.73	C	22.2	128.97	1.03	F
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
	EML - DS2							
Arm 1	1.9	5.35	0.63	A	1.4	4.54	0.57	A
Arm 2	2.6	14.93	0.71	B	5.6	27.77	0.85	D
Arm 3	3.1	23.49	0.75	C	22.5	130.52	1.03	F
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

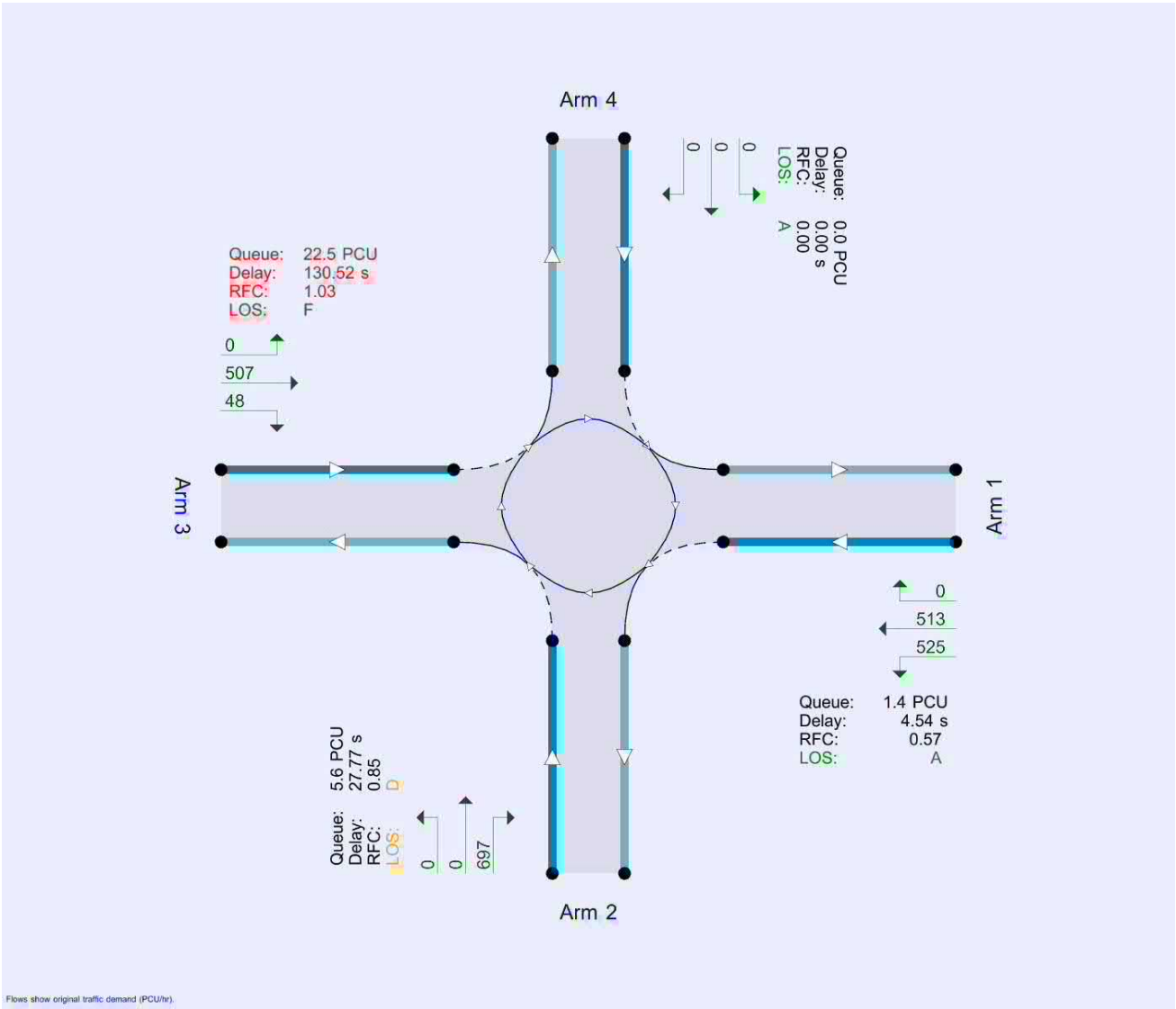
File summary

File Description

Title	B2177 Portsdown Hill Road / Maylands Road / B2177 Bedhampton Road / B2177 Bedhampton Hill roundabout
Location	
Site number	
Date	26/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	10.98	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B2177 Bedhampton Road	
2	B2177 Bedhampton Hill	
3	B2177 Portsdown Hill Road	
4	Maylands Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.00	7.00	35.0	20.0	26.0	11.0	
2	4.20	4.20	0.0	12.0	26.0	34.0	
3	3.50	3.50	0.0	8.0	26.0	36.0	
4	2.75	3.20	0.8	12.0	26.0	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.754	2052
2	0.547	1213
3	0.480	961
4	0.485	868

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1168	100.000
2		✓	637	100.000
3		✓	314	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	644	524	0
	2	634	0	3	0
	3	296	18	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.63	5.27	1.9	A
2	0.78	19.90	3.7	C
3	0.55	14.11	1.3	B
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	879	13	2042	0.431	876	0.8	3.386	A
2	480	393	999	0.480	476	1.0	7.515	A
3	236	473	734	0.322	234	0.5	7.901	A
4	0	708	525	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1050	16	2040	0.515	1049	1.2	3.989	A
2	573	470	956	0.599	570	1.6	10.194	B
3	282	568	688	0.410	281	0.8	9.700	A
4	0	849	456	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1286	20	2037	0.631	1283	1.9	5.230	A
2	701	576	899	0.780	693	3.6	18.597	C
3	346	690	629	0.549	344	1.3	13.742	B
4	0	1034	367	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1286	20	2037	0.631	1286	1.9	5.270	A
2	701	577	898	0.781	701	3.7	19.903	C
3	346	697	626	0.552	346	1.3	14.107	B
4	0	1043	362	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1050	16	2040	0.515	1053	1.2	4.022	A
2	573	472	955	0.599	581	1.7	10.797	B
3	282	578	683	0.413	284	0.8	9.982	A
4	0	863	450	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	879	14	2042	0.431	881	0.8	3.413	A
2	480	395	997	0.481	482	1.0	7.724	A
3	236	480	730	0.324	237	0.5	8.050	A
4	0	717	520	0.000	0	0.0	0.000	A

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	28.94	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1016	100.000
2		✓	711	100.000
3		✓	509	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	532	484	0
	2	711	0	0	0
	3	452	57	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.56	4.46	1.4	A
2	0.85	27.38	5.6	D
3	0.96	79.97	11.8	F
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	765	42	2020	0.379	762	0.7	3.141	A
2	535	363	1015	0.527	530	1.2	8.095	A
3	383	530	706	0.543	378	1.3	11.901	B
4	0	909	427	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	913	51	2014	0.454	912	0.9	3.591	A
2	639	435	976	0.655	636	2.0	11.537	B
3	458	636	655	0.698	453	2.4	19.145	C
4	0	1089	340	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1119	60	2007	0.557	1117	1.4	4.439	A
2	783	532	923	0.849	770	5.2	24.109	C
3	560	770	591	0.948	534	9.0	53.806	F
4	0	1304	235	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1119	61	2006	0.558	1119	1.4	4.462	A
2	783	533	922	0.849	781	5.6	27.381	D
3	560	781	586	0.957	549	11.8	79.968	F
4	0	1330	223	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	913	55	2011	0.454	915	0.9	3.620	A
2	639	436	975	0.656	653	2.2	12.788	B
3	458	653	647	0.707	493	2.9	30.440	D
4	0	1146	312	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	765	44	2019	0.379	766	0.7	3.163	A
2	535	365	1014	0.528	539	1.3	8.400	A
3	383	539	702	0.546	389	1.4	12.896	B
4	0	928	418	0.000	0	0.0	0.000	A

EMM - DS1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	11.57	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1162	100.000
2		✓	594	100.000
3		✓	434	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	651	511	0
	2	587	0	7	0
	3	398	36	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.63	5.33	1.9	A
2	0.72	15.65	2.8	C
3	0.73	22.67	2.9	C
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	875	27	2032	0.431	872	0.8	3.402	A
2	447	383	1004	0.445	444	0.9	7.025	A
3	327	438	750	0.436	323	0.8	9.207	A
4	0	762	499	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1045	32	2028	0.515	1043	1.2	4.017	A
2	534	459	963	0.555	532	1.3	9.157	A
3	390	526	708	0.551	388	1.3	12.297	B
4	0	914	425	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1279	39	2023	0.633	1277	1.9	5.287	A
2	654	561	907	0.721	649	2.7	15.040	C
3	478	641	653	0.732	472	2.8	21.208	C
4	0	1113	328	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1279	40	2022	0.633	1279	1.9	5.328	A
2	654	563	906	0.722	654	2.8	15.650	C
3	478	646	651	0.734	477	2.9	22.672	C
4	0	1123	323	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1045	33	2027	0.515	1047	1.2	4.051	A
2	534	461	962	0.555	539	1.4	9.496	A
3	390	533	705	0.554	396	1.4	13.065	B
4	0	929	417	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	875	27	2032	0.431	876	0.8	3.430	A
2	447	385	1003	0.446	449	0.9	7.181	A
3	327	444	748	0.437	329	0.9	9.504	A
4	0	773	493	0.000	0	0.0	0.000	A

EMM - DS1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	41.70	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1038	100.000
2		✓	697	100.000
3		✓	554	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	526	512	0
	2	697	0	0	0
	3	505	49	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.57	4.55	1.4	A
2	0.85	27.66	5.6	D
3	1.03	128.97	22.2	F
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	36	2025	0.386	779	0.7	3.171	A
2	525	384	1003	0.523	520	1.2	8.115	A
3	417	520	711	0.587	411	1.5	12.954	B
4	0	931	416	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	933	44	2019	0.462	932	0.9	3.638	A
2	627	460	962	0.651	623	2.0	11.579	B
3	498	623	662	0.753	492	3.1	22.535	C
4	0	1115	327	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1143	50	2015	0.567	1141	1.4	4.522	A
2	767	563	906	0.847	755	5.2	24.341	C
3	610	755	599	1.019	564	14.4	73.920	F
4	0	1319	228	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1143	51	2014	0.568	1143	1.4	4.547	A
2	767	564	905	0.848	766	5.6	27.664	D
3	610	766	593	1.028	579	22.2	128.969	F
4	0	1345	216	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	933	50	2014	0.463	935	1.0	3.677	A
2	627	461	961	0.652	640	2.1	12.833	B
3	498	640	653	0.762	570	4.1	64.006	F
4	0	1211	281	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	38	2024	0.386	783	0.7	3.192	A
2	525	386	1002	0.523	528	1.2	8.416	A
3	417	528	707	0.590	427	1.6	14.601	B
4	0	955	405	0.000	0	0.0	0.000	A

EML - DS2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	11.59	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1160	100.000
2		✓	585	100.000
3		✓	444	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	653	507	0
	2	578	0	7	0
	3	402	42	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.63	5.35	1.9	A
2	0.71	14.93	2.6	B
3	0.75	23.49	3.1	C
4	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	873	31	2029	0.430	870	0.8	3.407	A
2	440	380	1006	0.438	437	0.8	6.926	A
3	334	432	753	0.444	331	0.9	9.297	A
4	0	763	498	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1043	38	2024	0.515	1041	1.2	4.024	A
2	526	455	965	0.545	524	1.3	8.955	A
3	399	518	712	0.560	397	1.4	12.490	B
4	0	915	424	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1277	46	2018	0.633	1274	1.9	5.306	A
2	644	557	909	0.709	639	2.5	14.410	B
3	489	631	658	0.743	483	2.9	21.872	C
4	0	1114	328	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1277	46	2017	0.633	1277	1.9	5.348	A
2	644	558	908	0.709	644	2.6	14.932	B
3	489	636	655	0.746	488	3.1	23.489	C
4	0	1124	323	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1043	38	2023	0.515	1046	1.2	4.063	A
2	526	457	964	0.546	531	1.3	9.257	A
3	399	525	709	0.563	406	1.5	13.317	B
4	0	930	417	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	873	32	2028	0.431	875	0.8	3.438	A
2	440	382	1004	0.438	442	0.9	7.067	A
3	334	437	751	0.445	337	0.9	9.608	A
4	0	774	493	0.000	0	0.0	0.000	A

EML - DS2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	42.14	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1038	100.000
2		✓	697	100.000
3		✓	555	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	525	513	0
	2	697	0	0	0
	3	507	48	0	0
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.57	4.54	1.4	A
2	0.85	27.77	5.6	D
3	1.03	130.52	22.5	F
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	36	2025	0.386	779	0.7	3.170	A
2	525	385	1003	0.523	520	1.2	8.122	A
3	418	520	711	0.588	412	1.5	12.984	B
4	0	932	416	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	933	43	2020	0.462	932	0.9	3.636	A
2	627	461	962	0.652	623	2.0	11.596	B
3	499	623	662	0.754	493	3.1	22.632	C
4	0	1116	327	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1143	49	2015	0.567	1141	1.4	4.518	A
2	767	564	905	0.848	755	5.2	24.417	C
3	611	755	599	1.021	565	14.6	74.521	F
4	0	1320	228	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1143	50	2014	0.567	1143	1.4	4.542	A
2	767	565	905	0.848	766	5.6	27.771	D
3	611	766	593	1.030	579	22.5	130.518	F
4	0	1345	215	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	933	50	2015	0.463	935	1.0	3.672	A
2	627	462	961	0.652	640	2.1	12.856	B
3	499	640	653	0.764	572	4.2	65.560	F
4	0	1213	280	0.000	0	0.0	0.000	A

18:00 - 18:15

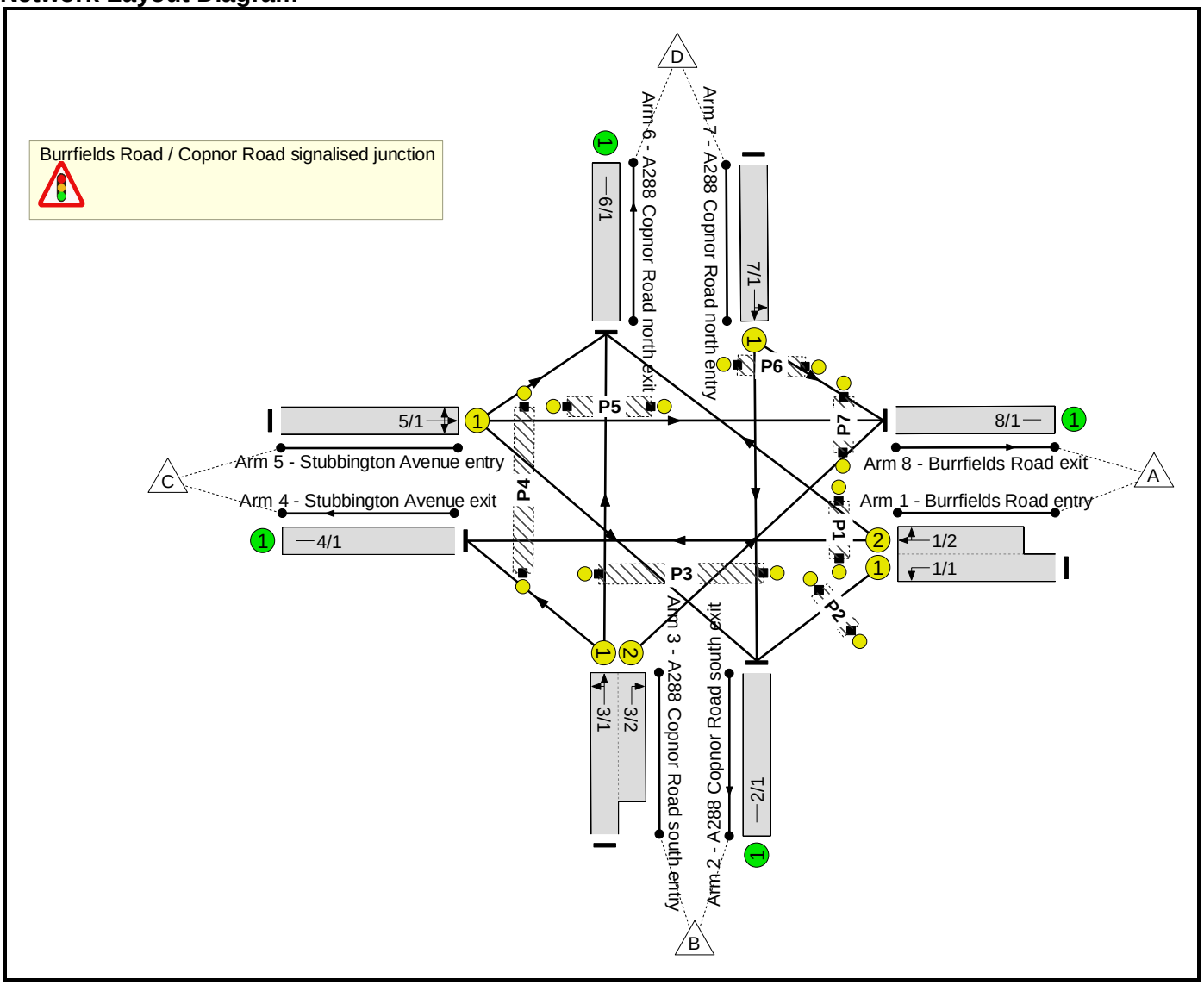
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	37	2024	0.386	783	0.7	3.190	A
2	525	387	1002	0.524	528	1.2	8.424	A
3	418	528	707	0.591	428	1.6	14.657	B
4	0	956	404	0.000	0	0.0	0.000	A

Full Input Data And Results

User and Project Details

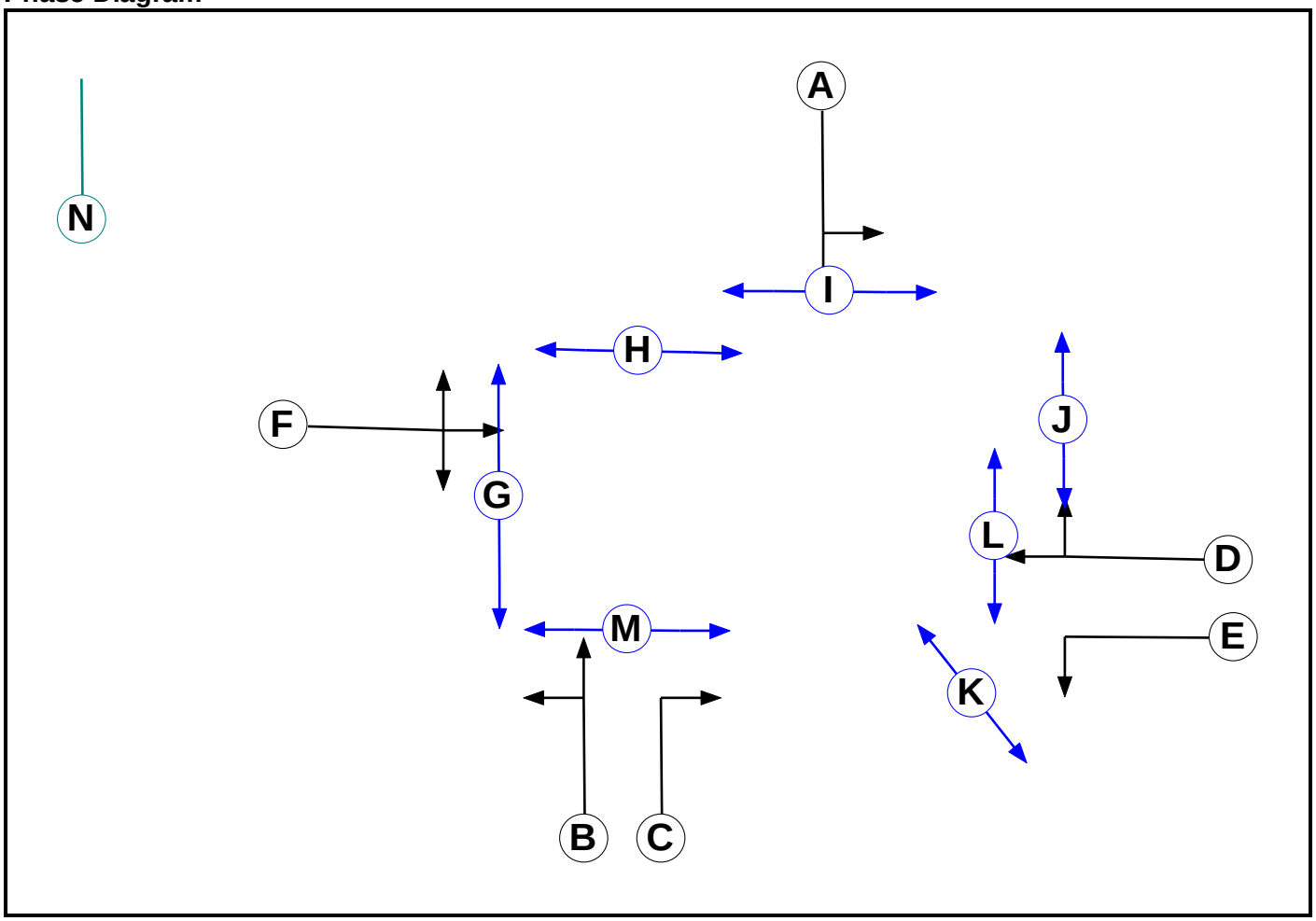
Project:	
Title:	**Burrfields Road / Copnor Road traffic signal junction**
Location:	
Additional detail:	
File name:	Burrfields Rd_Copnor Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Dummy		3	3

Full Input Data And Results

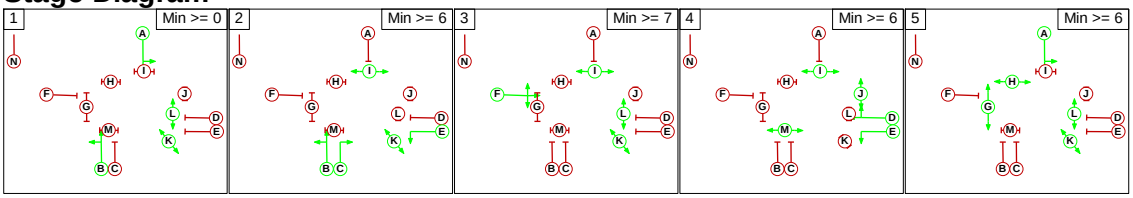
Phase Intergreens Matrix

		Starting Phase													
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
Terminating Phase	A		-	7	6	8	5	-	-	5	8	-	-	8	3
	B	-		-	5	-	5	7	8	-	-	-	-	5	3
	C	5	-		5	-	5	-	-	-	8	-	-	5	3
	D	5	6	6		-	7	8	8	-	-	5	-	-	3
	E	5	-	-	-		5	-	-	-	-	-	5	-	3
	F	5	6	6	6	7		5	8	-	9	-	-	8	3
	G	-	5	-	5	-	5		-	-	-	-	-	-	3
	H	-	5	-	5	-	5	-		-	-	-	-	-	3
	I	5	-	-	-	-	-	-	-		-	-	-	-	3
	J	5	-	5	-	-	5	-	-	-		-	-	-	3
	K	-	-	-	5	-	-	-	-	-	-		-	-	3
	L	-	-	-	-	5	-	-	-	-	-	-		-	3
	M	0	0	0	-	-	0	-	-	-	-	-	-		3
	N	2	2	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	A B K L
2	B C E I K
3	F I K L
4	D E I J M
5	A G H K L

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Full Input Data And Results

Prohibited Stage Change

	To Stage					
		1	2	3	4	5
From Stage	1		8	5	8	8
	2	5		5	8	8
	3	6	7		9	8
	4	6	6	7		8
	5	5	8	5	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Burrfields Road / Copnor Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Burrfields Road entry)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 2 Left	12.00
1/2 (Burrfields Road entry)	U	D	2	3	10.4	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Right	12.00
2/1 (A288 Copnor Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A288 Copnor Road south entry)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	8.00
											Arm 6 Ahead	Inf
3/2 (A288 Copnor Road south entry)	U	C	2	3	10.4	Geom	-	3.00	0.00	Y	Arm 8 Right	10.00
4/1 (Stubbington Avenue exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Stubbington Avenue entry)	U	F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Right	8.00
											Arm 6 Left	10.00
											Arm 8 Ahead	Inf
6/1 (A288 Copnor Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A288 Copnor Road north entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 8 Left	12.00
8/1 (Burrfields Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	229	3	25	257
	B	642	0	23	750	1415
	C	74	3	0	3	80
	D	169	363	0	0	532
	Tot.	885	595	26	778	2284

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	257(In) 229(Out)
1/2 (short)	28
2/1	595
3/1 (with short)	1415(In) 773(Out)
3/2 (short)	642
4/1	26
5/1	80
6/1	778
7/1	532
8/1	885

Full Input Data And Results

Lane Saturation Flows

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	10.7 %	1768	1768
				Arm 6 Right	12.00	89.3 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	3.0 %	1904	1904
				Arm 6 Ahead	Inf	97.0 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	3.8 %	1891	1891
				Arm 6 Left	10.00	3.8 %		
				Arm 8 Ahead	Inf	92.5 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	68.2 %	1842	1842
				Arm 8 Left	12.00	31.8 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	457	31	77	565
	B	159	0	6	711	876
	C	70	6	0	21	97
	D	10	651	0	0	661
	Tot.	239	1114	37	809	2199

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	565(In) 457(Out)
1/2 (short)	108
2/1	1114
3/1 (with short)	876(In) 717(Out)
3/2 (short)	159
4/1	37
5/1	97
6/1	809
7/1	661
8/1	239

Lane Saturation Flows

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	28.7 %	1804	1804
				Arm 6 Right	12.00	71.3 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.8 %	1912	1912
				Arm 6 Ahead	Inf	99.2 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	6.2 %	1834	1834
				Arm 6 Left	10.00	21.6 %		
				Arm 8 Ahead	Inf	72.2 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	98.5 %	1911	1911
				Arm 8 Left	12.00	1.5 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	296	3	25	324
	B	627	0	23	738	1388
	C	71	3	0	5	79
	D	149	391	0	0	540
	Tot.	847	690	26	768	2331

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	324(In) 296(Out)
1/2 (short)	28
2/1	690
3/1 (with short)	1388(In) 761(Out)
3/2 (short)	627
4/1	26
5/1	79
6/1	768
7/1	540
8/1	847

Full Input Data And Results

Lane Saturation Flows

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	10.7 %	1768	1768
				Arm 6 Right	12.00	89.3 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	3.0 %	1904	1904
				Arm 6 Ahead	Inf	97.0 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	3.8 %	1884	1884
				Arm 6 Left	10.00	6.3 %		
				Arm 8 Ahead	Inf	89.9 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	72.4 %	1851	1851
				Arm 8 Left	12.00	27.6 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	521	101	71	693
	B	160	0	6	713	879
	C	64	8	0	21	93
	D	10	743	0	0	753
	Tot.	234	1272	107	805	2418

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	693(In) 521(Out)
1/2 (short)	172
2/1	1272
3/1 (with short)	879(In) 719(Out)
3/2 (short)	160
4/1	107
5/1	93
6/1	805
7/1	753
8/1	234

Lane Saturation Flows

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	58.7 %	1869	1869
				Arm 6 Right	12.00	41.3 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.8 %	1912	1912
				Arm 6 Ahead	Inf	99.2 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	8.6 %	1824	1824
				Arm 6 Left	10.00	22.6 %		
				Arm 8 Ahead	Inf	68.8 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	98.7 %	1912	1912
				Arm 8 Left	12.00	1.3 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'EML- DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	227	3	25	255
	B	638	0	24	797	1459
	C	81	3	0	0	84
	D	150	382	0	0	532
	Tot.	869	612	27	822	2330

Traffic Lane Flows

Lane	Scenario 5: EML- DS2 AM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	255(In) 227(Out)
1/2 (short)	28
2/1	612
3/1 (with short)	1459(In) 821(Out)
3/2 (short)	638
4/1	27
5/1	84
6/1	822
7/1	532
8/1	869

Full Input Data And Results

Lane Saturation Flows

Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	10.7 %	1768	1768
				Arm 6 Right	12.00	89.3 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	2.9 %	1905	1905
				Arm 6 Ahead	Inf	97.1 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	3.6 %	1902	1902
				Arm 6 Left	10.00	0.0 %		
				Arm 8 Ahead	Inf	96.4 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	71.8 %	1850	1850
				Arm 8 Left	12.00	28.2 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	487	31	78	596
	B	160	0	6	735	901
	C	68	7	0	21	96
	D	10	650	0	0	660
	Tot.	238	1144	37	834	2253

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: Burrfields Road / Copnor Road signalised junction	
1/1 (with short)	596(In) 487(Out)
1/2 (short)	109
2/1	1144
3/1 (with short)	901(In) 741(Out)
3/2 (short)	160
4/1	37
5/1	96
6/1	834
7/1	660
8/1	238

Lane Saturation Flows

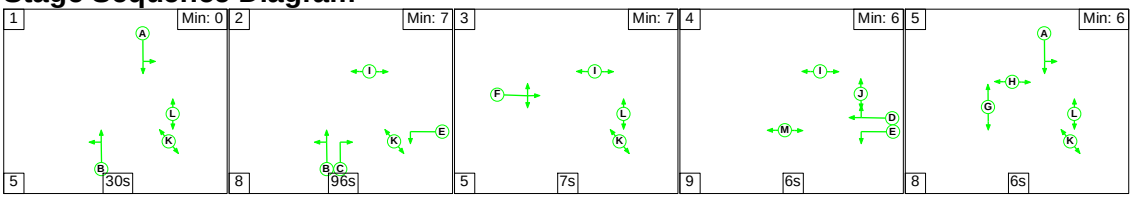
Junction: Burrfields Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Burrfields Road entry)	3.50	0.00	Y	Arm 2 Left	12.00	100.0 %	1747	1747
1/2 (Burrfields Road entry)	3.50	0.00	Y	Arm 4 Ahead	Inf	28.4 %	1804	1804
				Arm 6 Right	12.00	71.6 %		
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 4 Left	8.00	0.8 %	1912	1912
				Arm 6 Ahead	Inf	99.2 %		
3/2 (A288 Copnor Road south entry)	3.00	0.00	Y	Arm 8 Right	10.00	100.0 %	1665	1665
4/1 (Stubbington Avenue exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stubbington Avenue entry)	3.00	0.00	Y	Arm 2 Right	8.00	7.3 %	1830	1830
				Arm 6 Left	10.00	21.9 %		
				Arm 8 Ahead	Inf	70.8 %		
6/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A288 Copnor Road north entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	98.5 %	1911	1911
				Arm 8 Left	12.00	1.5 %		
8/1 (Burrfields Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

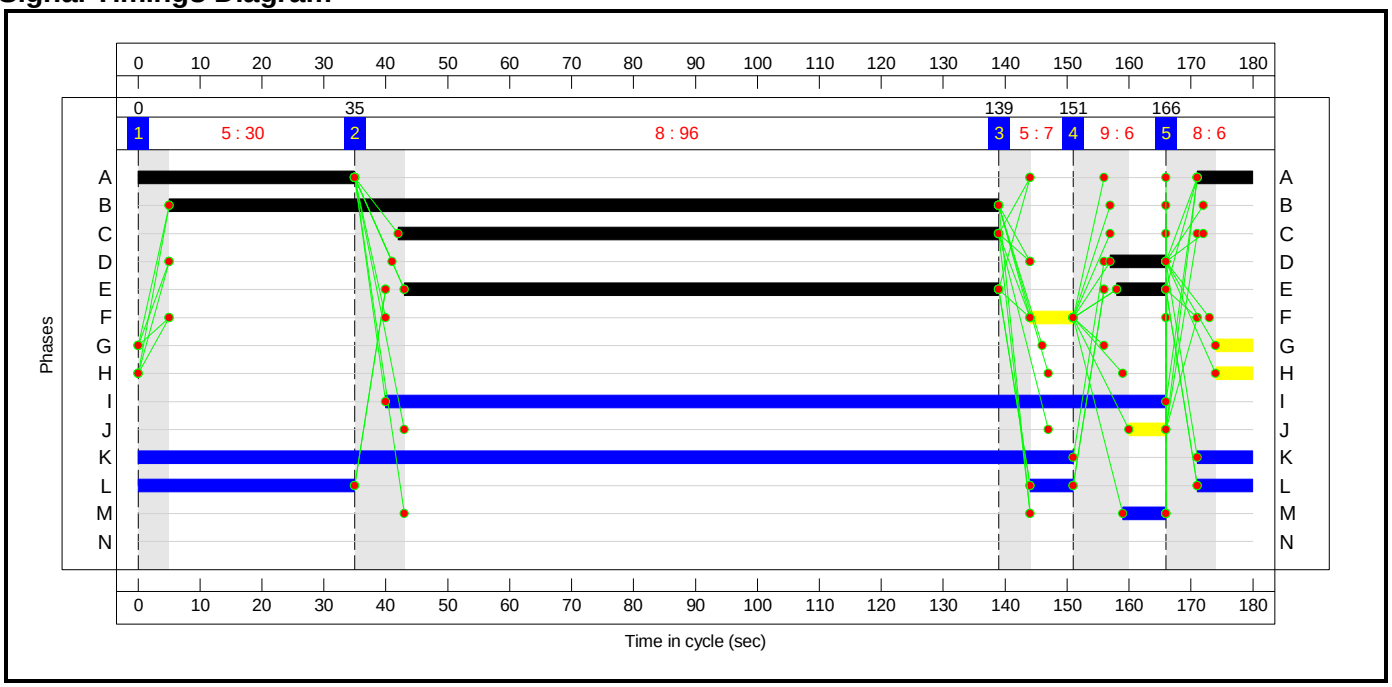
Stage Sequence Diagram



Stage Timings

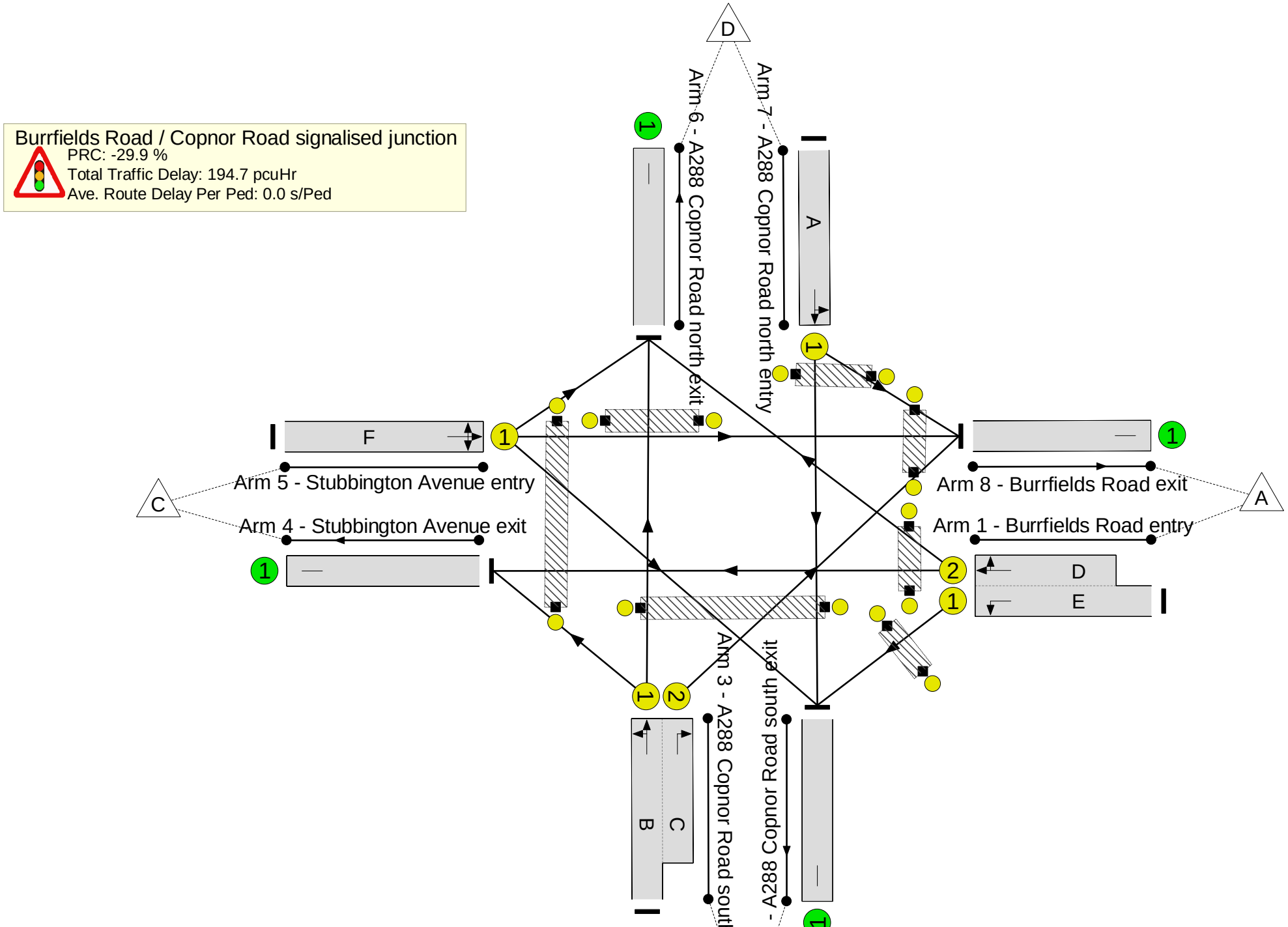
Stage	1	2	3	4	5
Duration	30	96	7	6	6
Change Point	0	35	139	151	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Burrfields Road / Copnor Road signalised junction
PRC: -29.9 %
Total Traffic Delay: 194.7 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A288 Copnor Road north exit
Arm 7 - A288 Copnor Road north entry
A
F
Arm 5 - Stubbington Avenue entry
C
Arm 4 - Stubbington Avenue exit
Arm 8 - Burrfields Road exit
A
Arm 1 - Burrfields Road entry
D
E
B
C
Arm 3 - A288 Copnor Road south exit
Arm 2 - A288 Copnor Road south entry

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.9%**
Burrfields Road / Copnor Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.9%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	104:9	-	257	1747:1768	1048	24.5%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	595	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	134:97	-	1415	1904:1665	1211	116.9%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	26	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	7	-	80	1891	84	95.2%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	778	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	44	-	532	1842	461	115.5%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	885	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	51	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	160	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	126	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%

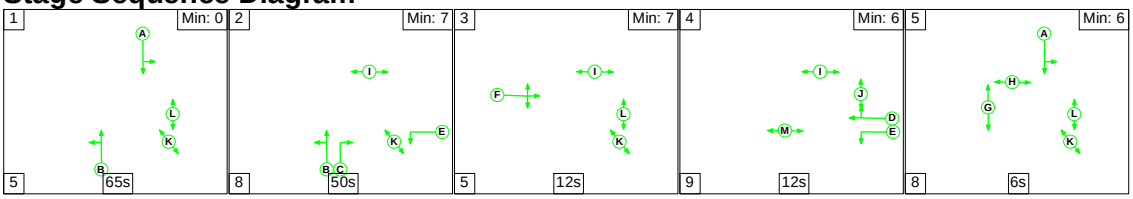
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**46.3**	**148.4**	**0.0**	**194.7**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**46.3**	**148.4**	**0.0**	**194.7**	**-**	**-**	**-**	**-**
1/1+1/2	257	257	-	-	-	1.3	0.2	-	1.5	21.0	4.1	0.2	4.2
2/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	1415	1211	-	-	-	26.3	105.5	-	131.7	335.2	75.6	105.5	181.0
4/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	80	80	-	-	-	1.9	3.6	-	5.5	246.6	4.0	3.6	7.6
6/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	532	461	-	-	-	16.8	39.1	-	56.0	378.8	30.2	39.1	69.3
8/1	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -29.9 Total Delay for Signalled Lanes (pcuHr): 194.70 Cycle Time (s): 180
PRC Over All Lanes (%): -29.9 Total Delay Over All Lanes(pcuHr): 194.70

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

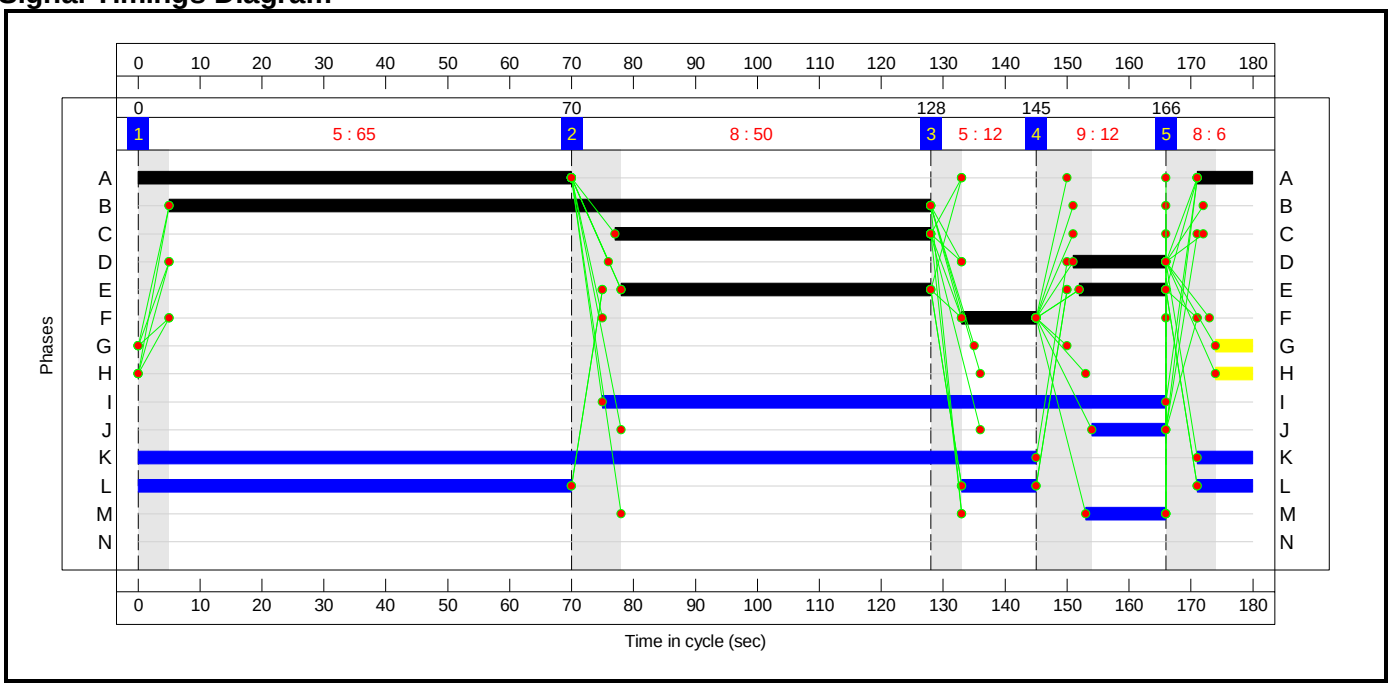
Stage Sequence Diagram



Stage Timings

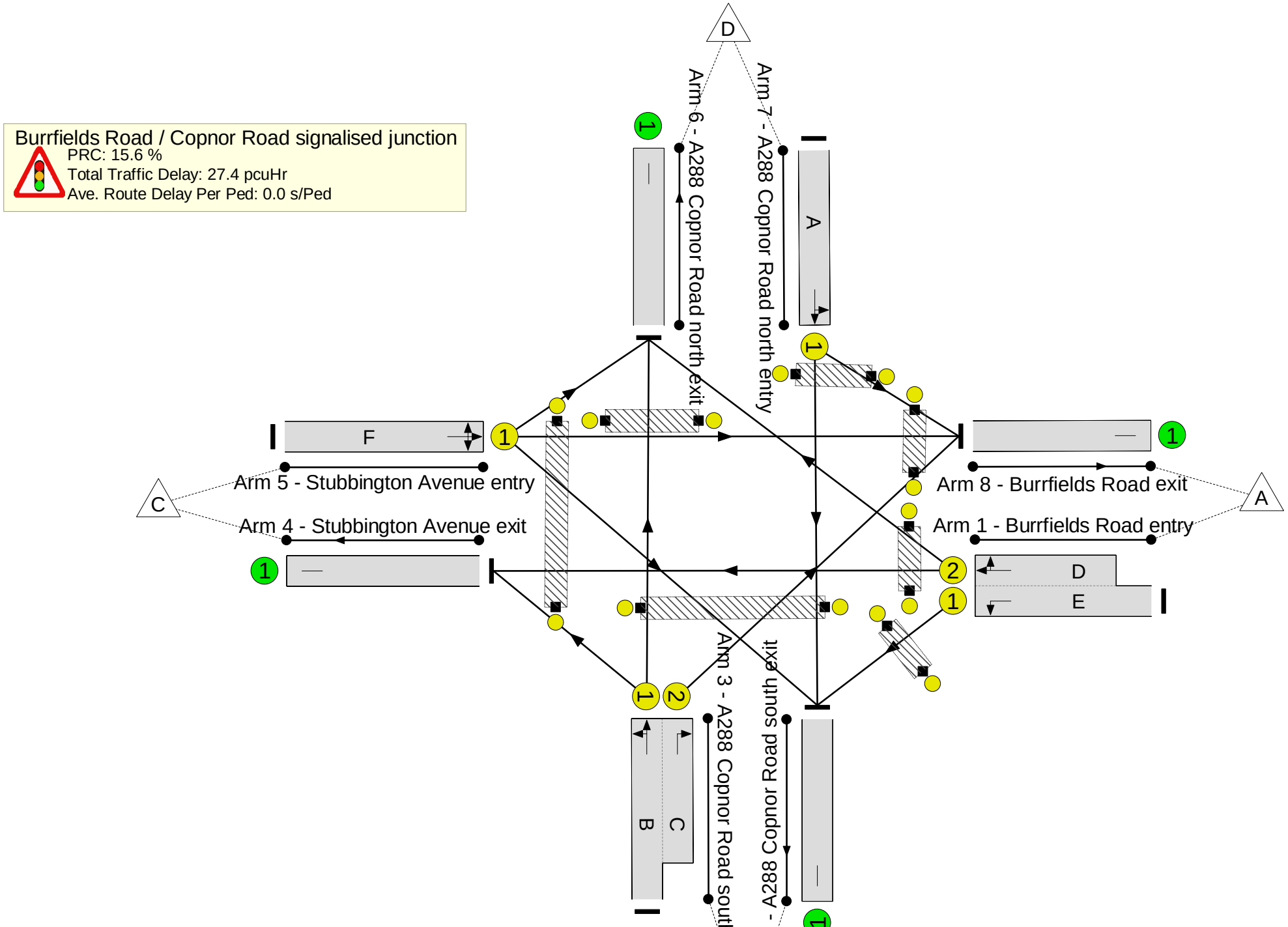
Stage	1	2	3	4	5
Duration	65	50	12	12	6
Change Point	0	70	128	145	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Burrfields Road / Copnor Road signalised junction
PRC: 15.6 %
Total Traffic Delay: 27.4 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A288 Copnor Road north exit
Arm 7 - A288 Copnor Road north entry
A
F
Arm 5 - Stubbington Avenue entry
C
Arm 4 - Stubbington Avenue exit
Arm 8 - Burrfields Road exit
A
Arm 1 - Burrfields Road entry
D
E
B
C
Arm 3 - A288 Copnor Road south exit
Arm 2 - A288 Copnor Road south entry

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.8%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	64:15	-	565	1747:1804	727	77.8%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	1114	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	123:51	-	876	1912:1665	1337	65.5%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	37	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	12	-	97	1834	132	73.2%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	809	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	79	-	661	1911	849	77.8%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	91	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	154	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	13	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	91	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	12	-	0	-	0	0.0%

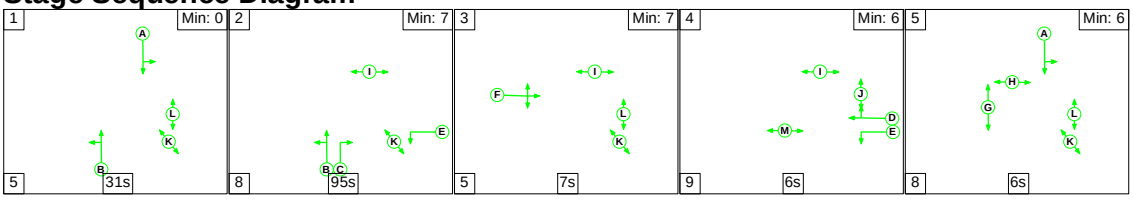
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**21.7**	**5.7**	**0.0**	**27.4**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**21.7**	**5.7**	**0.0**	**27.4**	**-**	**-**	**-**	**-**
1/1+1/2	565	565	-	-	-	6.6	1.7	-	8.3	53.1	17.3	1.7	19.0
2/1	1114	1114	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	876	876	-	-	-	5.1	0.9	-	6.0	24.7	20.8	0.9	21.8
4/1	37	37	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	97	97	-	-	-	2.2	1.3	-	3.5	129.2	4.7	1.3	6.0
6/1	809	809	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	661	661	-	-	-	7.8	1.7	-	9.5	51.9	27.9	1.7	29.6
8/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 15.6 Total Delay for Signalled Lanes (pcuHr): 27.36 Cycle Time (s): 180
PRC Over All Lanes (%): 15.6 Total Delay Over All Lanes(pcuHr): 27.36

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

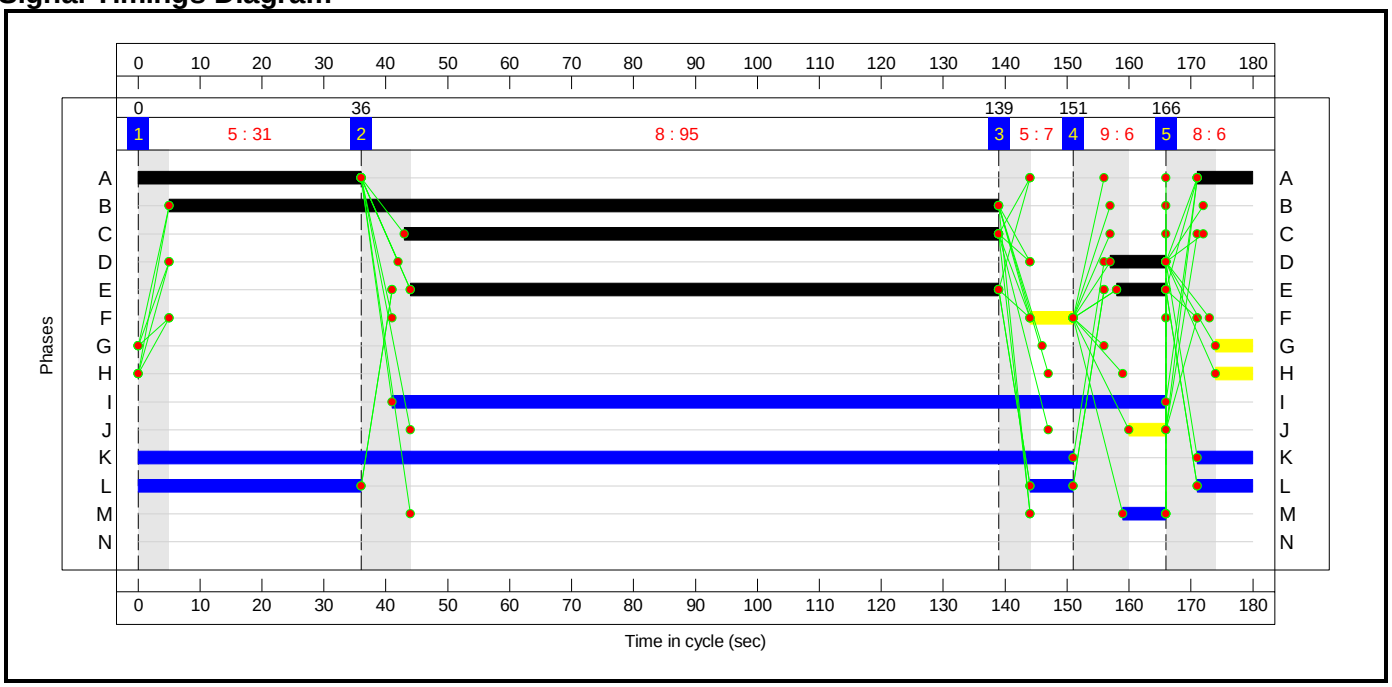
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	31	95	7	6	6
Change Point	0	36	139	151	166

Signal Timings Diagram



Full Input Data And Results

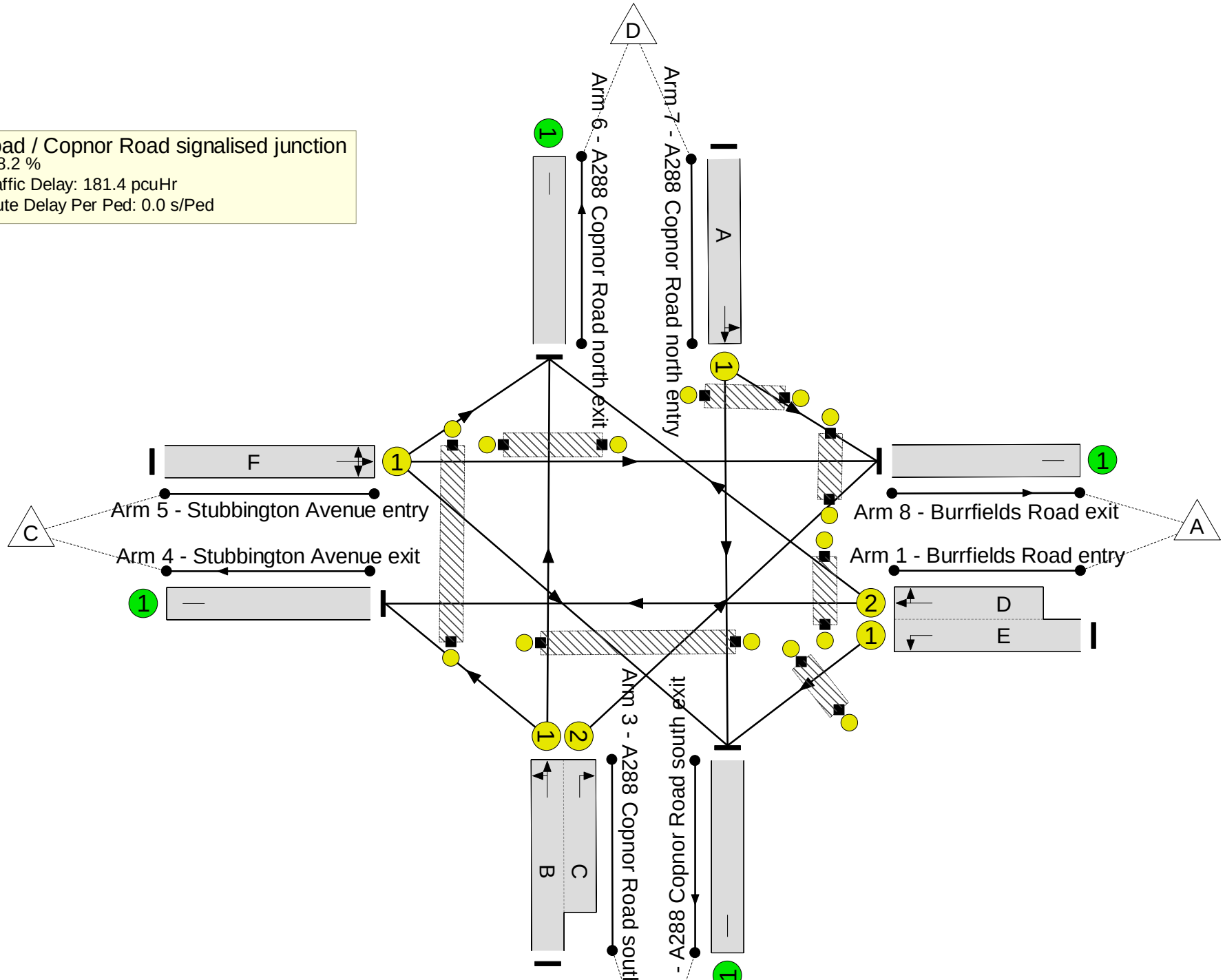
Network Layout Diagram

Burrfields Road / Copnor Road signalised junction

PRC: -28.2 %

Total Traffic Delay: 181.4 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.4%**
Burrfields Road / Copnor Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.4%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	103:9	-	324	1747:1768	1048	30.9%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	134:96	-	1388	1904:1665	1203	115.4%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	26	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	7	-	79	1884	84	94.3%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	768	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	45	-	540	1851	473	114.2%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	847	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	160	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	125	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%

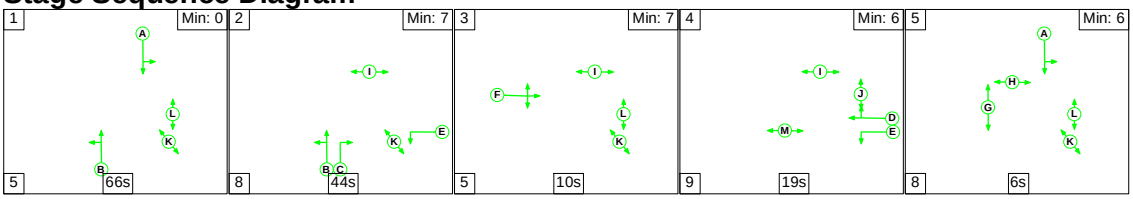
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**44.6**	**136.8**	**0.0**	**181.4**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**44.6**	**136.8**	**0.0**	**181.4**	**-**	**-**	**-**	**-**
1/1+1/2	324	324	-	-	-	1.6	0.2	-	1.8	20.5	5.6	0.2	5.8
2/1	642	642	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	1388	1203	-	-	-	24.6	96.1	-	120.7	313.1	73.2	96.1	169.3
4/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	79	79	-	-	-	1.9	3.4	-	5.3	241.4	3.9	3.4	7.3
6/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	540	473	-	-	-	16.5	37.1	-	53.6	357.2	30.3	37.1	67.5
8/1	745	745	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -28.2 Total Delay for Signalled Lanes (pcuHr): 181.42 Cycle Time (s): 180
PRC Over All Lanes (%): -28.2 Total Delay Over All Lanes(pcuHr): 181.42

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

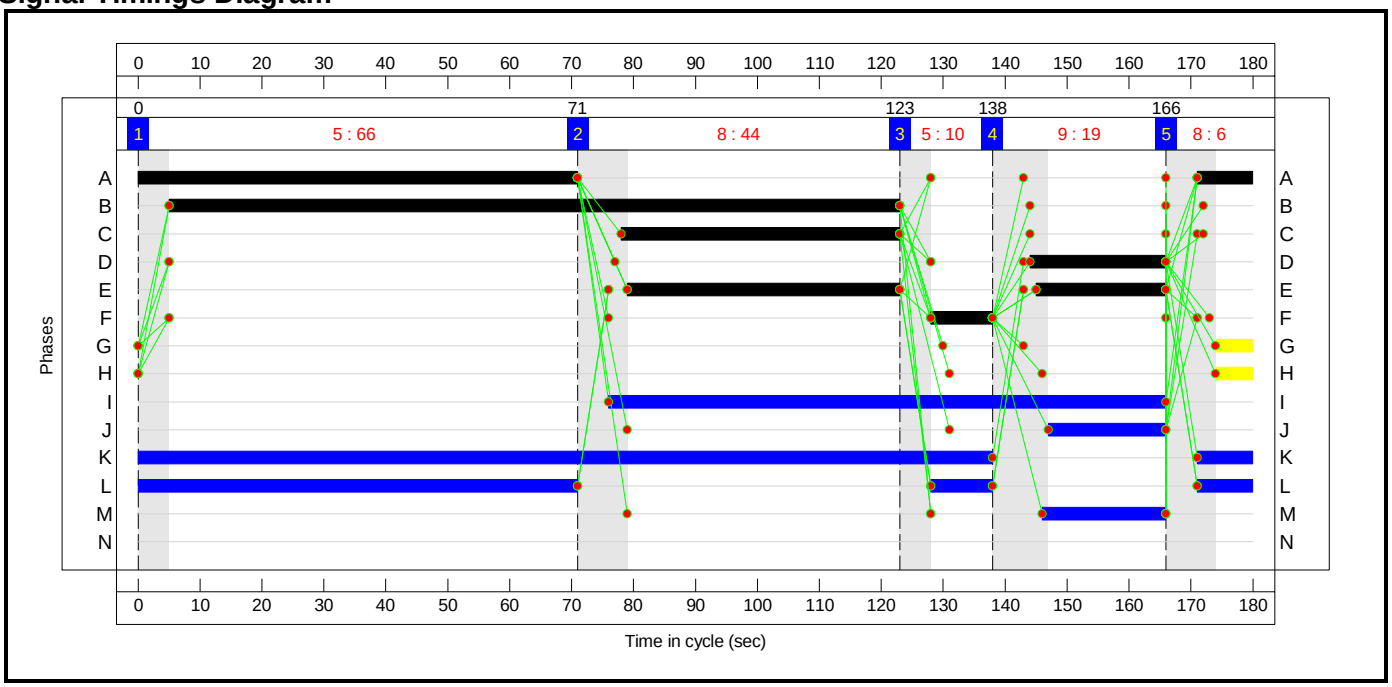
Stage Sequence Diagram



Stage Timings

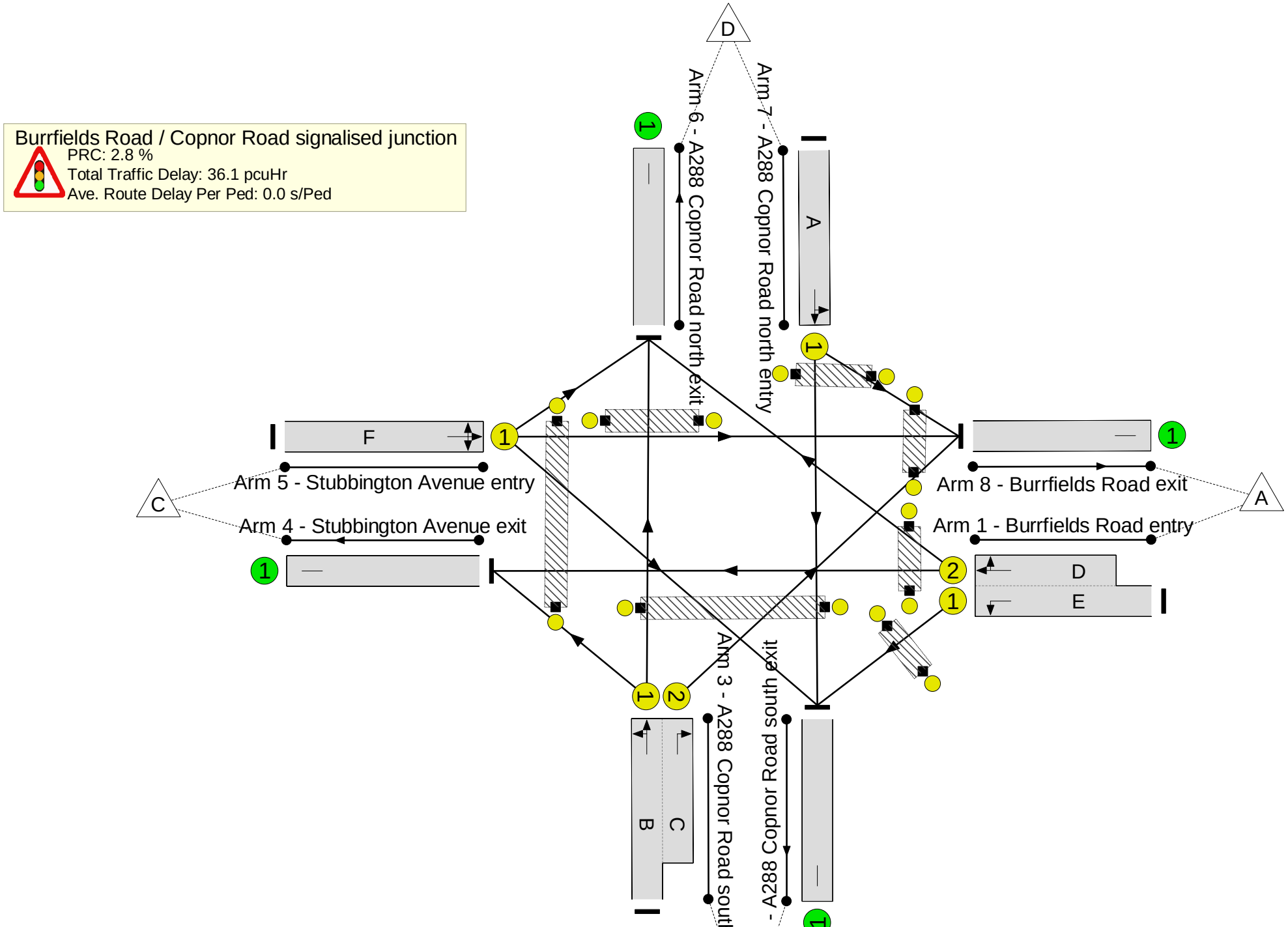
Stage	1	2	3	4	5
Duration	66	44	10	19	6
Change Point	0	71	123	138	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Burrfields Road / Copnor Road signalised junction
PRC: 2.8 %
Total Traffic Delay: 36.1 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A288 Copnor Road north exit
Arm 7 - A288 Copnor Road north entry
A
F
Arm 5 - Stubbington Avenue entry
C
Arm 4 - Stubbington Avenue exit
Arm 8 - Burrfields Road exit
A
Arm 1 - Burrfields Road entry
D
E
B
C
Arm 3 - A288 Copnor Road south exit
Arm 2 - A288 Copnor Road south entry

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.5%**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**87.5%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	65:22	-	693	1747:1869	793	87.4%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	1272	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	118:45	-	879	1912:1665	1285	68.4%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	107	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	10	-	93	1824	111	83.4%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	805	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	80	-	753	1912	860	87.5%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	234	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	90	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	147	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	20	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	90	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	19	-	0	-	0	0.0%

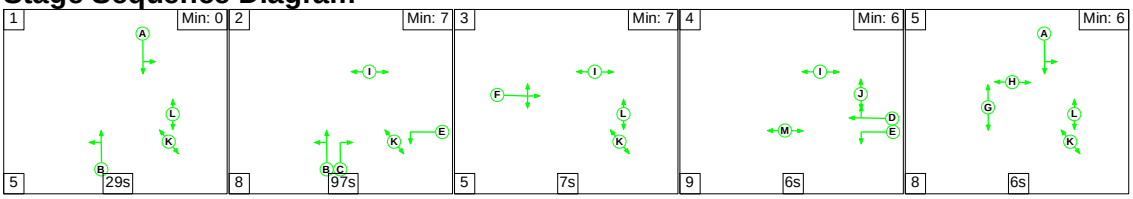
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**26.4**	**9.7**	**0.0**	**36.1**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**26.4**	**9.7**	**0.0**	**36.1**	**-**	**-**	**-**	**-**
1/1+1/2	693	693	-	-	-	9.0	3.2	-	12.2	63.4	23.3	3.2	26.6
2/1	1272	1272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	879	879	-	-	-	5.9	1.1	-	7.0	28.5	23.3	1.1	24.4
4/1	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	93	93	-	-	-	2.2	2.1	-	4.2	163.3	4.6	2.1	6.7
6/1	805	805	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	753	753	-	-	-	9.4	3.3	-	12.7	60.7	34.1	3.3	37.4
8/1	234	234	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 2.8 Total Delay for Signalled Lanes (pcuHr): 36.07 Cycle Time (s): 180
PRC Over All Lanes (%): 2.8 Total Delay Over All Lanes(pcuHr): 36.07

Full Input Data And Results

Scenario 5: 'EML- DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

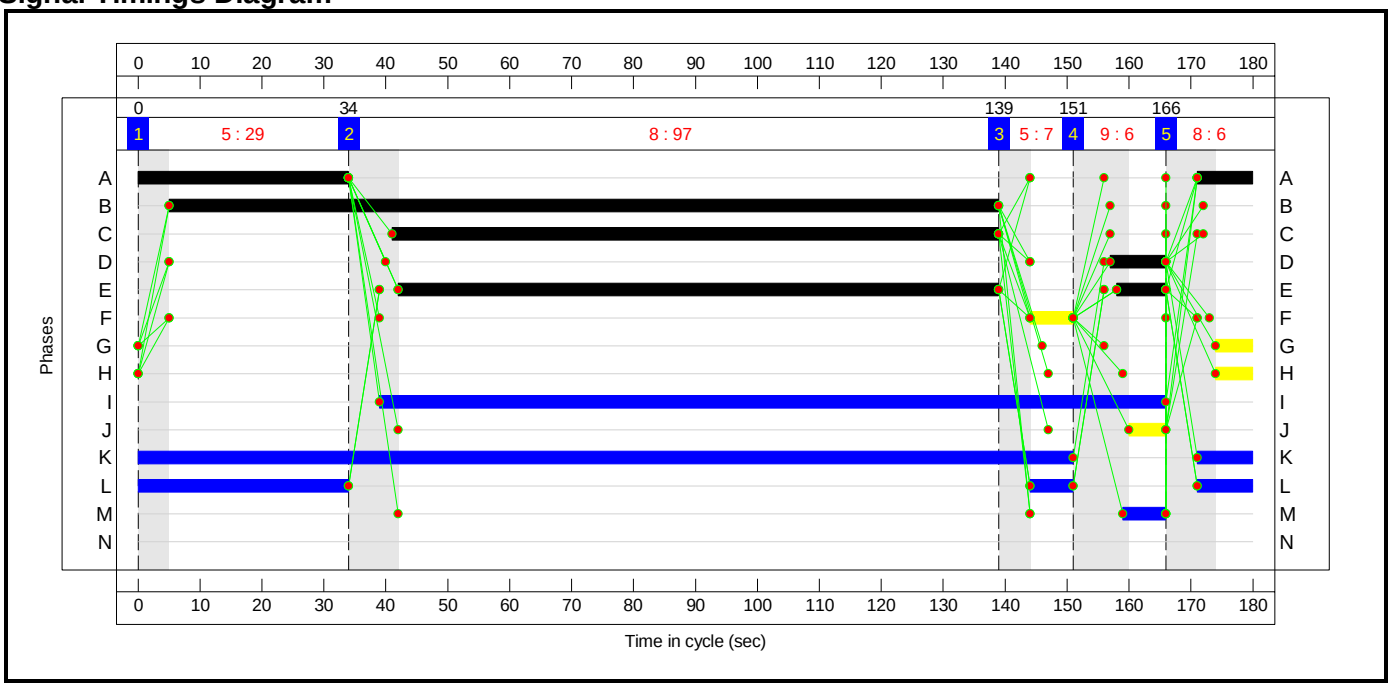
Stage Sequence Diagram



Stage Timings

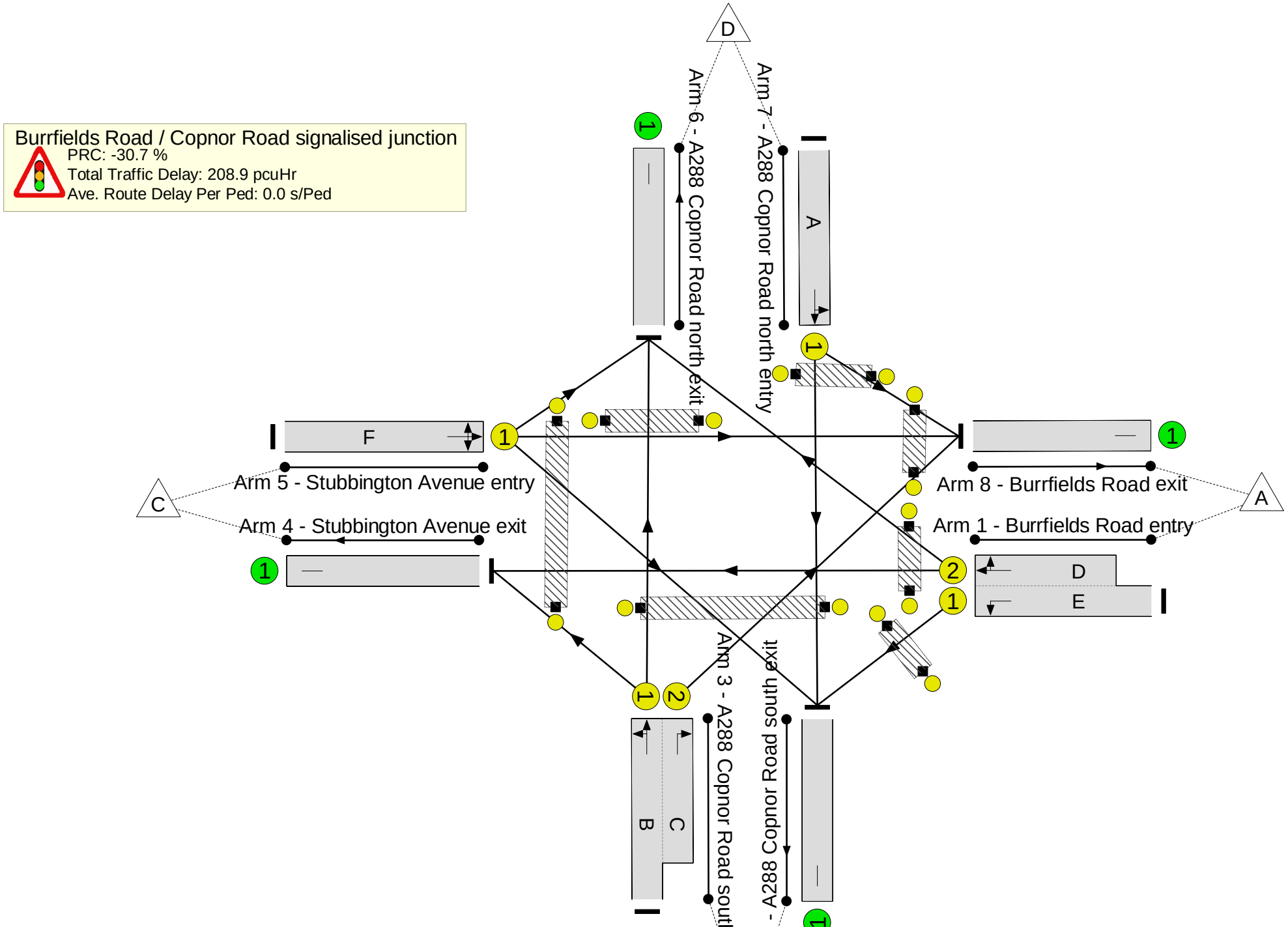
Stage	1	2	3	4	5
Duration	29	97	7	6	6
Change Point	0	34	139	151	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Burrfields Road / Copnor Road signalised junction
PRC: -30.7 %
Total Traffic Delay: 208.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A288 Copnor Road north exit
Arm 7 - A288 Copnor Road north entry
A
F
Arm 5 - Stubbington Avenue entry
C
Arm 4 - Stubbington Avenue exit
Arm 8 - Burrfields Road exit
A
Arm 1 - Burrfields Road entry
D
E
B
C
Arm 3 - A288 Copnor Road south exit
Arm 2 - A288 Copnor Road south entry

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**117.7%**
Burrfields Road / Copnor Road signalised junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**117.7%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	105:9	-	255	1747:1768	1056	24.1%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	612	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	134:98	-	1459	1905:1665	1240	117.7%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	27	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	7	-	84	1902	85	99.4%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	43	-	532	1850	452	117.6%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	869	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	50	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	160	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	127	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%

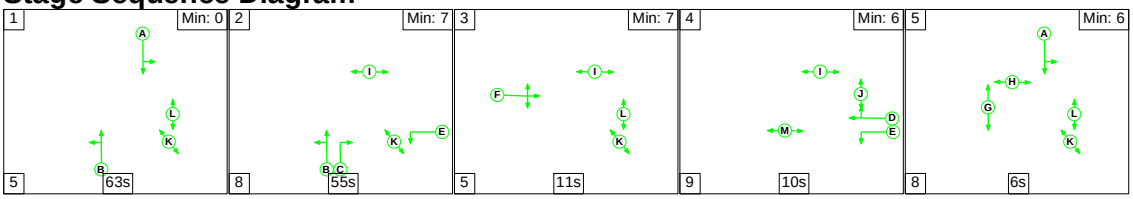
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**48.5**	**160.4**	**0.0**	**208.9**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**48.5**	**160.4**	**0.0**	**208.9**	**-**	**-**	**-**	**-**
1/1+1/2	255	255	-	-	-	1.3	0.2	-	1.5	20.7	4.0	0.2	4.1
2/1	555	555	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	1459	1240	-	-	-	27.5	112.8	-	140.3	346.1	79.2	112.8	192.0
4/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	84	84	-	-	-	2.0	4.5	-	6.5	276.7	4.2	4.5	8.6
6/1	702	702	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	532	452	-	-	-	17.7	43.0	-	60.7	410.7	30.6	43.0	73.6
8/1	751	751	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -30.7 Total Delay for Signalled Lanes (pcuHr): 208.88 Cycle Time (s): 180
PRC Over All Lanes (%): -30.7 Total Delay Over All Lanes(pcuHr): 208.88

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

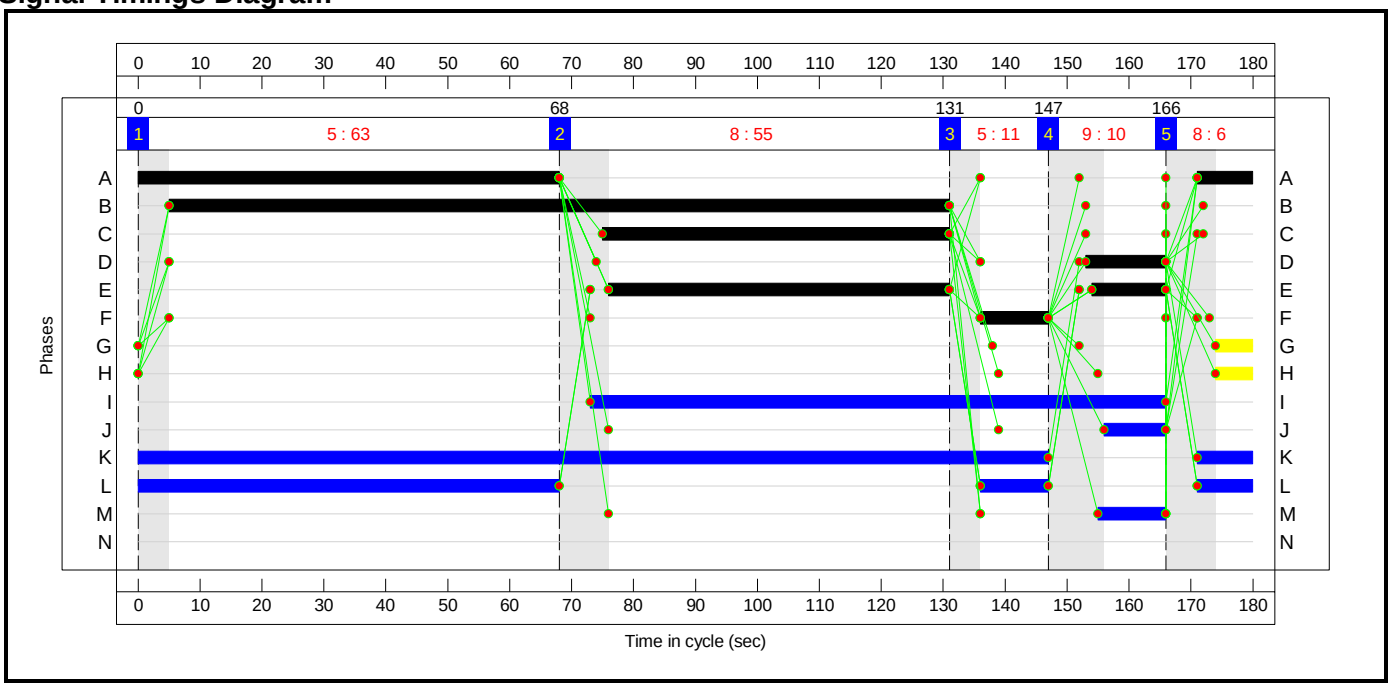
Stage Sequence Diagram



Stage Timings

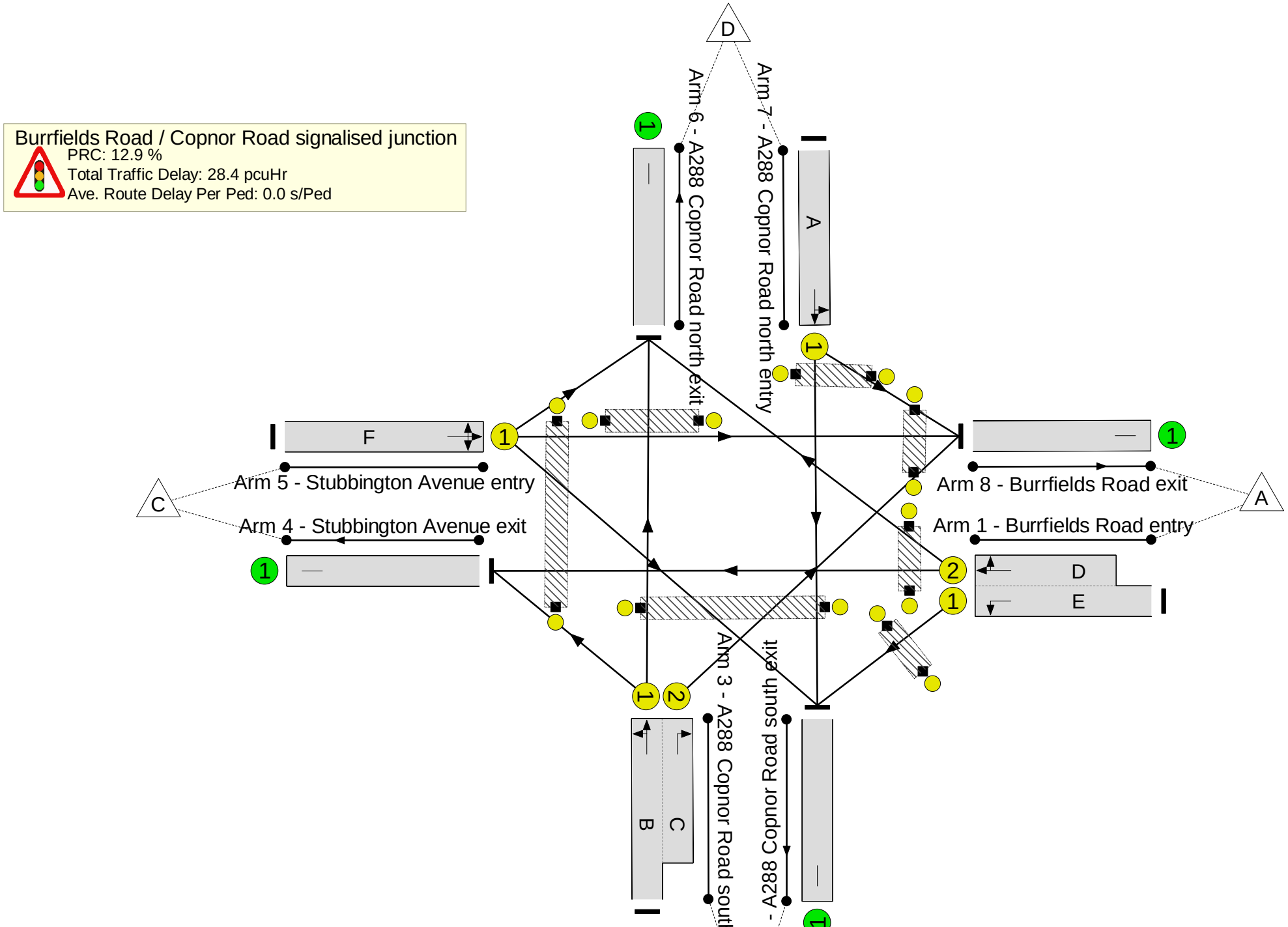
Stage	1	2	3	4	5
Duration	63	55	11	10	6
Change Point	0	68	131	147	166

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Burrfields Road / Copnor Road signalised junction
PRC: 12.9 %
Total Traffic Delay: 28.4 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped
D
Arm 6 - A288 Copnor Road north exit
Arm 7 - A288 Copnor Road north entry
A
F
Arm 5 - Stubbington Avenue entry
C
Arm 4 - Stubbington Avenue exit
Arm 8 - Burrfields Road exit
A
Arm 1 - Burrfields Road entry
D
E
B
C
Arm 3 - A288 Copnor Road south exit
Arm 2 - A288 Copnor Road south entry

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.7%**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.7%**
1/1+1/2	Burrfields Road entry Left Ahead Right	U	N/A	N/A	E D		2:1	67:13	-	596	1747:1804	751	79.4%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	1144	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Left Ahead Right	U	N/A	N/A	B C		1	126:56	-	901	1912:1665	1367	65.9%
4/1	Stubbington Avenue exit	U	N/A	N/A	-		-	-	-	37	Inf	Inf	0.0%
5/1	Stubbington Avenue entry Right Left Ahead	U	N/A	N/A	F		1	11	-	96	1830	122	78.7%
6/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	834	Inf	Inf	0.0%
7/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	A		1	77	-	660	1911	828	79.7%
8/1	Burrfields Road exit	U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		2	88	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	K		1	156	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	M		1	11	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	H		1	6	-	0	-	0	0.0%

Full Input Data And Results

Ped Link: P6	Unnamed Ped Link	-	N/A	-	I		1	93	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	J		1	10	-	0	-	0	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**22.0**	**6.4**	**0.0**	**28.4**	**-**	**-**	**-**	**-**
Burrfields Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**22.0**	**6.4**	**0.0**	**28.4**	**-**	**-**	**-**	**-**
1/1+1/2	596	596	-	-	-	6.9	1.9	-	8.8	53.0	18.7	1.9	20.6
2/1	1144	1144	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	901	901	-	-	-	4.8	1.0	-	5.7	22.9	20.8	1.0	21.7
4/1	37	37	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	96	96	-	-	-	2.2	1.6	-	3.8	144.2	4.7	1.6	6.4
6/1	834	834	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	660	660	-	-	-	8.1	1.9	-	10.0	54.6	28.4	1.9	30.3
8/1	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 12.9 Total Delay for Signalled Lanes (pcuHr): 28.36 Cycle Time (s): 180
PRC Over All Lanes (%): 12.9 Total Delay Over All Lanes(pcuHr): 28.36

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Burrfields Rd_Moneyfield Ave_Dundas Ln.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:27:33

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.7	4.62	0.38	A	0.3	4.28	0.22	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	2.6	9.88	0.71	A	0.2	3.07	0.17	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 5	0.3	3.96	0.24	A	2.5	9.85	0.70	A
	EMM - DS1							
Arm 1	0.4	4.10	0.28	A	0.0	3.99	0.04	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	1.8	7.20	0.63	A	0.2	2.88	0.16	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 5	0.3	3.83	0.24	A	2.6	9.59	0.70	A
	EML - DS2							
Arm 1	1.2	5.95	0.52	A	0.3	4.46	0.23	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	3.5	13.51	0.77	B	0.2	3.09	0.17	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 5	0.3	3.59	0.21	A	1.4	6.66	0.56	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

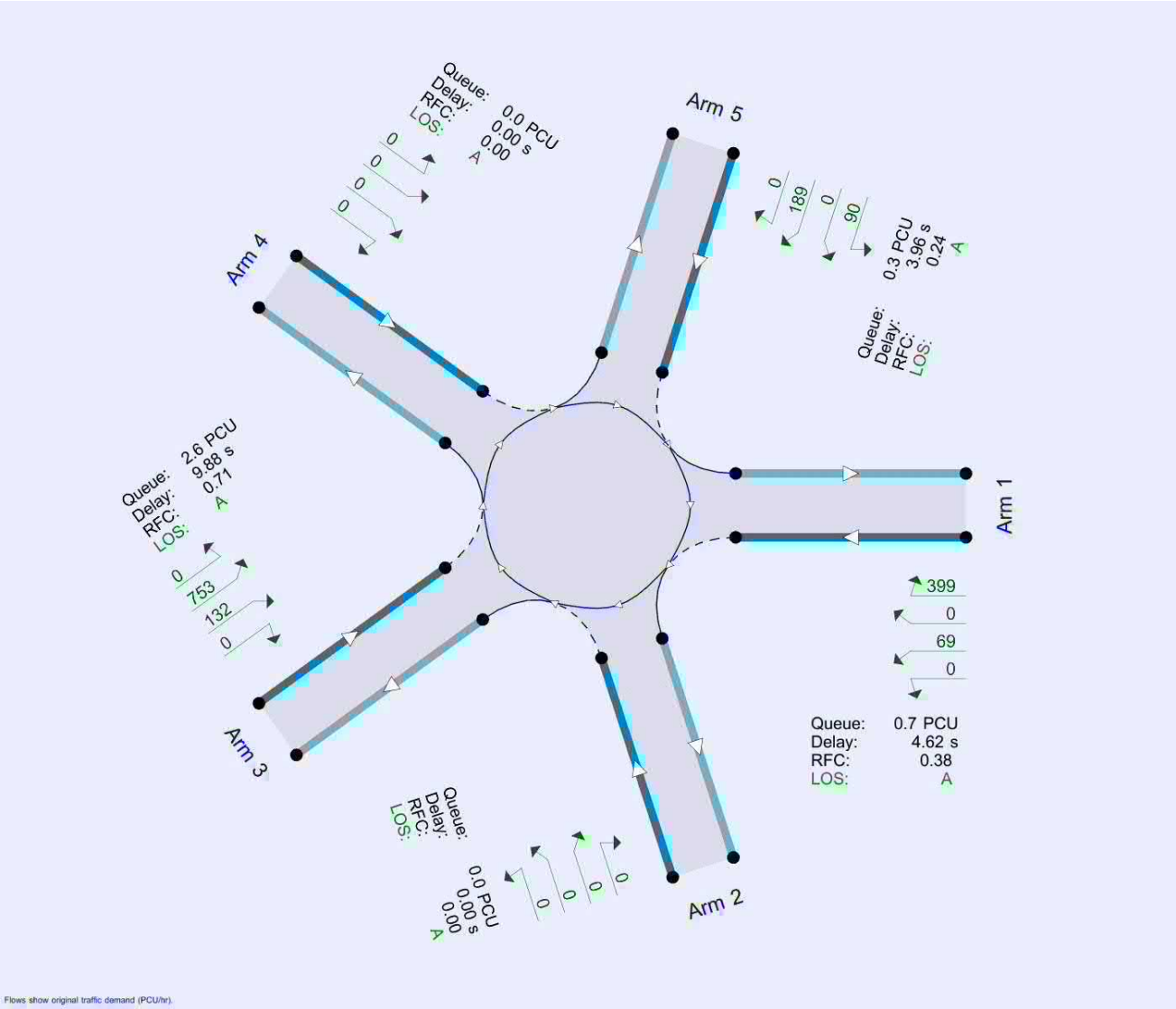
File summary

File Description

Title	Burrfields Road / Moneyfield Avenue / Dundas Lane roundabout
Location	
Site number	
Date	23/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Burrfields Road east	
2	Moneyfield Avenue	
3	Burrfields Road west	
4	Ocean Retail Park	
5	Dundas Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.50	6.50	1.8	15.0	40.0	25.0	
2	2.00	4.40	3.1	10.0	40.0	25.0	
3	3.60	6.30	13.0	20.0	40.0	16.0	
4	3.50	6.20	5.3	8.0	40.0	23.0	
5	4.00	6.80	3.1	10.0	40.0	24.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.602	1498
2	0.451	789
3	0.648	1659
4	0.548	1304
5	0.572	1390

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	468	100.000
2		✓	0	100.000
3		✓	885	100.000
4		✓	0	100.000
5		✓	279	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	69	0	399
	2	0	0	0	0	0
	3	132	0	0	0	753
	4	0	0	0	0	0
	5	90	0	189	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.38	4.62	0.7	A
2	0.00	0.00	0.0	A
3	0.71	9.88	2.6	A
4	0.00	0.00	0.0	A
5	0.24	3.96	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	352	142	1413	0.249	351	0.4	3.724	A
2	0	493	567	0.000	0	0.0	0.000	A
3	666	299	1465	0.455	663	0.9	4.913	A
4	0	962	777	0.000	0	0.0	0.000	A
5	210	99	1333	0.158	209	0.2	3.521	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	421	170	1396	0.301	420	0.5	4.057	A
2	0	590	524	0.000	0	0.0	0.000	A
3	796	358	1427	0.558	794	1.4	6.238	A
4	0	1152	673	0.000	0	0.0	0.000	A
5	251	118	1322	0.190	251	0.3	3.694	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	515	208	1373	0.375	515	0.7	4.609	A
2	0	722	464	0.000	0	0.0	0.000	A
3	974	439	1375	0.709	970	2.6	9.657	A
4	0	1408	532	0.000	0	0.0	0.000	A
5	307	145	1307	0.235	307	0.3	3.957	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	515	208	1373	0.375	515	0.7	4.617	A
2	0	723	463	0.000	0	0.0	0.000	A
3	974	439	1374	0.709	974	2.6	9.885	A
4	0	1414	530	0.000	0	0.0	0.000	A
5	307	145	1307	0.235	307	0.3	3.960	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	421	170	1396	0.301	421	0.5	4.067	A
2	0	592	523	0.000	0	0.0	0.000	A
3	796	359	1426	0.558	800	1.4	6.377	A
4	0	1160	669	0.000	0	0.0	0.000	A
5	251	119	1322	0.190	251	0.3	3.699	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	352	142	1412	0.249	353	0.4	3.740	A
2	0	495	566	0.000	0	0.0	0.000	A
3	666	301	1464	0.455	668	0.9	4.988	A
4	0	969	773	0.000	0	0.0	0.000	A
5	210	100	1333	0.158	210	0.2	3.529	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	230	100.000
2		✓	0	100.000
3		✓	239	100.000
4		✓	0	100.000
5		✓	855	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	83	0	147
	2	0	0	0	0	0
	3	75	0	0	0	164
	4	0	0	0	0	0
	5	371	0	484	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.22	4.28	0.3	A
2	0.00	0.00	0.0	A
3	0.17	3.07	0.2	A
4	0.00	0.00	0.0	A
5	0.70	9.85	2.5	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	173	362	1280	0.135	172	0.2	3.573	A
2	0	535	549	0.000	0	0.0	0.000	A
3	180	110	1588	0.113	179	0.1	2.810	A
4	0	290	1146	0.000	0	0.0	0.000	A
5	644	56	1358	0.474	640	1.0	5.486	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	207	434	1237	0.167	207	0.2	3.844	A
2	0	641	501	0.000	0	0.0	0.000	A
3	215	132	1574	0.137	215	0.2	2.913	A
4	0	347	1114	0.000	0	0.0	0.000	A
5	769	67	1351	0.569	767	1.4	6.754	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	253	530	1179	0.215	253	0.3	4.276	A
2	0	783	436	0.000	0	0.0	0.000	A
3	263	162	1554	0.169	263	0.2	3.066	A
4	0	425	1072	0.000	0	0.0	0.000	A
5	941	83	1343	0.701	937	2.5	9.658	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	253	533	1177	0.215	253	0.3	4.284	A
2	0	786	435	0.000	0	0.0	0.000	A
3	263	162	1554	0.169	263	0.2	3.066	A
4	0	425	1071	0.000	0	0.0	0.000	A
5	941	83	1343	0.701	941	2.5	9.850	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	207	438	1235	0.167	207	0.2	3.855	A
2	0	645	499	0.000	0	0.0	0.000	A
3	215	132	1573	0.137	215	0.2	2.917	A
4	0	347	1114	0.000	0	0.0	0.000	A
5	769	67	1351	0.569	773	1.5	6.893	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	173	365	1278	0.135	173	0.2	3.586	A
2	0	539	547	0.000	0	0.0	0.000	A
3	180	111	1587	0.113	180	0.1	2.813	A
4	0	291	1145	0.000	0	0.0	0.000	A
5	644	57	1358	0.474	646	1.0	5.577	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	348	100.000
2		✓	0	100.000
3		✓	847	100.000
4		✓	0	100.000
5		✓	294	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	100	0	248
	2	0	0	0	0	0
	3	52	0	0	0	795
	4	0	0	0	0	0
	5	70	0	224	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	4.10	0.4	A
2	0.00	0.00	0.0	A
3	0.63	7.20	1.8	A
4	0.00	0.00	0.0	A
5	0.24	3.83	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	262	168	1397	0.188	261	0.3	3.482	A
2	0	429	596	0.000	0	0.0	0.000	A
3	638	186	1539	0.414	635	0.8	4.366	A
4	0	821	855	0.000	0	0.0	0.000	A
5	221	39	1368	0.162	220	0.2	3.450	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	313	201	1377	0.227	313	0.3	3.720	A
2	0	514	558	0.000	0	0.0	0.000	A
3	761	223	1515	0.503	760	1.1	5.240	A
4	0	983	766	0.000	0	0.0	0.000	A
5	264	47	1363	0.194	264	0.3	3.602	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	383	246	1350	0.284	383	0.4	4.093	A
2	0	629	506	0.000	0	0.0	0.000	A
3	933	273	1482	0.629	930	1.8	7.126	A
4	0	1202	645	0.000	0	0.0	0.000	A
5	324	57	1357	0.238	323	0.3	3.830	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	383	247	1350	0.284	383	0.4	4.096	A
2	0	630	506	0.000	0	0.0	0.000	A
3	933	273	1482	0.629	932	1.8	7.202	A
4	0	1206	644	0.000	0	0.0	0.000	A
5	324	57	1357	0.239	324	0.3	3.830	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	313	202	1377	0.227	313	0.3	3.727	A
2	0	515	557	0.000	0	0.0	0.000	A
3	761	223	1514	0.503	764	1.1	5.301	A
4	0	988	763	0.000	0	0.0	0.000	A
5	264	47	1363	0.194	265	0.3	3.605	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	262	169	1396	0.188	262	0.3	3.491	A
2	0	431	595	0.000	0	0.0	0.000	A
3	638	187	1538	0.415	639	0.8	4.413	A
4	0	826	852	0.000	0	0.0	0.000	A
5	221	39	1368	0.162	222	0.2	3.458	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	8.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	38	100.000
2		✓	0	100.000
3		✓	234	100.000
4		✓	0	100.000
5		✓	888	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	0	38
	2	0	0	0	0	0
	3	0	0	0	0	234
	4	0	0	0	0	0
	5	186	0	702	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.04	3.99	0.0	A
2	0.00	0.00	0.0	A
3	0.16	2.88	0.2	A
4	0.00	0.00	0.0	A
5	0.70	9.59	2.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	525	1182	0.024	28	0.0	3.432	A
2	0	554	540	0.000	0	0.0	0.000	A
3	176	28	1641	0.107	176	0.1	2.703	A
4	0	204	1192	0.000	0	0.0	0.000	A
5	669	0	1390	0.481	665	1.0	5.434	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	34	630	1119	0.031	34	0.0	3.649	A
2	0	664	490	0.000	0	0.0	0.000	A
3	210	34	1637	0.129	210	0.2	2.775	A
4	0	244	1170	0.000	0	0.0	0.000	A
5	798	0	1390	0.574	796	1.5	6.653	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	42	770	1035	0.040	42	0.0	3.987	A
2	0	811	424	0.000	0	0.0	0.000	A
3	258	42	1632	0.158	257	0.2	2.880	A
4	0	299	1140	0.000	0	0.0	0.000	A
5	978	0	1390	0.703	973	2.5	9.411	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	42	773	1033	0.041	42	0.0	3.995	A
2	0	815	422	0.000	0	0.0	0.000	A
3	258	42	1632	0.158	258	0.2	2.880	A
4	0	299	1140	0.000	0	0.0	0.000	A
5	978	0	1390	0.703	978	2.6	9.593	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	34	634	1116	0.031	34	0.0	3.661	A
2	0	669	488	0.000	0	0.0	0.000	A
3	210	34	1637	0.129	211	0.2	2.778	A
4	0	245	1170	0.000	0	0.0	0.000	A
5	798	0	1390	0.574	803	1.5	6.790	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	530	1179	0.024	29	0.0	3.444	A
2	0	559	538	0.000	0	0.0	0.000	A
3	176	29	1641	0.107	176	0.1	2.706	A
4	0	205	1192	0.000	0	0.0	0.000	A
5	669	0	1390	0.481	670	1.0	5.518	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	643	100.000
2		✓	0	100.000
3		✓	868	100.000
4		✓	0	100.000
5		✓	261	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	66	0	577
	2	0	0	0	0	0
	3	2	0	0	0	866
	4	0	0	0	0	0
	5	72	0	189	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.52	5.95	1.2	A
2	0.00	0.00	0.0	A
3	0.77	13.51	3.5	B
4	0.00	0.00	0.0	A
5	0.21	3.59	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	484	142	1413	0.343	482	0.6	4.243	A
2	0	624	508	0.000	0	0.0	0.000	A
3	653	432	1379	0.474	650	1.0	5.401	A
4	0	1082	711	0.000	0	0.0	0.000	A
5	196	1	1389	0.141	196	0.2	3.317	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	578	170	1396	0.414	577	0.8	4.832	A
2	0	747	453	0.000	0	0.0	0.000	A
3	780	518	1323	0.590	778	1.6	7.232	A
4	0	1296	594	0.000	0	0.0	0.000	A
5	235	2	1389	0.169	234	0.2	3.429	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	708	208	1373	0.516	706	1.2	5.928	A
2	0	914	377	0.000	0	0.0	0.000	A
3	956	634	1248	0.766	948	3.4	12.902	B
4	0	1582	437	0.000	0	0.0	0.000	A
5	287	2	1389	0.207	287	0.3	3.594	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	708	208	1373	0.516	708	1.2	5.955	A
2	0	916	377	0.000	0	0.0	0.000	A
3	956	635	1247	0.766	955	3.5	13.514	B
4	0	1591	433	0.000	0	0.0	0.000	A
5	287	2	1389	0.207	287	0.3	3.594	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	578	170	1396	0.414	580	0.8	4.860	A
2	0	750	452	0.000	0	0.0	0.000	A
3	780	520	1322	0.590	788	1.6	7.514	A
4	0	1308	587	0.000	0	0.0	0.000	A
5	235	2	1389	0.169	235	0.2	3.434	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	484	142	1412	0.343	485	0.6	4.274	A
2	0	627	507	0.000	0	0.0	0.000	A
3	653	435	1377	0.475	656	1.0	5.509	A
4	0	1091	706	0.000	0	0.0	0.000	A
5	196	2	1389	0.141	197	0.2	3.323	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	241	100.000
2		✓	0	100.000
3		✓	238	100.000
4		✓	0	100.000
5		✓	700	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	76	0	165
	2	0	0	0	0	0
	3	40	0	0	0	198
	4	0	0	0	0	0
	5	180	0	520	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.23	4.46	0.3	A
2	0.00	0.00	0.0	A
3	0.17	3.09	0.2	A
4	0.00	0.00	0.0	A
5	0.56	6.66	1.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	181	389	1264	0.144	181	0.2	3.655	A
2	0	570	533	0.000	0	0.0	0.000	A
3	179	124	1579	0.113	179	0.1	2.826	A
4	0	302	1139	0.000	0	0.0	0.000	A
5	527	30	1373	0.384	524	0.7	4.652	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	217	467	1217	0.178	216	0.2	3.956	A
2	0	683	482	0.000	0	0.0	0.000	A
3	214	148	1563	0.137	214	0.2	2.934	A
4	0	362	1106	0.000	0	0.0	0.000	A
5	629	36	1369	0.460	628	0.9	5.337	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	265	571	1154	0.230	265	0.3	4.450	A
2	0	836	413	0.000	0	0.0	0.000	A
3	262	181	1541	0.170	262	0.2	3.094	A
4	0	443	1061	0.000	0	0.0	0.000	A
5	771	44	1365	0.565	769	1.4	6.623	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	265	572	1154	0.230	265	0.3	4.458	A
2	0	838	412	0.000	0	0.0	0.000	A
3	262	182	1541	0.170	262	0.2	3.094	A
4	0	444	1061	0.000	0	0.0	0.000	A
5	771	44	1365	0.565	771	1.4	6.665	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	217	469	1216	0.178	217	0.2	3.965	A
2	0	686	480	0.000	0	0.0	0.000	A
3	214	149	1563	0.137	214	0.2	2.936	A
4	0	363	1105	0.000	0	0.0	0.000	A
5	629	36	1369	0.460	631	0.9	5.377	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	181	392	1262	0.144	182	0.2	3.665	A
2	0	574	531	0.000	0	0.0	0.000	A
3	179	124	1578	0.114	179	0.1	2.832	A
4	0	304	1138	0.000	0	0.0	0.000	A
5	527	30	1373	0.384	528	0.7	4.695	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Hambledon Rd_A3 Maurepas Way.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:46:32

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	1.0	2.56	0.48	A	1.5	3.14	0.58	A
Arm 2	0.8	3.33	0.41	A	0.8	3.52	0.43	A
Arm 3	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 4	0.5	1.70	0.31	A	0.8	2.07	0.42	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

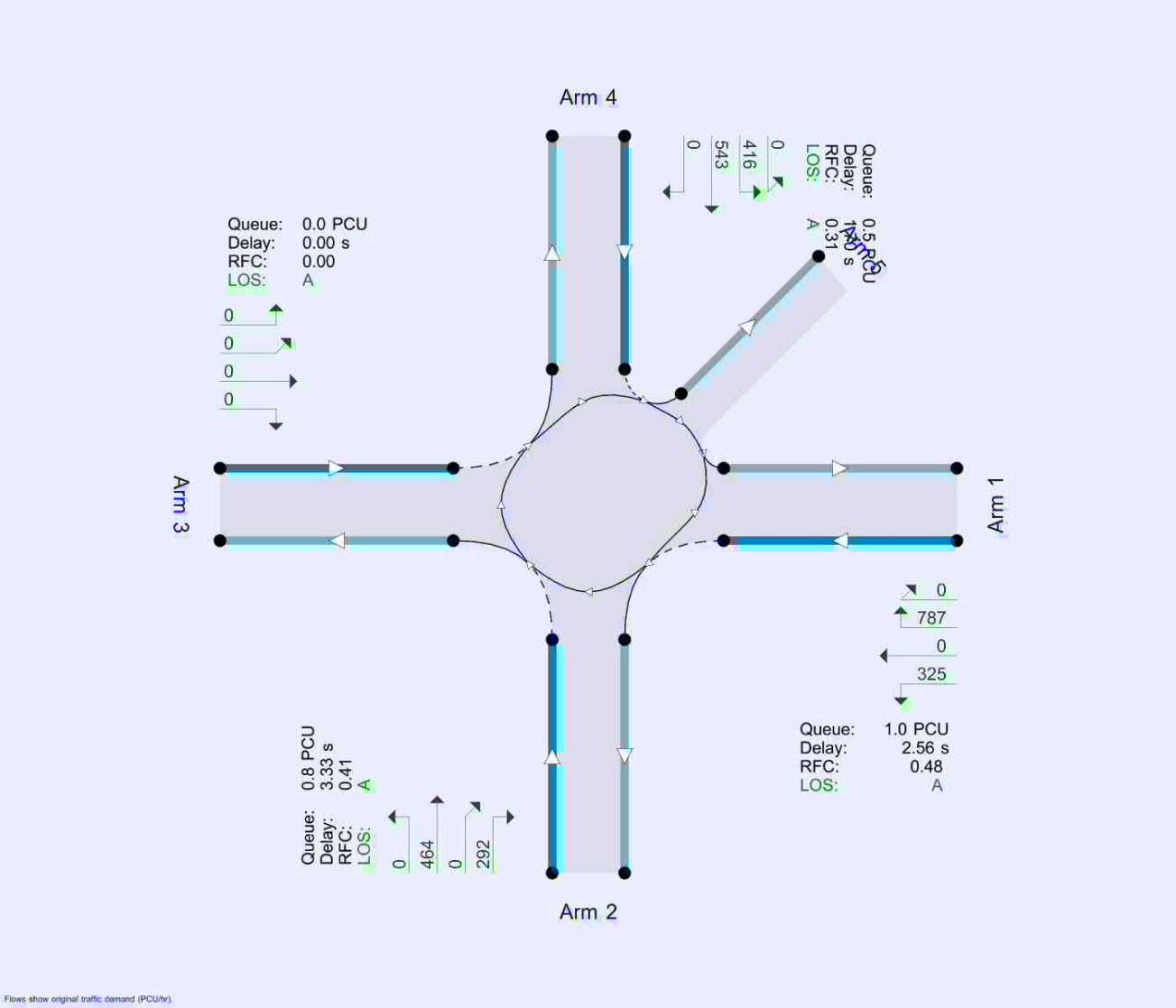
File summary

File Description

Title	Hambledon Road / A3 Maurepas Way Roundabout
Location	
Site number	
Date	06/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	2.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A3 Maurepas Way east	
2	A3 Maurepas Way south	
3	Houghton Avenue	
4	Hambledon Road	
5	Retail Park	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	10.50	11.00	4.0	45.0	65.0	20.0	
2	7.00	10.00	17.0	20.0	65.0	19.0	
3	3.50	9.00	30.0	25.0	65.0	20.0	
4	11.50	12.00	4.0	40.0	65.0	15.0	
5							✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.841	3493
2	0.721	2805
3	0.624	2205
4	0.906	3868
5		

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1312	100.000
2		✓	756	100.000
3		✓	0	100.000
4		✓	959	100.000
5				

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	200	325	0	787	0
	2	292	0	0	464	0
	3	0	0	0	0	0
	4	416	543	0	0	0
	5	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.48	2.56	1.0	A
2	0.41	3.33	0.8	A
3	0.00	0.00	0.0	A
4	0.31	1.70	0.5	A
5				

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	988	408	3150	0.314	986	0.5	1.827	A
2	569	742	2270	0.251	568	0.4	2.324	A
3	0	1309	1388	0.000	0	0.0	0.000	A
4	722	370	3533	0.204	721	0.3	1.408	A
5		1090						

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1179	488	3083	0.383	1179	0.7	2.080	A
2	680	887	2165	0.314	679	0.5	2.664	A
3	0	1566	1228	0.000	0	0.0	0.000	A
4	862	442	3467	0.249	862	0.4	1.519	A
5		1304						

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1445	598	2991	0.483	1443	1.0	2.556	A
2	832	1086	2022	0.412	831	0.8	3.323	A
3	0	1917	1008	0.000	0	0.0	0.000	A
4	1056	541	3377	0.313	1055	0.5	1.705	A
5		1596						

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1445	598	2991	0.483	1445	1.0	2.560	A
2	832	1087	2021	0.412	832	0.8	3.330	A
3	0	1919	1007	0.000	0	0.0	0.000	A
4	1056	542	3377	0.313	1056	0.5	1.705	A
5		1598						

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1179	488	3083	0.383	1181	0.7	2.083	A
2	680	888	2164	0.314	681	0.5	2.670	A
3	0	1569	1226	0.000	0	0.0	0.000	A
4	862	443	3466	0.249	863	0.4	1.522	A
5		1306						

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	988	409	3149	0.314	988	0.5	1.835	A
2	569	744	2269	0.251	570	0.4	2.333	A
3	0	1313	1385	0.000	0	0.0	0.000	A
4	722	371	3532	0.204	722	0.3	1.409	A
5		1093						

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	2.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1579	100.000
2		✓	774	100.000
3		✓	0	100.000
4		✓	1257	100.000
5				

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	311	535	0	733	0
	2	266	0	0	508	0
	3	0	0	0	0	0
	4	722	535	0	0	0
	5	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.58	3.14	1.5	A
2	0.43	3.52	0.8	A
3	0.00	0.00	0.0	A
4	0.42	2.07	0.8	A
5				

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1189	402	3155	0.377	1186	0.7	2.008	A
2	583	784	2239	0.260	581	0.4	2.386	A
3	0	1365	1353	0.000	0	0.0	0.000	A
4	946	433	3475	0.272	945	0.4	1.565	A
5		1378						

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1419	481	3089	0.460	1418	0.9	2.369	A
2	696	938	2129	0.327	695	0.5	2.761	A
3	0	1633	1186	0.000	0	0.0	0.000	A
4	1130	518	3398	0.333	1129	0.5	1.745	A
5		1648						

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1739	589	2998	0.580	1736	1.5	3.132	A
2	852	1148	1977	0.431	851	0.8	3.514	A
3	0	1999	957	0.000	0	0.0	0.000	A
4	1384	634	3293	0.420	1383	0.8	2.072	A
5		2017						

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1739	589	2998	0.580	1738	1.5	3.143	A
2	852	1149	1976	0.431	852	0.8	3.523	A
3	0	2002	956	0.000	0	0.0	0.000	A
4	1384	635	3292	0.420	1384	0.8	2.075	A
5		2019						

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1419	481	3089	0.460	1422	0.9	2.378	A
2	696	940	2127	0.327	697	0.5	2.771	A
3	0	1637	1183	0.000	0	0.0	0.000	A
4	1130	520	3397	0.333	1131	0.5	1.750	A
5		1651						

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1189	403	3154	0.377	1190	0.7	2.016	A
2	583	787	2238	0.260	583	0.4	2.396	A
3	0	1370	1350	0.000	0	0.0	0.000	A
4	946	435	3474	0.272	947	0.4	1.569	A
5		1382						

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Hambledon Rd_Milton Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:17:36

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	4.0	25.39	0.80	D	7.7	59.94	0.90	F
Arm 2	1.5	3.72	0.58	A	1.3	3.35	0.54	A
Arm 3	0.5	3.51	0.32	A	1.6	6.91	0.60	A
Arm 4	0.5	3.39	0.31	A	1.1	5.70	0.50	A
	EMM - DS1							
Arm 1	1.2	10.63	0.52	B	0.8	9.07	0.44	A
Arm 2	1.0	3.01	0.47	A	0.9	2.82	0.45	A
Arm 3	0.4	3.06	0.28	A	1.3	5.39	0.54	A
Arm 4	0.4	3.06	0.29	A	0.3	3.30	0.21	A
	EML - DS2							
Arm 1	1.2	10.91	0.53	B	0.9	9.14	0.44	A
Arm 2	1.0	2.99	0.46	A	0.9	2.80	0.45	A
Arm 3	0.4	3.05	0.28	A	1.2	5.34	0.53	A
Arm 4	0.4	3.07	0.29	A	0.3	3.30	0.21	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

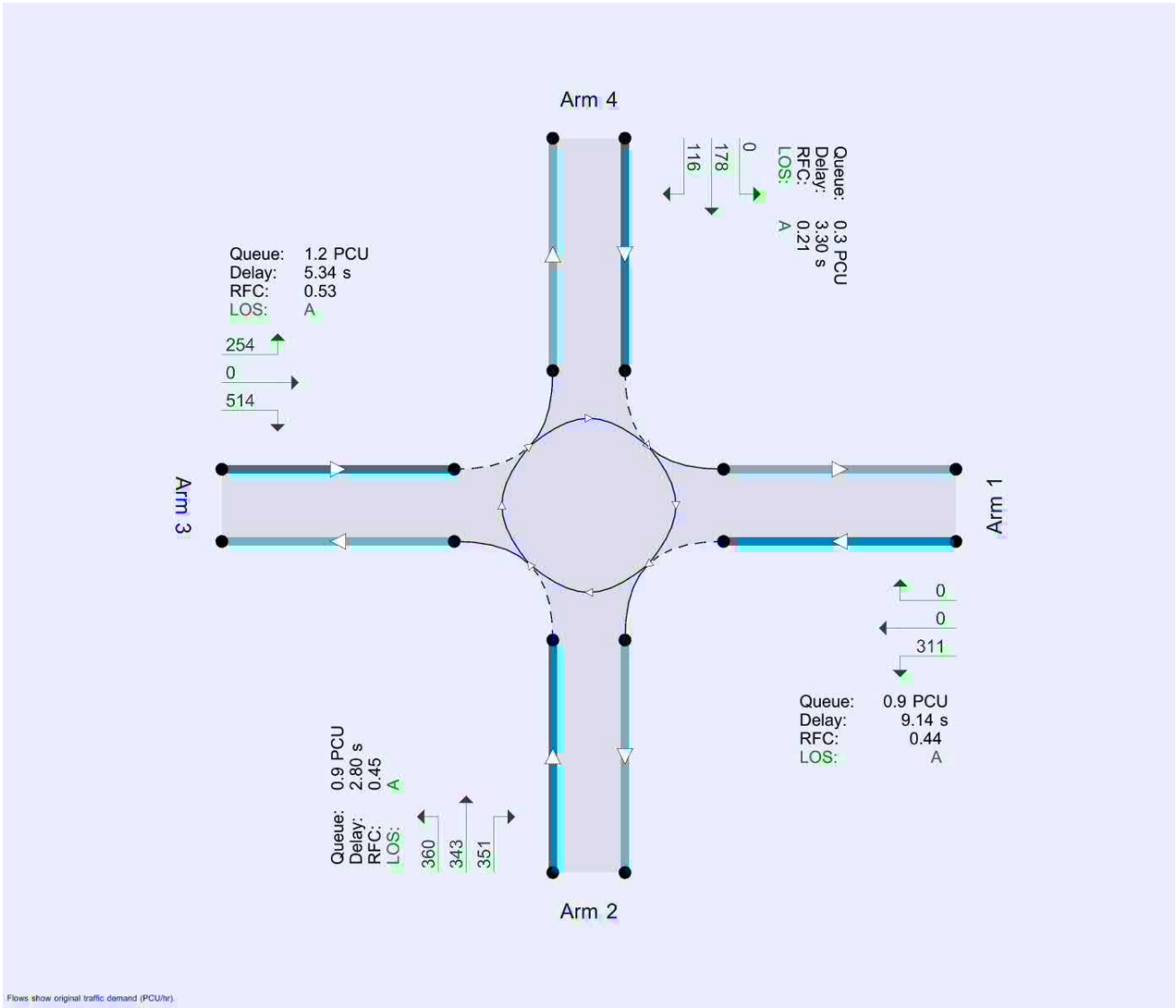
File summary

File Description

Title	Hambledon Road / Milton Road Roundabout
Location	
Site number	
Date	06/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Milton Road	
2	Hambledon Road south	
3	Elettra Avenue	
4	Hambledon Road north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.40	4.20	8.0	25.0	47.0	21.0	
2	7.20	8.20	60.0	50.0	47.0	14.0	
3	5.00	7.60	17.5	20.0	47.0	18.0	
4	3.70	7.80	80.0	25.0	47.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.548	1264
2	0.835	2679
3	0.717	2134
4	0.722	2210

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	542	100.000
2		✓	1314	100.000
3		✓	477	100.000
4		✓	482	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	542	0	0
	2	276	0	704	334
	3	0	369	0	108
	4	0	299	183	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.80	25.39	4.0	D
2	0.58	3.72	1.5	A
3	0.32	3.51	0.5	A
4	0.31	3.39	0.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	408	639	913	0.447	405	0.9	7.733	A
2	989	137	2564	0.386	986	0.7	2.506	A
3	359	458	1806	0.199	358	0.3	2.734	A
4	363	484	1860	0.195	362	0.3	2.642	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	487	764	844	0.577	485	1.5	10.943	B
2	1181	164	2542	0.465	1180	0.9	2.909	A
3	429	548	1742	0.246	428	0.4	3.015	A
4	433	579	1791	0.242	433	0.3	2.915	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	597	936	750	0.795	587	3.8	23.086	C
2	1447	201	2511	0.576	1445	1.5	3.705	A
3	525	671	1654	0.318	525	0.5	3.505	A
4	531	709	1698	0.313	530	0.5	3.389	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	597	937	750	0.796	596	4.0	25.394	D
2	1447	201	2511	0.576	1447	1.5	3.721	A
3	525	672	1653	0.318	525	0.5	3.510	A
4	531	710	1697	0.313	531	0.5	3.394	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	487	766	843	0.578	497	1.5	11.742	B
2	1181	165	2541	0.465	1183	1.0	2.922	A
3	429	549	1741	0.246	429	0.4	3.023	A
4	433	581	1790	0.242	434	0.4	2.919	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	408	641	912	0.447	411	0.9	7.941	A
2	989	138	2564	0.386	990	0.7	2.518	A
3	359	460	1805	0.199	359	0.3	2.740	A
4	363	486	1859	0.195	363	0.3	2.649	A

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	12.95	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	451	100.000
2		✓	1253	100.000
3		✓	773	100.000
4		✓	620	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	437	0	14
	2	485	0	367	401
	3	0	562	0	211
	4	0	507	113	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.90	59.94	7.7	F
2	0.54	3.35	1.3	A
3	0.60	6.91	1.6	A
4	0.50	5.70	1.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	340	886	777	0.437	336	0.8	8.910	A
2	943	95	2599	0.363	941	0.6	2.385	A
3	582	676	1650	0.353	580	0.6	3.692	A
4	467	786	1643	0.284	465	0.4	3.359	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	405	1061	682	0.595	403	1.6	14.043	B
2	1126	114	2584	0.436	1126	0.8	2.714	A
3	695	808	1555	0.447	694	0.9	4.593	A
4	557	940	1531	0.364	557	0.6	4.060	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	497	1298	552	0.900	477	6.5	44.588	E
2	1380	139	2563	0.538	1378	1.3	3.337	A
3	851	989	1425	0.597	848	1.6	6.828	A
4	683	1150	1379	0.495	681	1.1	5.655	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	497	1301	550	0.903	492	7.7	59.938	F
2	1380	140	2562	0.538	1380	1.3	3.347	A
3	851	991	1424	0.598	851	1.6	6.907	A
4	683	1153	1377	0.496	683	1.1	5.698	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	405	1066	679	0.597	429	1.7	17.283	C
2	1126	115	2583	0.436	1128	0.9	2.725	A
3	695	811	1553	0.447	698	0.9	4.647	A
4	557	944	1528	0.365	559	0.6	4.095	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	340	892	775	0.438	343	0.9	9.240	A
2	943	96	2599	0.363	944	0.6	2.396	A
3	582	678	1648	0.353	583	0.6	3.724	A
4	467	789	1640	0.285	468	0.4	3.382	A

EMM - DS1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	369	100.000
2		✓	1050	100.000
3		✓	464	100.000
4		✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	369	0	0
	2	169	0	633	248
	3	0	329	0	135
	4	0	249	225	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.52	10.63	1.2	B
2	0.47	3.01	1.0	A
3	0.28	3.06	0.4	A
4	0.29	3.06	0.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	278	603	933	0.298	276	0.5	6.010	A
2	790	169	2538	0.311	789	0.5	2.262	A
3	349	313	1910	0.183	348	0.2	2.535	A
4	357	374	1940	0.184	356	0.2	2.499	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	332	721	868	0.382	331	0.7	7.360	A
2	944	202	2510	0.376	943	0.7	2.525	A
3	417	375	1866	0.224	417	0.3	2.733	A
4	426	447	1887	0.226	426	0.3	2.710	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	406	883	779	0.521	404	1.2	10.507	B
2	1156	247	2472	0.468	1155	1.0	3.003	A
3	511	459	1806	0.283	510	0.4	3.058	A
4	522	548	1814	0.288	521	0.4	3.063	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	406	884	779	0.522	406	1.2	10.626	B
2	1156	248	2472	0.468	1156	1.0	3.008	A
3	511	459	1805	0.283	511	0.4	3.058	A
4	522	548	1814	0.288	522	0.4	3.064	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	332	723	867	0.383	334	0.7	7.451	A
2	944	203	2510	0.376	945	0.7	2.534	A
3	417	375	1865	0.224	418	0.3	2.737	A
4	426	448	1886	0.226	427	0.3	2.715	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	278	605	932	0.298	279	0.5	6.073	A
2	790	170	2537	0.312	791	0.5	2.270	A
3	349	314	1909	0.183	350	0.2	2.539	A
4	357	375	1939	0.184	357	0.2	2.503	A

EMM - DS1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	309	100.000
2		✓	1060	100.000
3		✓	769	100.000
4		✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	309	0	0
	2	352	0	360	348
	3	0	516	0	253
	4	0	174	116	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.44	9.07	0.8	A
2	0.45	2.82	0.9	A
3	0.54	5.39	1.3	A
4	0.21	3.30	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	233	605	932	0.250	231	0.4	5.640	A
2	798	87	2606	0.306	796	0.5	2.186	A
3	579	526	1757	0.329	577	0.5	3.348	A
4	218	651	1739	0.126	218	0.2	2.600	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	278	724	867	0.321	277	0.5	6.711	A
2	953	104	2592	0.368	952	0.6	2.415	A
3	691	629	1684	0.411	690	0.8	3.984	A
4	261	780	1647	0.158	261	0.2	2.856	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	340	886	778	0.437	339	0.8	8.996	A
2	1167	128	2572	0.454	1166	0.9	2.816	A
3	847	770	1582	0.535	845	1.3	5.354	A
4	319	954	1521	0.210	319	0.3	3.294	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	340	887	777	0.438	340	0.8	9.066	A
2	1167	128	2572	0.454	1167	0.9	2.817	A
3	847	771	1582	0.535	847	1.3	5.386	A
4	319	956	1520	0.210	319	0.3	3.297	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	278	726	865	0.321	279	0.5	6.769	A
2	953	104	2592	0.368	954	0.6	2.421	A
3	691	630	1683	0.411	693	0.8	4.011	A
4	261	782	1645	0.158	261	0.2	2.861	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	233	608	930	0.250	233	0.4	5.687	A
2	798	87	2606	0.306	799	0.5	2.193	A
3	579	527	1756	0.330	580	0.5	3.370	A
4	218	654	1737	0.126	219	0.2	2.607	A

EML - DS2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	375	100.000
2		✓	1044	100.000
3		✓	465	100.000
4		✓	478	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	375	0	0
	2	166	0	632	246
	3	0	330	0	135
	4	0	253	225	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.53	10.91	1.2	B
2	0.46	2.99	1.0	A
3	0.28	3.05	0.4	A
4	0.29	3.07	0.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	282	607	931	0.303	280	0.5	6.071	A
2	786	169	2538	0.310	784	0.5	2.256	A
3	350	309	1912	0.183	349	0.2	2.532	A
4	360	372	1941	0.185	359	0.2	2.502	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	337	726	865	0.390	336	0.7	7.470	A
2	939	202	2510	0.374	938	0.7	2.517	A
3	418	370	1869	0.224	418	0.3	2.728	A
4	430	446	1888	0.228	429	0.3	2.714	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	413	889	776	0.532	411	1.2	10.775	B
2	1149	247	2472	0.465	1148	1.0	2.988	A
3	512	453	1809	0.283	512	0.4	3.051	A
4	526	546	1816	0.290	526	0.4	3.070	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	413	890	776	0.532	413	1.2	10.908	B
2	1149	248	2472	0.465	1149	1.0	2.993	A
3	512	454	1809	0.283	512	0.4	3.052	A
4	526	546	1815	0.290	526	0.4	3.071	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	337	727	865	0.390	339	0.7	7.563	A
2	939	203	2510	0.374	940	0.7	2.523	A
3	418	371	1868	0.224	418	0.3	2.733	A
4	430	446	1887	0.228	430	0.3	2.719	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	282	609	930	0.304	283	0.5	6.135	A
2	786	170	2537	0.310	787	0.5	2.264	A
3	350	310	1912	0.183	350	0.2	2.538	A
4	360	374	1940	0.186	360	0.3	2.508	A

EML - DS2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	311	100.000
2		✓	1054	100.000
3		✓	768	100.000
4		✓	294	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	311	0	0
	2	351	0	360	343
	3	0	514	0	254
	4	0	178	116	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.44	9.14	0.9	A
2	0.45	2.80	0.9	A
3	0.53	5.34	1.2	A
4	0.21	3.30	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	234	606	931	0.251	233	0.4	5.658	A
2	794	87	2606	0.304	792	0.5	2.180	A
3	578	521	1761	0.328	576	0.5	3.337	A
4	221	649	1741	0.127	221	0.2	2.603	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	280	726	866	0.323	279	0.5	6.742	A
2	948	104	2592	0.366	947	0.6	2.407	A
3	690	623	1687	0.409	690	0.8	3.965	A
4	264	777	1649	0.160	264	0.2	2.859	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	342	888	777	0.441	341	0.9	9.065	A
2	1160	128	2572	0.451	1159	0.9	2.802	A
3	846	763	1587	0.533	844	1.2	5.312	A
4	324	951	1523	0.213	323	0.3	3.300	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	342	890	776	0.441	342	0.9	9.137	A
2	1160	128	2572	0.451	1160	0.9	2.804	A
3	846	764	1587	0.533	846	1.2	5.343	A
4	324	952	1522	0.213	324	0.3	3.303	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	280	728	864	0.323	281	0.5	6.801	A
2	948	104	2592	0.366	949	0.6	2.411	A
3	690	625	1687	0.409	692	0.8	3.991	A
4	264	779	1647	0.160	265	0.2	2.864	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	234	609	930	0.252	235	0.4	5.706	A
2	794	87	2606	0.305	794	0.5	2.186	A
3	578	523	1759	0.329	579	0.5	3.356	A
4	221	652	1739	0.127	222	0.2	2.611	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Hulbert Rd_Frendstaple Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 16:02:12

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	2.8	5.85	0.72	A	12.5	22.63	0.93	C
Arm 2	0.5	6.40	0.31	A	1.7	14.31	0.61	B
Arm 3	2.2	5.18	0.67	A	4.4	10.42	0.80	B
Arm 4	3.2	18.24	0.75	C	2.1	13.48	0.66	B
	EMM - DS1							
Arm 1	3.5	6.93	0.76	A	14.3	25.33	0.94	D
Arm 2	1.5	10.80	0.57	B	3.4	23.30	0.77	C
Arm 3	1.6	4.57	0.59	A	1.3	4.71	0.55	A
Arm 4	3.2	18.12	0.75	C	1.6	9.85	0.59	A
	EML - DS2							
Arm 1	3.4	6.90	0.76	A	14.1	25.05	0.94	D
Arm 2	1.4	10.65	0.57	B	3.4	23.17	0.77	C
Arm 3	1.6	4.59	0.59	A	1.3	4.72	0.55	A
Arm 4	3.2	18.08	0.75	C	1.6	10.01	0.60	B

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

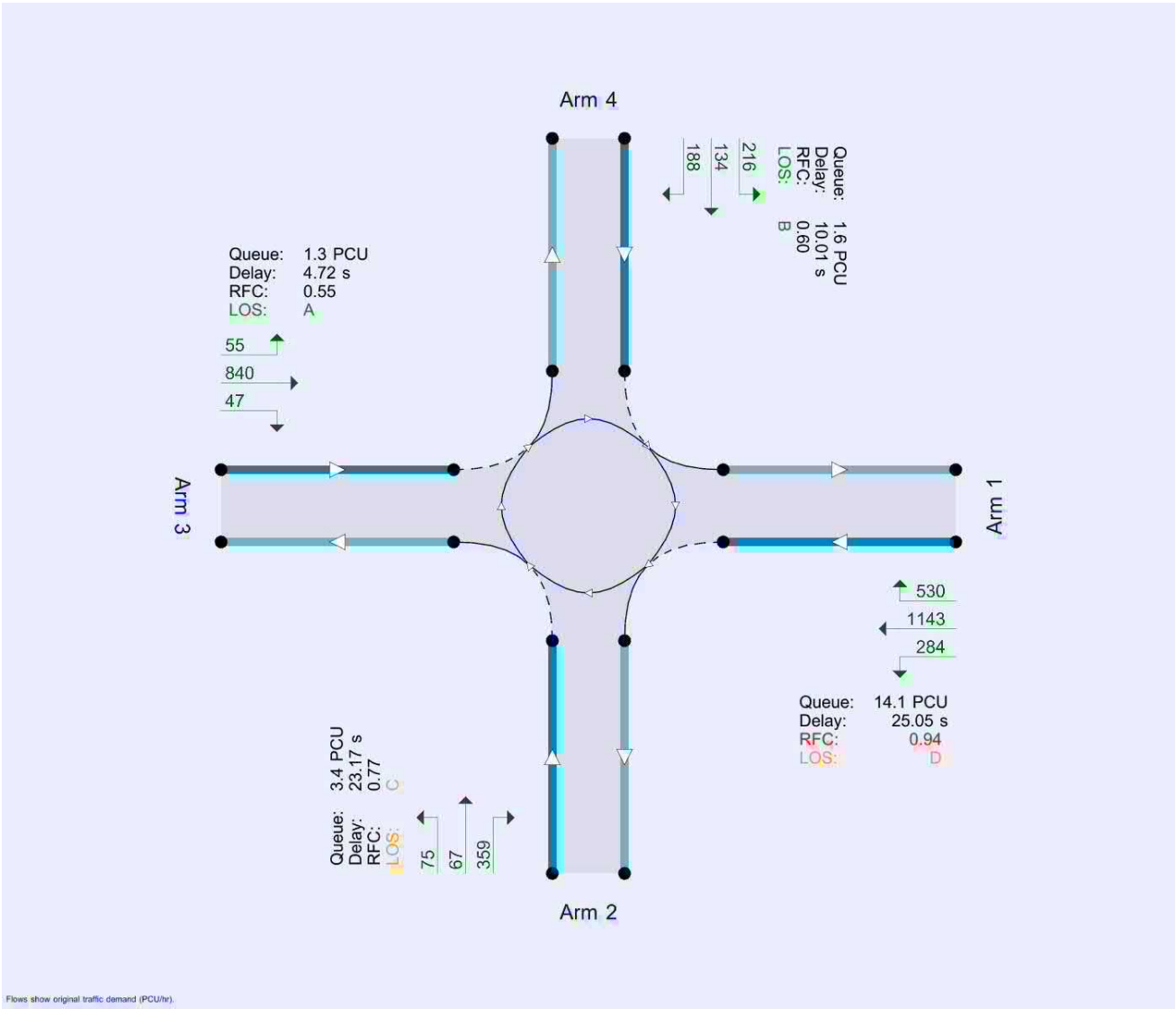
File summary

File Description

Title	Hulbert Road / Frendstaple Road Roundabout
Location	
Site number	
Date	08/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hulbert Road east	
2	Frendstaple Road	
3	Hulbert Road west	
4	Tempest Avenue	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.00	9.70	4.2	30.0	70.0	14.0	
2	3.50	8.00	12.8	30.0	70.0	13.0	
3	7.10	8.00	10.0	30.0	70.0	9.0	
4	3.25	8.00	13.0	15.0	70.0	19.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.658	2560
2	0.544	1830
3	0.664	2574
4	0.508	1684

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1562	100.000
2		✓	250	100.000
3		✓	1380	100.000
4		✓	587	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	66	1279	217
	2	151	0	70	29
	3	1217	102	0	61
	4	463	56	68	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.72	5.85	2.8	A
2	0.31	6.40	0.5	A
3	0.67	5.18	2.2	A
4	0.75	18.24	3.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1176	169	2449	0.480	1172	1.0	3.091	A
2	188	1173	1192	0.158	187	0.2	3.938	A
3	1039	298	2376	0.437	1036	0.8	2.947	A
4	442	1103	1124	0.393	439	0.7	5.762	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	203	2427	0.579	1402	1.5	3.858	A
2	225	1404	1067	0.211	224	0.3	4.699	A
3	1241	356	2337	0.531	1239	1.2	3.602	A
4	528	1320	1013	0.521	526	1.2	8.090	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1720	247	2398	0.717	1715	2.7	5.759	A
2	275	1716	897	0.307	274	0.5	6.357	A
3	1519	436	2284	0.665	1516	2.1	5.128	A
4	646	1615	864	0.748	639	3.0	17.077	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1720	249	2397	0.718	1720	2.8	5.848	A
2	275	1722	894	0.308	275	0.5	6.403	A
3	1519	437	2283	0.665	1519	2.2	5.182	A
4	646	1618	862	0.750	646	3.2	18.241	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1404	205	2425	0.579	1409	1.5	3.917	A
2	225	1412	1062	0.212	226	0.3	4.737	A
3	1241	358	2336	0.531	1244	1.3	3.641	A
4	528	1325	1011	0.522	535	1.2	8.468	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1176	171	2448	0.480	1178	1.0	3.125	A
2	188	1180	1189	0.158	189	0.2	3.962	A
3	1039	299	2375	0.437	1041	0.9	2.972	A
4	442	1108	1121	0.394	444	0.7	5.868	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	16.66	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1914	100.000
2		✓	397	100.000
3		✓	1410	100.000
4		✓	526	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	314	962	638
	2	192	0	153	52
	3	1233	27	0	150
	4	147	109	270	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.93	22.63	12.5	C
2	0.61	14.31	1.7	B
3	0.80	10.42	4.4	B
4	0.66	13.48	2.1	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1441	304	2360	0.611	1434	1.7	4.246	A
2	299	1401	1068	0.280	297	0.4	5.124	A
3	1062	661	2135	0.497	1057	1.1	3.659	A
4	396	1088	1131	0.350	394	0.6	5.353	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1721	364	2321	0.741	1715	3.1	6.480	A
2	357	1676	919	0.388	356	0.7	7.023	A
3	1268	790	2049	0.619	1265	1.8	5.035	A
4	473	1302	1022	0.463	471	0.9	7.173	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2107	444	2268	0.929	2075	11.1	18.097	C
2	437	2030	726	0.602	433	1.6	13.365	B
3	1552	958	1937	0.801	1543	4.2	9.797	A
4	579	1588	877	0.660	575	2.1	12.909	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2107	447	2266	0.930	2102	12.5	22.626	C
2	437	2054	713	0.613	437	1.7	14.311	B
3	1552	969	1930	0.804	1552	4.4	10.424	B
4	579	1598	872	0.664	579	2.1	13.478	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1721	368	2318	0.742	1757	3.3	7.511	A
2	357	1714	898	0.398	361	0.7	7.424	A
3	1268	808	2037	0.622	1278	1.8	5.282	A
4	473	1316	1015	0.466	477	1.0	7.424	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1441	307	2358	0.611	1447	1.7	4.375	A
2	299	1414	1061	0.282	300	0.4	5.210	A
3	1062	667	2131	0.498	1064	1.1	3.725	A
4	396	1096	1127	0.351	397	0.6	5.440	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	8.43	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1660	100.000
2		✓	448	100.000
3		✓	1141	100.000
4		✓	599	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	68	1347	245
	2	313	0	75	60
	3	1018	113	0	10
	4	488	82	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.76	6.93	3.5	A
2	0.57	10.80	1.5	B
3	0.59	4.57	1.6	A
4	0.75	18.12	3.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1250	168	2450	0.510	1245	1.1	3.276	A
2	337	1216	1169	0.289	336	0.4	4.742	A
3	859	463	2266	0.379	856	0.7	2.804	A
4	451	1083	1134	0.398	448	0.7	5.752	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1492	201	2428	0.615	1490	1.7	4.210	A
2	403	1455	1039	0.388	402	0.7	6.207	A
3	1026	554	2205	0.465	1025	0.9	3.350	A
4	538	1296	1025	0.525	537	1.2	8.064	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1828	245	2399	0.762	1821	3.4	6.773	A
2	493	1778	863	0.572	490	1.4	10.539	B
3	1256	677	2124	0.591	1254	1.6	4.537	A
4	660	1585	878	0.751	652	3.1	16.948	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1828	247	2398	0.762	1827	3.5	6.935	A
2	493	1785	860	0.574	493	1.5	10.800	B
3	1256	680	2122	0.592	1256	1.6	4.574	A
4	660	1590	876	0.753	659	3.2	18.123	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1492	203	2427	0.615	1499	1.8	4.299	A
2	403	1464	1034	0.390	406	0.7	6.333	A
3	1026	559	2202	0.466	1028	1.0	3.378	A
4	538	1303	1022	0.527	546	1.2	8.455	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1250	169	2449	0.510	1252	1.2	3.315	A
2	337	1223	1165	0.289	338	0.5	4.795	A
3	859	466	2264	0.379	860	0.7	2.825	A
4	451	1089	1131	0.399	453	0.7	5.859	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	18.04	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1961	100.000
2		✓	502	100.000
3		✓	943	100.000
4		✓	533	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	287	1146	528
	2	358	0	77	67
	3	839	47	0	57
	4	214	132	187	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.94	25.33	14.3	D
2	0.77	23.30	3.4	C
3	0.55	4.71	1.3	A
4	0.59	9.85	1.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1476	274	2380	0.620	1469	1.8	4.316	A
2	378	1394	1072	0.353	376	0.6	5.668	A
3	710	714	2100	0.338	708	0.6	2.839	A
4	401	933	1210	0.332	399	0.5	4.870	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1763	328	2344	0.752	1757	3.2	6.679	A
2	451	1668	923	0.489	450	1.0	8.330	A
3	848	854	2007	0.422	847	0.8	3.410	A
4	479	1116	1117	0.429	478	0.8	6.189	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2159	401	2296	0.940	2122	12.5	19.576	C
2	553	2016	733	0.754	545	3.1	20.155	C
3	1038	1032	1888	0.550	1036	1.3	4.637	A
4	587	1362	992	0.592	584	1.6	9.633	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2159	403	2295	0.941	2152	14.3	25.329	D
2	553	2043	719	0.769	551	3.4	23.299	C
3	1038	1046	1879	0.553	1038	1.3	4.710	A
4	587	1369	989	0.594	587	1.6	9.847	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1763	331	2342	0.753	1806	3.5	7.952	A
2	451	1711	900	0.502	460	1.1	9.197	A
3	848	876	1992	0.426	850	0.8	3.473	A
4	479	1127	1111	0.431	482	0.8	6.322	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1476	276	2378	0.621	1483	1.8	4.455	A
2	378	1407	1065	0.355	380	0.6	5.798	A
3	710	721	2095	0.339	711	0.6	2.865	A
4	401	939	1207	0.332	402	0.6	4.928	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	8.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1657	100.000
2		✓	446	100.000
3		✓	1144	100.000
4		✓	597	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	69	1343	245
	2	313	0	73	60
	3	1019	115	0	10
	4	487	82	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.76	6.90	3.4	A
2	0.57	10.65	1.4	B
3	0.59	4.59	1.6	A
4	0.75	18.08	3.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1247	169	2449	0.509	1243	1.1	3.271	A
2	336	1212	1171	0.287	334	0.4	4.722	A
3	861	463	2266	0.380	859	0.7	2.809	A
4	449	1085	1133	0.397	447	0.7	5.749	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1490	202	2427	0.614	1487	1.7	4.201	A
2	401	1450	1041	0.385	400	0.7	6.166	A
3	1028	554	2205	0.466	1027	1.0	3.358	A
4	537	1299	1024	0.524	535	1.2	8.064	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1824	246	2398	0.761	1818	3.4	6.743	A
2	491	1773	866	0.567	488	1.4	10.400	B
3	1260	677	2124	0.593	1257	1.6	4.555	A
4	657	1589	877	0.750	650	3.1	16.917	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1824	248	2397	0.761	1824	3.4	6.904	A
2	491	1779	863	0.569	491	1.4	10.649	B
3	1260	680	2122	0.594	1260	1.6	4.591	A
4	657	1593	875	0.752	657	3.2	18.081	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1490	204	2426	0.614	1496	1.8	4.291	A
2	401	1460	1036	0.387	404	0.7	6.291	A
3	1028	559	2202	0.467	1031	1.0	3.386	A
4	537	1305	1021	0.526	545	1.2	8.447	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1247	170	2448	0.510	1250	1.2	3.312	A
2	336	1219	1167	0.288	337	0.4	4.774	A
3	861	466	2264	0.380	862	0.7	2.827	A
4	449	1091	1130	0.398	451	0.7	5.858	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	17.89	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1957	100.000
2		✓	501	100.000
3		✓	942	100.000
4		✓	538	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	284	1143	530
	2	359	0	75	67
	3	840	47	0	55
	4	216	134	188	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.94	25.05	14.1	D
2	0.77	23.17	3.4	C
3	0.55	4.72	1.3	A
4	0.60	10.01	1.6	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1473	276	2378	0.619	1466	1.8	4.310	A
2	377	1394	1072	0.352	375	0.6	5.662	A
3	709	716	2098	0.338	707	0.6	2.841	A
4	405	934	1209	0.335	403	0.5	4.897	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1759	331	2342	0.751	1753	3.2	6.658	A
2	450	1668	923	0.488	449	1.0	8.316	A
3	847	856	2005	0.422	846	0.8	3.413	A
4	484	1118	1116	0.433	483	0.8	6.239	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2155	404	2294	0.939	2118	12.4	19.426	C
2	552	2017	733	0.752	543	3.1	20.073	C
3	1037	1036	1886	0.550	1035	1.3	4.644	A
4	592	1364	991	0.598	589	1.6	9.785	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	2155	406	2293	0.940	2148	14.1	25.046	D
2	552	2043	719	0.767	550	3.4	23.169	C
3	1037	1050	1877	0.553	1037	1.3	4.717	A
4	592	1371	987	0.600	592	1.6	10.012	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1759	334	2341	0.752	1802	3.4	7.902	A
2	450	1710	900	0.501	459	1.1	9.171	A
3	847	879	1990	0.426	849	0.8	3.475	A
4	484	1129	1111	0.435	487	0.9	6.379	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1473	279	2377	0.620	1480	1.8	4.445	A
2	377	1407	1065	0.354	379	0.6	5.791	A
3	709	723	2093	0.339	710	0.6	2.864	A
4	405	940	1206	0.336	406	0.6	4.958	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Junction 2_A3(M).j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:10:15

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.6	3.03	0.36	A	0.7	3.94	0.40	A
Arm 2	4.8	15.36	0.82	C	7.6	23.08	0.89	C
Arm 3	4.2	7.63	0.80	A	1.7	3.55	0.61	A
Arm 4	8.5	30.17	0.90	D	11.5	27.32	0.93	D
	EMM - DS1							
Arm 1	0.6	2.99	0.37	A	0.8	4.12	0.43	A
Arm 2	9.1	27.32	0.91	D	19.5	54.14	0.98	F
Arm 3	4.1	7.58	0.79	A	1.4	3.25	0.56	A
Arm 4	5.8	20.77	0.85	C	10.7	25.70	0.92	D
	EML - DS2							
Arm 1	0.6	3.00	0.37	A	0.8	4.09	0.43	A
Arm 2	8.9	26.77	0.90	D	19.1	53.00	0.97	F
Arm 3	4.2	7.63	0.79	A	1.4	3.26	0.56	A
Arm 4	5.9	20.88	0.85	C	10.9	26.02	0.92	D

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

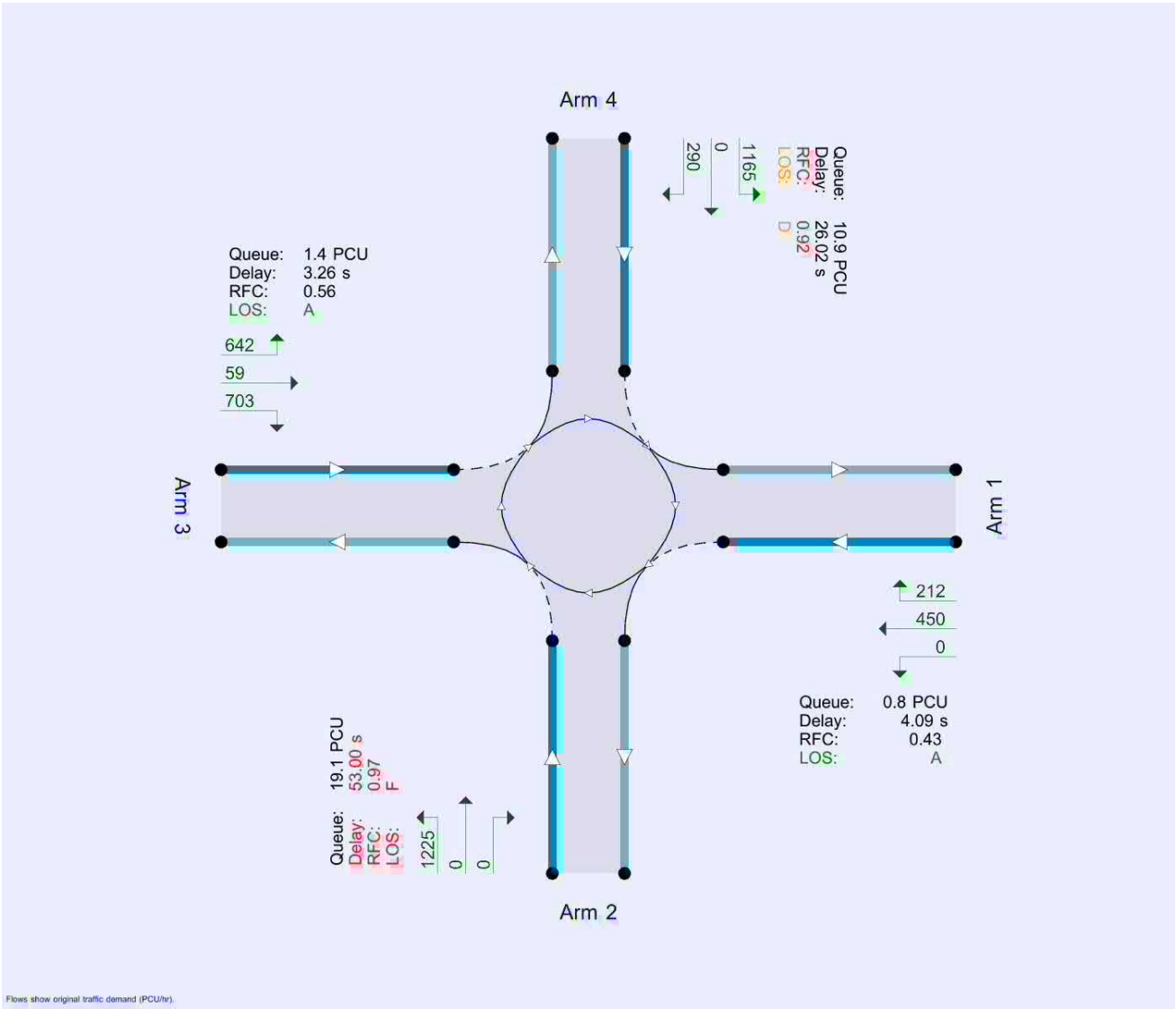
File summary

File Description

Title	Junction 2, A3(M)
Location	
Site number	
Date	26/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	13.67	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Dell Piece East	
2	A3(M) south	
3	B2149 Dell Piece West	
4	A3(M) north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.50	7.60	23.4	45.0	125.0	7.0	
2	6.00	6.20	0.1	999.0	125.0	5.0	
3	3.50	8.50	26.4	50.0	125.0	10.0	
4	6.00	6.50	22.0	999.0	125.0	5.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.891	2671
2	0.914	2342
3	1.100	3017
4	0.994	2574

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	661	100.000
2		ONE HOUR	✓	1063	100.000
3		ONE HOUR	✓	1826	100.000
4		ONE HOUR	✓	985	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	257	404
	2	0	0	1063	0
	3	853	399	0	574
	4	733	1	251	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.36	3.03	0.6	A	607	910
2	0.82	15.36	4.8	C	975	1463
3	0.80	7.63	4.2	A	1676	2513
4	0.90	30.17	8.5	D	904	1356

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	488	2236	0.223	496	1189	0.0	0.3	2.276	A
2	800	200	684	1716	0.466	796	300	0.0	1.0	4.289	A
3	1375	344	303	2684	0.512	1370	1178	0.0	1.1	3.005	A
4	742	185	939	1640	0.452	738	734	0.0	0.9	4.371	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	584	2150	0.276	594	1422	0.3	0.4	2.544	A
2	956	239	819	1593	0.600	953	359	1.0	1.6	6.156	A
3	1642	410	363	2618	0.627	1639	1409	1.1	1.8	4.032	A
4	885	221	1124	1457	0.608	882	878	0.9	1.7	6.855	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	709	2039	0.357	727	1725	0.4	0.6	3.016	A
2	1170	293	997	1430	0.818	1159	438	1.6	4.6	14.018	B
3	2010	503	444	2529	0.795	2001	1712	1.8	4.1	7.384	A
4	1085	271	1372	1210	0.896	1061	1073	1.7	7.5	23.723	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	716	2033	0.358	728	1743	0.6	0.6	3.033	A
2	1170	293	1003	1425	0.821	1169	440	4.6	4.8	15.360	C
3	2010	503	445	2528	0.795	2010	1728	4.1	4.2	7.630	A
4	1085	271	1378	1204	0.901	1080	1077	7.5	8.5	30.171	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	594	2141	0.278	595	1450	0.6	0.4	2.563	A
2	956	239	828	1585	0.603	968	362	4.8	1.7	6.541	A
3	1642	410	364	2617	0.627	1651	1432	4.2	1.9	4.134	A
4	885	221	1132	1449	0.611	913	883	8.5	1.8	7.746	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	492	2233	0.223	498	1198	0.4	0.3	2.283	A
2	800	200	688	1713	0.467	803	302	1.7	1.0	4.365	A
3	1375	344	304	2683	0.512	1378	1187	1.9	1.2	3.042	A
4	742	185	945	1635	0.454	745	737	1.8	0.9	4.464	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	15.54	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	605	100.000
2		ONE HOUR	✓	1139	100.000
3		ONE HOUR	✓	1573	100.000
4		ONE HOUR	✓	1470	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	464	141
	2	0	0	1139	0
	3	52	703	0	818
	4	1154	1	315	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.40	3.94	0.7	A	555	833
2	0.89	23.08	7.6	C	1045	1568
3	0.61	3.55	1.7	A	1443	2165
4	0.93	27.32	11.5	D	1349	2023

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	455	114	765	1989	0.229	454	904	0.0	0.3	2.577	A
2	857	214	690	1711	0.501	853	529	0.0	1.1	4.594	A
3	1184	296	106	2901	0.408	1181	1437	0.0	0.8	2.299	A
4	1107	277	567	2011	0.550	1101	720	0.0	1.3	4.331	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	544	136	915	1856	0.293	543	1081	0.3	0.5	3.015	A
2	1024	256	826	1587	0.645	1020	632	1.1	2.0	6.945	A
3	1414	354	127	2878	0.491	1413	1719	0.8	1.1	2.700	A
4	1321	330	678	1900	0.696	1317	861	1.3	2.5	6.740	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	666	167	1114	1678	0.397	665	1303	0.5	0.7	3.905	A
2	1254	314	1005	1423	0.881	1234	774	2.0	6.9	19.282	C
3	1732	433	155	2847	0.608	1729	2085	1.1	1.7	3.536	A
4	1619	405	830	1749	0.925	1588	1054	2.5	10.2	21.387	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	666	167	1121	1672	0.398	666	1324	0.7	0.7	3.936	A
2	1254	314	1012	1417	0.885	1251	775	6.9	7.6	23.076	C
3	1732	433	155	2847	0.608	1732	2108	1.7	1.7	3.551	A
4	1619	405	831	1748	0.926	1613	1056	10.2	11.5	27.318	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	544	136	925	1847	0.295	545	1112	0.7	0.5	3.043	A
2	1024	256	836	1578	0.649	1046	634	7.6	2.1	7.742	A
3	1414	354	127	2878	0.491	1417	1755	1.7	1.1	2.716	A
4	1321	330	680	1898	0.696	1357	864	11.5	2.6	7.787	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	455	114	769	1986	0.229	456	912	0.5	0.3	2.589	A
2	857	214	694	1707	0.502	861	531	2.1	1.1	4.701	A
3	1184	296	106	2900	0.408	1185	1449	1.1	0.8	2.312	A
4	1107	277	569	2009	0.551	1112	723	2.6	1.4	4.439	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	14.56	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	704	100.000
2		ONE HOUR	✓	1159	100.000
3		ONE HOUR	✓	1812	100.000
4		ONE HOUR	✓	964	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	290	414
	2	0	0	1159	0
	3	853	360	0	599
	4	741	0	223	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.37	2.99	0.6	A	646	969
2	0.91	27.32	9.1	D	1064	1595
3	0.79	7.58	4.1	A	1663	2494
4	0.85	20.77	5.8	C	885	1327

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	530	133	437	2281	0.232	529	1195	0.0	0.3	2.259	A
2	873	218	696	1706	0.512	868	270	0.0	1.1	4.701	A
3	1364	341	311	2675	0.510	1360	1253	0.0	1.1	3.000	A
4	726	181	910	1669	0.435	722	760	0.0	0.8	4.168	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	633	158	523	2205	0.287	632	1430	0.3	0.4	2.518	A
2	1042	260	832	1581	0.659	1038	323	1.1	2.1	7.244	A
3	1629	407	372	2608	0.625	1626	1499	1.1	1.8	4.021	A
4	867	217	1089	1492	0.581	864	910	0.8	1.5	6.281	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	775	194	637	2104	0.368	774	1739	0.4	0.6	2.977	A
2	1276	319	1016	1413	0.903	1252	395	2.1	8.1	21.962	C
3	1995	499	455	2517	0.793	1986	1813	1.8	4.1	7.343	A
4	1061	265	1330	1252	0.848	1046	1112	1.5	5.4	17.988	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	775	194	641	2099	0.369	775	1754	0.6	0.6	2.990	A
2	1276	319	1020	1409	0.906	1272	396	8.1	9.1	27.325	D
3	1995	499	456	2516	0.793	1995	1837	4.1	4.1	7.585	A
4	1061	265	1335	1247	0.851	1060	1115	5.4	5.8	20.766	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	633	158	530	2199	0.288	634	1450	0.6	0.4	2.531	A
2	1042	260	838	1576	0.661	1070	325	9.1	2.2	8.233	A
3	1629	407	373	2608	0.625	1638	1535	4.1	1.9	4.123	A
4	867	217	1097	1484	0.584	884	914	5.8	1.6	6.777	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	530	133	440	2279	0.233	530	1204	0.4	0.3	2.265	A
2	873	218	699	1703	0.512	877	272	2.2	1.2	4.818	A
3	1364	341	312	2674	0.510	1367	1264	1.9	1.2	3.037	A
4	726	181	915	1664	0.436	729	764	1.6	0.9	4.245	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	23.35	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	668	100.000
2		ONE HOUR	✓	1220	100.000
3		ONE HOUR	✓	1400	100.000
4		ONE HOUR	✓	1455	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	456	212
	2	0	0	1220	0
	3	57	703	0	640
	4	1163	0	292	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.43	4.12	0.8	A	613	919
2	0.98	54.14	19.5	F	1119	1679
3	0.56	3.25	1.4	A	1285	1927
4	0.92	25.70	10.7	D	1335	2003

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	503	126	747	2005	0.251	501	914	0.0	0.4	2.631	A
2	918	230	720	1683	0.546	913	528	0.0	1.3	5.107	A
3	1054	263	159	2842	0.371	1051	1474	0.0	0.6	2.208	A
4	1095	274	571	2007	0.546	1090	640	0.0	1.3	4.297	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	601	150	893	1875	0.320	600	1093	0.4	0.5	3.104	A
2	1097	274	862	1554	0.706	1092	631	1.3	2.6	8.470	A
3	1259	315	190	2808	0.448	1258	1763	0.6	0.9	2.553	A
4	1308	327	683	1895	0.690	1304	765	1.3	2.4	6.642	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	735	184	1089	1701	0.432	734	1320	0.5	0.8	4.092	A
2	1343	336	1050	1382	0.972	1295	773	2.6	14.7	34.380	D
3	1541	385	233	2761	0.558	1539	2112	0.9	1.4	3.235	A
4	1602	400	836	1743	0.919	1573	937	2.4	9.6	20.528	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	735	184	1095	1695	0.434	735	1340	0.8	0.8	4.124	A
2	1343	336	1056	1376	0.976	1324	774	14.7	19.5	54.135	F
3	1541	385	233	2761	0.558	1541	2147	1.4	1.4	3.247	A
4	1602	400	837	1742	0.919	1597	938	9.6	10.7	25.703	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	601	150	902	1867	0.322	602	1123	0.8	0.5	3.132	A
2	1097	274	871	1546	0.710	1164	633	19.5	2.8	12.155	B
3	1259	315	191	2807	0.448	1261	1844	1.4	0.9	2.562	A
4	1308	327	684	1894	0.691	1341	767	10.7	2.5	7.573	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	503	126	751	2002	0.251	504	922	0.5	0.4	2.645	A
2	918	230	724	1680	0.547	924	530	2.8	1.3	5.280	A
3	1054	263	160	2842	0.371	1055	1489	0.9	0.7	2.219	A
4	1095	274	573	2005	0.546	1100	642	2.5	1.3	4.399	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	14.45	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	705	100.000
2		ONE HOUR	✓	1154	100.000
3		ONE HOUR	✓	1813	100.000
4		ONE HOUR	✓	965	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	289	416
	2	0	0	1154	0
	3	852	361	0	600
	4	741	0	224	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.37	3.00	0.6	A	647	970
2	0.90	26.77	8.9	D	1059	1588
3	0.79	7.63	4.2	A	1664	2495
4	0.85	20.88	5.9	C	886	1328

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	439	2280	0.233	529	1195	0.0	0.3	2.261	A
2	869	217	697	1704	0.510	864	271	0.0	1.1	4.688	A
3	1365	341	312	2674	0.510	1360	1249	0.0	1.1	3.006	A
4	727	182	910	1669	0.435	723	763	0.0	0.8	4.172	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	525	2203	0.288	633	1429	0.3	0.4	2.522	A
2	1037	259	834	1579	0.657	1034	324	1.1	2.1	7.208	A
3	1630	407	374	2606	0.625	1627	1494	1.1	1.8	4.032	A
4	868	217	1089	1492	0.582	865	912	0.8	1.5	6.290	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	639	2102	0.369	775	1738	0.4	0.6	2.984	A
2	1271	318	1018	1411	0.901	1247	396	2.1	8.0	21.649	C
3	1996	499	458	2514	0.794	1987	1808	1.8	4.1	7.390	A
4	1062	266	1329	1252	0.848	1047	1115	1.5	5.4	18.059	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	644	2097	0.370	776	1752	0.6	0.6	2.997	A
2	1271	318	1022	1407	0.903	1267	397	8.0	8.9	26.772	D
3	1996	499	458	2514	0.794	1996	1831	4.1	4.2	7.632	A
4	1062	266	1335	1247	0.852	1061	1119	5.4	5.9	20.877	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	532	2197	0.288	635	1450	0.6	0.4	2.537	A
2	1037	259	840	1574	0.659	1064	326	8.9	2.2	8.159	A
3	1630	407	374	2606	0.626	1639	1530	4.2	1.9	4.136	A
4	868	217	1097	1484	0.585	885	917	5.9	1.6	6.791	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	442	2277	0.233	531	1203	0.4	0.3	2.268	A
2	869	217	701	1701	0.511	873	272	2.2	1.2	4.803	A
3	1365	341	313	2673	0.511	1368	1260	1.9	1.2	3.043	A
4	727	182	915	1664	0.437	729	766	1.6	0.9	4.249	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	23.19	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1093	0.00
2	1048	165.00
3	233	0.00
4	839	150.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	662	100.000
2		ONE HOUR	✓	1225	100.000
3		ONE HOUR	✓	1404	100.000
4		ONE HOUR	✓	1455	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	450	212
	2	0	0	1225	0
	3	59	703	0	642
	4	1165	0	290	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.43	4.09	0.8	A	607	911
2	0.97	53.00	19.1	F	1124	1686
3	0.56	3.26	1.4	A	1288	1933
4	0.92	26.02	10.9	D	1335	2003

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	125	745	2007	0.248	497	917	0.0	0.4	2.620	A
2	922	231	714	1689	0.546	917	528	0.0	1.3	5.094	A
3	1057	264	159	2842	0.372	1054	1472	0.0	0.6	2.212	A
4	1095	274	572	2005	0.546	1090	641	0.0	1.3	4.304	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	595	149	891	1877	0.317	595	1097	0.4	0.5	3.087	A
2	1101	275	854	1561	0.706	1096	631	1.3	2.6	8.434	A
3	1262	316	190	2808	0.450	1261	1760	0.6	0.9	2.559	A
4	1308	327	684	1894	0.691	1304	767	1.3	2.4	6.662	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	729	182	1086	1703	0.428	728	1324	0.5	0.8	4.056	A
2	1349	337	1041	1390	0.970	1301	773	2.6	14.5	33.892	D
3	1546	386	233	2761	0.560	1544	2109	0.9	1.4	3.247	A
4	1602	400	838	1741	0.920	1573	939	2.4	9.7	20.705	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	729	182	1092	1697	0.429	729	1344	0.8	0.8	4.088	A
2	1349	337	1047	1385	0.974	1330	774	14.5	19.1	52.998	F
3	1546	386	233	2761	0.560	1546	2144	1.4	1.4	3.259	A
4	1602	400	839	1740	0.921	1597	940	9.7	10.9	26.018	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	595	149	900	1869	0.319	596	1127	0.8	0.5	3.115	A
2	1101	275	864	1552	0.709	1167	633	19.1	2.8	11.984	B
3	1262	316	191	2807	0.450	1264	1839	1.4	0.9	2.568	A
4	1308	327	686	1892	0.691	1341	769	10.9	2.5	7.612	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	125	749	2003	0.249	499	925	0.5	0.4	2.634	A
2	922	231	718	1685	0.547	928	530	2.8	1.3	5.267	A
3	1057	264	160	2842	0.372	1058	1486	0.9	0.7	2.221	A
4	1095	274	574	2003	0.547	1100	644	2.5	1.3	4.406	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Junction 3_A3(M).j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:12:39

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.6	2.99	0.35	A	0.7	3.65	0.38	A
Arm 2	3.0	9.28	0.73	A	3.9	11.58	0.79	B
Arm 3	2.6	4.72	0.71	A	1.3	2.70	0.54	A
Arm 4	7.7	27.22	0.89	D	29.3	65.28	1.00	F
	EMM - DS1							
Arm 1	0.6	2.97	0.37	A	0.8	3.84	0.42	A
Arm 2	4.5	12.97	0.81	B	6.8	19.00	0.87	C
Arm 3	2.6	4.72	0.70	A	1.1	2.53	0.50	A
Arm 4	5.6	19.99	0.85	C	25.5	58.61	0.99	F
	EML - DS2							
Arm 1	0.6	2.97	0.37	A	0.8	3.80	0.41	A
Arm 2	4.4	12.74	0.80	B	6.8	18.83	0.87	C
Arm 3	2.6	4.73	0.70	A	1.1	2.54	0.50	A
Arm 4	5.6	19.99	0.85	C	26.4	60.21	0.99	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

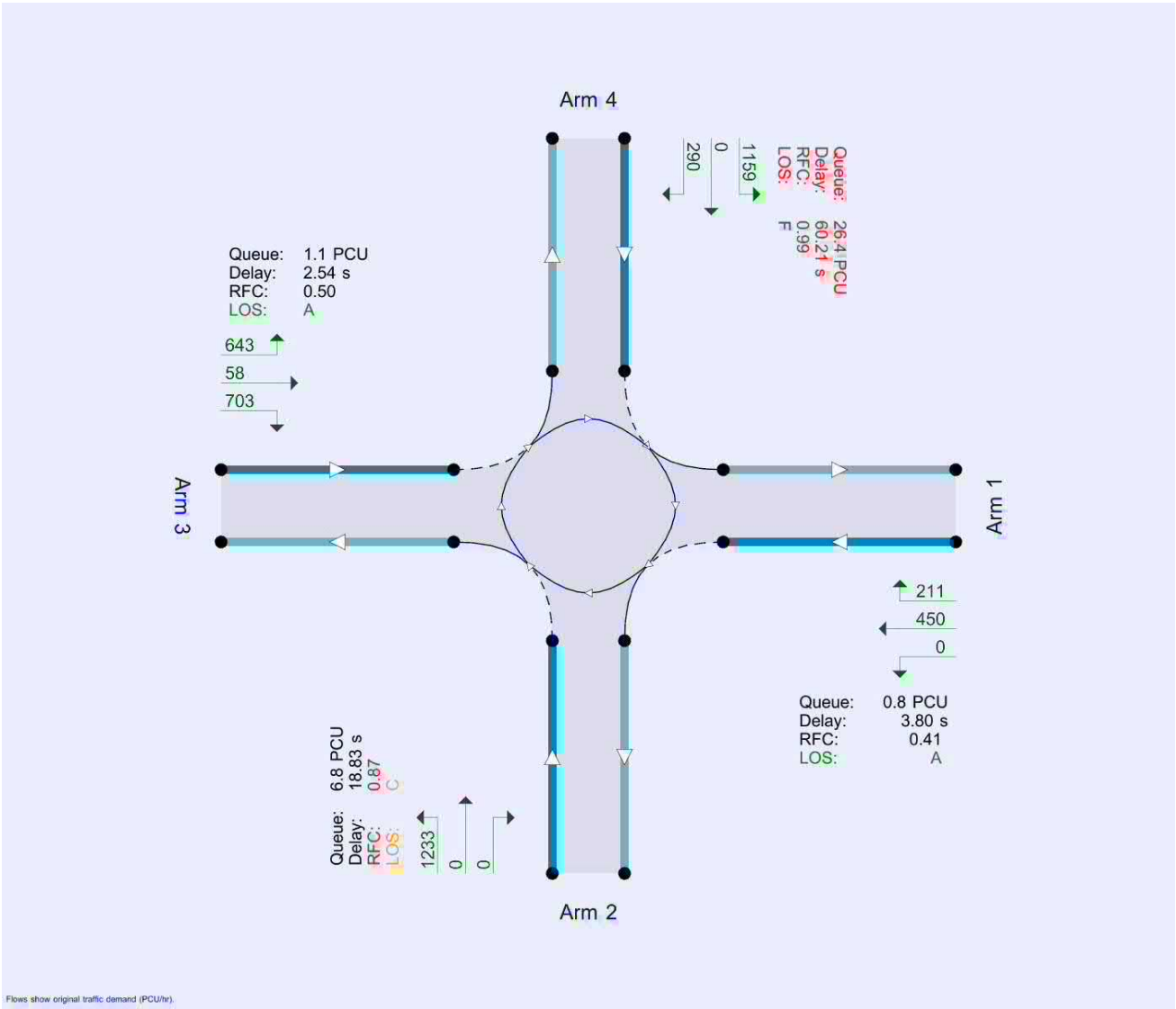
File summary

File Description

Title	Junction 3, A3(M)
Location	
Site number	
Date	26/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	10.42	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hulbert Road east	
2	A3(M) south	
3	Hulbert Road west	
4	A3(M) north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.10	7.50	24.9	40.0	145.0	9.0	
2	6.00	6.90	5.7	50.0	145.0	5.0	
3	7.60	7.60	0.0	45.0	145.0	4.0	
4	6.50	6.50	0.0	50.0	145.0	26.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.762	2597
2	0.951	2551
3	1.208	3386
4	0.716	2207

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	661	100.000
2		ONE HOUR	✓	1063	100.000
3		ONE HOUR	✓	1826	100.000
4		ONE HOUR	✓	985	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	257	404
	2	0	0	1063	0
	3	853	399	0	574
	4	733	0	252	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.35	2.99	0.6	A	607	910
2	0.73	9.28	3.0	A	975	1463
3	0.71	4.72	2.6	A	1676	2513
4	0.89	27.22	7.7	D	904	1356

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	488	2225	0.224	496	1189	0.0	0.3	2.290	A
2	800	200	685	1900	0.421	797	300	0.0	0.8	3.580	A
3	1375	344	303	3019	0.455	1371	1179	0.0	0.9	2.398	A
4	742	185	940	1535	0.483	737	734	0.0	1.0	4.944	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	584	2152	0.276	594	1422	0.3	0.4	2.541	A
2	956	239	820	1772	0.539	954	358	0.8	1.3	4.824	A
3	1642	410	363	2947	0.557	1640	1410	0.9	1.4	3.024	A
4	885	221	1124	1403	0.631	882	878	1.0	1.8	7.558	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	710	2056	0.354	727	1729	0.4	0.6	2.979	A
2	1170	293	999	1601	0.731	1164	438	1.3	2.9	8.929	A
3	2010	503	444	2849	0.706	2006	1719	1.4	2.6	4.668	A
4	1085	271	1375	1223	0.887	1064	1075	1.8	7.0	22.463	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	716	2051	0.355	728	1744	0.6	0.6	2.991	A
2	1170	293	1004	1596	0.733	1170	439	2.9	3.0	9.279	A
3	2010	503	445	2848	0.706	2010	1730	2.6	2.6	4.723	A
4	1085	271	1378	1221	0.888	1082	1077	7.0	7.7	27.220	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	592	2146	0.277	595	1445	0.6	0.4	2.556	A
2	956	239	827	1765	0.542	962	360	3.0	1.3	4.974	A
3	1642	410	364	2947	0.557	1646	1426	2.6	1.4	3.058	A
4	885	221	1129	1399	0.633	909	881	7.7	1.9	8.433	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	491	2222	0.224	498	1198	0.4	0.3	2.296	A
2	800	200	689	1896	0.422	802	301	1.3	0.8	3.624	A
3	1375	344	304	3018	0.455	1377	1187	1.4	0.9	2.416	A
4	742	185	944	1532	0.484	745	737	1.9	1.0	5.057	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	24.09	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	605	100.000
2		ONE HOUR	✓	1141	100.000
3		ONE HOUR	✓	1573	100.000
4		ONE HOUR	✓	1464	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	464	141
	2	0	0	1141	0
	3	52	703	0	818
	4	1150	0	314	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.38	3.65	0.7	A	555	833
2	0.79	11.58	3.9	B	1047	1571
3	0.54	2.70	1.3	A	1443	2165
4	1.00	65.28	29.3	F	1343	2015

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	455	114	763	2015	0.226	454	899	0.0	0.3	2.534	A
2	859	215	689	1896	0.453	855	528	0.0	0.9	3.793	A
3	1184	296	106	3258	0.363	1182	1439	0.0	0.6	1.905	A
4	1102	276	567	1801	0.612	1095	720	0.0	1.7	5.556	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	544	136	912	1902	0.286	543	1075	0.3	0.4	2.915	A
2	1026	256	824	1768	0.580	1023	632	0.9	1.5	5.304	A
3	1414	354	127	3233	0.437	1413	1721	0.6	0.9	2.175	A
4	1316	329	678	1722	0.764	1309	862	1.7	3.4	9.441	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	666	167	1104	1756	0.379	665	1269	0.4	0.7	3.628	A
2	1256	314	996	1604	0.783	1247	773	1.5	3.8	10.829	B
3	1732	433	155	3199	0.541	1730	2088	0.9	1.3	2.693	A
4	1612	403	830	1613	0.999	1543	1055	3.4	20.7	38.476	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	666	167	1112	1749	0.381	666	1297	0.7	0.7	3.654	A
2	1256	314	1004	1596	0.787	1256	774	3.8	3.9	11.577	B
3	1732	433	155	3198	0.542	1732	2105	1.3	1.3	2.699	A
4	1612	403	831	1612	1.000	1578	1056	20.7	29.3	65.285	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	544	136	937	1883	0.289	545	1161	0.7	0.4	2.960	A
2	1026	256	849	1744	0.588	1035	633	3.9	1.6	5.656	A
3	1414	354	127	3232	0.437	1416	1757	1.3	0.9	2.183	A
4	1316	329	680	1721	0.765	1418	863	29.3	3.8	17.362	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	455	114	768	2012	0.226	456	911	0.4	0.3	2.545	A
2	859	215	694	1891	0.454	862	530	1.6	0.9	3.855	A
3	1184	296	106	3257	0.364	1185	1450	0.9	0.6	1.913	A
4	1102	276	569	1800	0.612	1110	723	3.8	1.8	5.805	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	9.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	705	100.000
2		ONE HOUR	✓	1160	100.000
3		ONE HOUR	✓	1812	100.000
4		ONE HOUR	✓	964	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	290	415
	2	0	0	1160	0
	3	851	358	0	603
	4	741	0	223	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.37	2.97	0.6	A	647	970
2	0.81	12.97	4.5	B	1064	1597
3	0.70	4.72	2.6	A	1663	2494
4	0.85	19.99	5.6	C	885	1327

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	436	2265	0.234	529	1194	0.0	0.3	2.281	A
2	873	218	696	1889	0.462	870	269	0.0	0.9	3.870	A
3	1364	341	312	3009	0.453	1361	1254	0.0	0.9	2.397	A
4	726	181	908	1558	0.466	722	764	0.0	1.0	4.718	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	521	2200	0.288	633	1428	0.3	0.4	2.528	A
2	1043	261	833	1759	0.593	1040	321	0.9	1.6	5.489	A
3	1629	407	373	2935	0.555	1627	1501	0.9	1.4	3.023	A
4	867	217	1086	1430	0.606	864	914	1.0	1.7	6.954	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	635	2113	0.367	775	1739	0.4	0.6	2.960	A
2	1277	319	1018	1584	0.806	1266	393	1.6	4.3	12.088	B
3	1995	499	456	2834	0.704	1990	1827	1.4	2.6	4.664	A
4	1061	265	1328	1257	0.844	1047	1119	1.7	5.3	17.744	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	639	2110	0.368	776	1752	0.6	0.6	2.969	A
2	1277	319	1021	1580	0.808	1276	394	4.3	4.5	12.973	B
3	1995	499	457	2834	0.704	1995	1841	2.6	2.6	4.719	A
4	1061	265	1331	1255	0.846	1060	1121	5.3	5.6	19.995	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	527	2195	0.289	635	1445	0.6	0.4	2.537	A
2	1043	261	839	1754	0.595	1054	323	4.5	1.6	5.749	A
3	1629	407	374	2935	0.555	1634	1519	2.6	1.4	3.057	A
4	867	217	1090	1427	0.607	882	917	5.6	1.7	7.467	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	438	2263	0.235	531	1202	0.4	0.3	2.287	A
2	873	218	700	1886	0.463	876	270	1.6	1.0	3.933	A
3	1364	341	313	3008	0.454	1366	1263	1.4	0.9	2.415	A
4	726	181	911	1555	0.467	729	767	1.7	1.0	4.809	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	24.09	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	668	100.000
2		ONE HOUR	✓	1226	100.000
3		ONE HOUR	✓	1400	100.000
4		ONE HOUR	✓	1447	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	457	211
	2	0	0	1226	0
	3	56	703	0	641
	4	1155	0	292	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.42	3.84	0.8	A	613	919
2	0.87	19.00	6.8	C	1125	1687
3	0.50	2.53	1.1	A	1285	1927
4	0.99	58.61	25.5	F	1328	1992

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	503	126	747	2028	0.248	501	906	0.0	0.4	2.592	A
2	923	231	720	1867	0.494	919	528	0.0	1.1	4.159	A
3	1054	263	158	3195	0.330	1052	1480	0.0	0.5	1.846	A
4	1089	272	570	1799	0.605	1083	640	0.0	1.7	5.477	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	601	150	893	1917	0.313	600	1083	0.4	0.5	3.005	A
2	1102	276	861	1732	0.636	1099	632	1.1	1.9	6.218	A
3	1259	315	190	3157	0.399	1258	1771	0.5	0.7	2.084	A
4	1301	325	682	1719	0.757	1294	765	1.7	3.3	9.179	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	735	184	1082	1772	0.415	734	1284	0.5	0.8	3.812	A
2	1350	337	1043	1559	0.866	1332	773	1.9	6.2	16.361	C
3	1541	385	232	3106	0.496	1540	2144	0.7	1.1	2.527	A
4	1593	398	835	1610	0.990	1531	937	3.3	18.8	35.944	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	735	184	1090	1766	0.416	735	1312	0.8	0.8	3.841	A
2	1350	337	1051	1551	0.870	1348	774	6.2	6.8	19.004	C
3	1541	385	232	3105	0.496	1541	2167	1.1	1.1	2.531	A
4	1593	398	836	1609	0.990	1566	938	18.8	25.5	58.609	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	601	150	913	1901	0.316	602	1159	0.8	0.5	3.048	A
2	1102	276	882	1713	0.643	1121	633	6.8	2.0	6.899	A
3	1259	315	190	3156	0.399	1260	1813	1.1	0.7	2.089	A
4	1301	325	683	1718	0.757	1389	767	25.5	3.6	15.095	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	503	126	751	2025	0.248	503	918	0.5	0.4	2.605	A
2	923	231	725	1862	0.496	927	530	2.0	1.1	4.251	A
3	1054	263	159	3194	0.330	1055	1493	0.7	0.5	1.853	A
4	1089	272	572	1798	0.606	1097	642	3.6	1.7	5.708	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	9.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	705	100.000
2		ONE HOUR	✓	1154	100.000
3		ONE HOUR	✓	1813	100.000
4		ONE HOUR	✓	964	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	289	416
	2	0	0	1154	0
	3	849	360	0	604
	4	740	0	224	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.37	2.97	0.6	A	647	970
2	0.80	12.74	4.4	B	1059	1588
3	0.70	4.73	2.6	A	1664	2495
4	0.85	19.99	5.6	C	885	1327

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	438	2263	0.235	529	1192	0.0	0.3	2.283	A
2	869	217	697	1888	0.460	865	270	0.0	0.9	3.856	A
3	1365	341	312	3008	0.454	1361	1250	0.0	0.9	2.399	A
4	726	181	908	1558	0.466	722	766	0.0	1.0	4.718	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	524	2198	0.288	633	1425	0.3	0.4	2.531	A
2	1037	259	834	1758	0.590	1035	323	0.9	1.6	5.456	A
3	1630	407	374	2934	0.555	1628	1495	0.9	1.4	3.027	A
4	867	217	1086	1430	0.606	864	916	1.0	1.7	6.954	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	639	2110	0.368	775	1736	0.4	0.6	2.965	A
2	1271	318	1019	1583	0.803	1260	395	1.6	4.2	11.907	B
3	1996	499	458	2833	0.705	1991	1821	1.4	2.6	4.678	A
4	1061	265	1328	1257	0.844	1047	1121	1.7	5.3	17.743	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	776	194	643	2107	0.368	776	1748	0.6	0.6	2.974	A
2	1271	318	1023	1579	0.805	1270	396	4.2	4.4	12.744	B
3	1996	499	458	2832	0.705	1996	1834	2.6	2.6	4.732	A
4	1061	265	1331	1255	0.846	1060	1123	5.3	5.6	19.995	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	634	158	530	2193	0.289	635	1443	0.6	0.4	2.543	A
2	1037	259	840	1753	0.592	1048	325	4.4	1.6	5.704	A
3	1630	407	374	2933	0.556	1635	1514	2.6	1.4	3.062	A
4	867	217	1090	1427	0.607	882	919	5.6	1.7	7.467	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	531	133	441	2261	0.235	531	1199	0.4	0.3	2.291	A
2	869	217	701	1885	0.461	871	271	1.6	0.9	3.916	A
3	1365	341	313	3007	0.454	1367	1259	1.4	0.9	2.418	A
4	726	181	911	1555	0.467	729	769	1.7	1.0	4.811	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout	1,2,3,4	24.55	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1822	0.00
2	1020	145.00
3	252	0.00
4	1878	130.00

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	661	100.000
2		ONE HOUR	✓	1233	100.000
3		ONE HOUR	✓	1404	100.000
4		ONE HOUR	✓	1449	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	450	211
	2	0	0	1233	0
	3	58	703	0	643
	4	1159	0	290	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.41	3.80	0.8	A	607	910
2	0.87	18.83	6.8	C	1131	1697
3	0.50	2.54	1.1	A	1288	1933
4	0.99	60.21	26.4	F	1330	1994

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	745	2029	0.245	496	911	0.0	0.4	2.581	A
2	928	232	713	1873	0.496	924	528	0.0	1.1	4.154	A
3	1057	264	158	3195	0.331	1055	1479	0.0	0.5	1.848	A
4	1091	273	572	1798	0.607	1084	641	0.0	1.7	5.497	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	891	1918	0.310	594	1089	0.4	0.5	2.988	A
2	1108	277	853	1740	0.637	1105	632	1.1	1.9	6.204	A
3	1262	316	190	3157	0.400	1261	1769	0.5	0.7	2.088	A
4	1303	326	684	1718	0.758	1296	767	1.7	3.3	9.242	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	1080	1774	0.410	727	1289	0.5	0.8	3.777	A
2	1358	339	1033	1569	0.865	1340	773	1.9	6.2	16.240	C
3	1546	386	232	3106	0.498	1544	2142	0.7	1.1	2.534	A
4	1595	399	837	1608	0.992	1532	939	3.3	19.2	36.570	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	728	182	1088	1768	0.412	728	1317	0.8	0.8	3.805	A
2	1358	339	1041	1561	0.870	1355	774	6.2	6.8	18.833	C
3	1546	386	232	3105	0.498	1546	2164	1.1	1.1	2.539	A
4	1595	399	838	1608	0.992	1567	940	19.2	26.4	60.214	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	594	149	912	1902	0.312	595	1167	0.8	0.5	3.031	A
2	1108	277	874	1720	0.644	1127	633	6.8	2.0	6.888	A
3	1262	316	190	3156	0.400	1264	1812	1.1	0.7	2.093	A
4	1303	326	685	1717	0.759	1394	769	26.4	3.6	15.575	C

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	498	124	749	2026	0.246	498	922	0.5	0.4	2.592	A
2	928	232	718	1869	0.497	932	530	2.0	1.1	4.244	A
3	1057	264	159	3194	0.331	1058	1491	0.7	0.5	1.853	A
4	1091	273	573	1797	0.607	1099	643	3.6	1.7	5.731	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Milton Rd_St Marys Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 09:53:31

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	93.1	713.62	1.43	F	90.0	775.88	1.51	F
Arm 2	2.3	8.93	0.68	A	1.8	7.38	0.62	A
Arm 3	0.7	4.19	0.37	A	1.0	5.27	0.47	A
Arm 5	2.7	9.80	0.72	A	6.8	20.91	0.87	C
	EMM - DS1							
Arm 1	78.6	609.87	1.38	F	60.8	531.22	1.37	F
Arm 2	2.2	8.73	0.67	A	1.7	7.12	0.60	A
Arm 3	0.7	4.17	0.38	A	1.1	5.69	0.51	A
Arm 5	3.4	11.72	0.76	B	12.5	37.84	0.94	E
	EML - DS2							
Arm 1	93.7	719.14	1.43	F	89.6	784.74	1.52	F
Arm 2	2.3	8.94	0.68	A	1.8	7.66	0.63	A
Arm 3	0.6	4.05	0.35	A	1.0	5.38	0.48	A
Arm 5	2.9	10.08	0.73	B	8.6	26.28	0.90	D

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

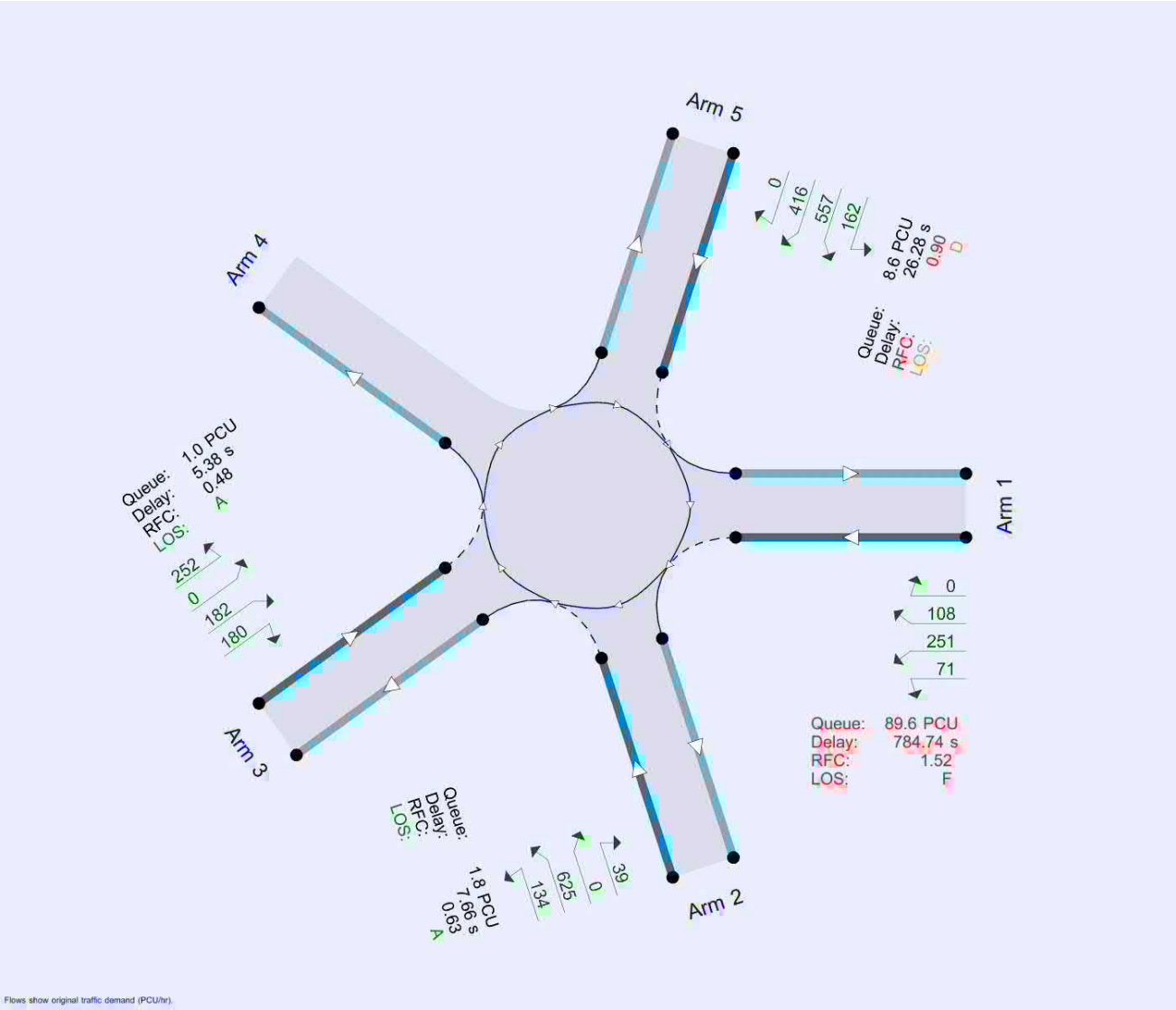
File summary

File Description

Title	Milton Road / St Marys Road Roundabout
Location	
Site number	
Date	08/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	134.73	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Langstone Road	
2	Milton Road south	
3	St Marys Road	
4	Milton Road north	
5	Baffins Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.70	4.00	0.3	3.0	34.0	43.0	
2	5.50	6.20	2.2	30.0	34.0	12.0	
3	4.00	7.40	49.0	10.0	34.0	27.0	
4							✓
5	3.75	6.50	39.0	10.0	34.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.366	775
2	0.720	1911
3	0.697	1976
4		
5	0.620	1664

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	500	100.000
2		✓	846	100.000
3		✓	512	100.000
4				
5		✓	930	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	94	297	109	0
	2	47	0	312	487	0
	3	153	147	0	212	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	110	427	393	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.43	713.62	93.1	F
2	0.68	8.93	2.3	A
3	0.37	4.19	0.7	A
4				
5	0.72	9.80	2.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	376	724	510	0.739	365	2.8	25.797	D
2	637	591	1486	0.429	634	0.8	4.631	A
3	385	480	1642	0.235	384	0.3	3.147	A
4		260						
5	700	260	1503	0.466	696	0.9	4.888	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	449	868	457	0.983	420	10.1	75.813	F
2	761	694	1412	0.539	759	1.3	6.048	A
3	460	571	1578	0.292	460	0.5	3.538	A
4		312						
5	836	312	1471	0.568	834	1.4	6.198	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	551	1060	387	1.424	385	51.6	310.529	F
2	931	743	1376	0.677	928	2.2	8.751	A
3	564	669	1509	0.374	563	0.7	4.181	A
4		381						
5	1024	381	1428	0.717	1019	2.7	9.565	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	551	1065	385	1.430	385	93.1	646.358	F
2	931	745	1375	0.678	931	2.3	8.925	A
3	564	672	1508	0.374	564	0.7	4.195	A
4		382						
5	1024	382	1427	0.717	1024	2.7	9.798	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	449	874	455	0.988	449	93.1	713.615	F
2	761	720	1392	0.546	764	1.3	6.341	A
3	460	580	1571	0.293	461	0.5	3.568	A
4		313						
5	836	313	1470	0.569	841	1.5	6.344	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	376	730	507	0.742	502	61.8	558.063	F
2	637	704	1404	0.454	639	0.9	5.183	A
3	385	512	1619	0.238	386	0.3	3.215	A
4		262						
5	700	262	1502	0.466	702	1.0	4.964	A

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	126.20	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	437	100.000
2		✓	788	100.000
3		✓	607	100.000
4				
5		✓	1110	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	73	260	104	0
	2	33	0	132	623	0
	3	164	182	0	261	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	158	552	400	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.51	775.88	90.0	F
2	0.62	7.38	1.8	A
3	0.47	5.27	1.0	A
4				
5	0.87	20.91	6.8	C

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	329	848	464	0.709	319	2.4	25.886	D
2	593	565	1504	0.394	590	0.7	4.321	A
3	457	567	1580	0.289	455	0.4	3.513	A
4		284						
5	836	284	1488	0.562	830	1.4	5.969	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	393	1016	403	0.975	366	9.1	78.575	F
2	708	663	1433	0.494	707	1.1	5.438	A
3	546	676	1505	0.363	545	0.6	4.123	A
4		340						
5	998	340	1453	0.687	994	2.3	8.550	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	481	1234	323	1.490	321	49.1	351.813	F
2	868	702	1406	0.617	865	1.7	7.288	A
3	668	796	1421	0.470	667	1.0	5.244	A
4		416						
5	1222	416	1406	0.869	1206	6.3	18.489	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	481	1247	318	1.512	318	89.9	728.459	F
2	868	705	1404	0.618	868	1.8	7.383	A
3	668	798	1420	0.471	668	1.0	5.270	A
4		417						
5	1222	417	1406	0.870	1220	6.8	20.914	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	393	1034	396	0.992	392	90.0	775.875	F
2	708	693	1412	0.502	711	1.1	5.668	A
3	546	685	1498	0.364	547	0.6	4.170	A
4		342						
5	998	342	1452	0.687	1015	2.5	9.382	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	329	858	461	0.714	455	58.5	589.846	F
2	593	682	1420	0.418	595	0.8	4.805	A
3	457	603	1555	0.294	458	0.5	3.609	A
4		286						
5	836	286	1487	0.562	840	1.4	6.157	A

EMM - DS1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	108.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	462	100.000
2		✓	831	100.000
3		✓	519	100.000
4				
5		✓	982	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	93	261	108	0
	2	52	0	316	463	0
	3	162	147	0	210	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	118	445	419	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.38	609.87	78.6	F
2	0.67	8.73	2.2	A
3	0.38	4.17	0.7	A
4				
5	0.76	11.72	3.4	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	348	757	498	0.699	338	2.3	23.693	C
2	626	584	1491	0.420	622	0.8	4.545	A
3	391	465	1652	0.237	389	0.3	3.134	A
4		271						
5	739	271	1496	0.494	735	1.1	5.172	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	415	907	443	0.938	394	7.6	63.481	F
2	747	690	1414	0.528	745	1.2	5.907	A
3	467	554	1590	0.294	466	0.5	3.522	A
4		324						
5	883	324	1463	0.603	880	1.6	6.767	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	509	1107	370	1.377	366	43.2	272.807	F
2	915	751	1370	0.668	911	2.2	8.557	A
3	571	650	1522	0.375	571	0.7	4.157	A
4		397						
5	1081	397	1418	0.762	1074	3.4	11.291	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	509	1113	367	1.385	367	78.6	574.236	F
2	915	754	1368	0.669	915	2.2	8.731	A
3	571	653	1521	0.376	571	0.7	4.170	A
4		397						
5	1081	397	1418	0.763	1081	3.4	11.719	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	415	915	440	0.945	434	74.1	609.872	F
2	747	726	1388	0.538	751	1.3	6.245	A
3	467	567	1581	0.295	467	0.5	3.560	A
4		325						
5	883	325	1463	0.604	890	1.7	6.995	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	348	763	495	0.702	488	39.0	421.016	F
2	626	706	1403	0.446	627	0.9	5.118	A
3	391	503	1625	0.240	391	0.3	3.211	A
4		272						
5	739	272	1496	0.494	742	1.1	5.272	A

EMM - DS1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	85.60	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	379	100.000
2		✓	770	100.000
3		✓	665	100.000
4				
5		✓	1158	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	72	204	103	0
	2	37	0	132	601	0
	3	214	195	0	256	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	181	558	419	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.37	531.22	60.8	F
2	0.60	7.12	1.7	A
3	0.51	5.69	1.1	A
4				
5	0.94	37.84	12.5	E

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	285	876	454	0.629	278	1.7	21.791	C
2	580	539	1523	0.381	577	0.7	4.173	A
3	501	554	1590	0.315	499	0.5	3.623	A
4		334						
5	872	334	1457	0.598	865	1.6	6.624	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	341	1049	391	0.872	327	5.1	53.631	F
2	692	640	1450	0.477	691	1.0	5.206	A
3	598	661	1515	0.395	597	0.7	4.311	A
4		400						
5	1041	400	1416	0.735	1036	2.9	10.268	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	417	1264	312	1.337	308	32.5	247.979	F
2	848	699	1407	0.602	845	1.6	7.010	A
3	732	784	1429	0.512	730	1.1	5.653	A
4		490						
5	1275	490	1361	0.937	1244	10.7	28.437	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	417	1284	305	1.370	304	60.8	531.223	F
2	848	705	1403	0.604	848	1.7	7.123	A
3	732	785	1429	0.513	732	1.1	5.685	A
4		491						
5	1275	491	1360	0.938	1268	12.5	37.840	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	341	1086	377	0.903	371	53.3	529.741	F
2	692	690	1414	0.490	695	1.1	5.524	A
3	598	676	1504	0.397	599	0.7	4.383	A
4		402						
5	1041	402	1415	0.736	1078	3.2	12.961	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	285	888	450	0.634	441	14.5	285.289	F
2	580	675	1425	0.407	581	0.8	4.698	A
3	501	601	1557	0.322	501	0.5	3.757	A
4		336						
5	872	336	1456	0.599	878	1.7	6.923	A

EML - DS2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	136.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	501	100.000
2		✓	845	100.000
3		✓	474	100.000
4				
5		✓	951	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	95	287	119	0
	2	46	0	307	492	0
	3	137	147	0	190	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	131	424	396	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.43	719.14	93.7	F
2	0.68	8.94	2.3	A
3	0.35	4.05	0.6	A
4				
5	0.73	10.08	2.9	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	724	510	0.740	366	2.8	25.901	D
2	636	593	1484	0.429	633	0.8	4.635	A
3	357	490	1634	0.218	356	0.3	3.094	A
4		248						
5	716	248	1511	0.474	712	1.0	4.935	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	450	867	457	0.985	421	10.3	76.431	F
2	760	696	1410	0.539	758	1.3	6.056	A
3	426	582	1570	0.271	426	0.4	3.461	A
4		296						
5	855	296	1481	0.577	853	1.5	6.289	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	552	1060	387	1.426	385	52.0	312.705	F
2	930	746	1374	0.677	926	2.2	8.767	A
3	522	681	1501	0.348	521	0.6	4.039	A
4		363						
5	1047	363	1439	0.727	1042	2.8	9.823	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	552	1064	385	1.433	385	93.7	650.536	F
2	930	748	1373	0.678	930	2.3	8.942	A
3	522	684	1499	0.348	522	0.6	4.051	A
4		363						
5	1047	363	1439	0.728	1047	2.9	10.084	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	450	874	455	0.991	450	93.7	719.139	F
2	760	723	1390	0.546	763	1.3	6.354	A
3	426	593	1562	0.273	427	0.4	3.490	A
4		297						
5	855	297	1480	0.578	860	1.5	6.447	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	730	507	0.743	502	62.6	563.530	F
2	636	705	1403	0.453	638	0.9	5.185	A
3	357	525	1610	0.222	357	0.3	3.164	A
4		249						
5	716	249	1510	0.474	718	1.0	5.013	A

EML - DS2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 5 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	126.53	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	430	100.000
2		✓	798	100.000
3		✓	614	100.000
4				
5		✓	1135	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	71	251	108	0
	2	39	0	134	625	0
	3	182	180	0	252	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	162	557	416	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.52	784.74	89.6	F
2	0.63	7.66	1.8	A
3	0.48	5.38	1.0	A
4				
5	0.90	26.28	8.6	D

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	862	459	0.705	314	2.4	25.905	D
2	601	573	1498	0.401	598	0.7	4.384	A
3	462	576	1574	0.294	460	0.5	3.549	A
4		301						
5	854	301	1478	0.578	849	1.5	6.235	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	387	1033	397	0.974	360	9.0	78.933	F
2	717	673	1426	0.503	716	1.1	5.563	A
3	552	686	1497	0.369	551	0.6	4.185	A
4		360						
5	1020	360	1441	0.708	1016	2.6	9.219	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	473	1251	317	1.495	315	48.6	355.301	F
2	879	713	1397	0.629	876	1.8	7.548	A
3	676	808	1413	0.479	675	1.0	5.354	A
4		441						
5	1250	441	1391	0.898	1229	7.8	21.998	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	473	1267	311	1.522	311	89.3	737.739	F
2	879	716	1395	0.630	879	1.8	7.661	A
3	676	809	1412	0.479	676	1.0	5.381	A
4		441						
5	1250	441	1391	0.899	1247	8.6	26.276	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	387	1057	388	0.997	385	89.6	784.735	F
2	717	704	1404	0.511	720	1.2	5.811	A
3	552	696	1491	0.370	553	0.7	4.230	A
4		361						
5	1020	361	1440	0.709	1044	2.8	10.533	B

18:00 - 18:15

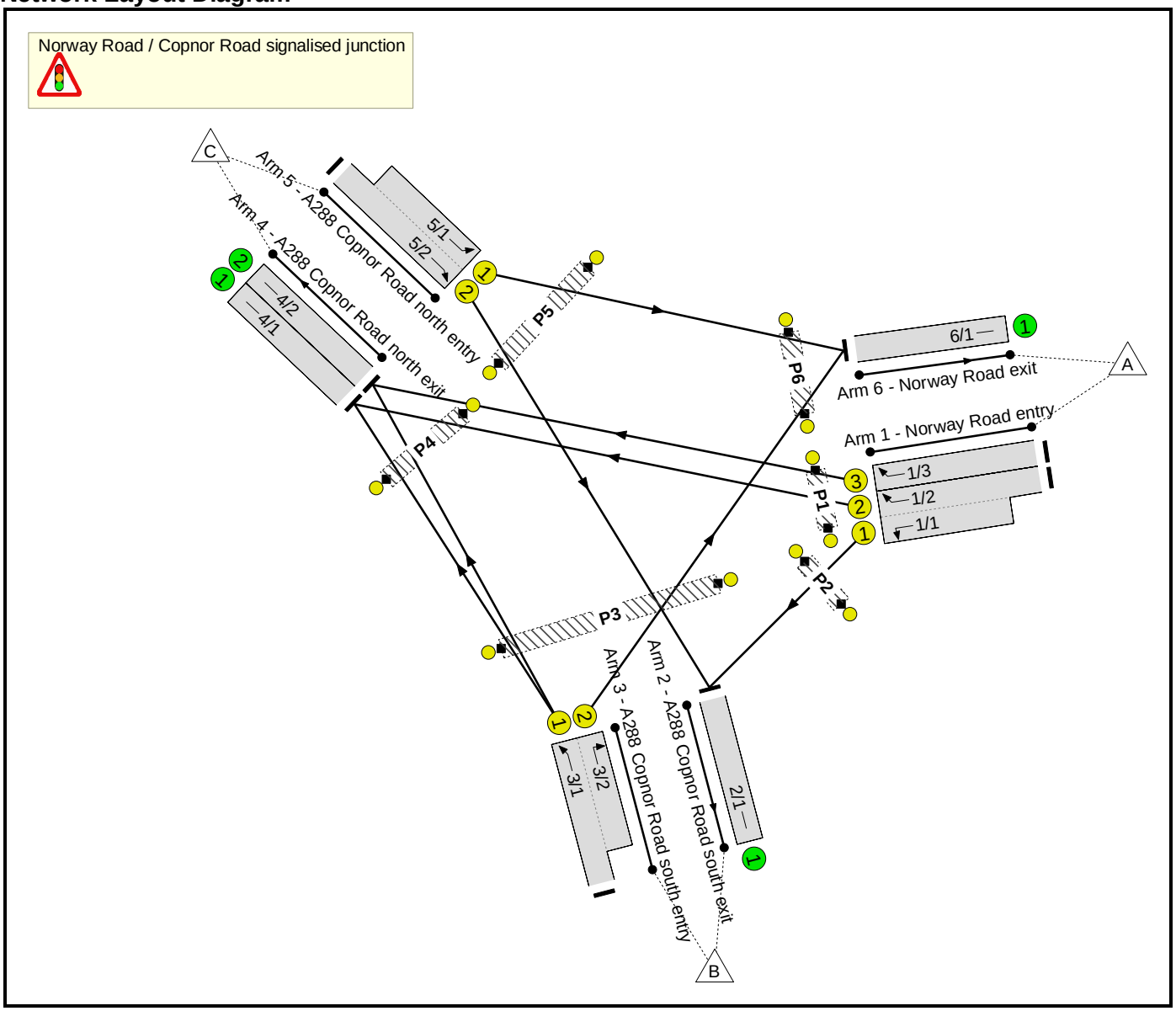
Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	872	455	0.711	450	58.1	594.064	F
2	601	691	1414	0.425	602	0.8	4.888	A
3	462	614	1548	0.299	463	0.5	3.654	A
4		302						
5	854	302	1477	0.579	859	1.5	6.464	A

Full Input Data And Results

User and Project Details

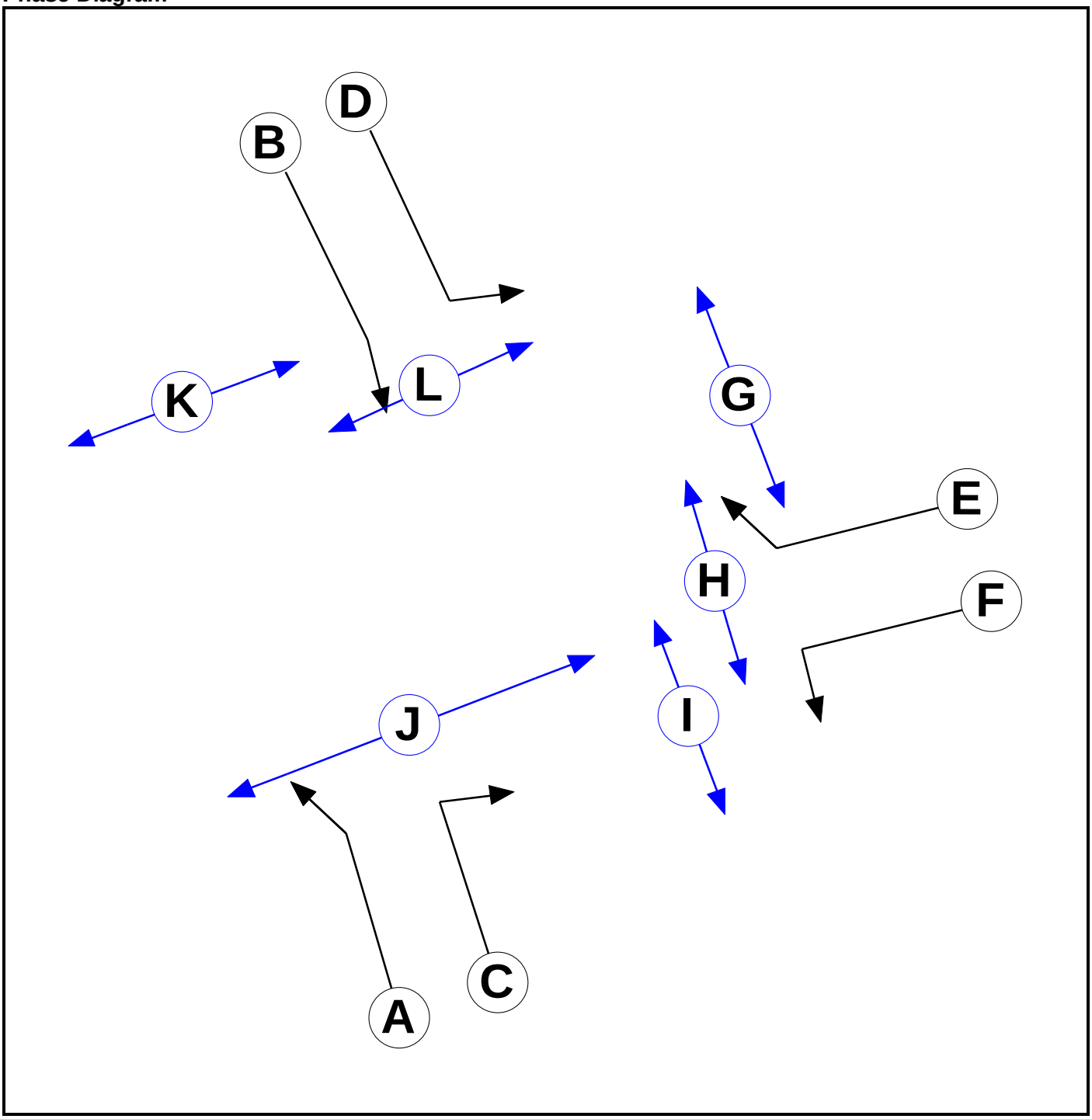
Project:	
Title:	**Norway Road / Copnor Road traffic signal junction**
Location:	
Additional detail:	
File name:	Norway Rd_Copnor Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		6	6
K	Pedestrian		5	5
L	Pedestrian		6	6

Phase Intergreens Matrix

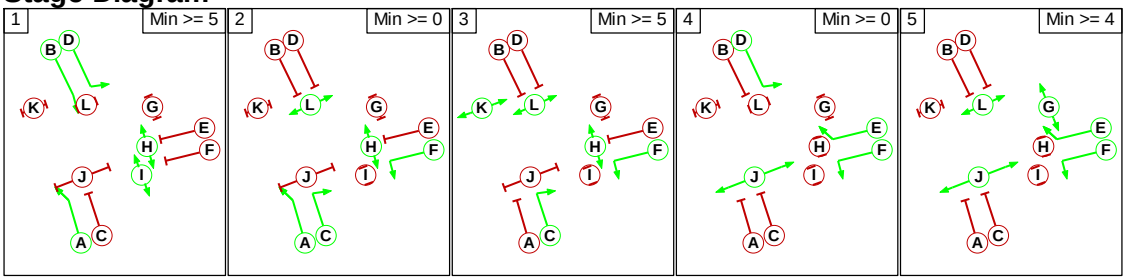
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A		-	-	-	5	-	-	-	-	5	9	-
	B	-		5	-	7	8	-	-	-	9	-	5
	C	-	7		9	5	-	12	-	-	5	-	-
	D	-	-	5		-	-	8	-	-	-	-	5
	E	5	5	5	-		-	-	5	-	-	11	-
	F	-	5	-	-	-		-	-	5	-	-	-
	G	-	-	5	5	-	-		-	-	-	-	-
	H	-	-	-	-	5	-	-		-	-	-	-
	I	-	-	-	-	-	5	-	-		-	-	-
	J	5	5	5	-	-	-	-	-	-		-	-
	K	5	-	-	-	5	-	-	-	-	-		-
	L	-	5	-	5	-	-	-	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B D H I
2	A C F H L
3	C F H K L
4	D E F J
5	E F G J L

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		8	9	9	9
2	9		9	9	12
3	9	5		9	12
4	5	5	11		8
5	5	5	11	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Norway Road / Copnor Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Norway Road / Copnor Road signalised junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Norway Road entry)	U	F	2	3	10.4	Geom	-	3.50	0.00	Y	Arm 2 Left	30.00
1/2 (Norway Road entry)	U	E	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Right	8.00
1/3 (Norway Road entry)	U	E	2	3	10.4	Geom	-	3.50	0.00	Y	Arm 4 Right	8.00
2/1 (A288 Copnor Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A288 Copnor Road south entry)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	140.00
3/2 (A288 Copnor Road south entry)	U	C	2	3	26.1	Geom	-	3.50	0.00	Y	Arm 6 Right	Inf
4/1 (A288 Copnor Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (A288 Copnor Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (A288 Copnor Road north entry)	U	D	2	3	24.3	Geom	-	3.50	0.00	Y	Arm 6 Left	Inf
5/2 (A288 Copnor Road north entry)	U	B	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 2 Ahead	140.00
6/1 (Norway Road exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	60	426	486
	B	121	0	774	895
	C	743	325	0	1068
	Tot.	864	385	1200	2449

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	60
1/2 (with short)	284(In) 224(Out)
1/3	202
2/1	385
3/1 (with short)	895(In) 774(Out)
3/2 (short)	121
4/1	611
4/2	589
5/1 (short)	743
5/2 (with short)	1068(In) 325(Out)
6/1	864

Full Input Data And Results

Lane Saturation Flows

Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	174	810	984
	B	154	0	379	533
	C	632	521	0	1153
	Tot.	786	695	1189	2670

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	174
1/2 (with short)	573(In) 399(Out)
1/3	411
2/1	695
3/1 (with short)	533(In) 379(Out)
3/2 (short)	154
4/1	589
4/2	600
5/1 (short)	632
5/2 (with short)	1153(In) 521(Out)
6/1	786

Lane Saturation Flows

Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	59	428	487
	B	123	0	761	884
	C	745	336	0	1081
	Tot.	868	395	1189	2452

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	59
1/2 (with short)	283(In) 224(Out)
1/3	204
2/1	395
3/1 (with short)	884(In) 761(Out)
3/2 (short)	123
4/1	605
4/2	584
5/1 (short)	745
5/2 (with short)	1081(In) 336(Out)
6/1	868

Full Input Data And Results

Lane Saturation Flows

Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	277	775	1052
	B	159	0	295	454
	C	579	524	0	1103
	Tot.	738	801	1070	2609

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	277
1/2 (with short)	657(In) 380(Out)
1/3	395
2/1	801
3/1 (with short)	454(In) 295(Out)
3/2 (short)	159
4/1	528
4/2	542
5/1 (short)	579
5/2 (with short)	1103(In) 524(Out)
6/1	738

Lane Saturation Flows

Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	59	386	445
	B	134	0	809	943
	C	738	327	0	1065
	Tot.	872	386	1195	2453

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	59
1/2 (with short)	264(In) 205(Out)
1/3	181
2/1	386
3/1 (with short)	943(In) 809(Out)
3/2 (short)	134
4/1	610
4/2	585
5/1 (short)	738
5/2 (with short)	1065(In) 327(Out)
6/1	872

Full Input Data And Results

Lane Saturation Flows

Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	168	805	973
	B	160	0	365	525
	C	651	522	0	1173
	Tot.	811	690	1170	2671

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: Norway Road / Copnor Road signalised junction	
1/1 (short)	168
1/2 (with short)	565(In) 397(Out)
1/3	408
2/1	690
3/1 (with short)	525(In) 365(Out)
3/2 (short)	160
4/1	580
4/2	590
5/1 (short)	651
5/2 (with short)	1173(In) 522(Out)
6/1	811

Lane Saturation Flows

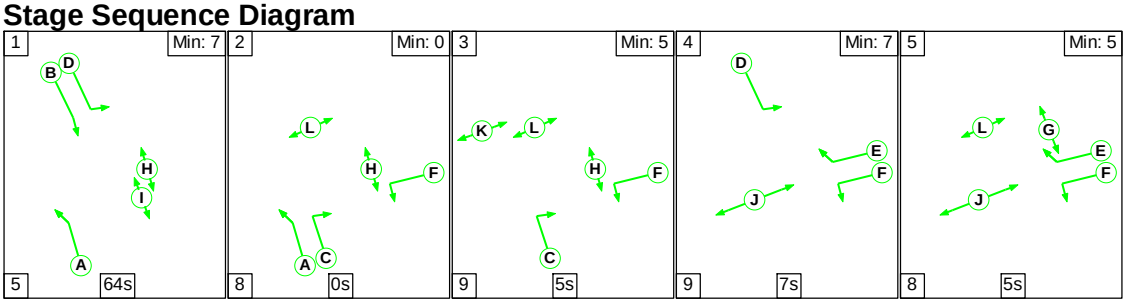
Junction: Norway Road / Copnor Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Norway Road entry)	3.50	0.00	Y	Arm 2 Left	30.00	100.0 %	1871	1871
1/2 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
1/3 (Norway Road entry)	3.50	0.00	Y	Arm 4 Right	8.00	100.0 %	1655	1655
2/1 (A288 Copnor Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 4 Ahead	140.00	100.0 %	1944	1944
3/2 (A288 Copnor Road south entry)	3.50	0.00	Y	Arm 6 Right	Inf	100.0 %	1965	1965
4/1 (A288 Copnor Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (A288 Copnor Road north exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (A288 Copnor Road north entry)	3.50	0.00	Y	Arm 6 Left	Inf	100.0 %	1965	1965
5/2 (A288 Copnor Road north entry)	4.00	0.00	Y	Arm 2 Ahead	140.00	100.0 %	1994	1994
6/1 (Norway Road exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

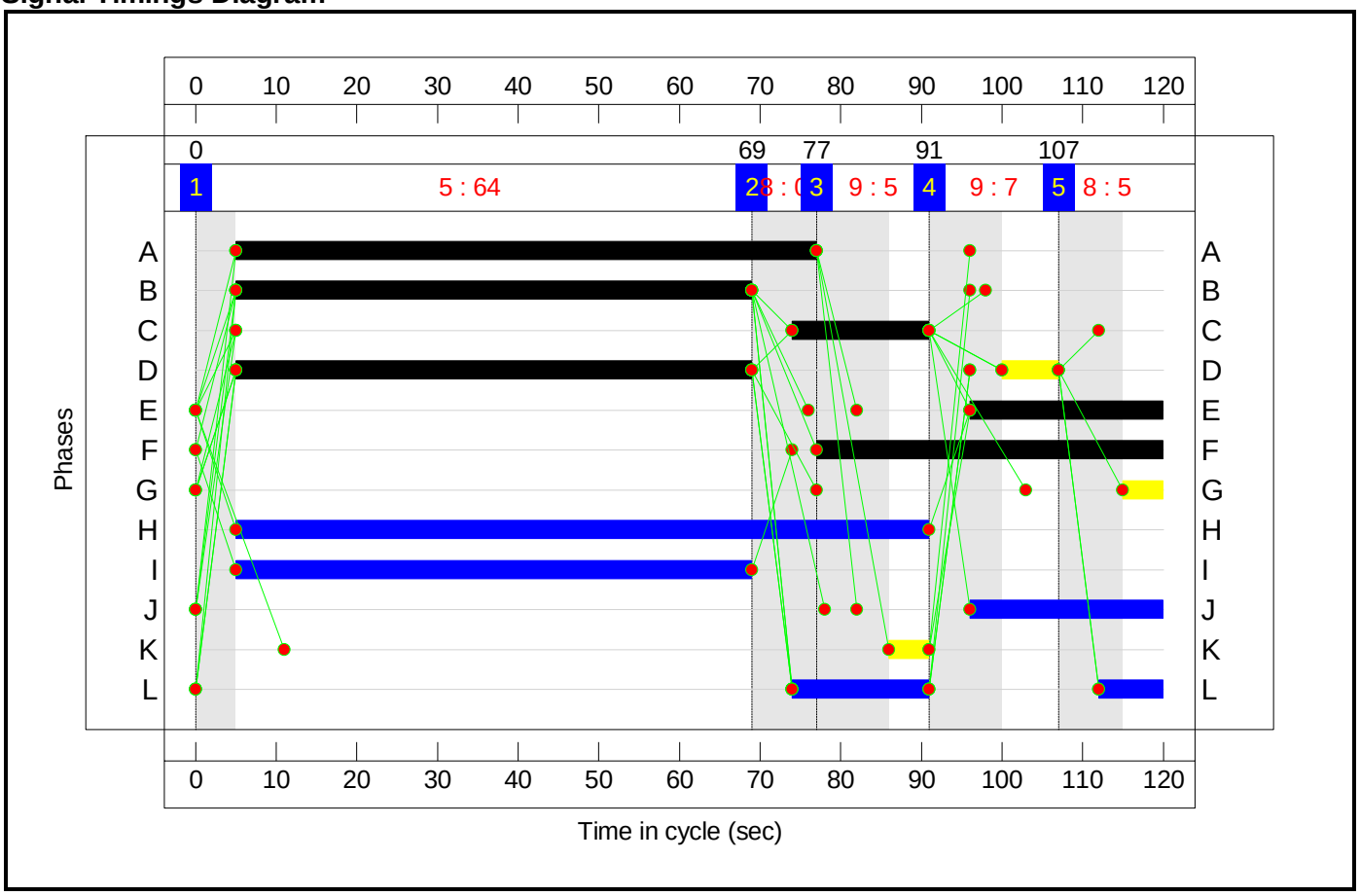
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	64	0	5	7	5
Change Point	0	69	77	91	107

Signal Timings Diagram

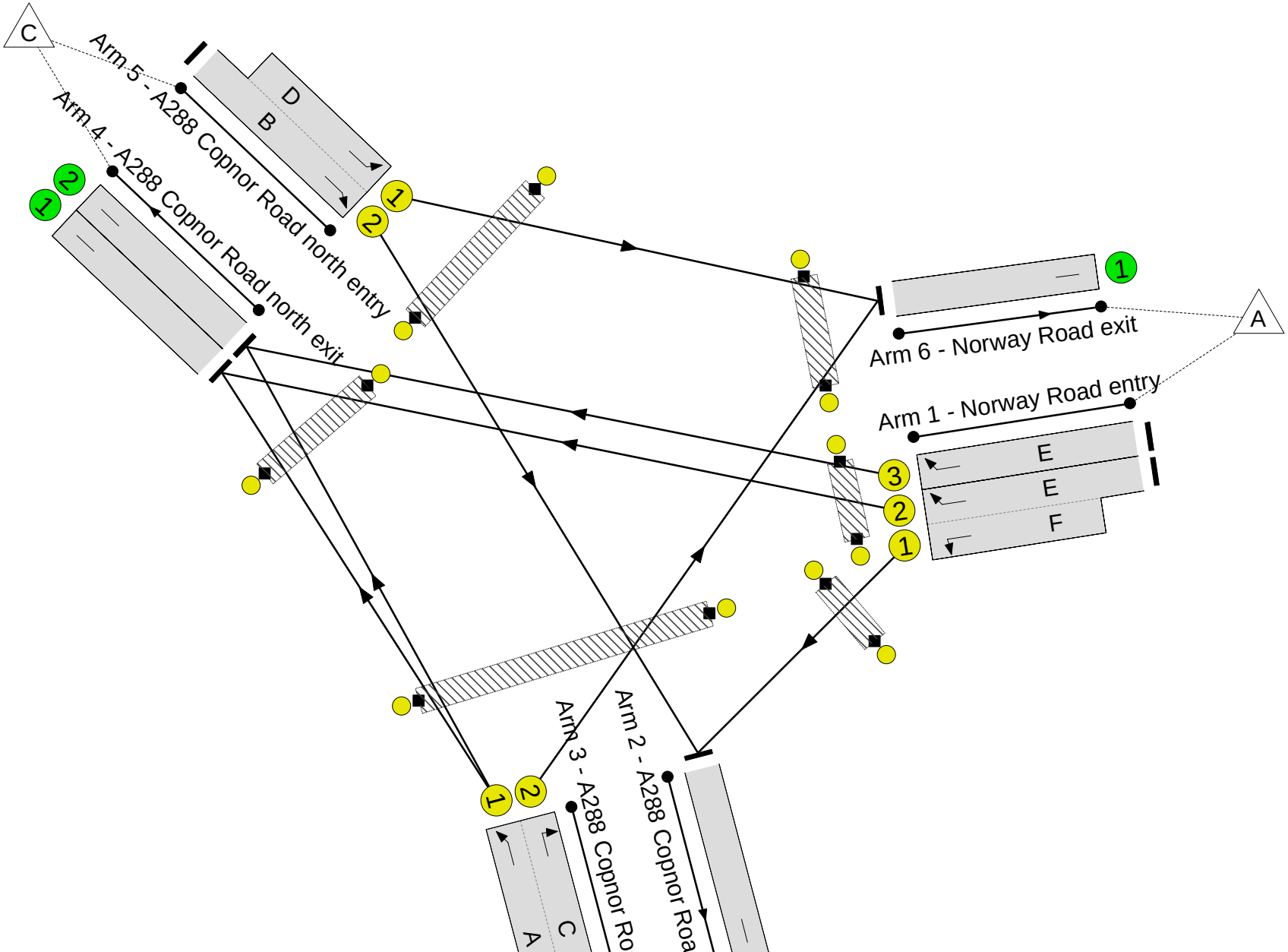


Full Input Data And Results

Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 31.7 %
Total Traffic Delay: 17.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.3%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.3%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	24:43	-	284	1655:1871	433	65.6%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	24	-	202	1655	345	58.6%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	385	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	72:17	-	895	1944:1965	1310	68.3%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	611	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	64:71	-	1068	1994:1965	1578	67.7%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	864	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	86	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	64	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	24	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

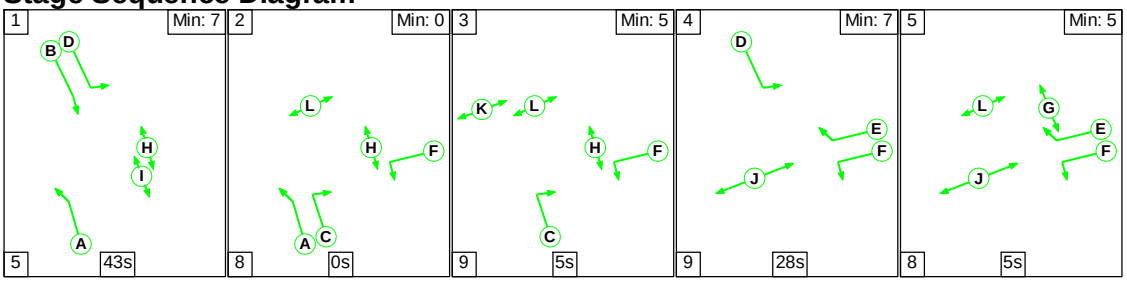
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.2**	**3.8**	**0.0**	**17.9**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**14.2**	**3.8**	**0.0**	**17.9**	**-**	**-**	**-**	**-**
1/2+1/1	284	284	-	-	-	3.1	0.9	-	4.1	51.5	6.8	0.9	7.7
1/3	202	202	-	-	-	2.4	0.7	-	3.1	55.3	6.1	0.7	6.8
2/1	385	385	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	895	895	-	-	-	4.8	1.1	-	5.9	23.8	16.8	1.1	17.8
4/1	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1068	1068	-	-	-	3.8	1.0	-	4.8	16.3	11.1	1.0	12.2
6/1	864	864	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 31.7 Total Delay for Signalled Lanes (pcuHr): 17.92 Cycle Time (s): 120
PRC Over All Lanes (%): 31.7 Total Delay Over All Lanes(pcuHr): 17.92

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

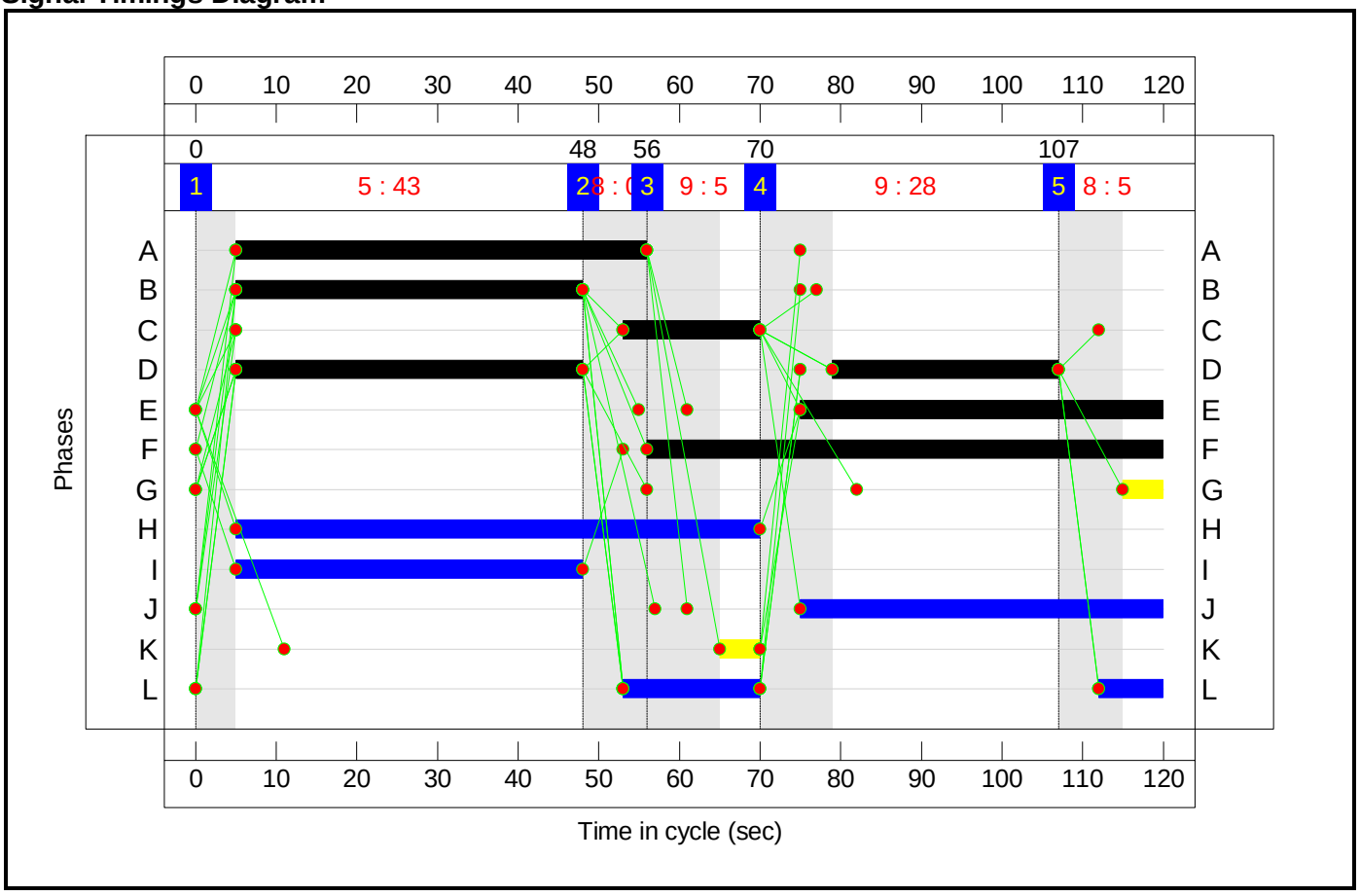
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	43	0	5	28	5
Change Point	0	48	56	70	107

Signal Timings Diagram

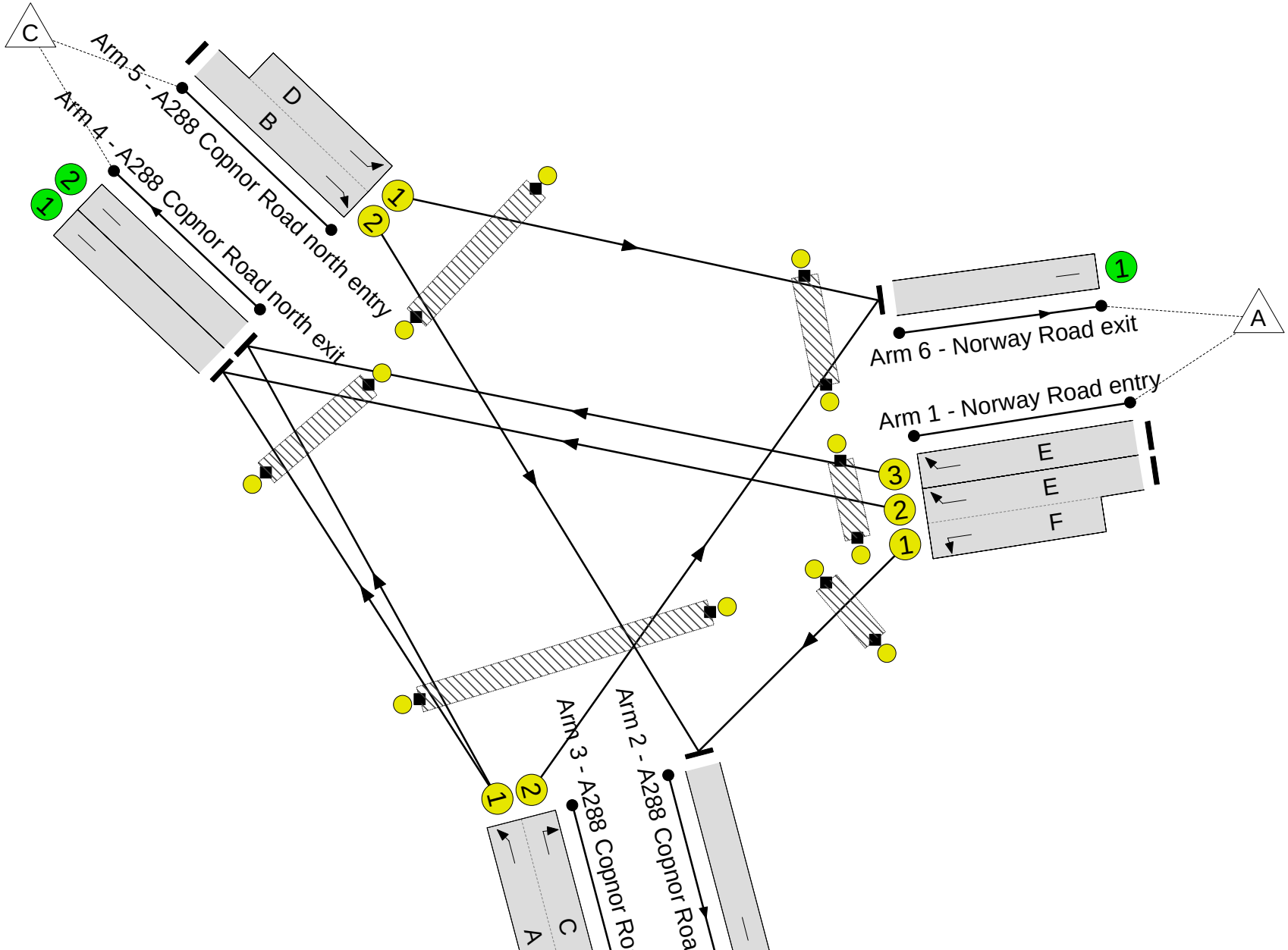


Full Input Data And Results

Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 23.5 %
Total Traffic Delay: 21.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.9%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.9%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	45:64	-	573	1655:1871	786	72.9%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	45	-	411	1655	634	64.8%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	695	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	51:17	-	533	1944:1965	1123	47.5%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	43:71	-	1153	1994:1965	1618	71.3%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	786	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	65	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	43	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	45	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

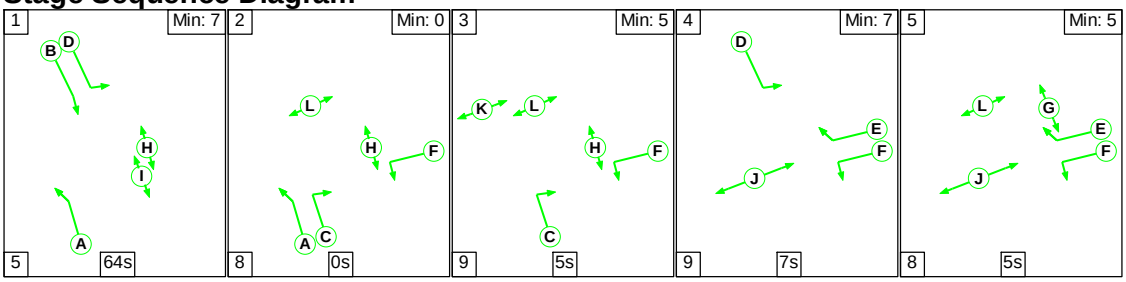
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.9**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.9**	**-**	**-**	**-**	**-**
1/2+1/1	573	573	-	-	-	4.0	1.3	-	5.3	33.5	11.0	1.3	12.4
1/3	411	411	-	-	-	3.5	0.9	-	4.4	38.3	11.2	0.9	12.1
2/1	695	695	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	533	533	-	-	-	4.5	0.5	-	5.0	33.7	8.8	0.5	9.3
4/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	600	600	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1153	1153	-	-	-	6.0	1.2	-	7.2	22.6	14.8	1.2	16.0
6/1	786	786	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 23.5 Total Delay for Signalled Lanes (pcuHr): 21.92 Cycle Time (s): 120
PRC Over All Lanes (%): 23.5 Total Delay Over All Lanes(pcuHr): 21.92

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

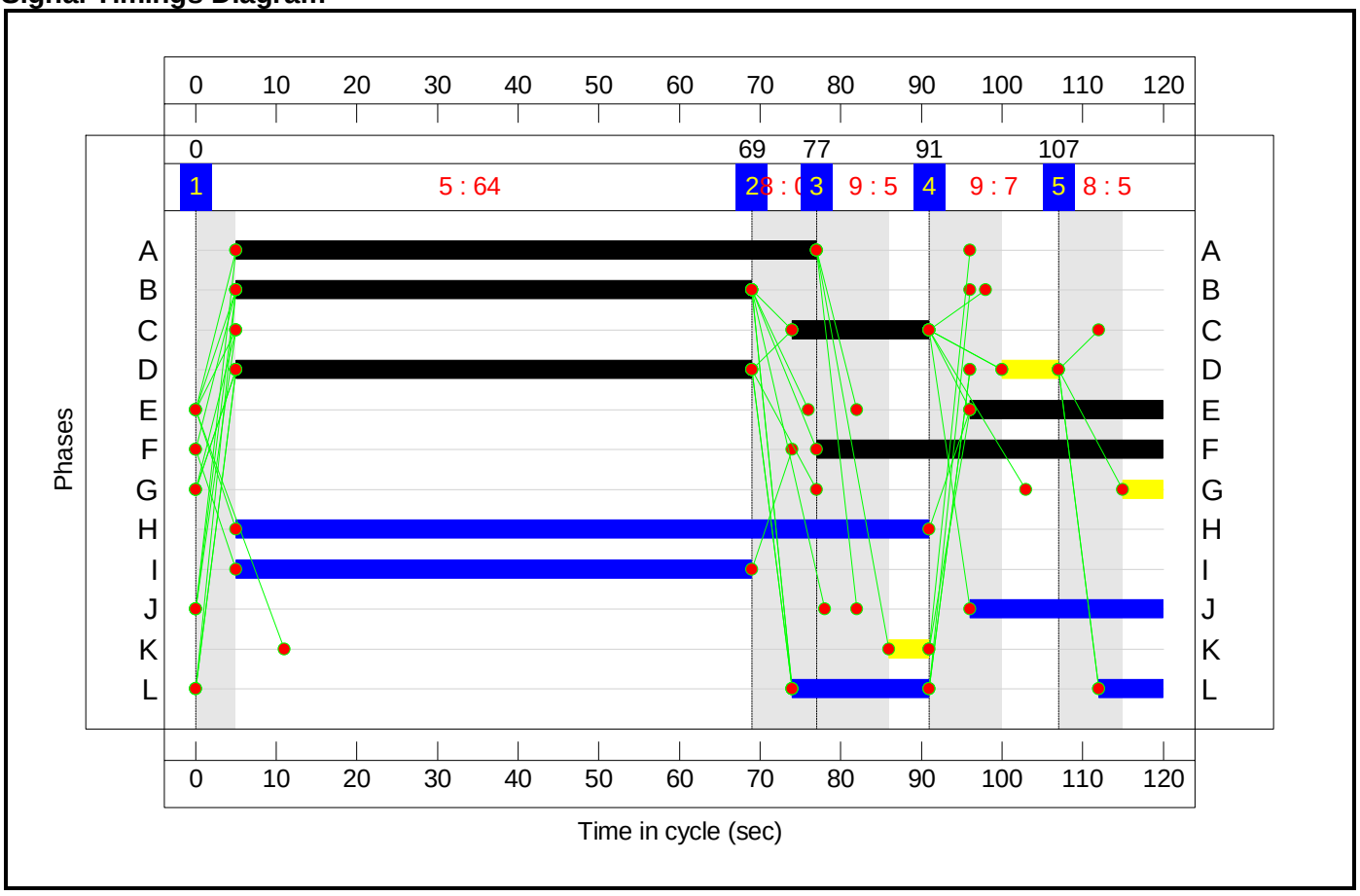
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	64	0	5	7	5
Change Point	0	69	77	91	107

Signal Timings Diagram



Full Input Data And Results

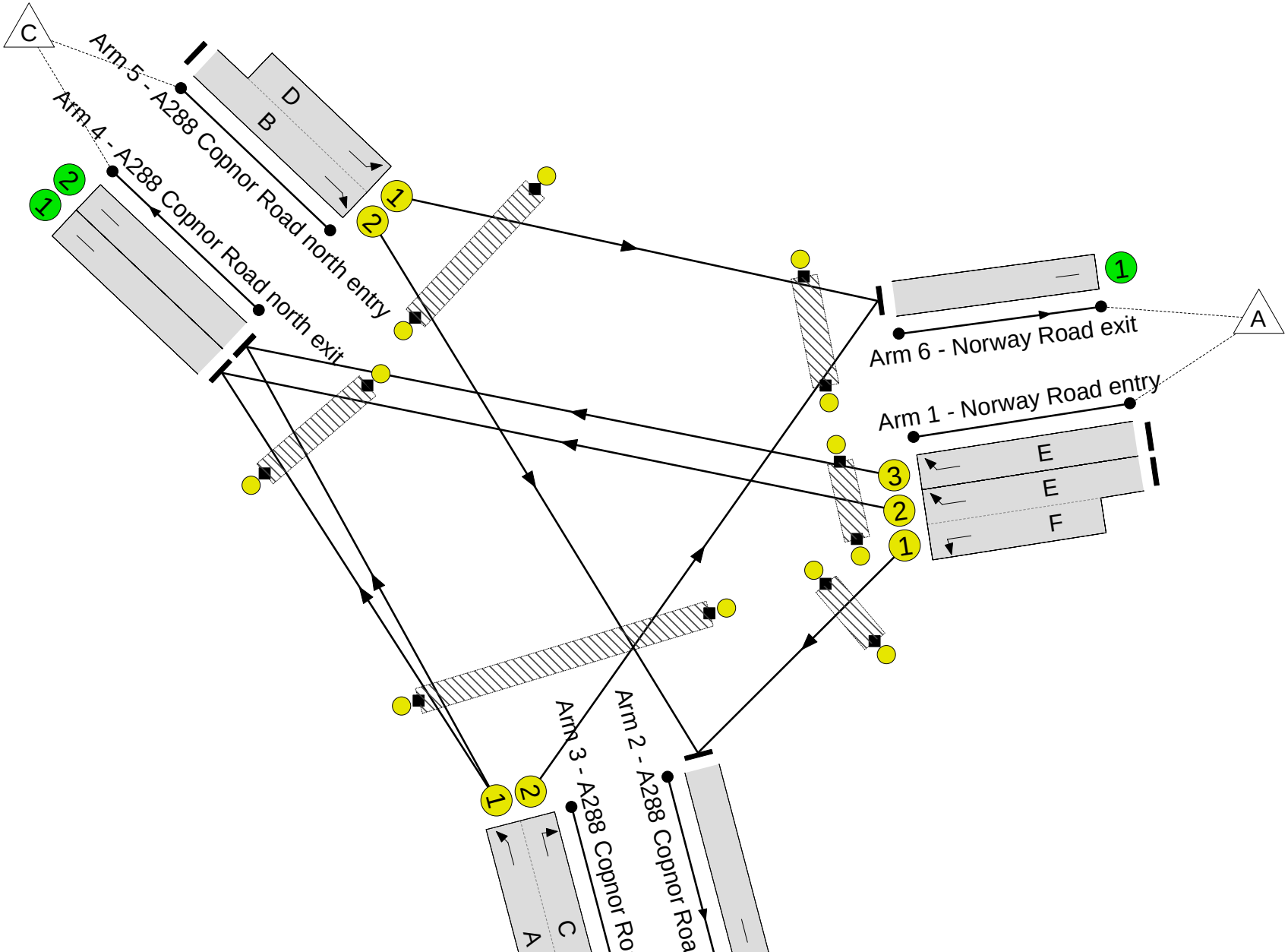
Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 32.3 %

Total Traffic Delay: 17.9 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.0%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.0%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	24:43	-	283	1655:1871	432	65.6%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	24	-	204	1655	345	59.2%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	395	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	72:17	-	884	1944:1965	1314	67.3%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	64:71	-	1081	1994:1965	1590	68.0%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	868	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	86	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	64	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	24	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

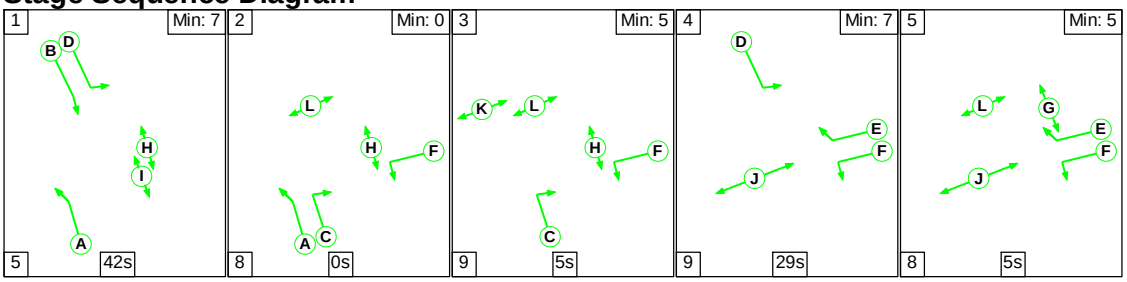
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.2**	**3.7**	**0.0**	**17.9**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**14.2**	**3.7**	**0.0**	**17.9**	**-**	**-**	**-**	**-**
1/2+1/1	283	283	-	-	-	3.1	0.9	-	4.1	51.6	6.8	0.9	7.7
1/3	204	204	-	-	-	2.4	0.7	-	3.1	55.6	6.1	0.7	6.8
2/1	395	395	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	884	884	-	-	-	4.8	1.0	-	5.8	23.6	16.3	1.0	17.3
4/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1081	1081	-	-	-	3.9	1.1	-	4.9	16.4	11.2	1.1	12.2
6/1	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 32.3 Total Delay for Signalled Lanes (pcuHr): 17.93 Cycle Time (s): 120
PRC Over All Lanes (%): 32.3 Total Delay Over All Lanes(pcuHr): 17.93

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

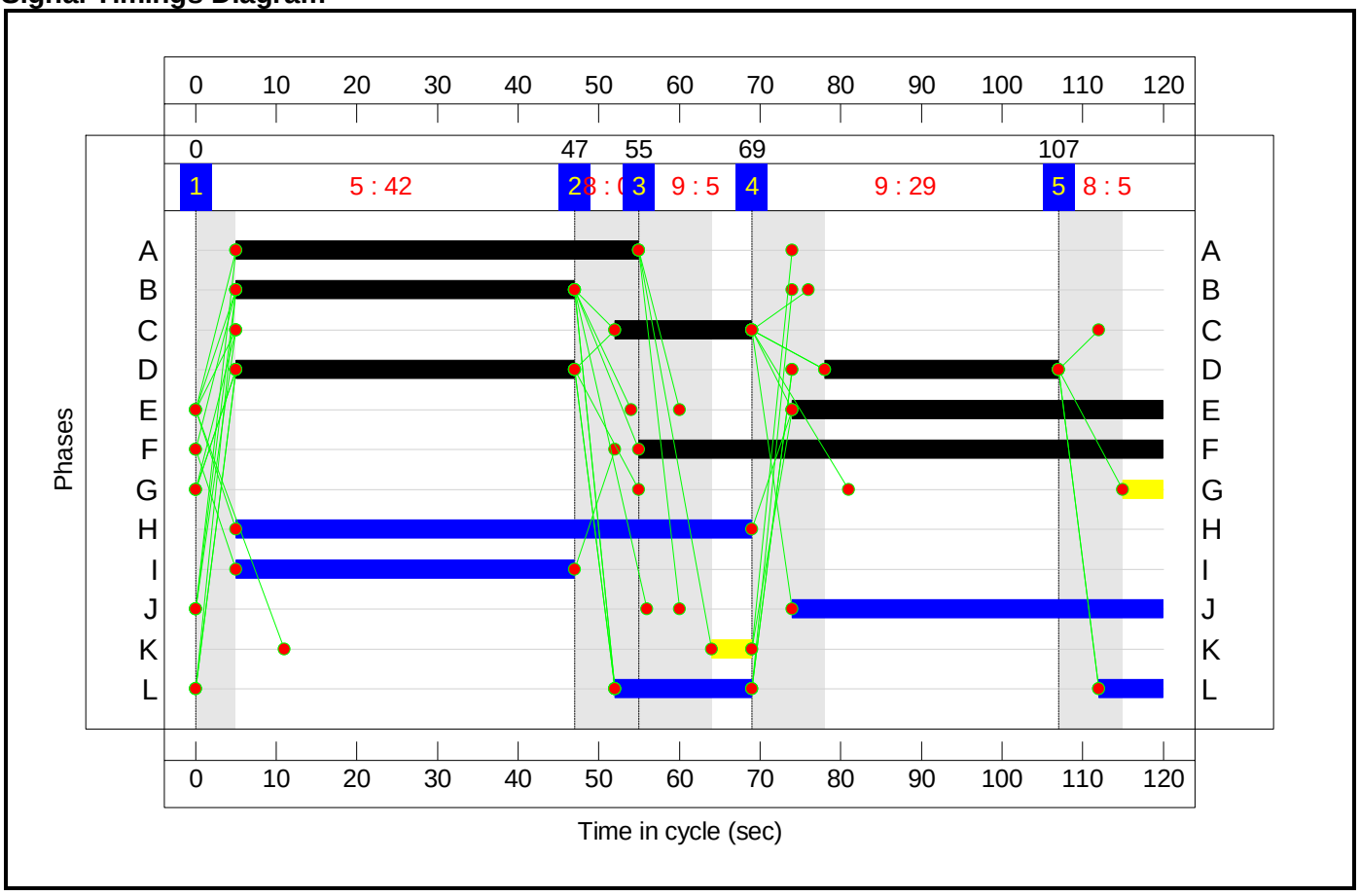
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	42	0	5	29	5
Change Point	0	47	55	69	107

Signal Timings Diagram

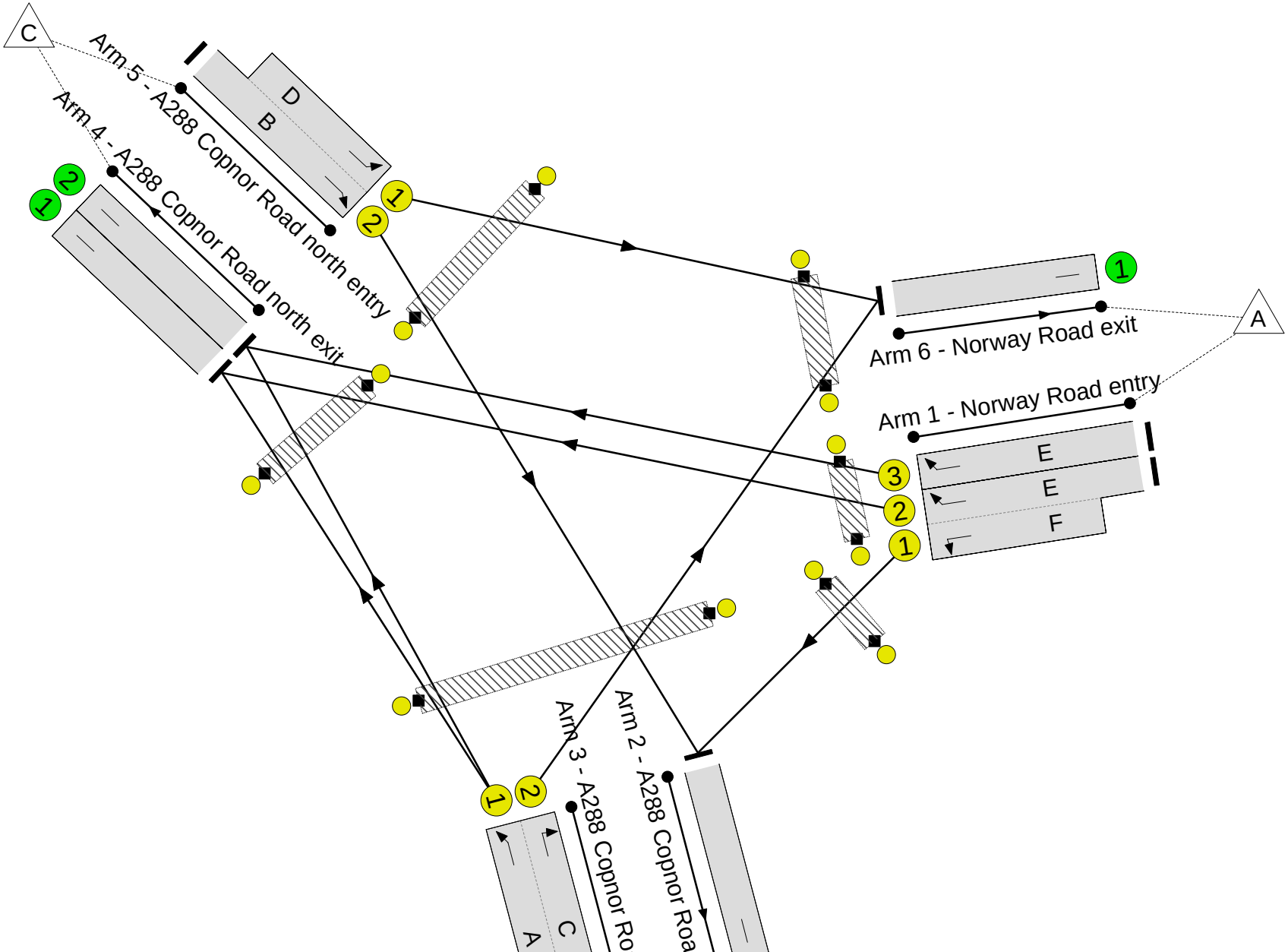


Full Input Data And Results

Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 22.7 %
Total Traffic Delay: 21.2 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.3%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.3%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	46:65	-	657	1655:1871	898	73.2%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	46	-	395	1655	648	60.9%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	801	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	50:17	-	454	1944:1965	1109	40.9%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	528	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	542	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	42:71	-	1103	1994:1965	1504	73.3%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	738	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	64	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	42	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	46	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**17.3**	**3.8**	**0.0**	**21.2**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**17.3**	**3.8**	**0.0**	**21.2**	**-**	**-**	**-**	**-**
1/2+1/1	657	657	-	-	-	4.1	1.3	-	5.5	30.1	9.9	1.3	11.3
1/3	395	395	-	-	-	3.2	0.8	-	4.0	36.2	10.4	0.8	11.2
2/1	801	801	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	454	454	-	-	-	4.0	0.3	-	4.3	34.5	6.6	0.3	7.0
4/1	528	528	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1103	1103	-	-	-	6.0	1.4	-	7.4	24.1	15.1	1.4	16.5
6/1	738	738	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1

PRC for Signalled Lanes (%): 22.7
PRC Over All Lanes (%): 22.7

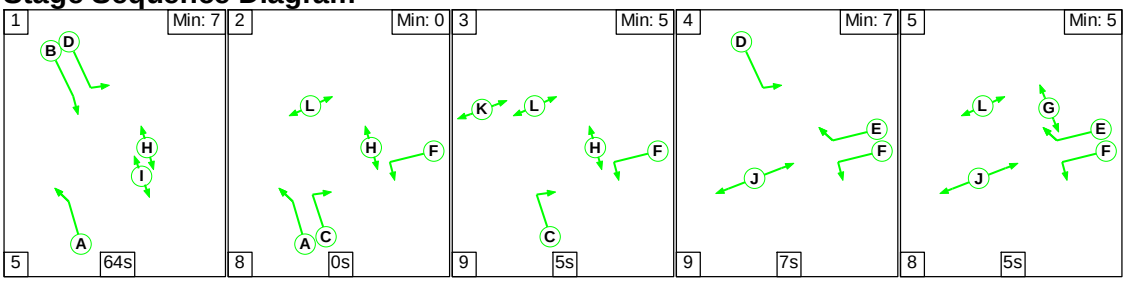
Total Delay for Signalled Lanes (pcuHr): 21.19
Total Delay Over All Lanes(pcuHr): 21.19

Cycle Time (s): 120

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

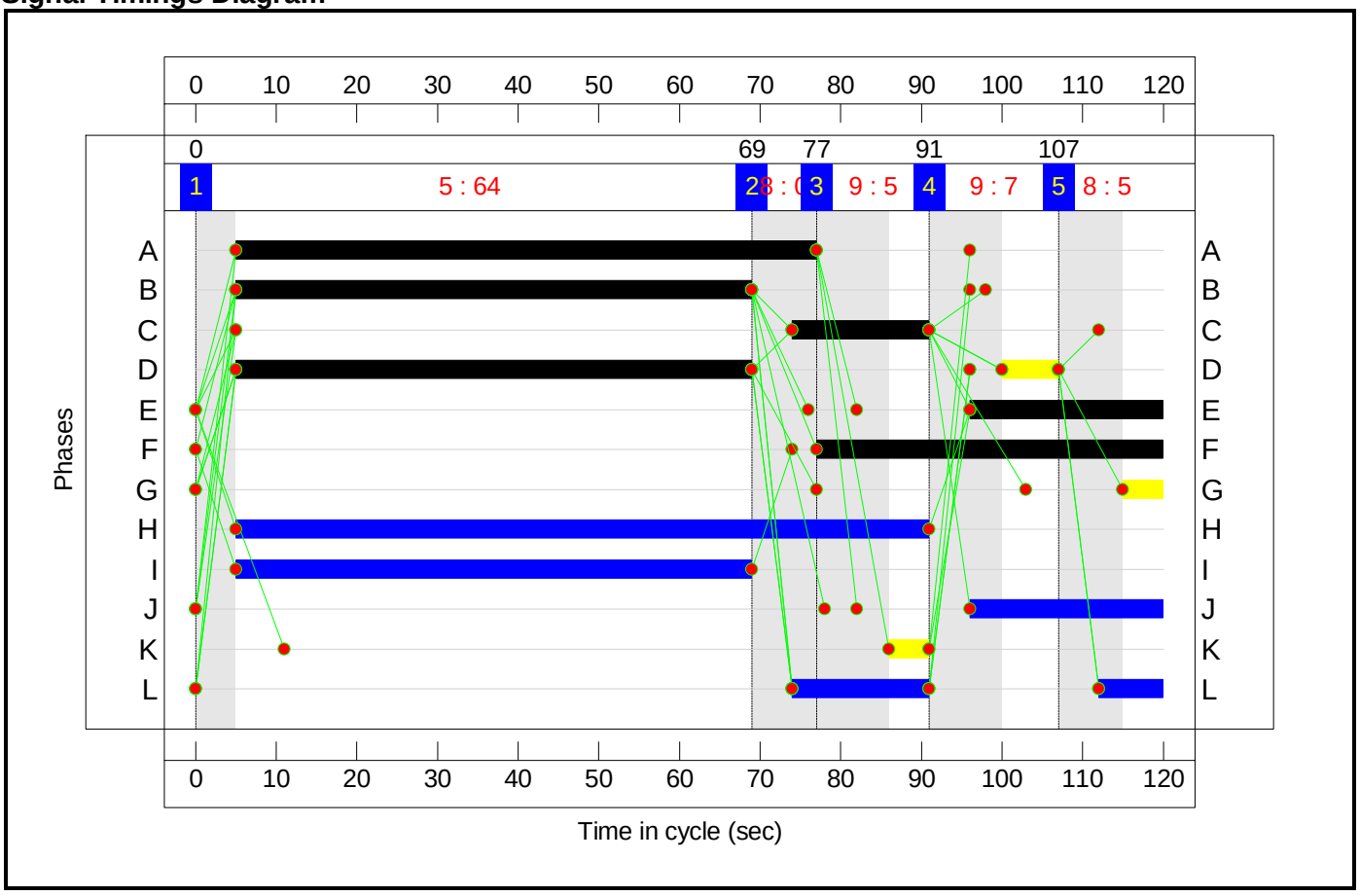
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	64	0	5	7	5
Change Point	0	69	77	91	107

Signal Timings Diagram

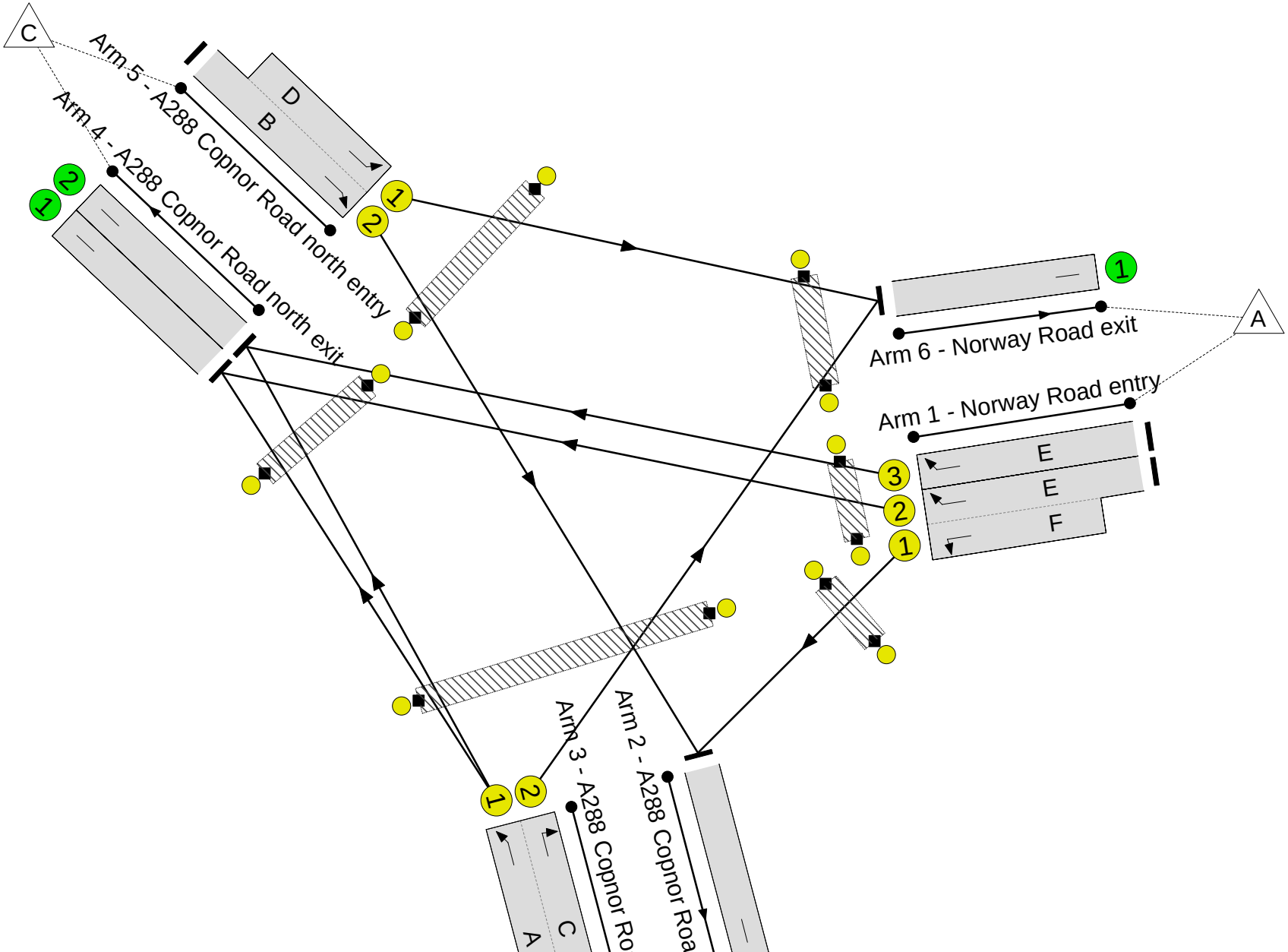


Full Input Data And Results

Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 25.7 %
Total Traffic Delay: 17.6 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.6%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.6%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	24:43	-	264	1655:1871	439	60.1%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	24	-	181	1655	345	52.5%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	386	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	72:17	-	943	1944:1965	1317	71.6%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	64:71	-	1065	1994:1965	1583	67.3%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	86	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	64	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	24	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

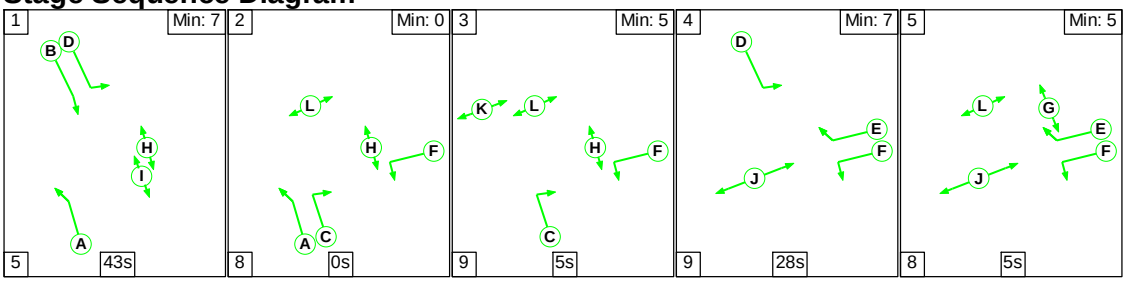
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.0**	**3.6**	**0.0**	**17.6**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**14.0**	**3.6**	**0.0**	**17.6**	**-**	**-**	**-**	**-**
1/2+1/1	264	264	-	-	-	2.9	0.7	-	3.6	49.1	6.1	0.7	6.9
1/3	181	181	-	-	-	2.1	0.5	-	2.7	53.1	5.3	0.5	5.9
2/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	943	943	-	-	-	5.3	1.3	-	6.5	24.9	18.0	1.3	19.2
4/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1065	1065	-	-	-	3.8	1.0	-	4.8	16.2	11.0	1.0	12.0
6/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 25.7 Total Delay for Signalled Lanes (pcuHr): 17.60 Cycle Time (s): 120
PRC Over All Lanes (%): 25.7 Total Delay Over All Lanes(pcuHr): 17.60

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

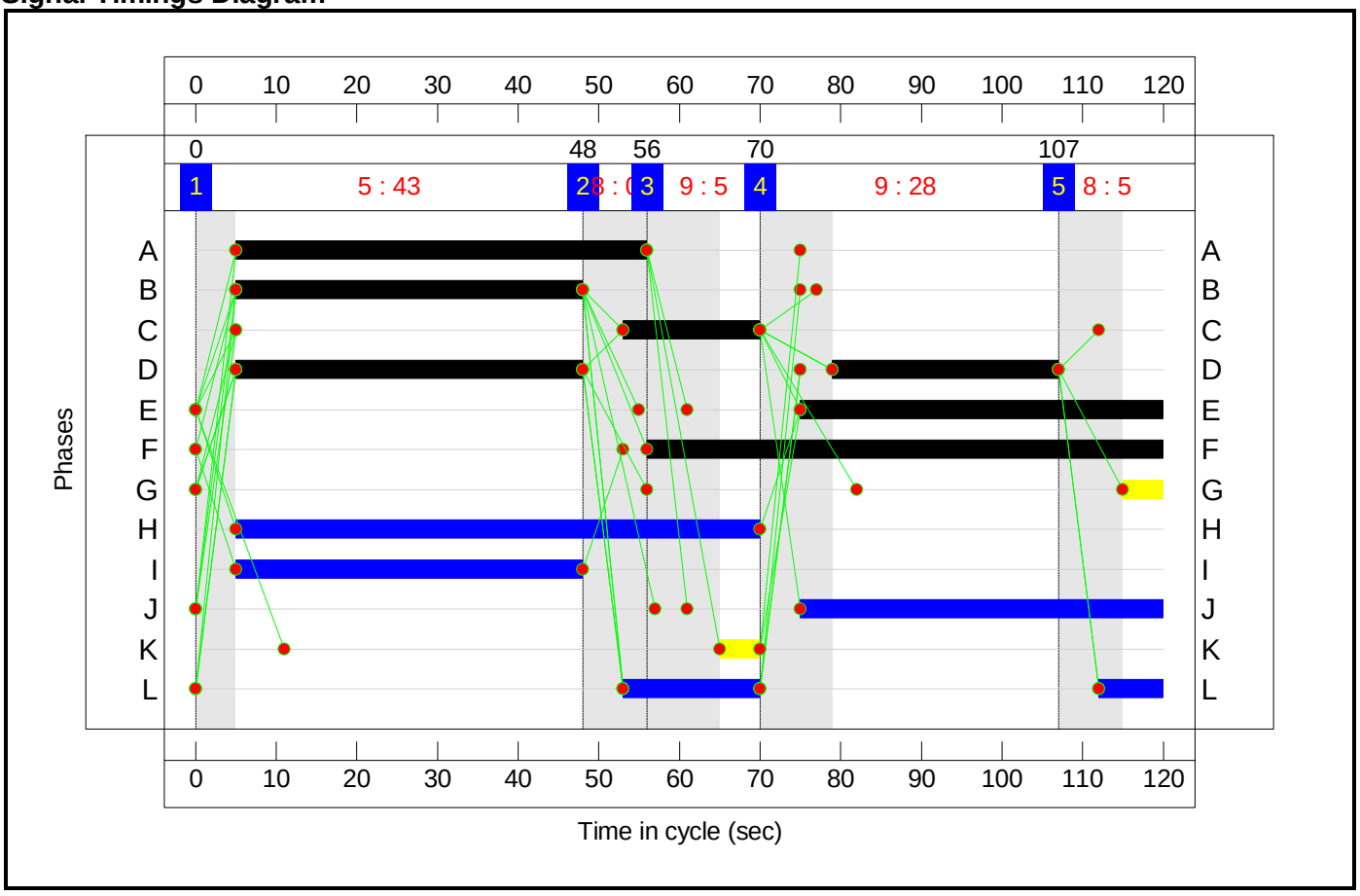
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	43	0	5	28	5
Change Point	0	48	56	70	107

Signal Timings Diagram

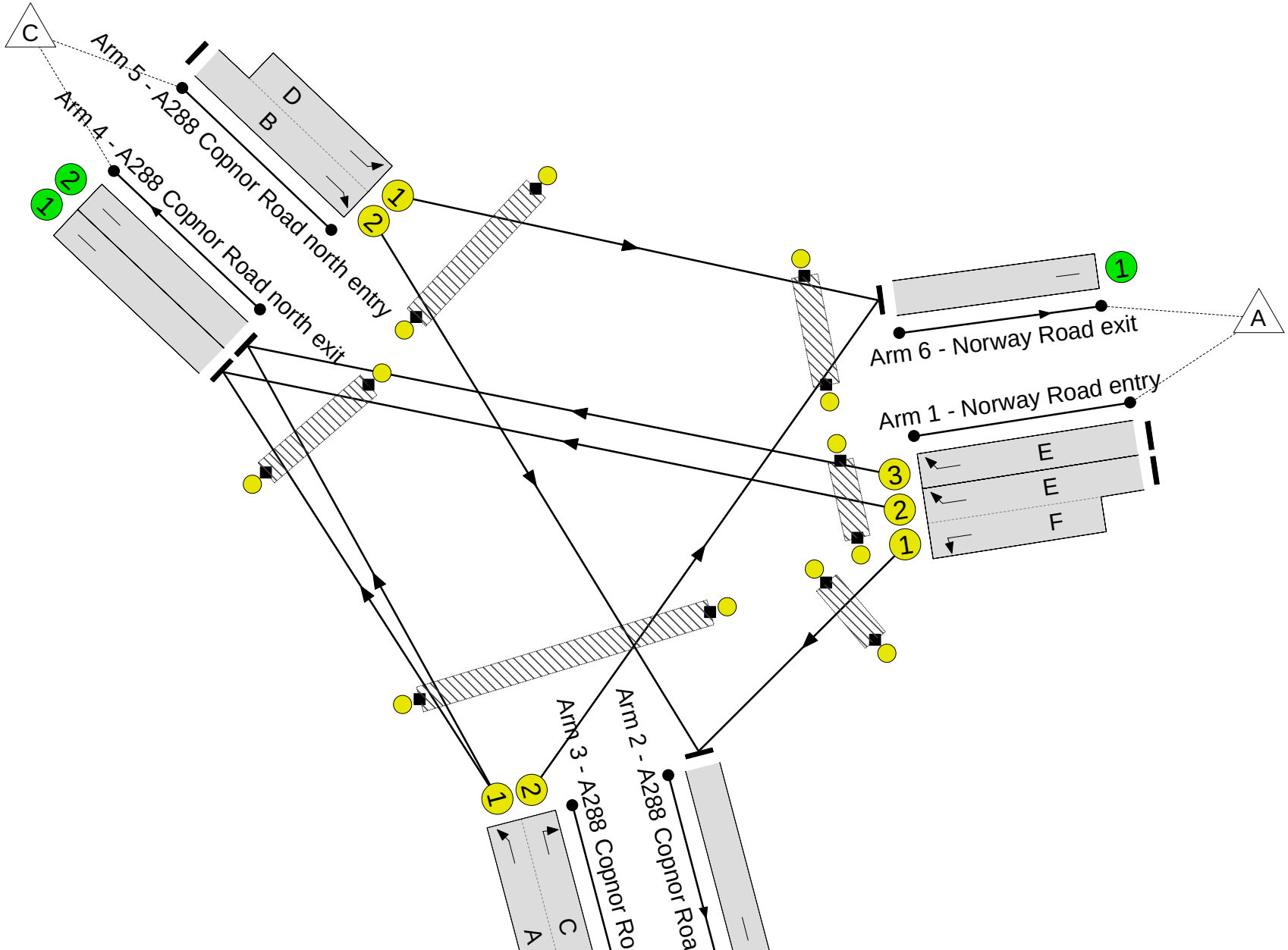


Full Input Data And Results

Network Layout Diagram

Norway Road / Copnor Road signalised junction

PRC: 24.6 %
Total Traffic Delay: 21.8 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.2%**
Norway Road / Copnor Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.2%**
1/2+1/1	Norway Road entry Left Right	U	N/A	N/A	E F		1	45:64	-	565	1655:1871	782	72.2%
1/3	Norway Road entry Right	U	N/A	N/A	E		1	45	-	408	1655	634	64.3%
2/1	A288 Copnor Road south exit	U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
3/1+3/2	A288 Copnor Road south entry Ahead Right	U	N/A	N/A	A C		1	51:17	-	525	1944:1965	1122	46.8%
4/1	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%
4/2	A288 Copnor Road north exit	U	N/A	N/A	-		-	-	-	590	Inf	Inf	0.0%
5/2+5/1	A288 Copnor Road north entry Ahead Left	U	N/A	N/A	B D		1:2	43:71	-	1173	1994:1965	1643	71.4%
6/1	Norway Road exit	U	N/A	N/A	-		-	-	-	811	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	H		1	65	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	I		1	43	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	J		1	45	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	K		1	5	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	L		2	25	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	G		1	5	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.8**	**-**	**-**	**-**	**-**
Norway Road / Copnor Road signalised junction	**-**	**-**	**0**	**0**	**0**	**18.0**	**3.9**	**0.0**	**21.8**	**-**	**-**	**-**	**-**
1/2+1/1	565	565	-	-	-	4.0	1.3	-	5.2	33.4	10.9	1.3	12.2
1/3	408	408	-	-	-	3.4	0.9	-	4.3	38.2	11.1	0.9	12.0
2/1	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	525	525	-	-	-	4.5	0.4	-	4.9	33.9	8.4	0.4	8.9
4/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	590	590	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	1173	1173	-	-	-	6.1	1.2	-	7.3	22.4	14.8	1.2	16.0
6/1	811	811	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 24.6 Total Delay for Signalled Lanes (pcuHr): 21.82 Cycle Time (s): 120
PRC Over All Lanes (%): 24.6 Total Delay Over All Lanes(pcuHr): 21.82

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []

Filename: Purbrook Way_College Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\PICADY\TA Models and Outputs
Report generation date: 28/10/2019 16:11:22

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Stream B-C	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream B-A	3.2	73.55	0.77	F	1.2	48.42	0.54	E
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
	EMM - DS1							
Stream B-C	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream B-A	5.5	114.52	0.88	F	1.7	52.27	0.62	F
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
	EML - DS2							
Stream B-C	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream B-A	5.1	106.72	0.87	F	1.7	53.51	0.62	F
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

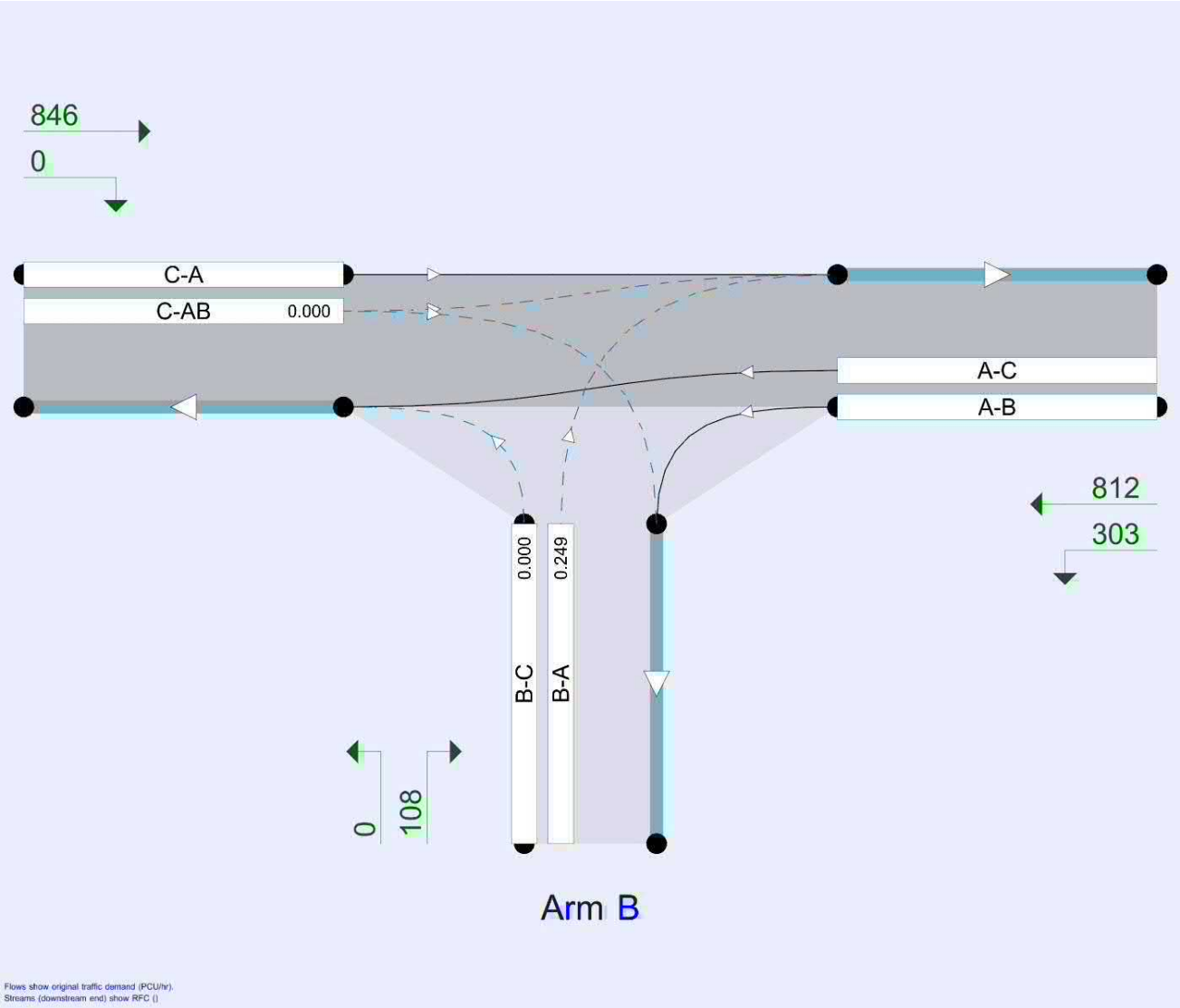
File summary

File Description

Title	Purbrook Way / College Road priority T-junction
Location	
Site number	
Date	29/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Purbrook Way east		Major
B	College Road		Minor
C	Purbrook Way west		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.60		✓	3.50	250.0	✓	19.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	7.60	5.60	4.80	4.40		4.00	70	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	619	0.105	0.265	0.167	0.379
1	B-C	563	0.080	0.203	-	-
1	C-B	820	0.296	0.296	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	819	100.000
B		✓	155	100.000
C		✓	1242	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	389	430
	B	155	0	0
	C	1242	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.77	73.55	3.2	F
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	434	0.000	0	0.0	0.000	A
B-A	117	346	0.337	115	0.5	16.926	C
C-AB	0	1276	0.000	0	0.0	0.000	A
C-A	935			935			
A-B	293			293			
A-C	324			324			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	402	0.000	0	0.0	0.000	A
B-A	139	294	0.475	138	0.9	25.146	D
C-AB	0	1205	0.000	0	0.0	0.000	A
C-A	1117			1117			
A-B	350			350			
A-C	387			387			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	347	0.000	0	0.0	0.000	A
B-A	171	220	0.774	163	2.9	62.076	F
C-AB	0	1107	0.000	0	0.0	0.000	A
C-A	1367			1367			
A-B	428			428			
A-C	473			473			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	343	0.000	0	0.0	0.000	A
B-A	171	220	0.774	169	3.2	73.550	F
C-AB	0	1107	0.000	0	0.0	0.000	A
C-A	1367			1367			
A-B	428			428			
A-C	473			473			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	398	0.000	0	0.0	0.000	A
B-A	139	294	0.475	148	1.0	28.643	D
C-AB	0	1205	0.000	0	0.0	0.000	A
C-A	1117			1117			
A-B	350			350			
A-C	387			387			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	433	0.000	0	0.0	0.000	A
B-A	117	346	0.337	119	0.6	17.519	C
C-AB	0	1276	0.000	0	0.0	0.000	A
C-A	935			935			
A-B	293			293			
A-C	324			324			

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1230	100.000
B		✓	85	100.000
C		✓	750	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	297	933
	B	85	0	0
	C	750	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.54	48.42	1.2	E
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	382	0.000	0	0.0	0.000	A
B-A	64	315	0.203	63	0.3	15.639	C
C-AB	0	1093	0.000	0	0.0	0.000	A
C-A	565			565			
A-B	224			224			
A-C	702			702			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	344	0.000	0	0.0	0.000	A
B-A	76	256	0.298	76	0.5	21.863	C
C-AB	0	987	0.000	0	0.0	0.000	A
C-A	674			674			
A-B	267			267			
A-C	839			839			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	284	0.000	0	0.0	0.000	A
B-A	94	175	0.536	91	1.1	45.858	E
C-AB	0	840	0.000	0	0.0	0.000	A
C-A	826			826			
A-B	327			327			
A-C	1027			1027			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	282	0.000	0	0.0	0.000	A
B-A	94	175	0.536	93	1.2	48.422	E
C-AB	0	840	0.000	0	0.0	0.000	A
C-A	826			826			
A-B	327			327			
A-C	1027			1027			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	342	0.000	0	0.0	0.000	A
B-A	76	256	0.298	79	0.5	22.734	C
C-AB	0	987	0.000	0	0.0	0.000	A
C-A	674			674			
A-B	267			267			
A-C	839			839			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	382	0.000	0	0.0	0.000	A
B-A	64	315	0.203	65	0.3	15.871	C
C-AB	0	1093	0.000	0	0.0	0.000	A
C-A	565			565			
A-B	224			224			
A-C	702			702			

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	8.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	855	100.000
B		✓	172	100.000
C		✓	1215	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	386	469
	B	172	0	0
	C	1215	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.88	114.52	5.5	F
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	424	0.000	0	0.0	0.000	A
B-A	129	342	0.378	127	0.6	18.182	C
C-AB	0	1260	0.000	0	0.0	0.000	A
C-A	915			915			
A-B	291			291			
A-C	353			353			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	389	0.000	0	0.0	0.000	A
B-A	155	289	0.536	152	1.2	28.630	D
C-AB	0	1186	0.000	0	0.0	0.000	A
C-A	1092			1092			
A-B	347			347			
A-C	422			422			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	328	0.000	0	0.0	0.000	A
B-A	189	214	0.884	176	4.5	84.496	F
C-AB	0	1084	0.000	0	0.0	0.000	A
C-A	1338			1338			
A-B	425			425			
A-C	516			516			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	322	0.000	0	0.0	0.000	A
B-A	189	214	0.884	185	5.5	114.520	F
C-AB	0	1084	0.000	0	0.0	0.000	A
C-A	1338			1338			
A-B	425			425			
A-C	516			516			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	381	0.000	0	0.0	0.000	A
B-A	155	289	0.536	171	1.4	37.647	E
C-AB	0	1186	0.000	0	0.0	0.000	A
C-A	1092			1092			
A-B	347			347			
A-C	422			422			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	422	0.000	0	0.0	0.000	A
B-A	129	342	0.378	132	0.7	19.076	C
C-AB	0	1260	0.000	0	0.0	0.000	A
C-A	915			915			
A-B	291			291			
A-C	353			353			

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1112	100.000
B		✓	109	100.000
C		✓	835	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	303	809
	B	109	0	0
	C	835	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.62	52.27	1.7	F
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	395	0.000	0	0.0	0.000	A
B-A	82	329	0.250	81	0.4	15.878	C
C-AB	0	1146	0.000	0	0.0	0.000	A
C-A	629			629			
A-B	228			228			
A-C	609			609			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	358	0.000	0	0.0	0.000	A
B-A	98	272	0.360	97	0.6	22.463	C
C-AB	0	1050	0.000	0	0.0	0.000	A
C-A	751			751			
A-B	272			272			
A-C	727			727			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	300	0.000	0	0.0	0.000	A
B-A	120	194	0.617	116	1.6	48.410	E
C-AB	0	917	0.000	0	0.0	0.000	A
C-A	919			919			
A-B	334			334			
A-C	891			891			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	298	0.000	0	0.0	0.000	A
B-A	120	194	0.617	120	1.7	52.272	F
C-AB	0	917	0.000	0	0.0	0.000	A
C-A	919			919			
A-B	334			334			
A-C	891			891			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	356	0.000	0	0.0	0.000	A
B-A	98	272	0.360	102	0.6	23.754	C
C-AB	0	1050	0.000	0	0.0	0.000	A
C-A	751			751			
A-B	272			272			
A-C	727			727			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	394	0.000	0	0.0	0.000	A
B-A	82	329	0.250	83	0.4	16.197	C
C-AB	0	1146	0.000	0	0.0	0.000	A
C-A	629			629			
A-B	228			228			
A-C	609			609			

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	8.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	851	100.000
B		✓	171	100.000
C		✓	1208	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	386	465
	B	171	0	0
	C	1208	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.87	106.72	5.1	F
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	425	0.000	0	0.0	0.000	A
B-A	129	344	0.374	126	0.6	17.987	C
C-AB	0	1262	0.000	0	0.0	0.000	A
C-A	909			909			
A-B	291			291			
A-C	350			350			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	390	0.000	0	0.0	0.000	A
B-A	154	291	0.529	152	1.2	28.071	D
C-AB	0	1188	0.000	0	0.0	0.000	A
C-A	1086			1086			
A-B	347			347			
A-C	418			418			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	331	0.000	0	0.0	0.000	A
B-A	188	217	0.868	176	4.3	80.499	F
C-AB	0	1087	0.000	0	0.0	0.000	A
C-A	1330			1330			
A-B	425			425			
A-C	512			512			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	325	0.000	0	0.0	0.000	A
B-A	188	217	0.868	185	5.1	106.718	F
C-AB	0	1087	0.000	0	0.0	0.000	A
C-A	1330			1330			
A-B	425			425			
A-C	512			512			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	383	0.000	0	0.0	0.000	A
B-A	154	291	0.529	169	1.3	35.879	E
C-AB	0	1188	0.000	0	0.0	0.000	A
C-A	1086			1086			
A-B	347			347			
A-C	418			418			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	423	0.000	0	0.0	0.000	A
B-A	129	344	0.374	131	0.7	18.838	C
C-AB	0	1262	0.000	0	0.0	0.000	A
C-A	909			909			
A-B	291			291			
A-C	350			350			

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	1115	100.000
B		✓	108	100.000
C		✓	846	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	303	812
	B	108	0	0
	C	846	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.62	53.51	1.7	F
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	395	0.000	0	0.0	0.000	A
B-A	81	327	0.249	80	0.4	15.958	C
C-AB	0	1144	0.000	0	0.0	0.000	A
C-A	637			637			
A-B	228			228			
A-C	611			611			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	357	0.000	0	0.0	0.000	A
B-A	97	270	0.360	96	0.6	22.651	C
C-AB	0	1048	0.000	0	0.0	0.000	A
C-A	761			761			
A-B	272			272			
A-C	730			730			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	299	0.000	0	0.0	0.000	A
B-A	119	192	0.621	115	1.6	49.420	E
C-AB	0	915	0.000	0	0.0	0.000	A
C-A	931			931			
A-B	334			334			
A-C	894			894			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	297	0.000	0	0.0	0.000	A
B-A	119	192	0.621	119	1.7	53.507	F
C-AB	0	915	0.000	0	0.0	0.000	A
C-A	931			931			
A-B	334			334			
A-C	894			894			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	355	0.000	0	0.0	0.000	A
B-A	97	270	0.360	101	0.6	23.987	C
C-AB	0	1048	0.000	0	0.0	0.000	A
C-A	761			761			
A-B	272			272			
A-C	730			730			

18:00 - 18:15

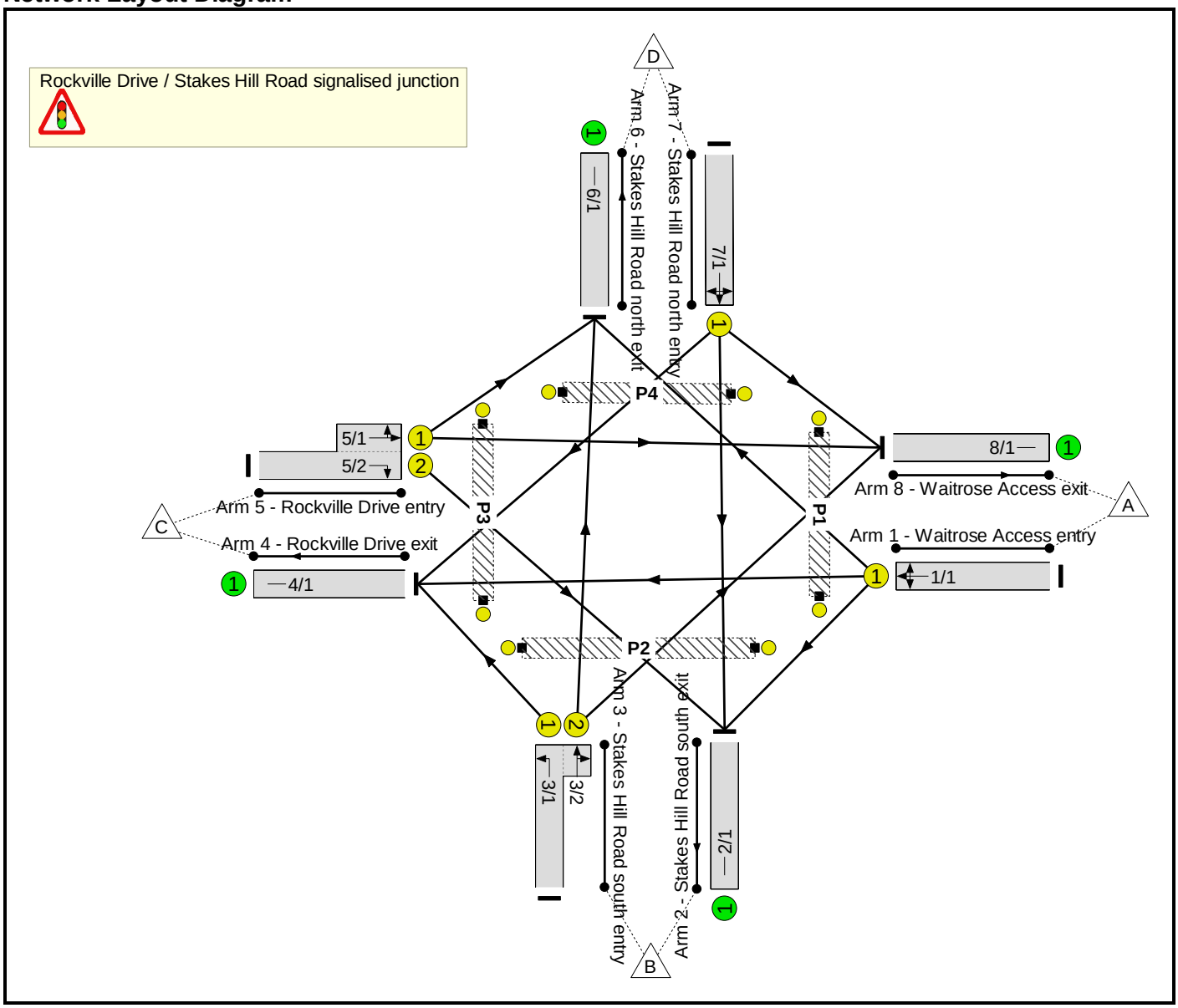
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	0	394	0.000	0	0.0	0.000	A
B-A	81	327	0.249	82	0.4	16.278	C
C-AB	0	1144	0.000	0	0.0	0.000	A
C-A	637			637			
A-B	228			228			
A-C	611			611			

Full Input Data And Results

User and Project Details

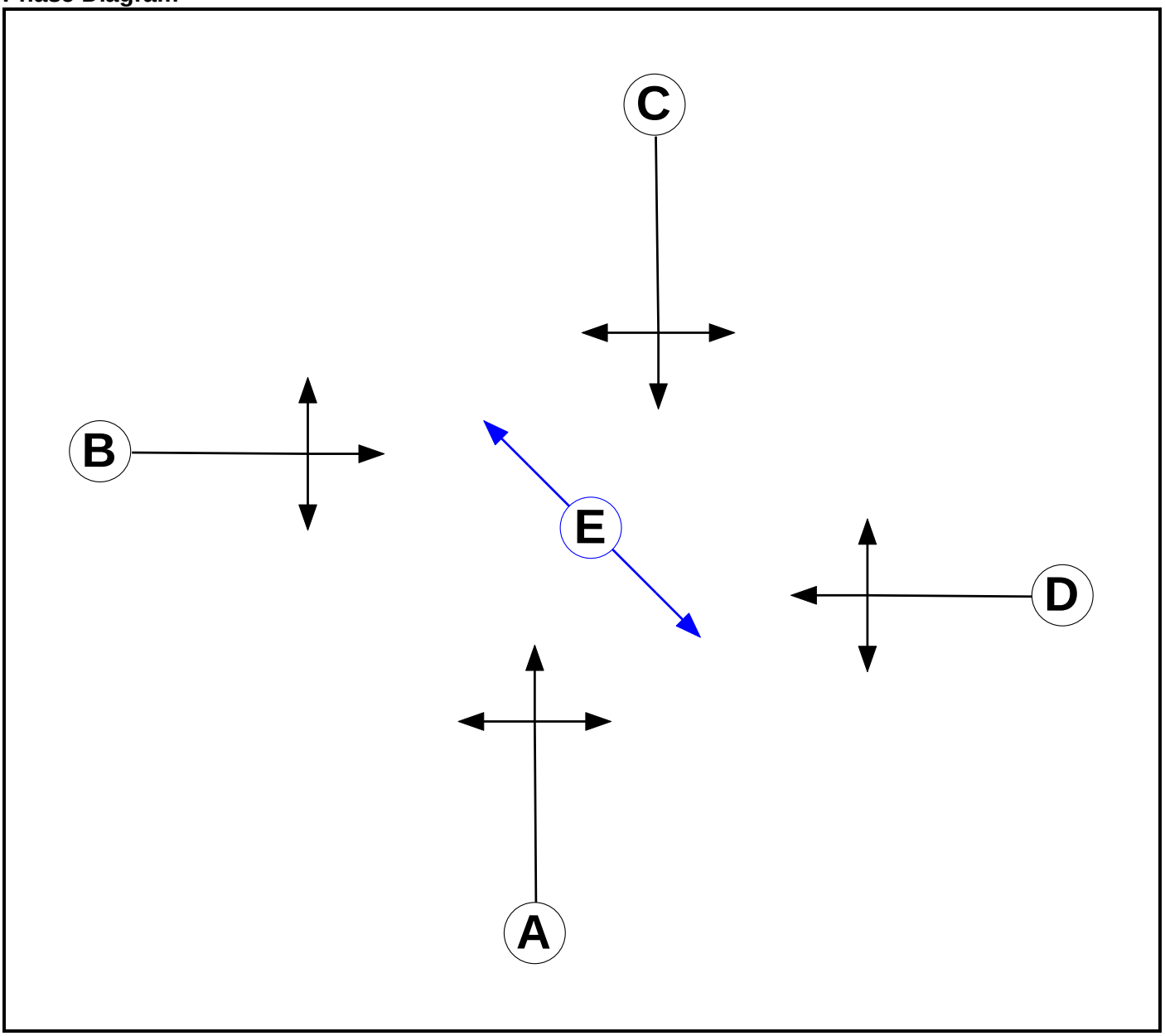
Project:	
Title:	**Rockville Drive / Stakes Hill Road traffic signal junction**
Location:	
Additional detail:	
File name:	Rockville Dr_Stakes Hill Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		7	7

Full Input Data And Results

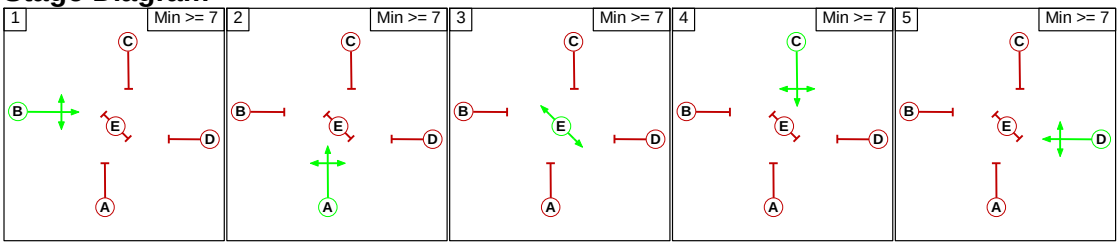
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E
A		6	6	5	7
B	6		6	5	7
C	7	7		5	7
D	7	7	5		7
E	0	0	0	0	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A
3	E
4	C
5	D

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		6	7	6	5
2	6		7	6	5
3	2	2		2	2
4	7	7	7		5
5	7	7	7	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Rockville Drive / Stakes Hill Road signalised junction
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Waitrose Access entry)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Left	15.00
											Arm 4 Ahead	15.00
											Arm 6 Right	10.00
2/1 (Stakes Hill Road south exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Stakes Hill Road south entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	60.00
3/2 (Stakes Hill Road south entry)	U	A	2	3	1.7	Geom	-	3.00	0.00	Y	Arm 6 Ahead	15.00
											Arm 8 Right	15.00
4/1 (Rockville Drive exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Rockville Drive entry)	U	B	2	3	3.5	Geom	-	3.25	0.00	Y	Arm 6 Left	12.00
											Arm 8 Ahead	70.00
5/2 (Rockville Drive entry)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Right	35.00
6/1 (Stakes Hill Road north exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Stakes Hill Road north entry)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 2 Ahead	35.00
											Arm 4 Right	15.00
											Arm 8 Left	10.00
8/1 (Waitrose Access exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'ELM - DM AM'	08:00	09:00	01:00	
2: 'ELM - DM PM'	17:00	18:00	01:00	
3: 'EMM - DS1 AM'	08:00	09:00	01:00	
4: 'EMM - DS1 PM'	17:00	18:00	01:00	
5: 'EML - DS2 AM'	08:00	09:00	01:00	
6: 'EML - DS2 PM'	17:00	18:00	01:00	

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	84	24	108
	C	0	433	0	0	433
	D	0	24	0	0	24
	Tot.	0	457	84	24	565

Traffic Lane Flows

Lane	Scenario 1: ELM - DM AM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	457
3/1 (with short)	108(In) 84(Out)
3/2 (short)	24
4/1	84
5/1 (short)	0
5/2 (with short)	433(In) 433(Out)
6/1	24
7/1	24
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	220	23	243
	C	0	364	0	0	364
	D	0	23	0	0	23
	Tot.	0	387	220	23	630

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: ELM - DM PM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	387
3/1 (with short)	243(In) 220(Out)
3/2 (short)	23
4/1	220
5/1 (short)	0
5/2 (with short)	364(In) 364(Out)
6/1	23
7/1	23
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	0	0	0	0
	B	0	0	140	24	164
	C	0	383	0	0	383
	D	0	24	0	0	24
	Tot.	0	407	140	24	571

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: EMM - DS1 AM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	407
3/1 (with short)	164(In) 140(Out)
3/2 (short)	24
4/1	140
5/1 (short)	0
5/2 (with short)	383(In) 383(Out)
6/1	24
7/1	24
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	0	0	0	0
B	0	0	246	24	270
C	0	323	0	0	323
D	0	23	0	0	23
Tot.	0	346	246	24	616

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EMM - DS1 PM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	346
3/1 (with short)	270(In) 246(Out)
3/2 (short)	24
4/1	246
5/1 (short)	0
5/2 (with short)	323(In) 323(Out)
6/1	24
7/1	23
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	0	0	0	0
B	0	0	145	24	169
C	0	381	0	0	381
D	0	24	0	0	24
Tot.	0	405	145	24	574

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: EML - DS2 AM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	405
3/1 (with short)	169(In) 145(Out)
3/2 (short)	24
4/1	145
5/1 (short)	0
5/2 (with short)	381(In) 381(Out)
6/1	24
7/1	24
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	0	0	0	0
B	0	0	250	24	274
C	0	320	0	0	320
D	0	23	0	0	23
Tot.	0	343	250	24	617

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: EML - DS2 PM
Junction: Rockville Drive / Stakes Hill Road signalised junction	
1/1	0
2/1	343
3/1 (with short)	274(In) 250(Out)
3/2 (short)	24
4/1	250
5/1 (short)	0
5/2 (with short)	320(In) 320(Out)
6/1	24
7/1	23
8/1	0

Full Input Data And Results

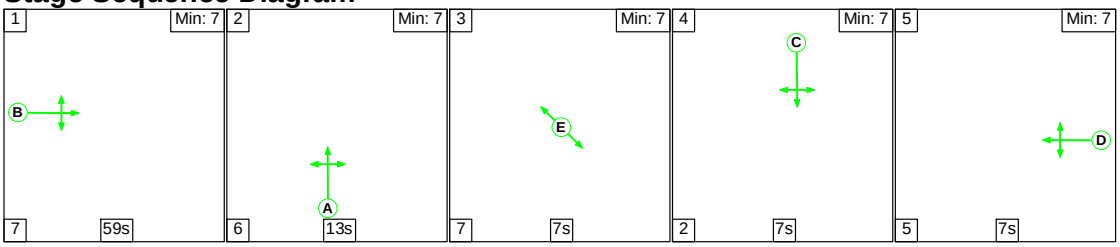
Lane Saturation Flows

Junction: Rockville Drive / Stakes Hill Road signalised junction

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Waitrose Access entry)	3.00	0.00	Y	Arm 2 Left	15.00	0.0 %	1915	1915
				Arm 4 Ahead	15.00	0.0 %		
				Arm 6 Right	10.00	0.0 %		
2/1 (Stakes Hill Road south exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 4 Left	60.00	100.0 %	1868	1868
3/2 (Stakes Hill Road south entry)	3.00	0.00	Y	Arm 6 Ahead	15.00	100.0 %	1741	1741
				Arm 8 Right	15.00	0.0 %		
4/1 (Rockville Drive exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Rockville Drive entry)	3.25	0.00	Y	Arm 6 Left	12.00	0.0 %	1940	1940
				Arm 8 Ahead	70.00	0.0 %		
5/2 (Rockville Drive entry)	3.25	0.00	Y	Arm 2 Right	35.00	100.0 %	1860	1860
6/1 (Stakes Hill Road north exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Stakes Hill Road north entry)	3.25	0.00	Y	Arm 2 Ahead	35.00	100.0 %	1860	1860
				Arm 4 Right	15.00	0.0 %		
				Arm 8 Left	10.00	0.0 %		
8/1 (Waitrose Access exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'ELM - DM AM' (FG1: 'ELM - DM AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

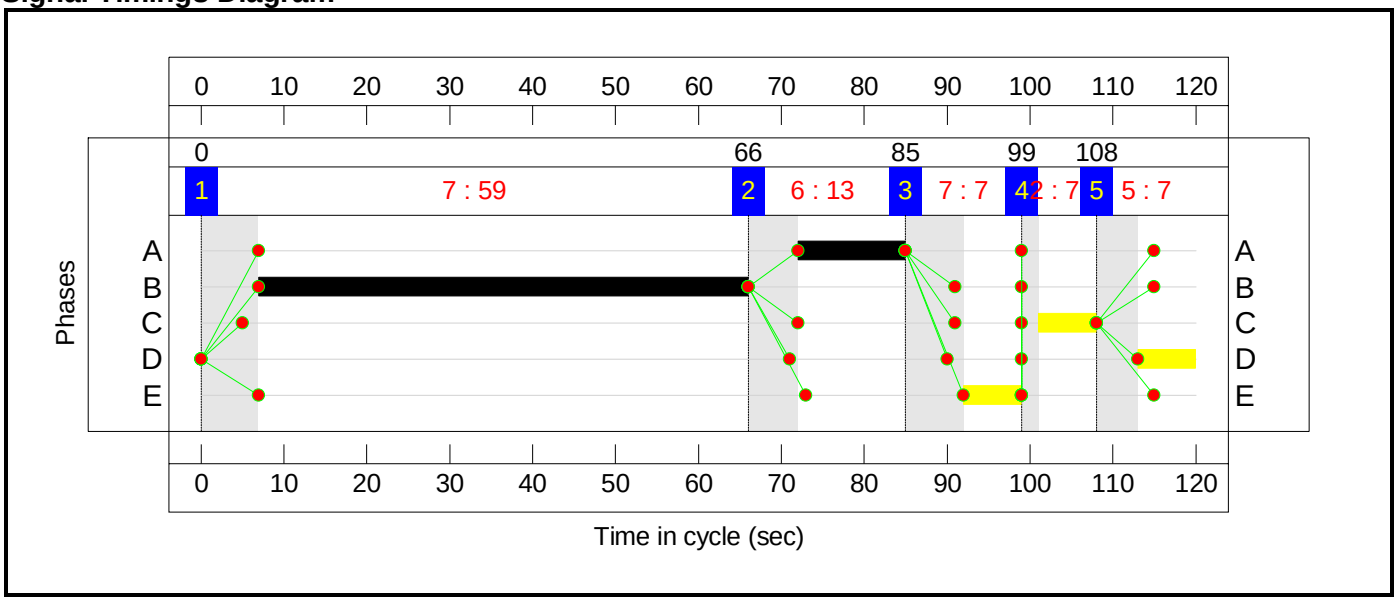


Stage Timings

Stage	1	2	3	4	5
Duration	59	13	7	7	7
Change Point	0	66	85	99	108

Full Input Data And Results

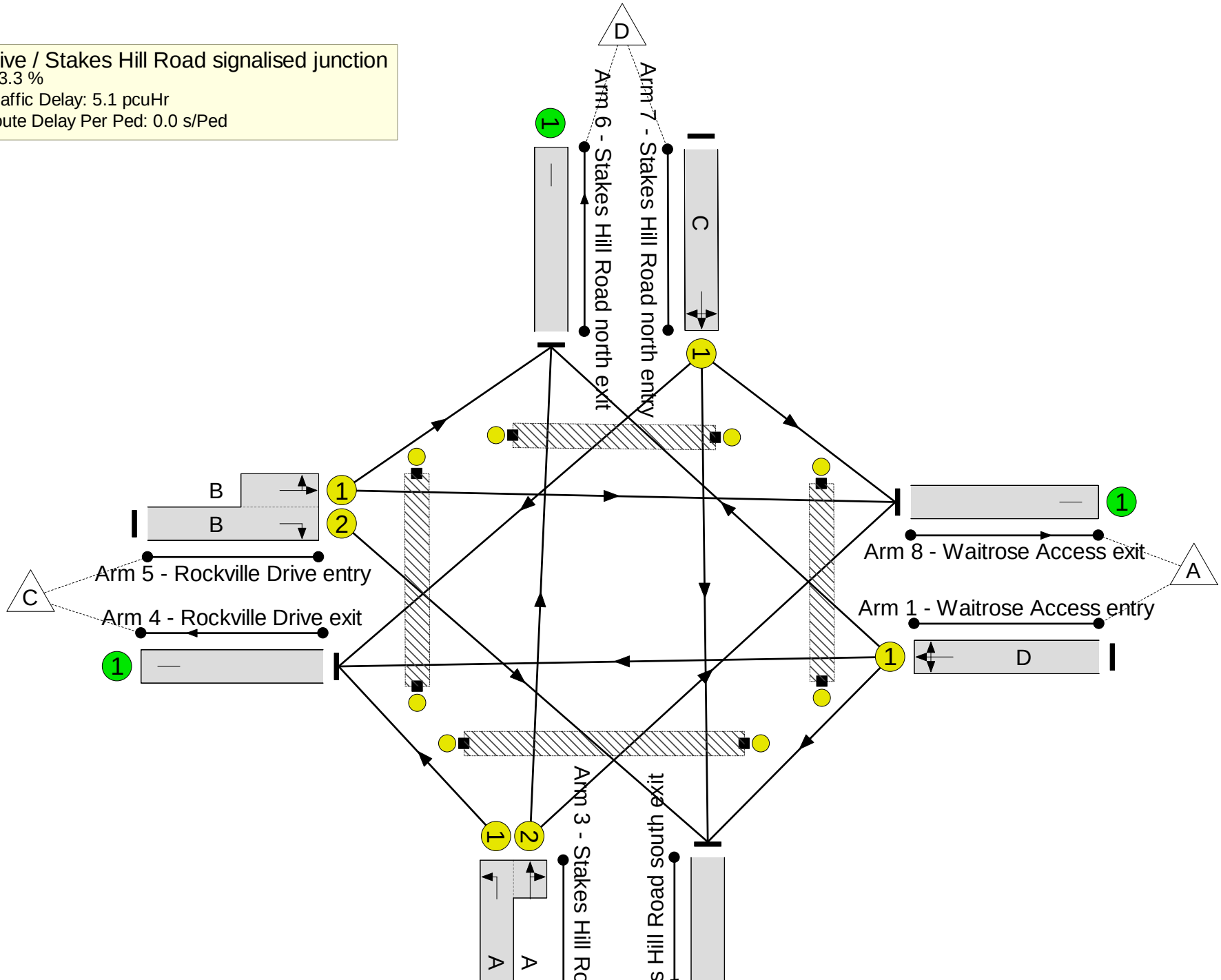
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction
PRC: 93.3 %
Total Traffic Delay: 5.1 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**46.6%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**46.6%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	13	-	108	1868:1741	240	45.1%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	84	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	59	-	433	1860:1940	930	46.6%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	24	1860	124	19.4%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

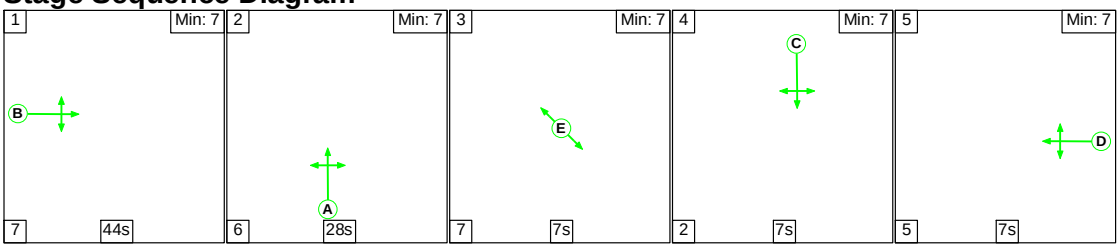
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**4.2**	**1.0**	**0.0**	**5.1**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**4.2**	**1.0**	**0.0**	**5.1**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	108	108	-	-	-	1.5	0.4	-	1.9	62.4	2.8	0.4	3.2
4/1	84	84	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	433	433	-	-	-	2.4	0.4	-	2.8	23.2	9.4	0.4	9.8
6/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	24	24	-	-	-	0.4	0.1	-	0.5	71.0	0.8	0.1	0.9
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 93.3 Total Delay for Signalled Lanes (pcuHr): 5.13 Cycle Time (s): 120
PRC Over All Lanes (%): 93.3 Total Delay Over All Lanes(pcuHr): 5.13

Full Input Data And Results

Scenario 2: 'ELM - DM PM' (FG2: 'ELM - DM PM', Plan 1: 'Network Control Plan 1')

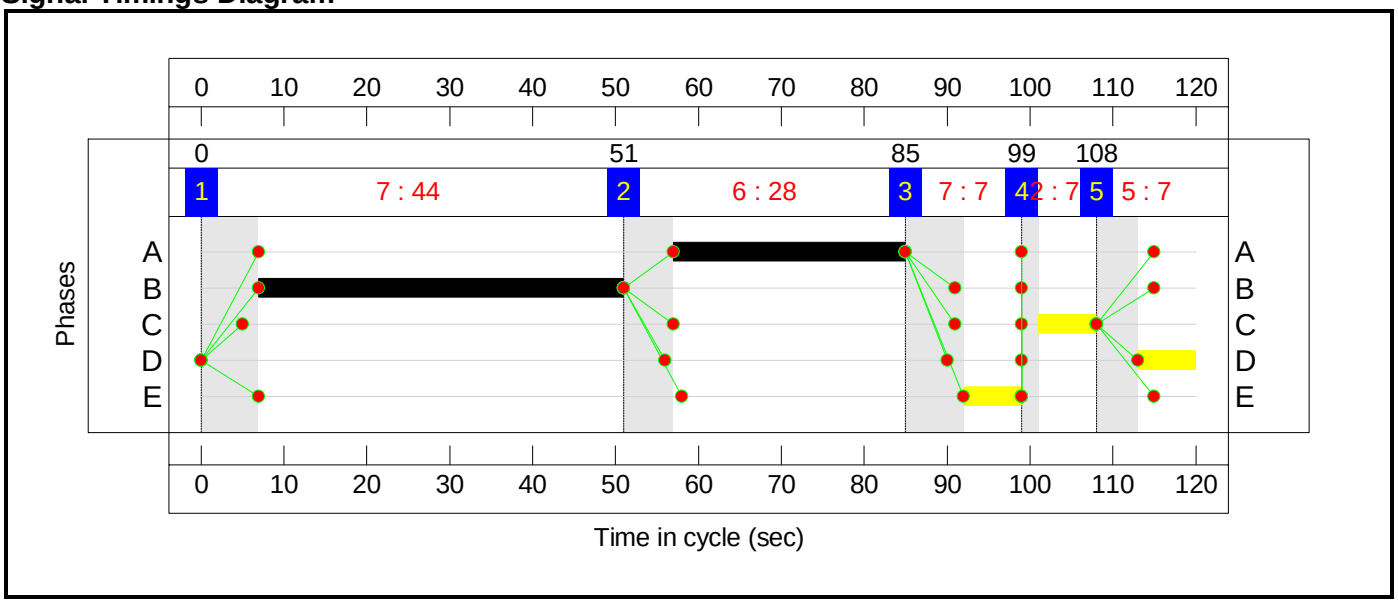
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	44	28	7	7	7
Change Point	0	51	85	99	108

Signal Timings Diagram



Full Input Data And Results

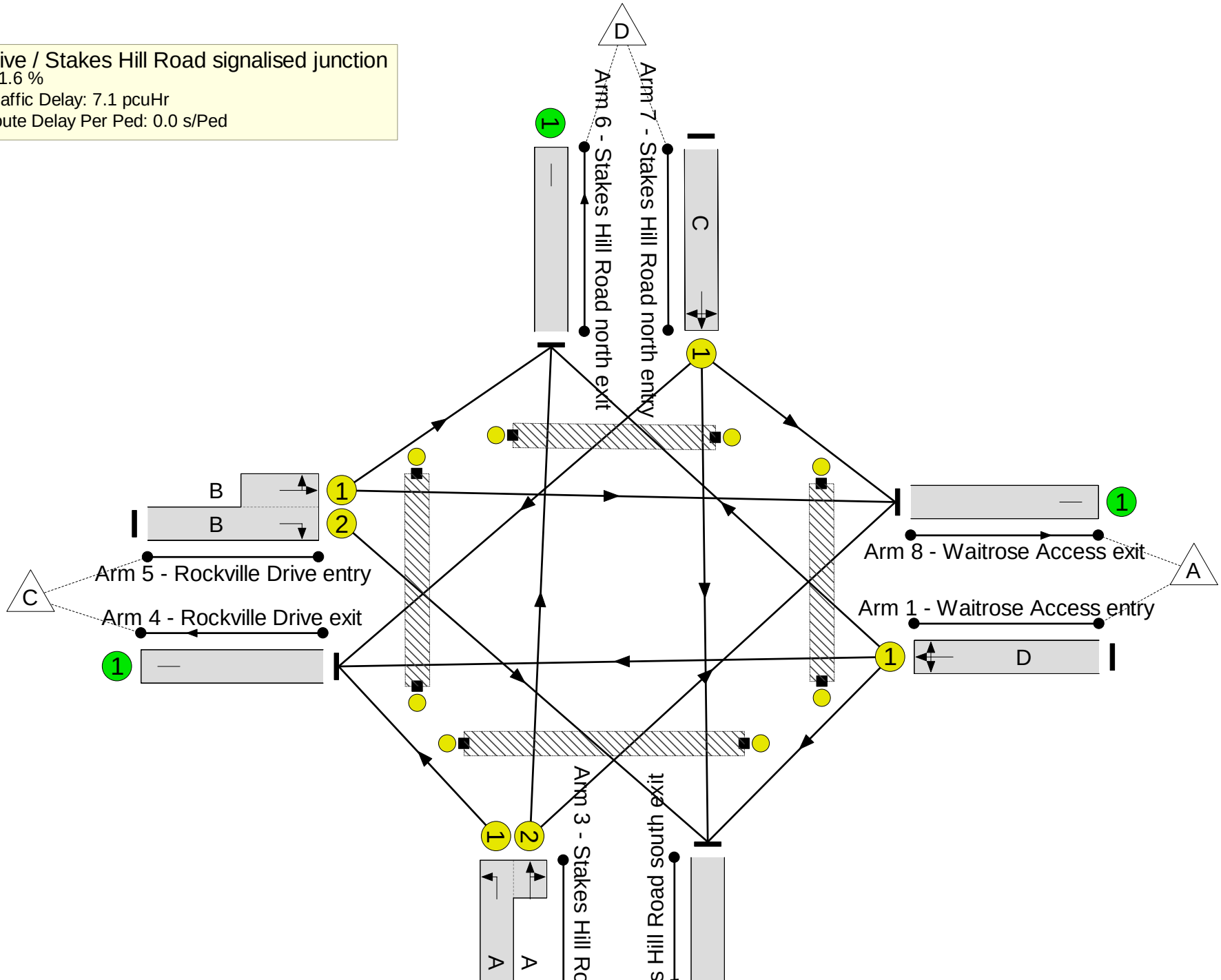
Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction

PRC: 71.6 %

Total Traffic Delay: 7.1 pcuHr

Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.5%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**52.5%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	28	-	243	1868:1741	463	52.5%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	220	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	44	-	364	1860:1940	698	52.2%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	23	1860	124	18.5%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

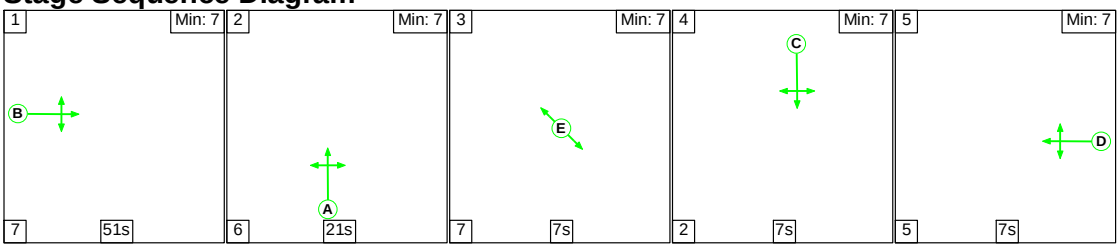
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.1**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.1**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	387	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	243	243	-	-	-	2.6	0.5	-	3.2	47.3	6.8	0.5	7.3
4/1	220	220	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	364	364	-	-	-	2.9	0.5	-	3.5	34.5	9.4	0.5	9.9
6/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.3	0.1	-	0.5	70.8	0.7	0.1	0.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 71.6 Total Delay for Signalled Lanes (pcuHr): 7.13 Cycle Time (s): 120
PRC Over All Lanes (%): 71.6 Total Delay Over All Lanes(pcuHr): 7.13

Full Input Data And Results

Scenario 3: 'EMM - DS1 AM' (FG3: 'EMM - DS1 AM', Plan 1: 'Network Control Plan 1')

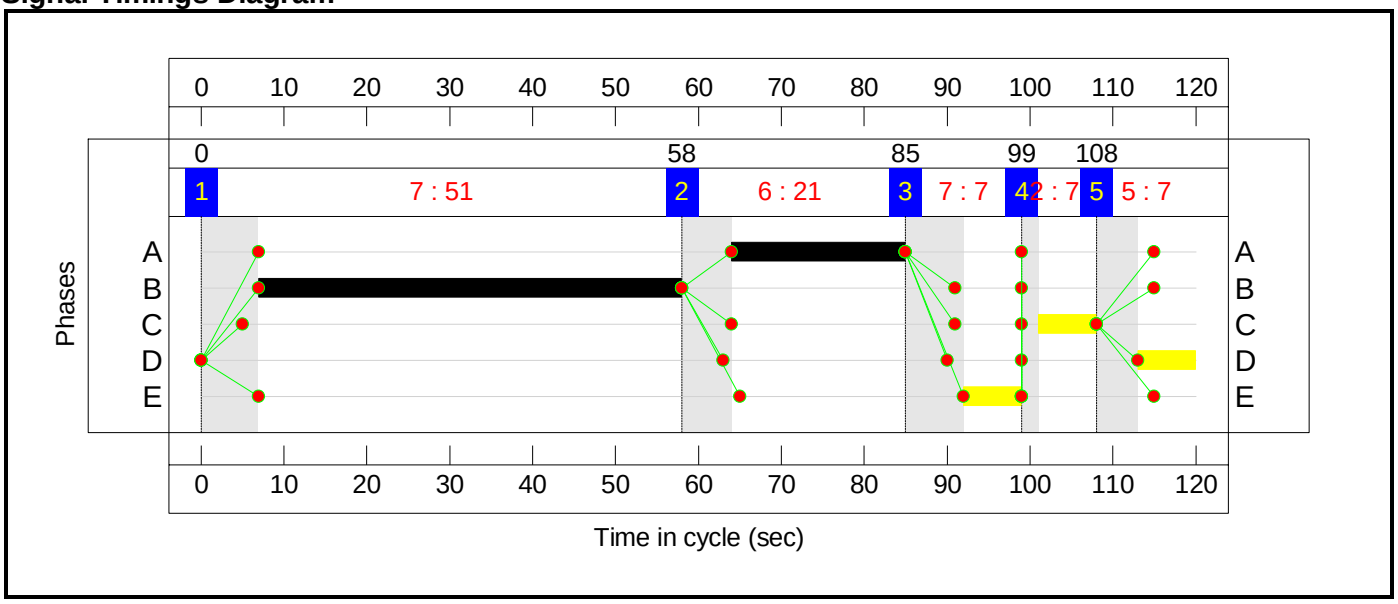
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	51	21	7	7	7
Change Point	0	58	85	99	108

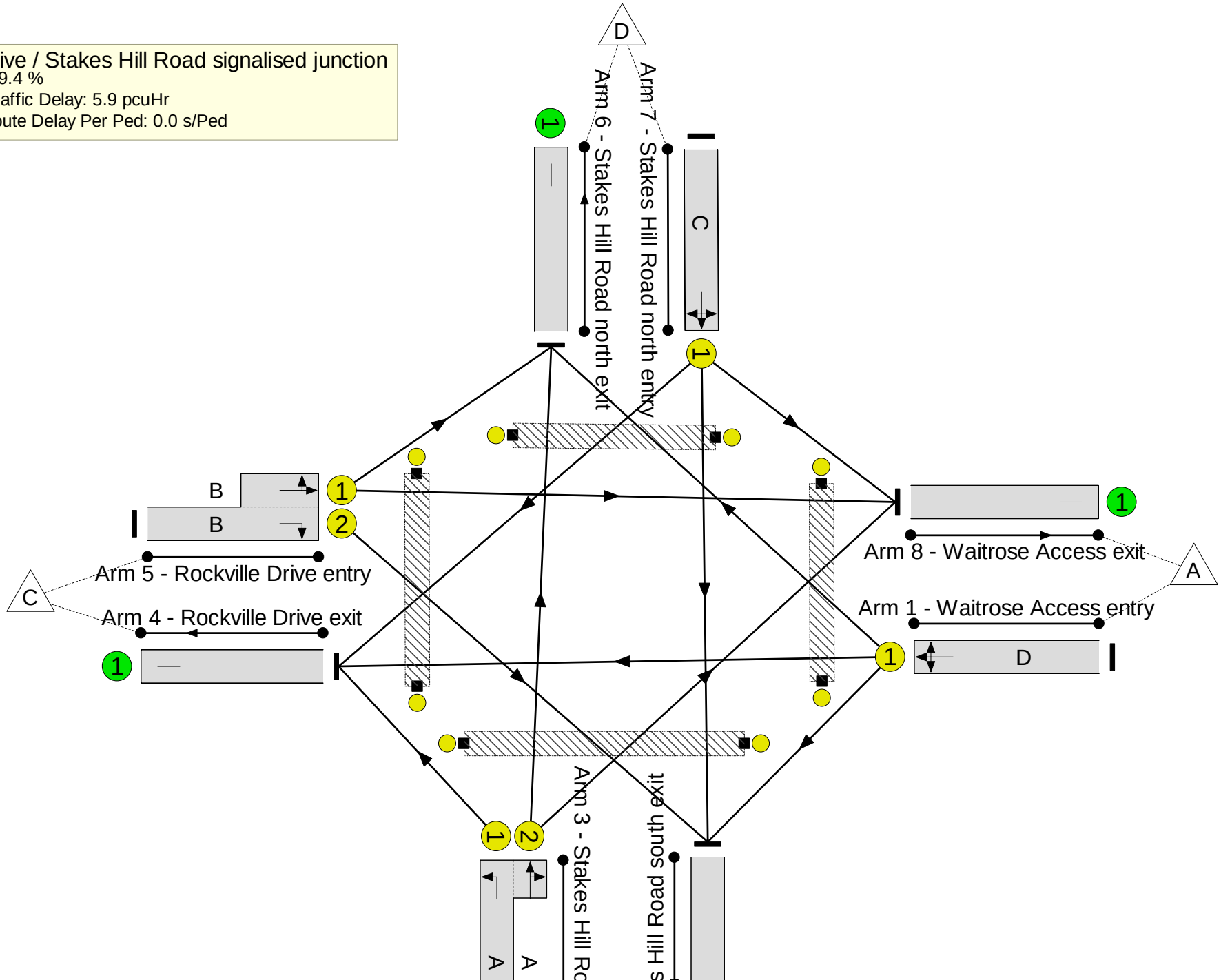
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction
PRC: 89.4 %
Total Traffic Delay: 5.9 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**47.5%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**47.5%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	21	-	164	1868:1741	358	45.9%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	140	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	51	-	383	1860:1940	806	47.5%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	24	1860	124	19.4%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

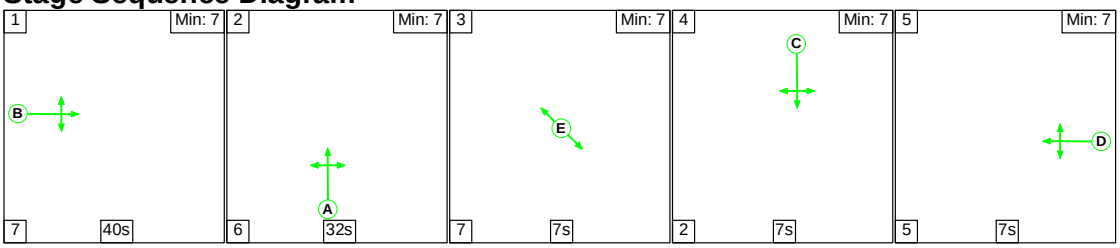
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**4.9**	**1.0**	**0.0**	**5.9**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**4.9**	**1.0**	**0.0**	**5.9**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	407	407	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	164	164	-	-	-	2.0	0.4	-	2.4	52.5	4.5	0.4	5.0
4/1	140	140	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	383	383	-	-	-	2.6	0.5	-	3.0	28.5	9.0	0.5	9.5
6/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	24	24	-	-	-	0.4	0.1	-	0.5	71.0	0.8	0.1	0.9
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 89.4 Total Delay for Signalled Lanes (pcuHr): 5.90 Cycle Time (s): 120
PRC Over All Lanes (%): 89.4 Total Delay Over All Lanes(pcuHr): 5.90

Full Input Data And Results

Scenario 4: 'EMM - DS1 PM' (FG4: 'EMM - DS1 PM', Plan 1: 'Network Control Plan 1')

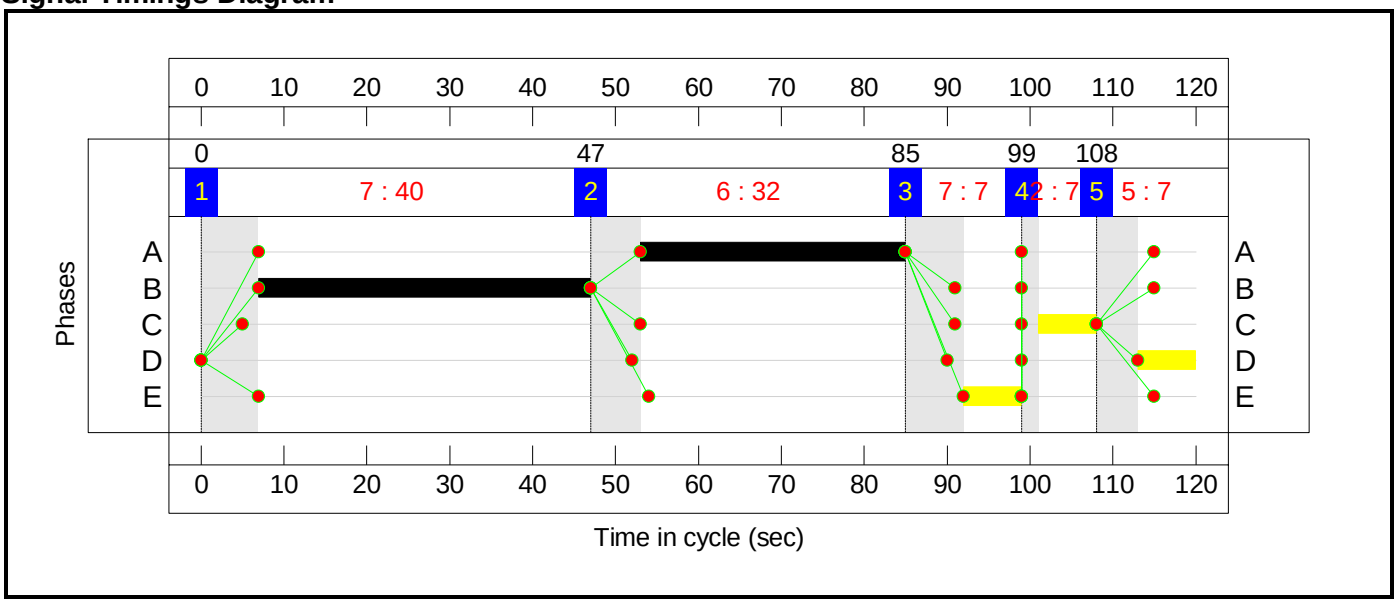
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	40	32	7	7	7
Change Point	0	47	85	99	108

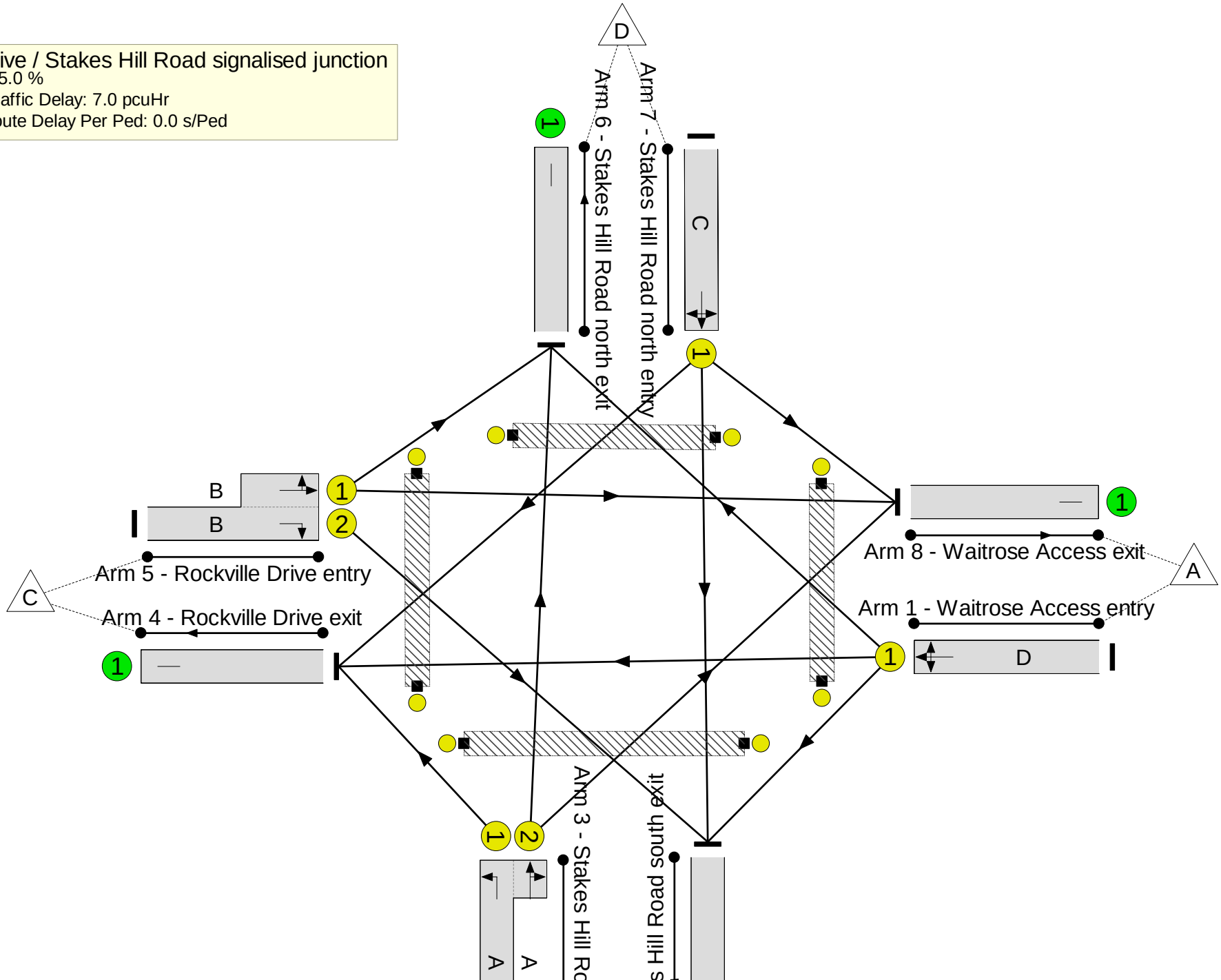
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction
PRC: 75.0 %
Total Traffic Delay: 7.0 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.4%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.4%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	346	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	32	-	270	1868:1741	525	51.4%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	246	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	40	-	323	1860:1940	636	50.8%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	23	1860	124	18.5%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

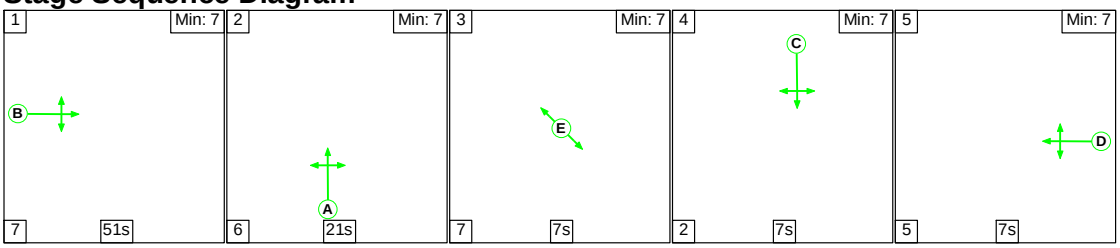
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.0**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.0**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	346	346	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	270	270	-	-	-	2.7	0.5	-	3.3	43.4	7.3	0.5	7.9
4/1	246	246	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	323	323	-	-	-	2.8	0.5	-	3.3	37.2	8.5	0.5	9.0
6/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.3	0.1	-	0.5	70.8	0.7	0.1	0.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 75.0 Total Delay for Signalled Lanes (pcuHr): 7.05 Cycle Time (s): 120
PRC Over All Lanes (%): 75.0 Total Delay Over All Lanes(pcuHr): 7.05

Full Input Data And Results

Scenario 5: 'EML - DS2 AM' (FG5: 'EML - DS2 AM', Plan 1: 'Network Control Plan 1')

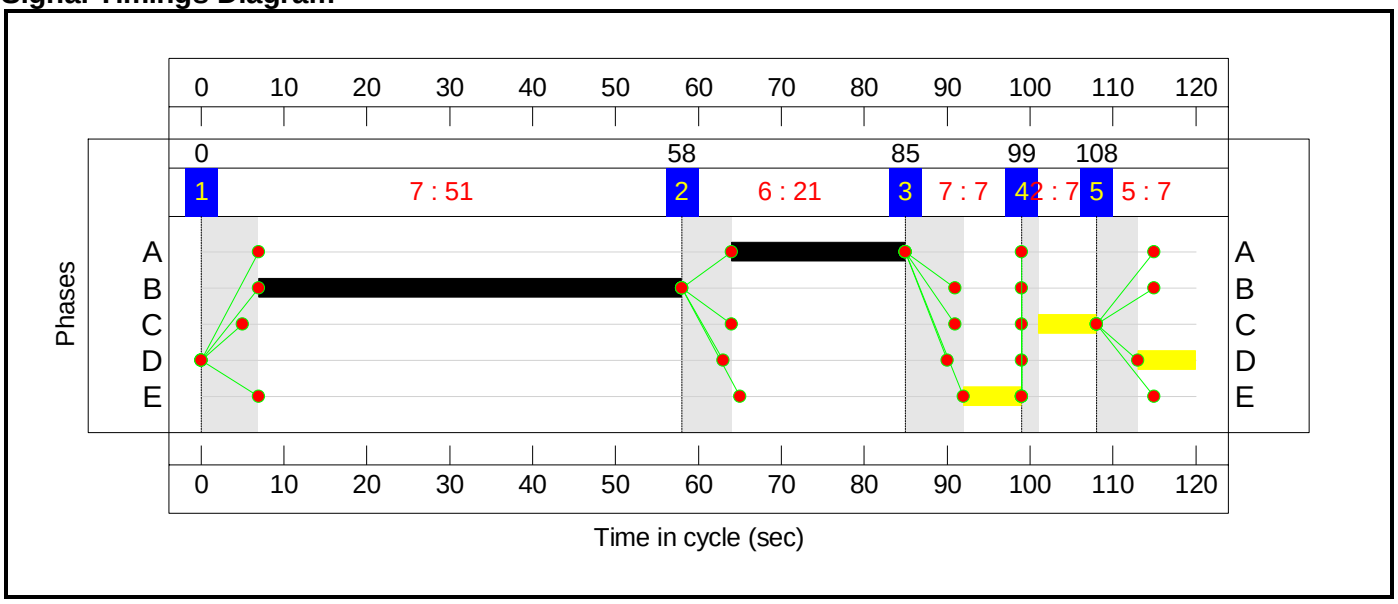
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	51	21	7	7	7
Change Point	0	58	85	99	108

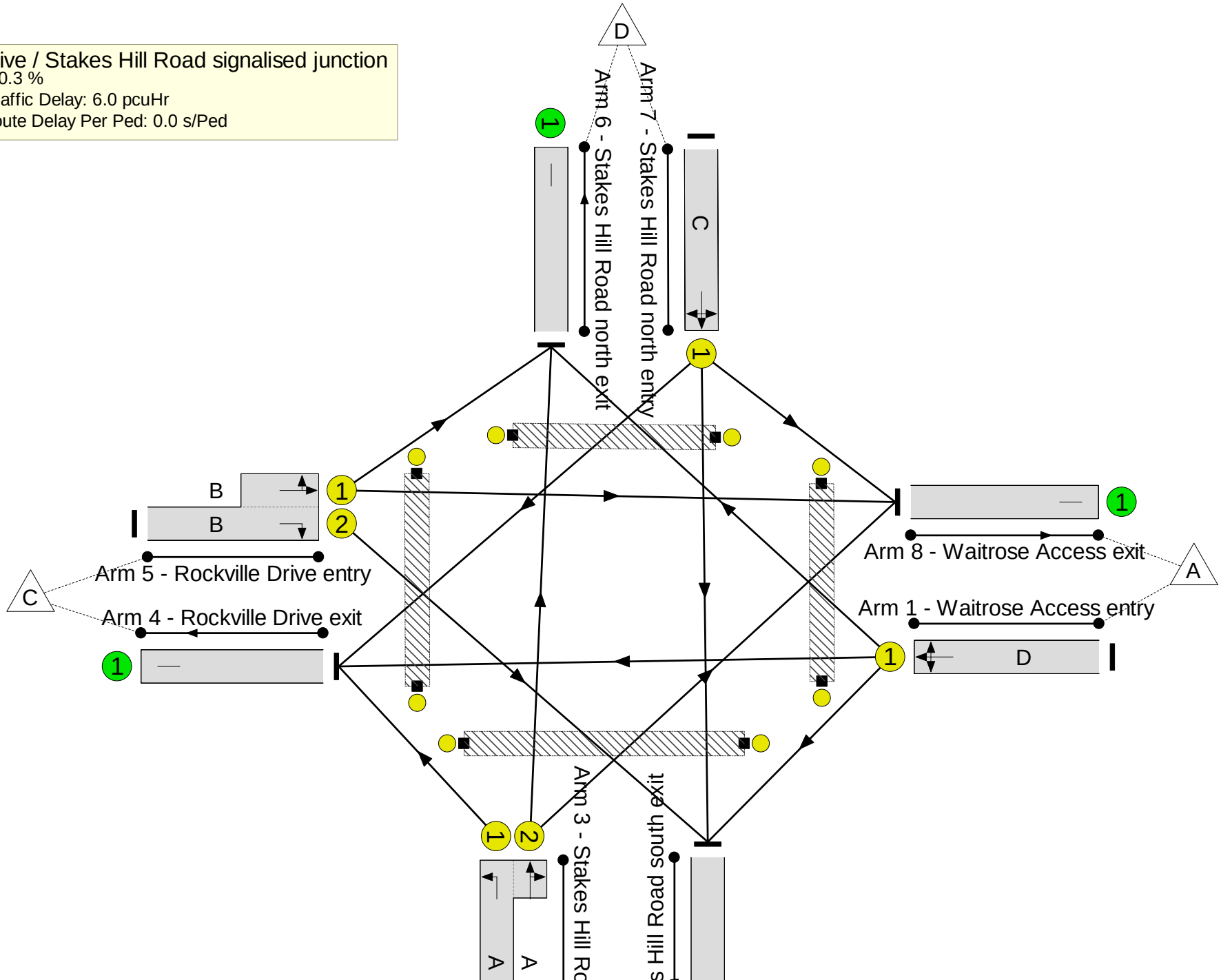
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction
PRC: 90.3 %
Total Traffic Delay: 6.0 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**47.3%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**47.3%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	405	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	21	-	169	1868:1741	357	47.3%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	145	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	51	-	381	1860:1940	806	47.3%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	24	1860	124	19.4%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

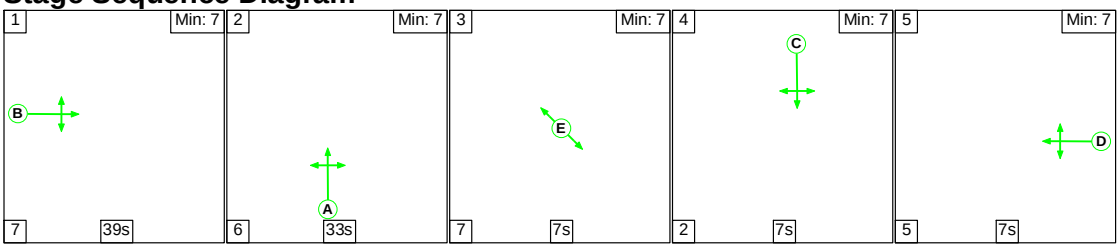
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.0**	**1.0**	**0.0**	**6.0**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.0**	**1.0**	**0.0**	**6.0**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	405	405	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	169	169	-	-	-	2.0	0.4	-	2.5	52.9	4.7	0.4	5.1
4/1	145	145	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	381	381	-	-	-	2.6	0.4	-	3.0	28.5	9.0	0.4	9.4
6/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	24	24	-	-	-	0.4	0.1	-	0.5	71.0	0.8	0.1	0.9
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 90.3 Total Delay for Signalled Lanes (pcuHr): 5.97 Cycle Time (s): 120
PRC Over All Lanes (%): 90.3 Total Delay Over All Lanes(pcuHr): 5.97

Full Input Data And Results

Scenario 6: 'EML - DS2 PM' (FG6: 'EML - DS2 PM', Plan 1: 'Network Control Plan 1')

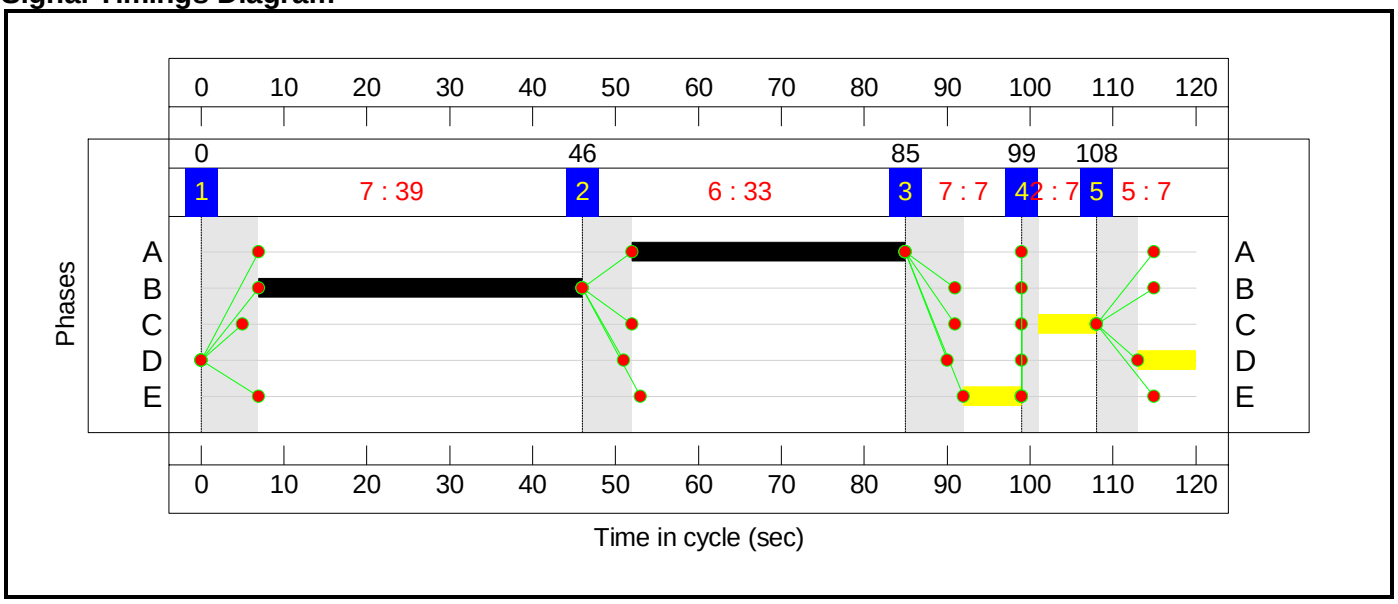
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	39	33	7	7	7
Change Point	0	46	85	99	108

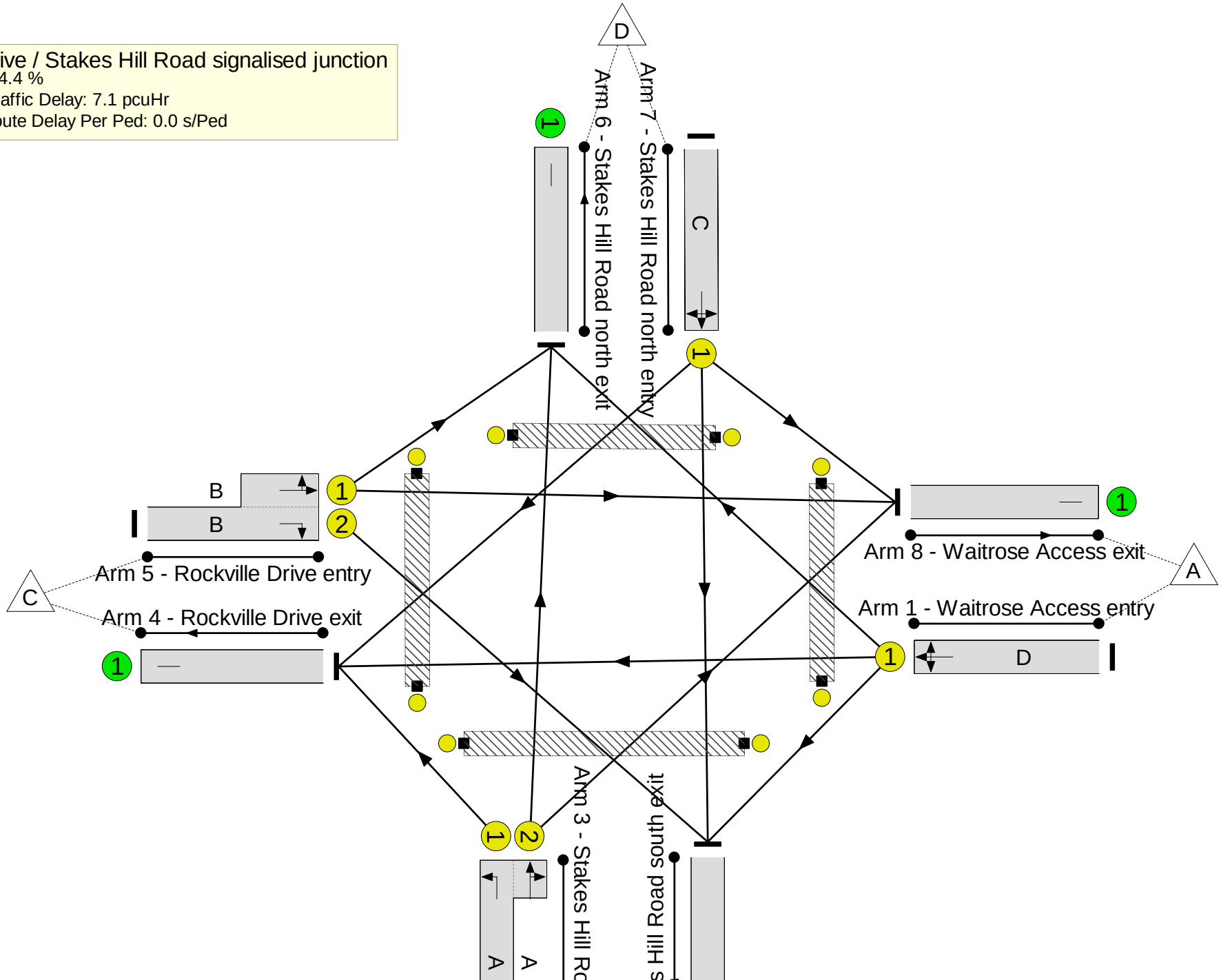
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Rockville Drive / Stakes Hill Road signalised junction
PRC: 74.4 %
Total Traffic Delay: 7.1 pcuHr
Ave. Route Delay Per Ped: 0.0 s/Ped



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.6%**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.6%**
1/1	Waitrose Access entry Left Ahead Right	U	N/A	N/A	D		1	7	-	0	1915	128	0.0%
2/1	Stakes Hill Road south exit	U	N/A	N/A	-		-	-	-	343	Inf	Inf	0.0%
3/1+3/2	Stakes Hill Road south entry Left Ahead Right	U	N/A	N/A	A		1	33	-	274	1868:1741	540	50.7%
4/1	Rockville Drive exit	U	N/A	N/A	-		-	-	-	250	Inf	Inf	0.0%
5/2+5/1	Rockville Drive entry Right Left Ahead	U	N/A	N/A	B		1	39	-	320	1860:1940	620	51.6%
6/1	Stakes Hill Road north exit	U	N/A	N/A	-		-	-	-	24	Inf	Inf	0.0%
7/1	Stakes Hill Road north entry Ahead Right Left	U	N/A	N/A	C		1	7	-	23	1860	124	18.5%
8/1	Waitrose Access exit	U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	E		1	7	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.1**	**-**	**-**	**-**	**-**
Rockville Drive / Stakes Hill Road signalised junction	**-**	**-**	**0**	**0**	**0**	**5.9**	**1.2**	**0.0**	**7.1**	**-**	**-**	**-**	**-**
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	343	343	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1+3/2	274	274	-	-	-	2.7	0.5	-	3.2	42.3	7.4	0.5	7.9
4/1	250	250	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	320	320	-	-	-	2.9	0.5	-	3.4	38.2	8.5	0.5	9.1
6/1	24	24	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	23	23	-	-	-	0.3	0.1	-	0.5	70.8	0.7	0.1	0.8
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 74.4 Total Delay for Signalled Lanes (pcuHr): 7.07 Cycle Time (s): 120
PRC Over All Lanes (%): 74.4 Total Delay Over All Lanes(pcuHr): 7.07

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Stakes Hill Rd_Frendstaple Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:59:01

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.1	2.50	0.10	A	0.1	2.41	0.09	A
Arm 2	0.2	2.25	0.18	A	0.4	2.58	0.29	A
Arm 3	0.6	3.24	0.34	A	0.5	3.10	0.33	A
	EMM - DS1							
Arm 1	0.1	2.61	0.10	A	0.2	2.67	0.13	A
Arm 2	0.3	2.38	0.23	A	0.4	2.52	0.26	A
Arm 3	0.7	3.53	0.40	A	0.7	3.49	0.40	A
	EML - DS2							
Arm 1	0.1	2.61	0.10	A	0.2	2.67	0.13	A
Arm 2	0.3	2.38	0.23	A	0.4	2.51	0.25	A
Arm 3	0.7	3.51	0.39	A	0.7	3.49	0.40	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

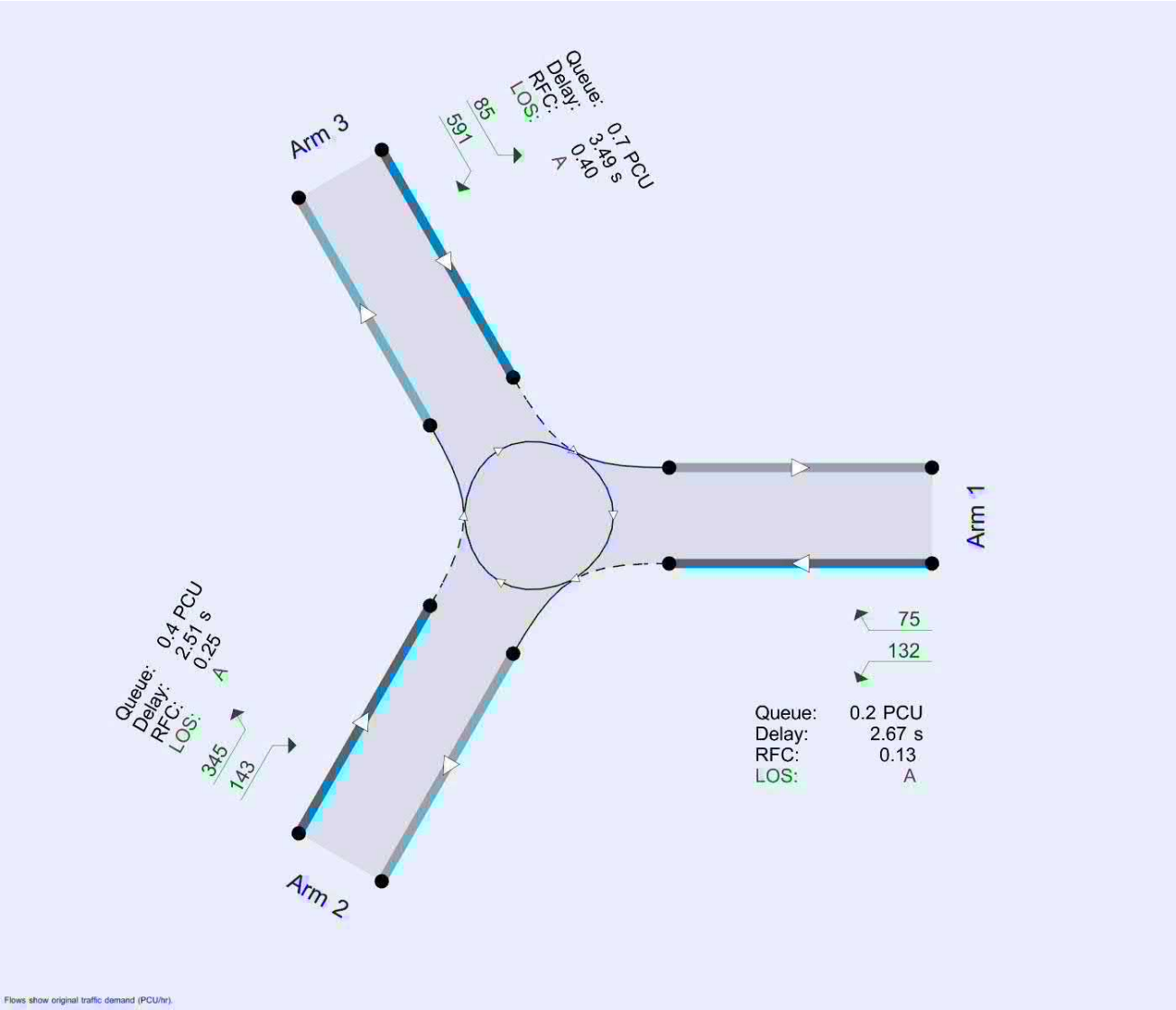
File summary

File Description

Title	Stakes Hill Road / Frendstaple Road Roundabout
Location	
Site number	
Date	07/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	2.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Frendstaple Road	
2	Stakes Hill Road south	
3	Stakes Hill Road north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.80	7.20	49.0	50.0	48.0	10.0	
2	4.50	7.20	26.0	50.0	48.0	10.0	
3	3.20	7.60	24.0	50.0	48.0	10.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.740	2191
2	0.736	2173
3	0.701	1989

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	151	100.000
2		✓	355	100.000
3		✓	577	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	124	27
	2	168	0	187
	3	35	542	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	2.50	0.1	A
2	0.18	2.25	0.2	A
3	0.34	3.24	0.6	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	114	407	1890	0.060	113	0.1	2.228	A
2	267	20	2158	0.124	267	0.2	2.094	A
3	434	126	1900	0.229	433	0.3	2.696	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	487	1831	0.074	136	0.1	2.335	A
2	319	24	2155	0.148	319	0.2	2.156	A
3	519	151	1883	0.276	518	0.4	2.902	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	166	596	1750	0.095	166	0.1	2.499	A
2	391	30	2151	0.182	391	0.2	2.249	A
3	635	185	1859	0.342	635	0.6	3.232	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	166	597	1750	0.095	166	0.1	2.500	A
2	391	30	2151	0.182	391	0.2	2.249	A
3	635	185	1859	0.342	635	0.6	3.235	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	488	1830	0.074	136	0.1	2.338	A
2	319	24	2155	0.148	319	0.2	2.157	A
3	519	151	1883	0.276	519	0.4	2.905	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	114	408	1889	0.060	114	0.1	2.230	A
2	267	20	2158	0.124	267	0.2	2.096	A
3	434	127	1900	0.229	435	0.3	2.705	A

ELM - DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	145	100.000
2		✓	563	100.000
3		✓	564	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	119	26
	2	120	0	443
	3	87	477	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	2.41	0.1	A
2	0.29	2.58	0.4	A
3	0.33	3.10	0.5	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	109	358	1926	0.057	109	0.1	2.178	A
2	424	20	2158	0.196	423	0.3	2.280	A
3	425	90	1925	0.221	423	0.3	2.633	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	130	429	1874	0.070	130	0.1	2.270	A
2	506	23	2156	0.235	506	0.3	2.400	A
3	507	108	1913	0.265	507	0.4	2.815	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	160	525	1803	0.089	160	0.1	2.409	A
2	620	29	2152	0.288	619	0.4	2.584	A
3	621	132	1896	0.328	620	0.5	3.102	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	160	525	1803	0.089	160	0.1	2.409	A
2	620	29	2152	0.288	620	0.4	2.584	A
3	621	132	1896	0.328	621	0.5	3.105	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	130	429	1874	0.070	130	0.1	2.273	A
2	506	23	2156	0.235	507	0.3	2.403	A
3	507	108	1913	0.265	508	0.4	2.818	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	109	359	1925	0.057	109	0.1	2.181	A
2	424	20	2158	0.196	424	0.3	2.283	A
3	425	90	1925	0.221	425	0.3	2.641	A

EMM - DS1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	3.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	155	100.000
2		✓	441	100.000
3		✓	668	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	124	31
	2	170	0	271
	3	47	621	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	2.61	0.1	A
2	0.23	2.38	0.3	A
3	0.40	3.53	0.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	117	466	1847	0.063	116	0.1	2.288	A
2	332	23	2156	0.154	331	0.2	2.169	A
3	503	128	1899	0.265	501	0.4	2.831	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	139	558	1779	0.078	139	0.1	2.415	A
2	396	28	2152	0.184	396	0.2	2.254	A
3	601	153	1881	0.319	600	0.5	3.090	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	171	683	1686	0.101	171	0.1	2.612	A
2	486	34	2148	0.226	485	0.3	2.382	A
3	735	187	1857	0.396	735	0.7	3.525	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	171	684	1685	0.101	171	0.1	2.613	A
2	486	34	2148	0.226	486	0.3	2.382	A
3	735	187	1857	0.396	735	0.7	3.528	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	139	559	1778	0.078	139	0.1	2.418	A
2	396	28	2152	0.184	397	0.2	2.255	A
3	601	153	1881	0.319	601	0.5	3.097	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	117	468	1845	0.063	117	0.1	2.290	A
2	332	23	2156	0.154	332	0.2	2.173	A
3	503	128	1899	0.265	503	0.4	2.838	A

EMM - DS1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	3.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	204	100.000
2		✓	491	100.000
3		✓	676	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	131	73
	2	143	0	348
	3	85	591	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.13	2.67	0.2	A
2	0.26	2.52	0.4	A
3	0.40	3.49	0.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	154	444	1863	0.082	153	0.1	2.315	A
2	370	55	2132	0.173	369	0.2	2.244	A
3	509	107	1913	0.266	507	0.4	2.814	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	183	531	1799	0.102	183	0.1	2.451	A
2	441	66	2125	0.208	441	0.3	2.352	A
3	608	128	1898	0.320	607	0.5	3.067	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	225	650	1710	0.131	224	0.2	2.664	A
2	541	80	2114	0.256	540	0.4	2.516	A
3	744	157	1878	0.396	743	0.7	3.488	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	225	651	1710	0.131	225	0.2	2.665	A
2	541	80	2114	0.256	541	0.4	2.516	A
3	744	157	1878	0.396	744	0.7	3.491	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	183	532	1798	0.102	184	0.1	2.453	A
2	441	66	2124	0.208	442	0.3	2.355	A
3	608	129	1898	0.320	609	0.5	3.073	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	154	445	1862	0.082	154	0.1	2.318	A
2	370	55	2132	0.173	370	0.2	2.248	A
3	509	108	1913	0.266	509	0.4	2.821	A

EML - DS2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	3.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	155	100.000
2		✓	440	100.000
3		✓	662	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	124	31
	2	170	0	270
	3	46	616	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	2.61	0.1	A
2	0.23	2.38	0.3	A
3	0.39	3.51	0.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	117	462	1849	0.063	116	0.1	2.285	A
2	331	23	2156	0.154	330	0.2	2.168	A
3	498	128	1899	0.262	497	0.4	2.822	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	139	553	1782	0.078	139	0.1	2.410	A
2	396	28	2152	0.184	395	0.2	2.253	A
3	595	153	1881	0.316	595	0.5	3.077	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	171	677	1690	0.101	171	0.1	2.605	A
2	484	34	2148	0.226	484	0.3	2.380	A
3	729	187	1857	0.392	728	0.7	3.505	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	171	678	1690	0.101	171	0.1	2.606	A
2	484	34	2148	0.226	484	0.3	2.380	A
3	729	187	1857	0.392	729	0.7	3.508	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	139	555	1781	0.078	139	0.1	2.413	A
2	396	28	2152	0.184	396	0.2	2.256	A
3	595	153	1881	0.316	596	0.5	3.084	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	117	464	1848	0.063	117	0.1	2.289	A
2	331	23	2156	0.154	331	0.2	2.172	A
3	498	128	1899	0.262	499	0.4	2.829	A

EML - DS2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	3.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	207	100.000
2		✓	488	100.000
3		✓	676	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	132	75
	2	143	0	345
	3	85	591	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.13	2.67	0.2	A
2	0.25	2.51	0.4	A
3	0.40	3.49	0.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	444	1863	0.084	155	0.1	2.319	A
2	367	56	2131	0.172	366	0.2	2.242	A
3	509	107	1913	0.266	507	0.4	2.814	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	186	531	1799	0.103	186	0.1	2.455	A
2	439	67	2123	0.207	438	0.3	2.350	A
3	608	128	1898	0.320	607	0.5	3.067	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	228	650	1710	0.133	228	0.2	2.670	A
2	537	83	2112	0.254	537	0.4	2.514	A
3	744	157	1878	0.396	743	0.7	3.488	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	228	651	1710	0.133	228	0.2	2.671	A
2	537	83	2112	0.254	537	0.4	2.514	A
3	744	157	1878	0.396	744	0.7	3.491	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	186	532	1798	0.104	186	0.1	2.459	A
2	439	67	2123	0.207	439	0.3	2.353	A
3	608	129	1898	0.320	609	0.5	3.071	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	156	445	1862	0.084	156	0.1	2.322	A
2	367	57	2131	0.172	368	0.2	2.247	A
3	509	108	1913	0.266	509	0.4	2.821	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Stakes Rd_Stakes Hill Rd_Purbrook Way.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 28/10/2019 15:56:34

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.5	3.83	0.31	A	2.3	8.29	0.68	A
Arm 2	0.2	6.07	0.18	A	0.3	9.15	0.21	A
Arm 3	25.5	109.48	1.02	F	1.8	15.83	0.63	C
Arm 4	3.8	18.59	0.78	C	1.2	6.93	0.52	A
	EMM - DS1							
Arm 1	0.6	4.05	0.35	A	1.6	6.59	0.60	A
Arm 2	0.3	6.77	0.24	A	0.3	8.12	0.20	A
Arm 3	62.3	247.07	1.13	F	2.0	15.66	0.65	C
Arm 4	2.9	14.82	0.73	B	1.7	8.48	0.60	A
	EML - DS2							
Arm 1	0.6	4.04	0.34	A	1.6	6.61	0.60	A
Arm 2	0.3	6.67	0.23	A	0.3	8.12	0.20	A
Arm 3	61.1	240.17	1.13	F	2.1	16.19	0.66	C
Arm 4	2.8	14.56	0.72	B	1.7	8.61	0.61	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

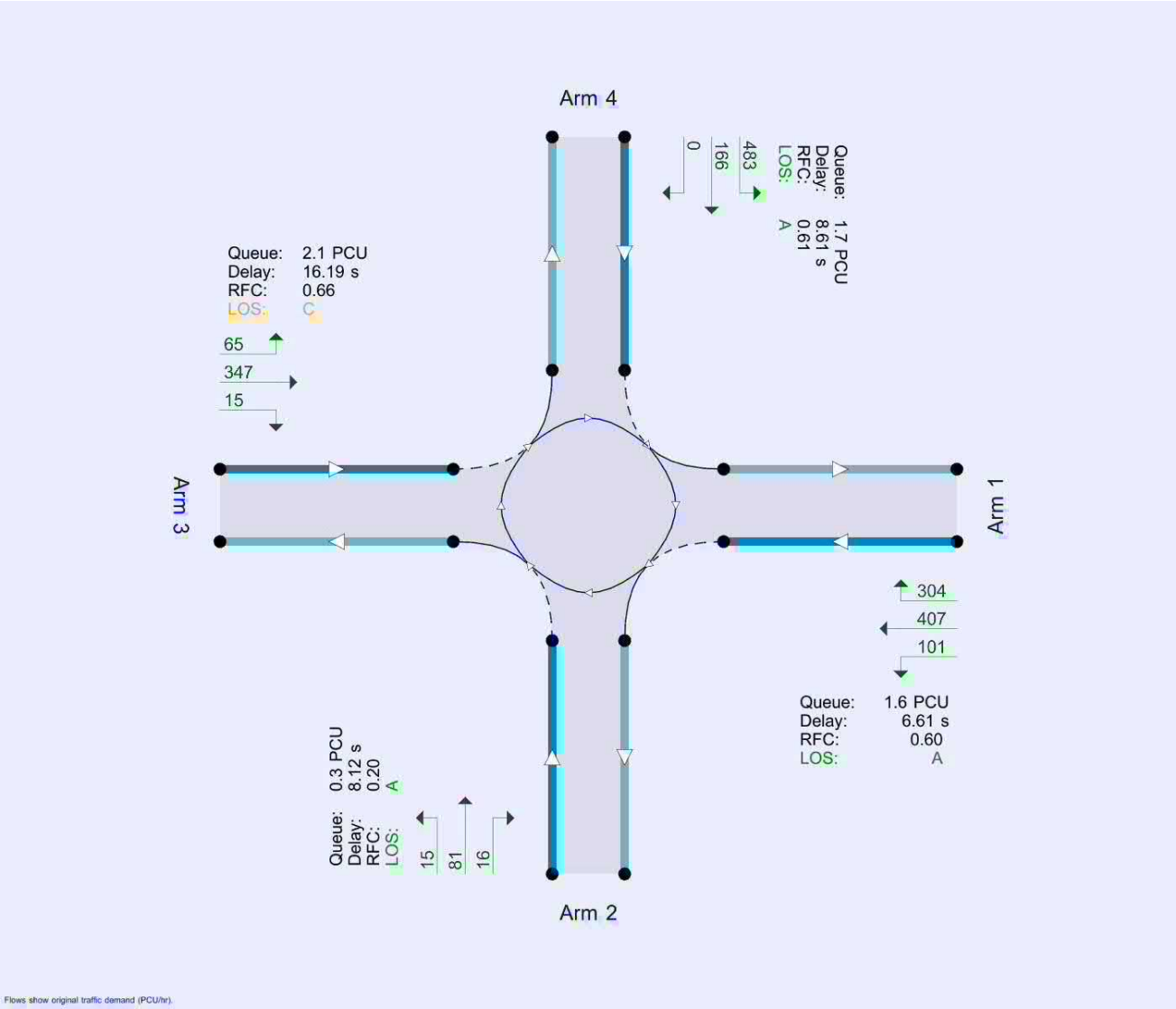
File summary

File Description

Title	Stakes Road / Stakes Hill Road / Purbrook Way Roundabout
Location	
Site number	
Date	07/08/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	48.96	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Purbrook Way	
2	Crookhorn Lane	
3	Stakes Road	
4	Stakes Hill Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.20	7.00	20.0	12.0	26.0	32.0	
2	3.80	3.80	0.0	5.0	26.0	32.0	
3	3.50	3.50	0.0	5.0	26.0	27.0	
4	3.00	6.70	10.0	25.0	26.0	32.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.632	1619
2	0.464	974
3	0.458	916
4	0.606	1426

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	430	100.000
2		✓	127	100.000
3		✓	756	100.000
4		✓	688	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	73	273	84
	2	32	0	15	80
	3	668	15	0	73
	4	542	146	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.31	3.83	0.5	A
2	0.18	6.07	0.2	A
3	1.02	109.48	25.5	F
4	0.78	18.59	3.8	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	120	1543	0.210	323	0.3	3.242	A
2	96	268	850	0.112	95	0.1	5.241	A
3	569	147	849	0.671	561	2.1	13.375	B
4	518	530	1105	0.469	514	1.0	6.660	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	387	144	1528	0.253	386	0.4	3.468	A
2	114	321	826	0.138	114	0.2	5.563	A
3	680	176	835	0.814	671	4.3	22.955	C
4	618	635	1042	0.594	616	1.6	9.251	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	473	175	1509	0.314	473	0.5	3.821	A
2	140	393	792	0.177	140	0.2	6.066	A
3	832	215	817	1.018	780	17.4	65.244	F
4	758	740	978	0.774	750	3.5	16.791	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	473	176	1507	0.314	473	0.5	3.828	A
2	140	393	792	0.177	140	0.2	6.070	A
3	832	216	817	1.019	800	25.5	109.480	F
4	758	758	967	0.783	756	3.8	18.593	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	387	148	1525	0.253	387	0.4	3.481	A
2	114	321	825	0.138	114	0.2	5.573	A
3	680	177	835	0.814	759	5.8	64.241	F
4	618	714	994	0.622	626	1.9	10.984	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	122	1542	0.210	324	0.3	3.252	A
2	96	269	850	0.113	96	0.1	5.255	A
3	569	148	848	0.671	583	2.3	15.629	C
4	518	551	1093	0.474	521	1.0	6.975	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	932	100.000
2		✓	106	100.000
3		✓	382	100.000
4		✓	563	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	100	435	397
	2	12	0	15	79
	3	326	15	0	41
	4	412	151	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.68	8.29	2.3	A
2	0.21	9.15	0.3	A
3	0.63	15.83	1.8	C
4	0.52	6.93	1.2	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	702	124	1540	0.456	698	0.9	4.682	A
2	80	623	685	0.116	79	0.1	6.529	A
3	288	365	749	0.384	285	0.7	8.488	A
4	424	263	1267	0.335	422	0.5	4.673	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	838	149	1525	0.549	836	1.3	5.736	A
2	95	746	628	0.152	95	0.2	7.431	A
3	343	438	716	0.480	342	1.0	10.565	B
4	506	316	1235	0.410	505	0.8	5.423	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1026	182	1504	0.682	1022	2.3	8.157	A
2	117	913	551	0.212	116	0.3	9.103	A
3	421	535	671	0.627	417	1.8	15.426	C
4	620	386	1193	0.520	618	1.2	6.875	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	1026	183	1503	0.683	1026	2.3	8.288	A
2	117	916	549	0.212	117	0.3	9.152	A
3	421	537	670	0.628	420	1.8	15.828	C
4	620	389	1191	0.520	620	1.2	6.933	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	838	150	1524	0.550	842	1.4	5.835	A
2	95	751	626	0.152	96	0.2	7.478	A
3	343	441	714	0.481	346	1.0	10.852	B
4	506	320	1232	0.411	508	0.8	5.476	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	702	125	1540	0.456	703	0.9	4.745	A
2	80	628	683	0.117	80	0.1	6.570	A
3	288	368	747	0.385	289	0.7	8.664	A
4	424	267	1265	0.335	425	0.6	4.721	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	100.46	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	469	100.000
2		✓	169	100.000
3		✓	796	100.000
4		✓	650	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	71	268	130
	2	72	0	15	82
	3	662	15	0	119
	4	482	168	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.35	4.05	0.6	A
2	0.24	6.77	0.3	A
3	1.13	247.07	62.3	F
4	0.73	14.82	2.9	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	353	137	1533	0.230	352	0.3	3.351	A
2	127	299	836	0.152	126	0.2	5.576	A
3	599	213	819	0.732	588	2.8	16.465	C
4	489	554	1091	0.449	486	0.9	6.509	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	422	164	1516	0.278	421	0.4	3.619	A
2	152	357	809	0.188	152	0.3	6.027	A
3	716	255	799	0.895	699	6.9	34.705	D
4	584	659	1027	0.569	582	1.4	8.860	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	516	198	1494	0.346	516	0.6	4.046	A
2	186	438	771	0.241	186	0.3	6.757	A
3	876	312	773	1.134	761	35.8	117.204	F
4	716	726	986	0.726	710	2.8	14.078	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	516	199	1493	0.346	516	0.6	4.054	A
2	186	438	771	0.241	186	0.3	6.768	A
3	876	313	773	1.134	770	62.3	240.112	F
4	716	734	981	0.729	715	2.9	14.821	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	422	167	1513	0.279	422	0.4	3.633	A
2	152	358	808	0.188	152	0.3	6.040	A
3	716	256	799	0.896	785	44.9	247.074	F
4	584	733	983	0.595	589	1.7	10.187	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	353	141	1530	0.231	353	0.3	3.367	A
2	127	300	835	0.152	127	0.2	5.598	A
3	599	214	818	0.733	764	3.7	103.284	F
4	489	704	1000	0.490	492	1.1	7.832	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	810	100.000
2		✓	113	100.000
3		✓	418	100.000
4		✓	647	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	101	403	306
	2	18	0	15	80
	3	338	15	0	65
	4	480	167	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.60	6.59	1.6	A
2	0.20	8.12	0.3	A
3	0.65	15.66	2.0	C
4	0.60	8.48	1.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	610	136	1533	0.398	607	0.7	4.264	A
2	85	531	728	0.117	84	0.1	6.149	A
3	315	303	778	0.405	312	0.7	8.450	A
4	487	277	1259	0.387	484	0.7	5.098	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	728	163	1516	0.480	727	1.0	5.013	A
2	102	636	679	0.150	101	0.2	6.853	A
3	376	363	750	0.501	374	1.1	10.500	B
4	582	332	1225	0.475	580	1.0	6.132	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	892	200	1493	0.597	889	1.6	6.537	A
2	124	779	613	0.203	124	0.3	8.091	A
3	460	444	713	0.645	457	1.9	15.260	C
4	712	406	1181	0.603	710	1.6	8.362	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	892	200	1492	0.598	892	1.6	6.593	A
2	124	781	612	0.203	124	0.3	8.118	A
3	460	445	712	0.646	460	2.0	15.658	C
4	712	408	1179	0.604	712	1.7	8.481	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	728	164	1515	0.481	731	1.0	5.062	A
2	102	639	678	0.150	102	0.2	6.880	A
3	376	364	749	0.502	379	1.1	10.790	B
4	582	336	1223	0.476	584	1.0	6.230	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	610	137	1532	0.398	611	0.7	4.304	A
2	85	535	726	0.117	85	0.1	6.181	A
3	315	305	777	0.405	316	0.8	8.631	A
4	487	281	1256	0.388	488	0.7	5.165	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	98.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	465	100.000
2		✓	163	100.000
3		✓	797	100.000
4		✓	647	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	71	265	129
	2	66	0	15	82
	3	664	15	0	118
	4	479	168	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.34	4.04	0.6	A
2	0.23	6.67	0.3	A
3	1.13	240.17	61.1	F
4	0.72	14.56	2.8	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	350	137	1533	0.228	349	0.3	3.342	A
2	123	296	837	0.147	122	0.2	5.530	A
3	600	207	821	0.731	589	2.8	16.360	C
4	487	551	1092	0.446	484	0.9	6.468	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	418	164	1516	0.276	418	0.4	3.607	A
2	147	354	810	0.181	146	0.2	5.963	A
3	716	249	802	0.893	700	6.8	34.253	D
4	582	656	1029	0.565	580	1.4	8.768	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	512	198	1494	0.343	511	0.6	4.028	A
2	179	433	773	0.232	179	0.3	6.659	A
3	878	304	777	1.130	764	35.2	115.196	F
4	712	724	988	0.721	707	2.7	13.843	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	512	199	1493	0.343	512	0.6	4.036	A
2	179	434	773	0.232	179	0.3	6.669	A
3	878	305	776	1.130	774	61.1	235.184	F
4	712	732	983	0.725	712	2.8	14.560	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	418	167	1513	0.276	419	0.4	3.621	A
2	147	355	810	0.181	147	0.2	5.977	A
3	716	249	802	0.894	788	43.3	240.173	F
4	582	730	984	0.591	586	1.6	10.077	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	350	141	1530	0.229	350	0.3	3.361	A
2	123	297	837	0.147	123	0.2	5.551	A
3	600	209	820	0.731	759	3.6	96.588	F
4	487	696	1004	0.485	489	1.1	7.723	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	9.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	812	100.000
2		✓	112	100.000
3		✓	427	100.000
4		✓	649	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	101	407	304
	2	16	0	15	81
	3	347	15	0	65
	4	483	166	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	10	10	10	10
	2	10	10	10	10
	3	10	10	10	10
	4	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.60	6.61	1.6	A
2	0.20	8.12	0.3	A
3	0.66	16.19	2.1	C
4	0.61	8.61	1.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	611	135	1533	0.399	608	0.7	4.269	A
2	84	533	727	0.116	84	0.1	6.149	A
3	321	300	779	0.413	318	0.8	8.551	A
4	489	282	1256	0.389	486	0.7	5.126	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	730	162	1516	0.481	729	1.0	5.021	A
2	101	638	678	0.148	100	0.2	6.852	A
3	384	360	751	0.511	382	1.1	10.692	B
4	583	339	1221	0.478	582	1.0	6.186	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	894	198	1494	0.599	892	1.6	6.553	A
2	123	781	612	0.201	123	0.3	8.090	A
3	470	440	715	0.658	467	2.0	15.741	C
4	715	413	1176	0.608	712	1.7	8.481	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	894	199	1493	0.599	894	1.6	6.610	A
2	123	783	611	0.202	123	0.3	8.117	A
3	470	441	714	0.658	470	2.1	16.191	C
4	715	416	1174	0.608	714	1.7	8.608	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	730	164	1516	0.482	732	1.0	5.072	A
2	101	641	677	0.149	101	0.2	6.882	A
3	384	362	750	0.511	387	1.2	11.010	B
4	583	343	1219	0.479	586	1.0	6.288	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	611	137	1533	0.399	613	0.7	4.310	A
2	84	536	726	0.116	85	0.1	6.181	A
3	321	303	778	0.413	323	0.8	8.743	A
4	489	286	1253	0.390	490	0.7	5.196	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Stubbington Ave_A2047_Gladys Ave_Angerstein Rd.j9
Path: \\uk.wspgroup.com\central data\Projects\62100xxx\62100616 - Aquind VO No.3\A DCO\D. EIA\5. WIP\12. Traffic and Transport\Transport Assessment\Analysis & Calcs\ARCADY\TA Models and Outputs
Report generation date: 29/10/2019 10:07:51

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	ELM - DM							
Arm 1	0.1	7.86	0.05	A	0.1	6.92	0.05	A
Arm 2	2.0	9.45	0.64	A	4.9	18.90	0.82	C
Arm 3	0.6	8.69	0.34	A	0.0	0.00	0.00	A
Arm 4	1.7	10.71	0.60	B	1.9	11.32	0.64	B
Arm 5	2.1	12.63	0.66	B	2.0	11.84	0.65	B
	EMM - DS1							
Arm 1	0.1	7.88	0.05	A	0.1	7.20	0.05	A
Arm 2	2.0	9.55	0.65	A	4.8	18.67	0.82	C
Arm 3	0.6	8.73	0.34	A	0.0	0.00	0.00	A
Arm 4	1.7	10.82	0.61	B	2.7	14.31	0.71	B
Arm 5	2.1	12.56	0.66	B	1.9	12.15	0.64	B
	EML - DS2							
Arm 1	0.1	7.86	0.06	A	0.1	6.96	0.05	A
Arm 2	2.1	9.88	0.66	A	4.9	19.05	0.83	C
Arm 3	0.6	8.75	0.34	A	0.0	0.00	0.00	A
Arm 4	1.6	10.63	0.60	B	2.0	11.51	0.65	B
Arm 5	2.1	12.61	0.66	B	1.9	11.74	0.64	B

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

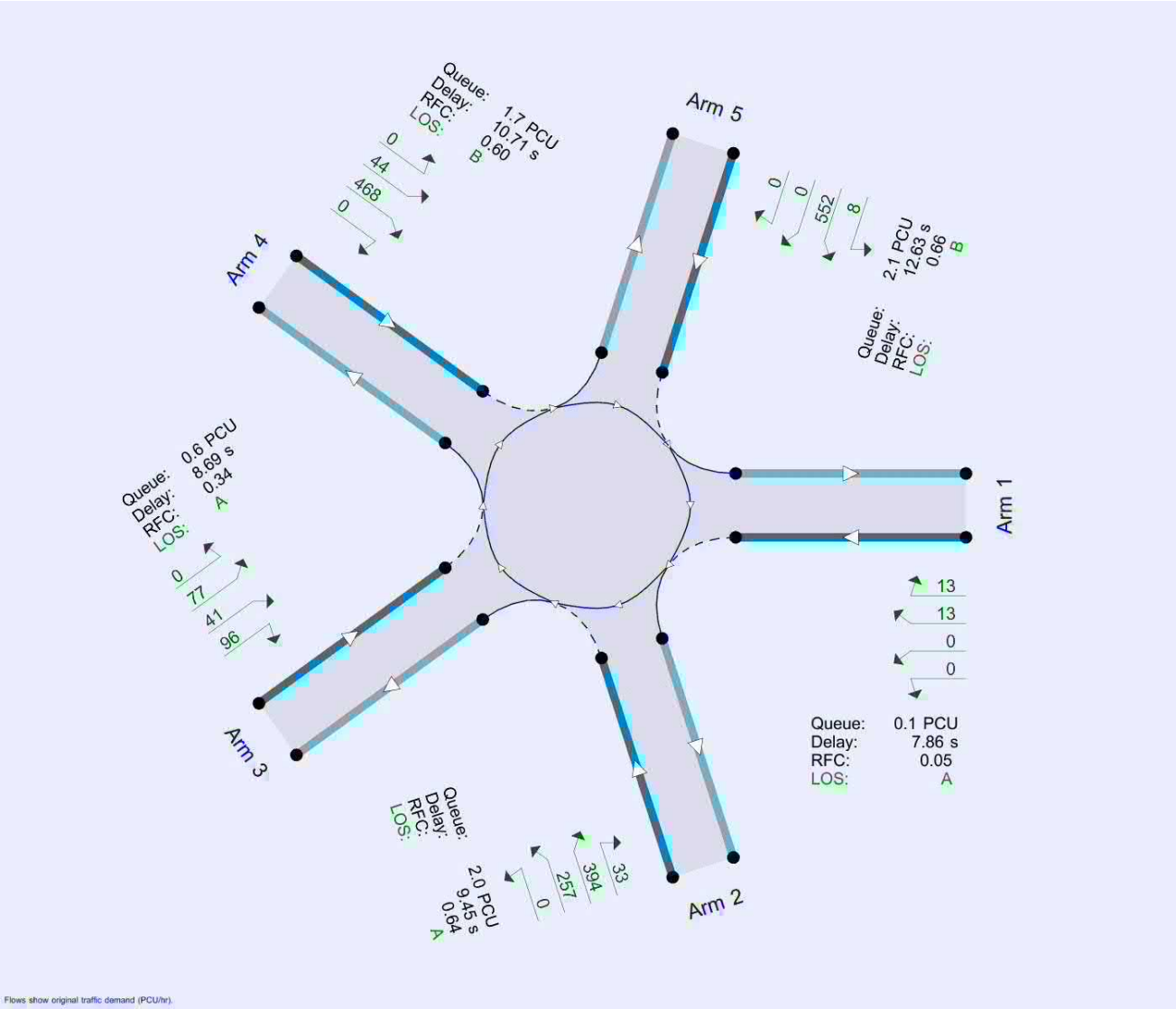
File summary

File Description

Title	Stubbington Avenue / A2047 / Gladys Avenue / Angerstein Road roundabout
Location	
Site number	
Date	26/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	62100616
Enumerator	CORP\UKAJT009
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

ELM - DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	10.56	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Stubbington Avenue	
2	A2047 London Road south	
3	Angerstein Road	
4	Gladys Avenue	
5	A2047 London Road north	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	4.00	4.70	0.7	10.0	25.0	30.0	
2	2.70	4.00	30.0	10.0	25.0	10.0	
3	4.00	6.10	0.9	6.0	25.0	47.0	
4	4.00	9.70	3.2	12.0	25.0	47.0	
5	4.80	4.80	0.0	10.0	25.0	35.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.544	1201
2	0.563	1188
3	0.477	1064
4	0.558	1335
5	0.571	1358

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	ELM - DM	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	26	100.000
2		✓	684	100.000
3		✓	214	100.000
4		✓	512	100.000
5		✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	13	13
	2	33	0	0	257	394
	3	41	96	0	0	77
	4	44	468	0	0	0
	5	8	552	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.05	7.86	0.1	A
2	0.64	9.45	2.0	A
3	0.34	8.69	0.6	A
4	0.60	10.71	1.7	B
5	0.66	12.63	2.1	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	835	747	0.026	19	0.0	5.444	A
2	515	19	1177	0.438	512	0.8	5.922	A
3	161	531	811	0.199	160	0.3	6.073	A
4	385	489	1062	0.363	383	0.6	5.810	A
5	422	510	1067	0.395	419	0.7	6.083	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	23	1001	657	0.036	23	0.0	6.253	A
2	615	23	1175	0.523	614	1.2	7.039	A
3	192	637	761	0.253	192	0.4	6.960	A
4	460	587	1008	0.457	459	0.9	7.202	A
5	503	612	1009	0.499	502	1.1	7.790	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	1222	536	0.053	29	0.1	7.799	A
2	753	29	1172	0.643	750	1.9	9.325	A
3	236	779	693	0.340	235	0.6	8.631	A
4	564	717	935	0.603	561	1.6	10.511	B
5	617	747	931	0.662	613	2.1	12.268	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	1228	533	0.054	29	0.1	7.856	A
2	753	29	1172	0.643	753	2.0	9.450	A
3	236	782	691	0.341	236	0.6	8.686	A
4	564	720	933	0.604	564	1.7	10.705	B
5	617	751	929	0.663	616	2.1	12.628	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	23	1010	651	0.036	23	0.0	6.309	A
2	615	23	1175	0.523	618	1.2	7.149	A
3	192	641	758	0.254	193	0.4	7.013	A
4	460	591	1005	0.458	463	0.9	7.340	A
5	503	617	1006	0.500	507	1.1	8.003	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	843	742	0.026	20	0.0	5.479	A
2	515	20	1177	0.438	516	0.9	6.008	A
3	161	536	809	0.199	162	0.3	6.124	A
4	385	494	1060	0.364	387	0.6	5.897	A
5	422	515	1064	0.396	423	0.7	6.193	A

ELM - DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	14.70	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	ELM - DM	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	25	100.000
2		✓	878	100.000
3		✓	2	100.000
4		✓	562	100.000
5		✓	556	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	1	0	21	3
	2	94	0	0	283	501
	3	1	0	0	0	1
	4	94	468	0	0	0
	5	20	536	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.05	6.92	0.1	A
2	0.82	18.90	4.9	C
3	0.00	0.00	0.0	A
4	0.64	11.32	1.9	B
5	0.65	11.84	2.0	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	751	792	0.024	19	0.0	5.118	A
2	661	18	1178	0.561	655	1.4	7.506	A
3	0	673	743	0.000	0	0.0	0.000	A
4	423	446	1086	0.390	420	0.7	5.924	A
5	419	491	1078	0.388	416	0.7	5.955	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	900	711	0.032	22	0.0	5.749	A
2	789	22	1176	0.671	786	2.2	10.078	B
3	0	808	679	0.000	0	0.0	0.000	A
4	505	535	1036	0.488	504	1.0	7.418	A
5	500	588	1022	0.489	498	1.0	7.539	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1099	603	0.046	27	0.1	6.881	A
2	967	26	1173	0.824	957	4.7	17.532	C
3	0	983	595	0.000	0	0.0	0.000	A
4	619	652	971	0.637	615	1.9	11.020	B
5	612	718	948	0.646	609	1.9	11.535	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1105	600	0.046	28	0.1	6.920	A
2	967	26	1173	0.824	966	4.9	18.900	C
3	0	992	591	0.000	0	0.0	0.000	A
4	619	658	968	0.639	619	1.9	11.323	B
5	612	722	946	0.647	612	2.0	11.844	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	909	706	0.032	23	0.0	5.792	A
2	789	22	1176	0.671	800	2.3	10.795	B
3	0	821	673	0.000	0	0.0	0.000	A
4	505	545	1031	0.490	509	1.1	7.627	A
5	500	594	1019	0.491	503	1.1	7.735	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	758	788	0.024	19	0.0	5.148	A
2	661	18	1178	0.561	665	1.4	7.769	A
3	0	683	739	0.000	0	0.0	0.000	A
4	423	453	1082	0.391	425	0.7	6.031	A
5	419	496	1075	0.389	420	0.7	6.058	A

EMM - DS1, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	10.60	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	EMM - DS1	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	26	100.000
2		✓	688	100.000
3		✓	214	100.000
4		✓	521	100.000
5		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	13	13
	2	32	0	0	271	385
	3	41	96	0	0	77
	4	45	476	0	0	0
	5	8	546	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.05	7.88	0.1	A
2	0.65	9.55	2.0	A
3	0.34	8.73	0.6	A
4	0.61	10.82	1.7	B
5	0.66	12.56	2.1	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	836	746	0.026	19	0.0	5.450	A
2	518	19	1177	0.440	515	0.9	5.951	A
3	161	534	810	0.199	160	0.3	6.086	A
4	392	482	1066	0.368	390	0.6	5.832	A
5	417	516	1063	0.392	414	0.7	6.075	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	23	1002	656	0.036	23	0.0	6.262	A
2	618	23	1175	0.526	617	1.2	7.081	A
3	192	640	759	0.254	192	0.4	6.981	A
4	468	578	1013	0.463	467	0.9	7.243	A
5	498	619	1005	0.496	497	1.1	7.769	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	1224	535	0.054	29	0.1	7.818	A
2	758	29	1172	0.646	754	2.0	9.419	A
3	236	783	691	0.341	235	0.6	8.670	A
4	574	706	941	0.610	571	1.7	10.614	B
5	610	756	926	0.658	606	2.0	12.212	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	29	1231	531	0.054	29	0.1	7.875	A
2	758	29	1172	0.646	757	2.0	9.549	A
3	236	786	689	0.342	236	0.6	8.726	A
4	574	709	939	0.611	574	1.7	10.816	B
5	610	760	924	0.660	610	2.1	12.564	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	23	1012	650	0.036	23	0.0	6.319	A
2	618	23	1175	0.527	621	1.2	7.197	A
3	192	645	757	0.254	193	0.4	7.038	A
4	468	582	1011	0.463	471	1.0	7.385	A
5	498	624	1002	0.497	502	1.1	7.982	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	845	741	0.026	20	0.0	5.486	A
2	518	20	1177	0.440	519	0.9	6.036	A
3	161	539	807	0.200	162	0.3	6.138	A
4	392	486	1064	0.369	393	0.6	5.918	A
5	417	521	1061	0.393	419	0.7	6.182	A

EMM - DS1, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	15.54	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	EMM - DS1	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	25	100.000
2		✓	875	100.000
3		✓	0	100.000
4		✓	625	100.000
5		✓	517	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	22	3
	2	113	0	0	273	489
	3	0	0	0	0	0
	4	80	545	0	0	0
	5	21	496	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.05	7.20	0.1	A
2	0.82	18.67	4.8	C
3	0.00	0.00	0.0	A
4	0.71	14.31	2.7	B
5	0.64	12.15	1.9	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	778	777	0.024	19	0.0	5.219	A
2	659	19	1177	0.560	653	1.4	7.479	A
3	0	672	744	0.000	0	0.0	0.000	A
4	471	452	1083	0.434	467	0.8	6.396	A
5	389	552	1043	0.373	387	0.6	6.009	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	933	693	0.032	22	0.0	5.902	A
2	787	22	1175	0.669	783	2.2	10.023	B
3	0	806	680	0.000	0	0.0	0.000	A
4	562	542	1033	0.544	560	1.3	8.345	A
5	465	661	981	0.474	463	1.0	7.637	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1138	582	0.047	27	0.1	7.145	A
2	963	27	1172	0.822	954	4.6	17.353	C
3	0	981	596	0.000	0	0.0	0.000	A
4	688	659	967	0.712	683	2.6	13.692	B
5	569	806	898	0.634	566	1.8	11.801	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1146	578	0.048	28	0.1	7.197	A
2	963	28	1172	0.822	963	4.8	18.668	C
3	0	990	592	0.000	0	0.0	0.000	A
4	688	666	964	0.714	688	2.7	14.311	B
5	569	812	894	0.636	569	1.9	12.154	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	944	687	0.033	23	0.0	5.957	A
2	787	23	1175	0.669	797	2.3	10.720	B
3	0	819	674	0.000	0	0.0	0.000	A
4	562	551	1028	0.547	567	1.4	8.694	A
5	465	670	976	0.476	468	1.0	7.859	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	787	773	0.024	19	0.0	5.251	A
2	659	19	1177	0.560	662	1.4	7.740	A
3	0	681	739	0.000	0	0.0	0.000	A
4	471	458	1080	0.436	473	0.9	6.546	A
5	389	558	1039	0.374	391	0.7	6.115	A

EML - DS2, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	10.69	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	EML - DS2	AM	ONE HOUR	07:45	09:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	27	100.000
2		✓	700	100.000
3		✓	209	100.000
4		✓	508	100.000
5		✓	563	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	13	14
	2	34	0	0	266	400
	3	38	96	0	0	75
	4	44	464	0	0	0
	5	8	555	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	7.86	0.1	A
2	0.66	9.88	2.1	A
3	0.34	8.75	0.6	A
4	0.60	10.63	1.6	B
5	0.66	12.61	2.1	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	834	747	0.027	20	0.0	5.447	A
2	527	20	1177	0.448	523	0.9	6.031	A
3	157	544	805	0.195	156	0.3	6.094	A
4	382	491	1061	0.361	380	0.6	5.795	A
5	424	506	1069	0.396	421	0.7	6.080	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1000	657	0.037	24	0.0	6.257	A
2	629	24	1174	0.536	628	1.2	7.225	A
3	188	652	753	0.249	187	0.4	6.994	A
4	457	589	1006	0.454	456	0.9	7.177	A
5	506	606	1012	0.500	505	1.1	7.782	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	30	1221	537	0.055	30	0.1	7.807	A
2	771	30	1171	0.658	767	2.1	9.728	A
3	230	797	684	0.336	229	0.5	8.693	A
4	559	721	933	0.600	557	1.6	10.442	B
5	620	741	935	0.663	616	2.1	12.251	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	30	1227	533	0.056	30	0.1	7.864	A
2	771	30	1171	0.658	771	2.1	9.875	A
3	230	800	683	0.337	230	0.6	8.752	A
4	559	723	931	0.601	559	1.6	10.632	B
5	620	744	933	0.664	620	2.1	12.609	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1009	652	0.037	24	0.0	6.310	A
2	629	24	1174	0.536	632	1.3	7.351	A
3	188	657	751	0.250	189	0.4	7.052	A
4	457	593	1004	0.455	459	0.9	7.312	A
5	506	611	1009	0.502	510	1.1	7.997	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	842	743	0.027	20	0.0	5.484	A
2	527	20	1176	0.448	529	0.9	6.126	A
3	157	549	802	0.196	158	0.3	6.145	A
4	382	496	1058	0.361	384	0.6	5.880	A
5	424	510	1067	0.397	425	0.7	6.192	A

EML - DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	14.79	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	EML - DS2	PM	ONE HOUR	16:45	18:15	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)
✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	25	100.000
2		✓	879	100.000
3		✓	0	100.000
4		✓	574	100.000
5		✓	550	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	0	0	22	3
	2	88	0	0	296	495
	3	0	0	0	0	0
	4	94	480	0	0	0
	5	20	530	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	10	10	10	10	10
	2	10	10	10	10	10
	3	10	10	10	10	10
	4	10	10	10	10	10
	5	10	10	10	10	10

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.05	6.96	0.1	A
2	0.83	19.05	4.9	C
3	0.00	0.00	0.0	A
4	0.65	11.51	2.0	B
5	0.64	11.74	1.9	B

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	755	790	0.024	19	0.0	5.134	A
2	662	19	1177	0.562	656	1.4	7.522	A
3	0	675	742	0.000	0	0.0	0.000	A
4	432	437	1091	0.396	429	0.7	5.960	A
5	414	495	1075	0.385	411	0.7	5.939	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	905	708	0.032	22	0.0	5.773	A
2	790	22	1175	0.672	787	2.2	10.112	B
3	0	809	678	0.000	0	0.0	0.000	A
4	516	525	1042	0.495	515	1.1	7.485	A
5	494	593	1019	0.485	493	1.0	7.505	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1106	599	0.046	27	0.1	6.923	A
2	968	27	1172	0.825	958	4.7	17.651	C
3	0	985	594	0.000	0	0.0	0.000	A
4	632	639	979	0.646	628	1.9	11.193	B
5	606	724	945	0.641	602	1.9	11.444	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1112	596	0.046	28	0.1	6.963	A
2	968	28	1172	0.825	967	4.9	19.049	C
3	0	994	590	0.000	0	0.0	0.000	A
4	632	645	975	0.648	632	2.0	11.513	B
5	606	729	942	0.643	605	1.9	11.744	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	914	703	0.032	23	0.0	5.817	A
2	790	23	1175	0.672	801	2.3	10.845	B
3	0	823	672	0.000	0	0.0	0.000	A
4	516	534	1037	0.497	520	1.1	7.699	A
5	494	600	1016	0.487	498	1.1	7.699	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	763	786	0.024	19	0.0	5.163	A
2	662	19	1177	0.562	665	1.4	7.788	A
3	0	684	738	0.000	0	0.0	0.000	A
4	432	444	1088	0.397	434	0.7	6.068	A
5	414	500	1072	0.386	416	0.7	6.042	A

Appendix I – SHUTTLE WORKING SIGNAL MODELLING OUTPUTS

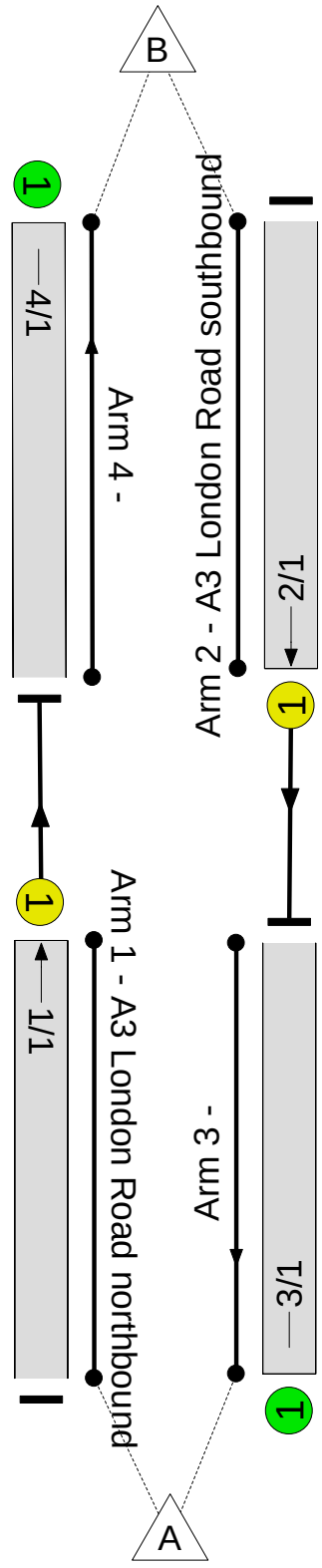
Full Input Data And Results

User and Project Details

Project:	
Title:	**A3 London Road (north of Ladybridge Roundabout) shuttle working analysis**
Location:	
Additional detail:	
File name:	A3 London Road (north of Ladybridge Roundabout).lsg3x
Author:	
Company:	
Address:	

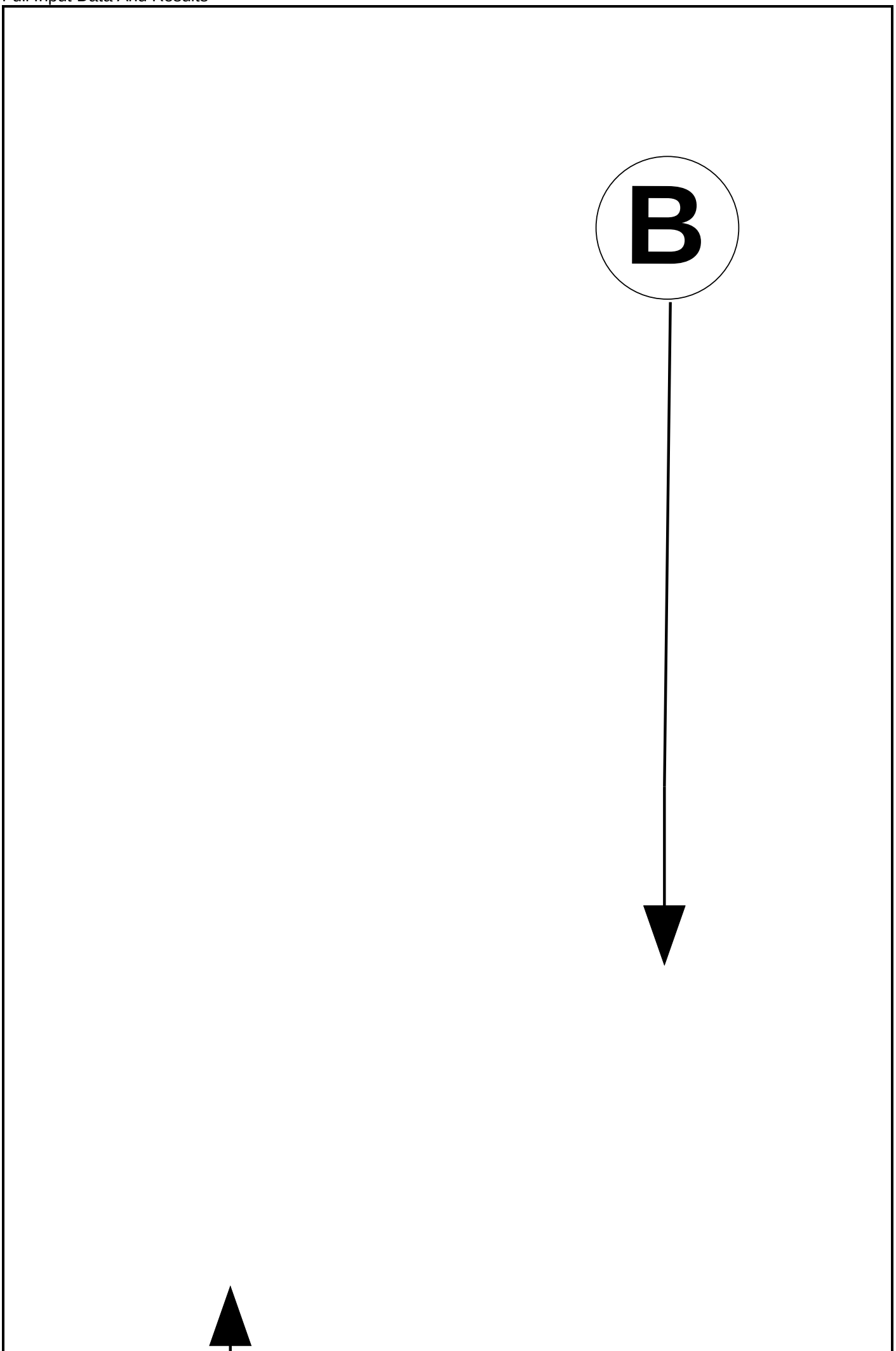
Network Layout Diagram

A3 London Road (north of Ladybridge Roundabout)



Full Input Data And Results

Phase Diagram


B

Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

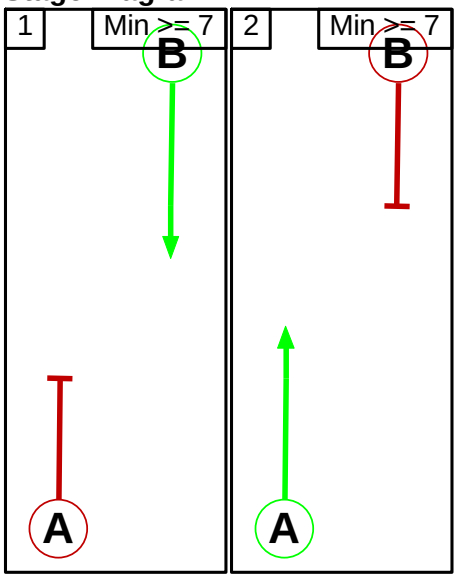
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B
A		17
B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		17
2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A3 London Road (north of Ladybridge Roundabout)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A3 London Road (north of Ladybridge Roundabout)												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A3 London Road northbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (A3 London Road southbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	451	451
	B	607	0	607
	Tot.	607	451	1058

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: A3 London Road (north of Ladybridge Roundabout)	
1/1	451
2/1	607
3/1	607
4/1	451

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (north of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	562	562
	B	514	0	514
	Tot.	514	562	1076

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: A3 London Road (north of Ladybridge Roundabout)	
1/1	562
2/1	514
3/1	514
4/1	562

Lane Saturation Flows

Junction: A3 London Road (north of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination		
	A	B	Tot.
A	0	448	448
B	620	0	620
Tot.	620	448	1068

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: A3 London Road (north of Ladybridge Roundabout)	
1/1	448
2/1	620
3/1	620
4/1	448

Lane Saturation Flows

Junction: A3 London Road (north of Ladybridge Roundabout)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination		
Origin		A	B	Tot.
	A	0	559	559
	B	514	0	514
	Tot.	514	559	1073

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: A3 London Road (north of Ladybridge Roundabout)	
1/1	559
2/1	514
3/1	514
4/1	559

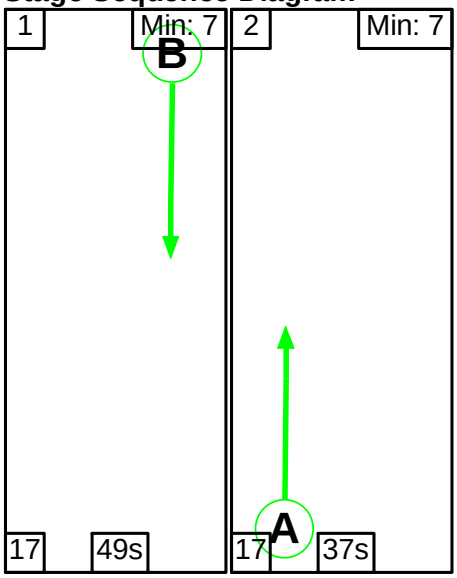
Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (north of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

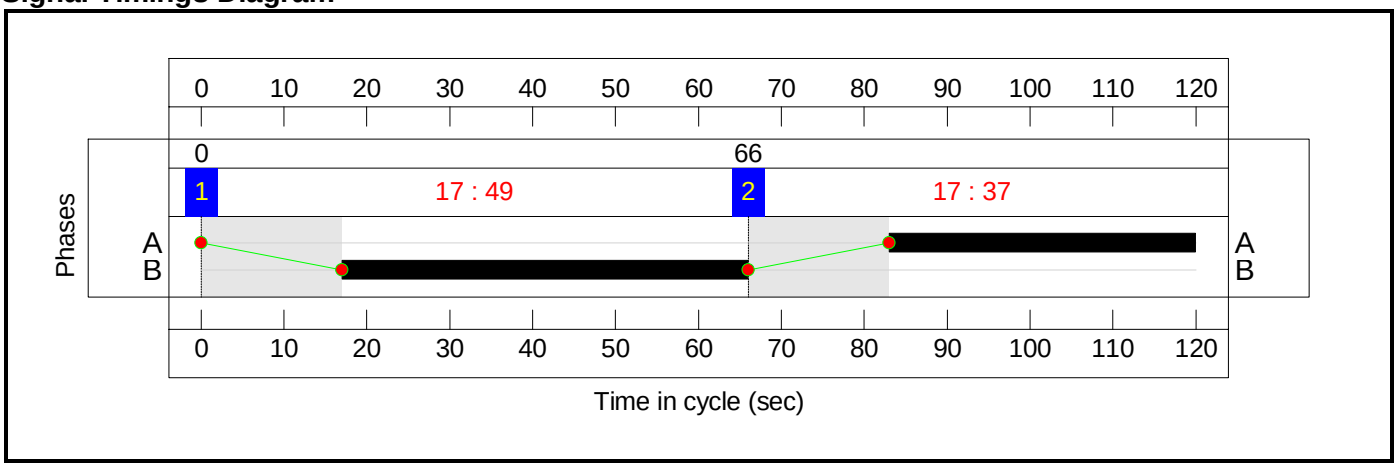
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	49	37
Change Point	0	66

Signal Timings Diagram



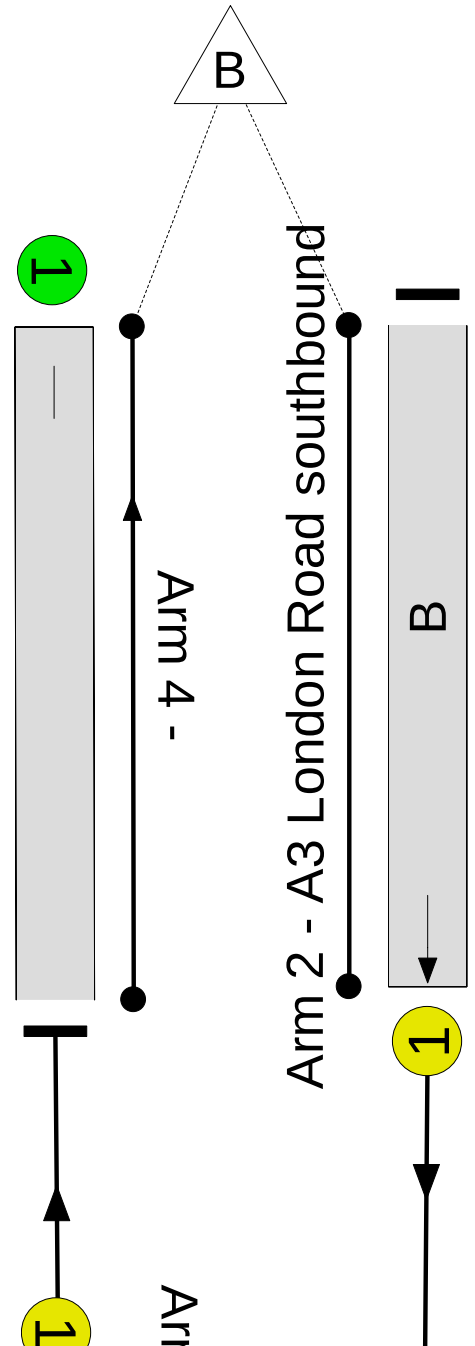
Full Input Data And Results

Network Layout Diagram

A3 London Road (north of Ladybridge Roundabout)

PRC: 17.4 %

Total Traffic Delay: 12.7 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.7%**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.7%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	37	-	451	1900	602	75.0%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	49	-	607	1900	792	76.7%
3/1		U	N/A	N/A	-		-	-	-	607	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%

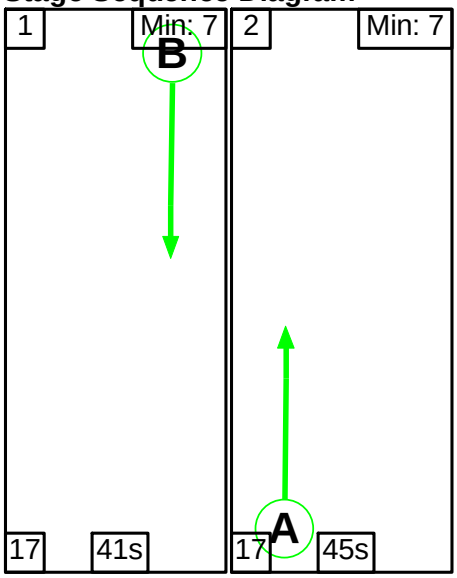
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.7**	**3.1**	**0.0**	**12.7**	**-**	**-**	**-**	**-**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**9.7**	**3.1**	**0.0**	**12.7**	**-**	**-**	**-**	**-**
1/1	451	451	-	-	-	4.6	1.5	-	6.1	48.5	13.4	1.5	14.9
2/1	607	607	-	-	-	5.1	1.6	-	6.7	39.6	17.2	1.6	18.8
3/1	607	607	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 17.4 Total Delay for Signalled Lanes (pcuHr): 12.74 Cycle Time (s): 120
PRC Over All Lanes (%): 17.4 Total Delay Over All Lanes(pcuHr): 12.74

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

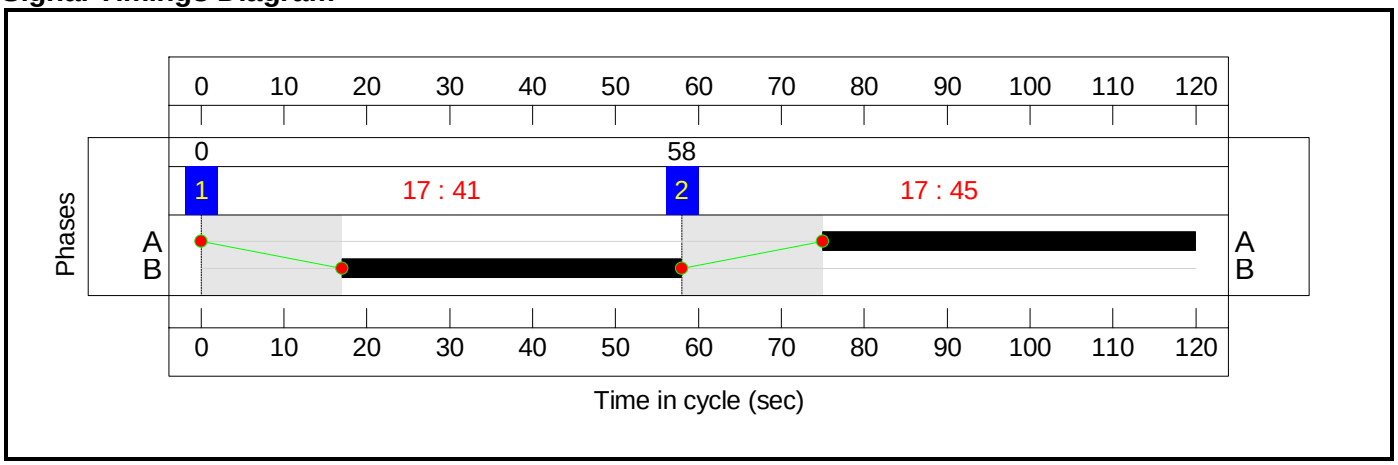
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	45
Change Point	0	58

Signal Timings Diagram



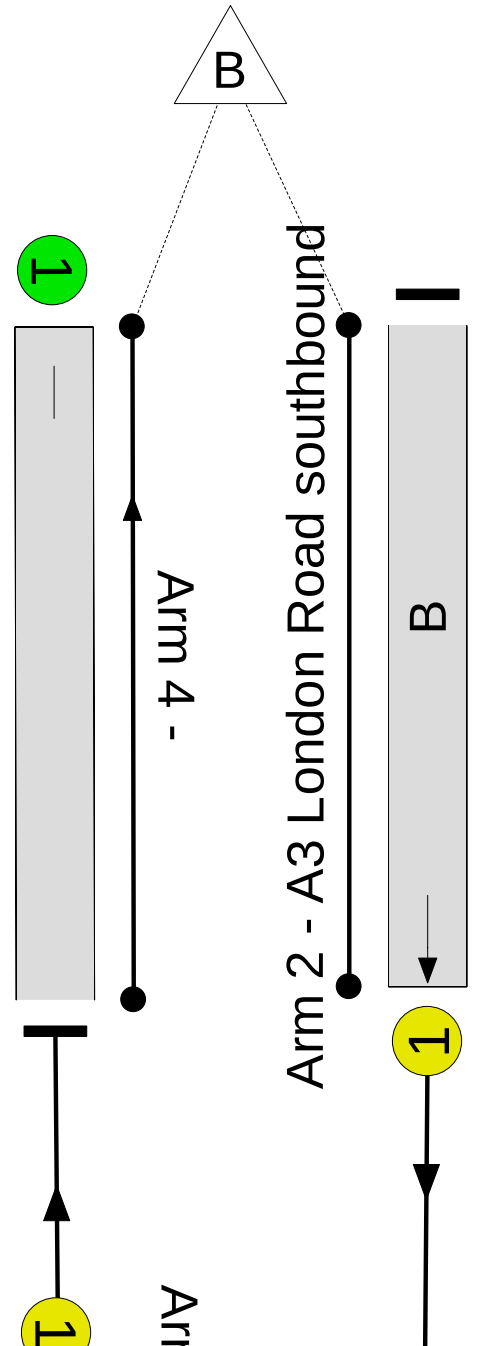
Full Input Data And Results

Network Layout Diagram

A3 London Road (north of Ladybridge Roundabout)

PRC: 16.4 %

Total Traffic Delay: 13.3 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.3%**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.3%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	45	-	562	1900	728	77.2%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	41	-	514	1900	665	77.3%
3/1		U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%

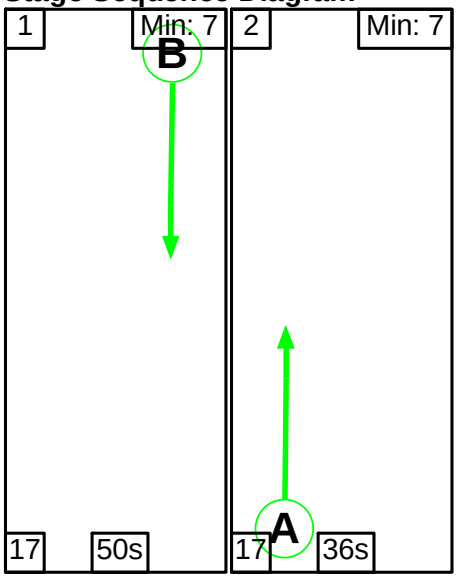
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.0**	**3.3**	**0.0**	**13.3**	**-**	**-**	**-**	**-**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.0**	**3.3**	**0.0**	**13.3**	**-**	**-**	**-**	**-**
1/1	562	562	-	-	-	5.1	1.7	-	6.7	43.0	16.4	1.7	18.0
2/1	514	514	-	-	-	5.0	1.7	-	6.6	46.4	15.1	1.7	16.8
3/1	514	514	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 16.4 Total Delay for Signalled Lanes (pcuHr): 13.34 Cycle Time (s): 120
PRC Over All Lanes (%): 16.4 Total Delay Over All Lanes(pcuHr): 13.34

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

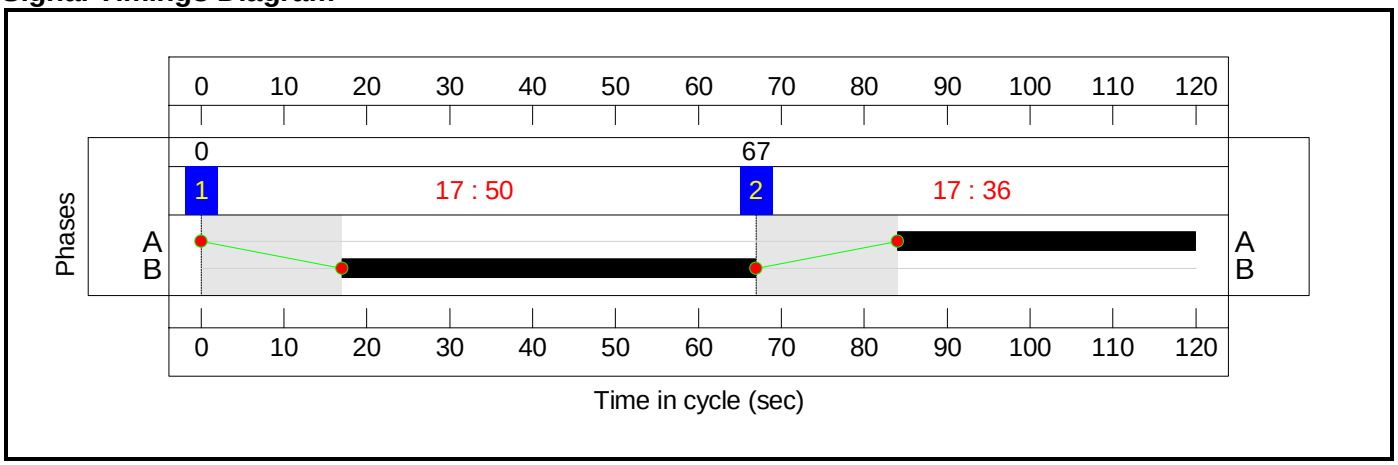
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	50	36
Change Point	0	67

Signal Timings Diagram



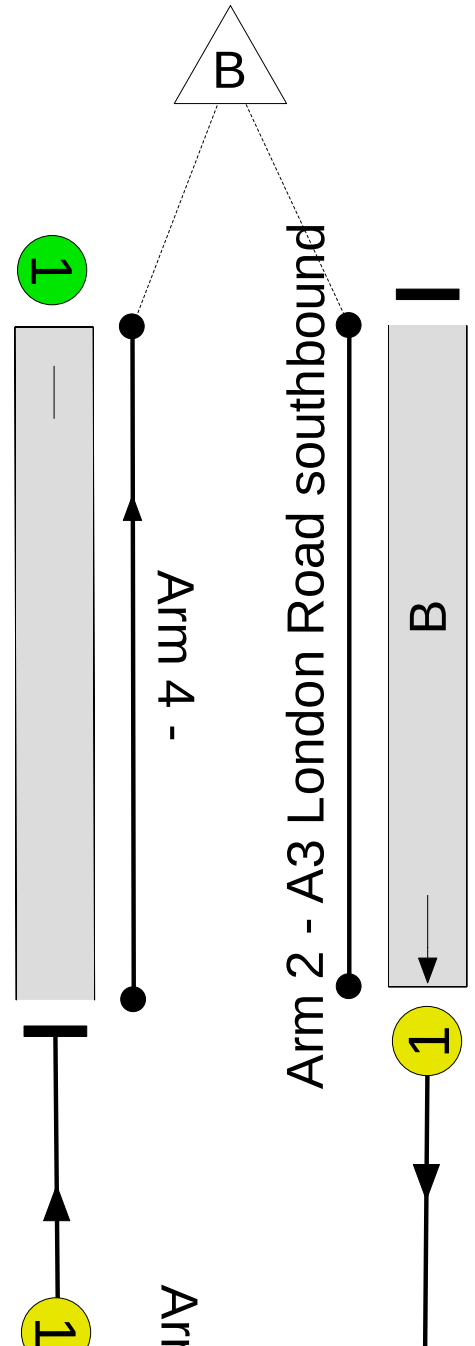
Full Input Data And Results

Network Layout Diagram

A3 London Road (north of Ladybridge Roundabout)

PRC: 17.2 %

Total Traffic Delay: 13.0 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**76.8%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	36	-	448	1900	586	76.5%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	50	-	620	1900	808	76.8%
3/1		U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	448	Inf	Inf	0.0%

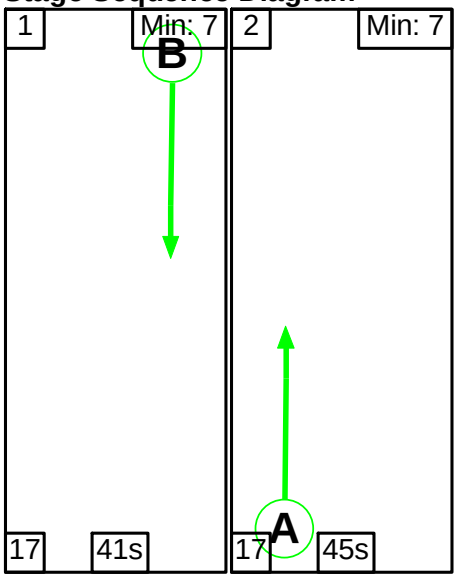
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.7**	**3.2**	**0.0**	**13.0**	**-**	**-**	**-**	**-**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**9.7**	**3.2**	**0.0**	**13.0**	**-**	**-**	**-**	**-**
1/1	448	448	-	-	-	4.7	1.6	-	6.3	50.3	13.4	1.6	15.0
2/1	620	620	-	-	-	5.1	1.6	-	6.7	38.9	17.6	1.6	19.2
3/1	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	448	448	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 17.2 Total Delay for Signalled Lanes (pcuHr): 12.96 Cycle Time (s): 120
PRC Over All Lanes (%): 17.2 Total Delay Over All Lanes(pcuHr): 12.96

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

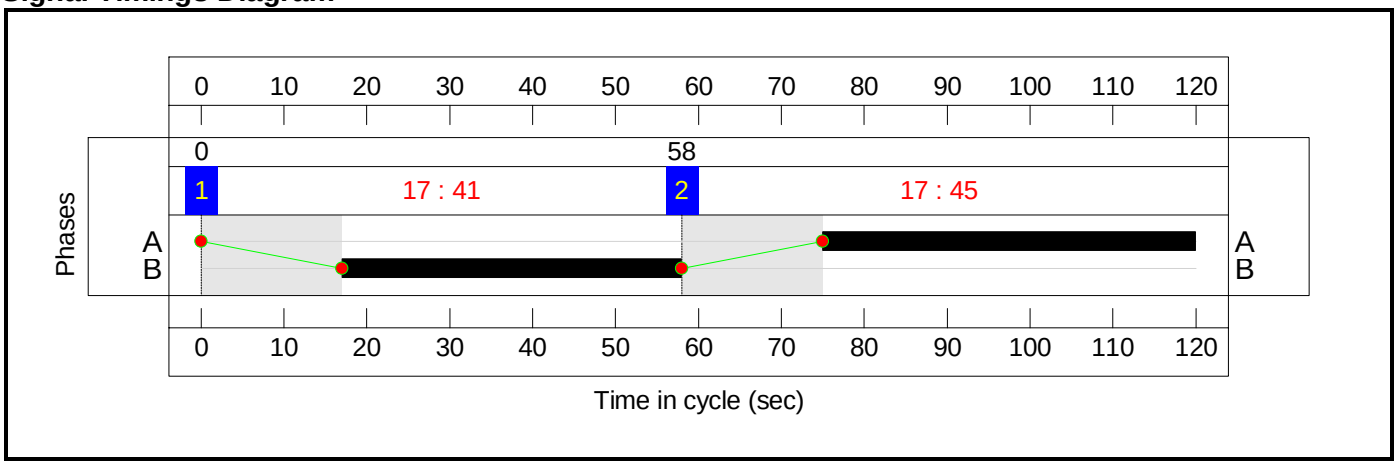
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	45
Change Point	0	58

Signal Timings Diagram



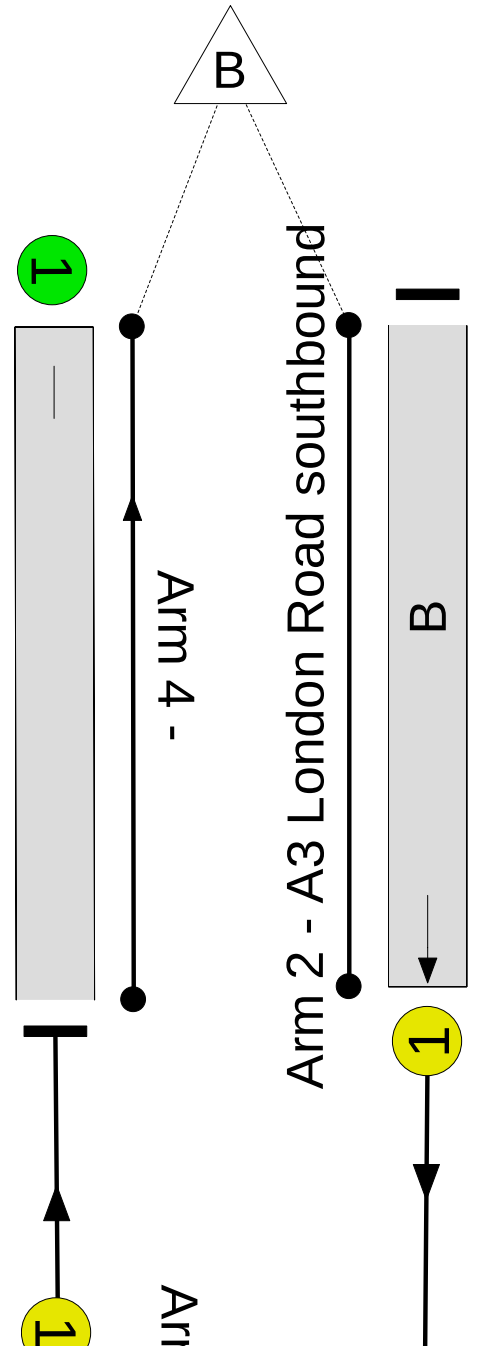
Full Input Data And Results

Network Layout Diagram

A3 London Road (north of Ladybridge Roundabout)

PRC: 16.4 %

Total Traffic Delay: 13.3 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.3%**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**77.3%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	45	-	559	1900	728	76.8%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	41	-	514	1900	665	77.3%
3/1		U	N/A	N/A	-		-	-	-	514	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.0**	**3.3**	**0.0**	**13.3**	**-**	**-**	**-**	**-**
A3 London Road (north of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.0**	**3.3**	**0.0**	**13.3**	**-**	**-**	**-**	**-**
1/1	559	559	-	-	-	5.0	1.6	-	6.6	42.8	16.1	1.6	17.8
2/1	514	514	-	-	-	5.0	1.7	-	6.6	46.4	15.1	1.7	16.8
3/1	514	514	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 16.4 Total Delay for Signalled Lanes (pcuHr): 13.27 Cycle Time (s): 120
PRC Over All Lanes (%): 16.4 Total Delay Over All Lanes(pcuHr): 13.27

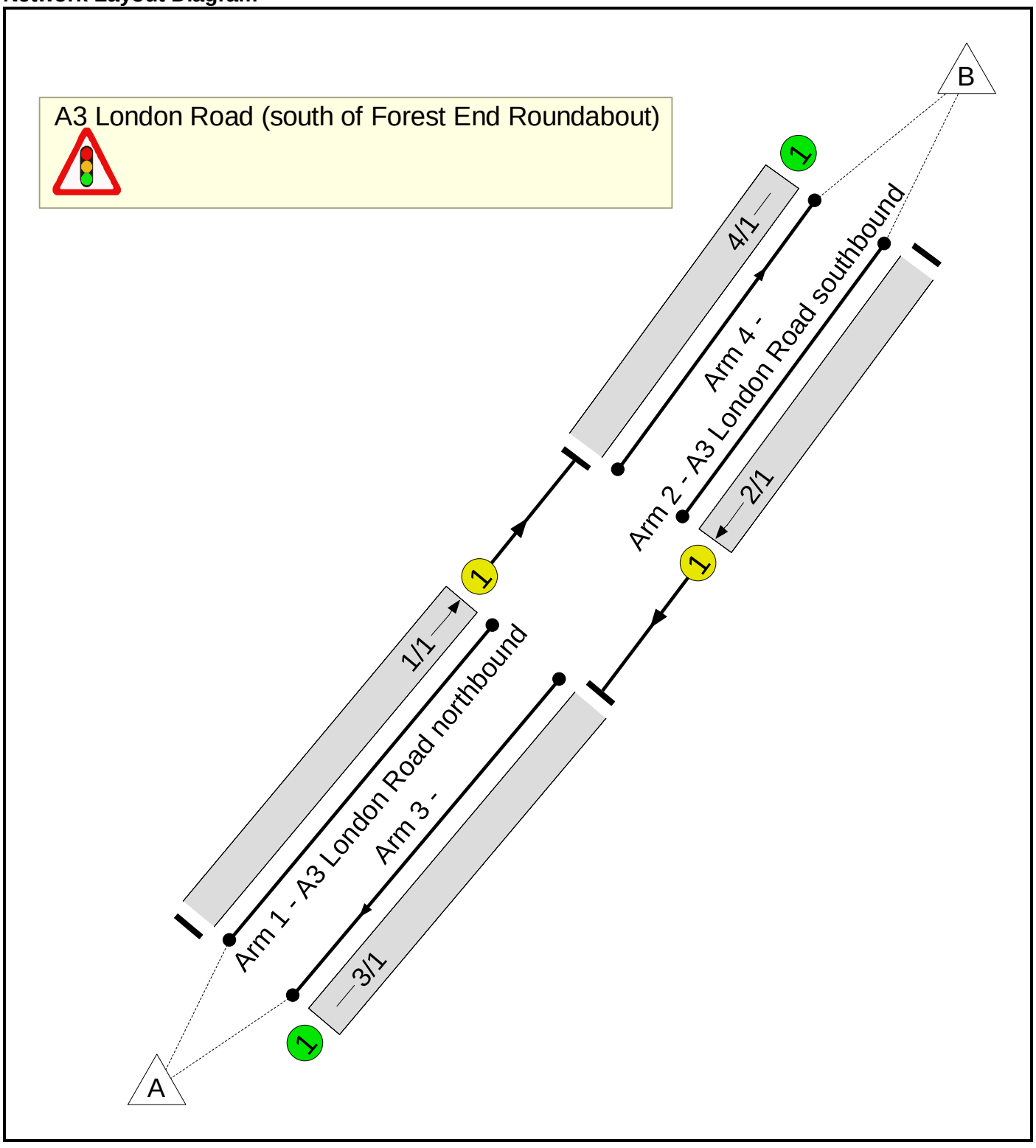
Full Input Data And Results

User and Project Details

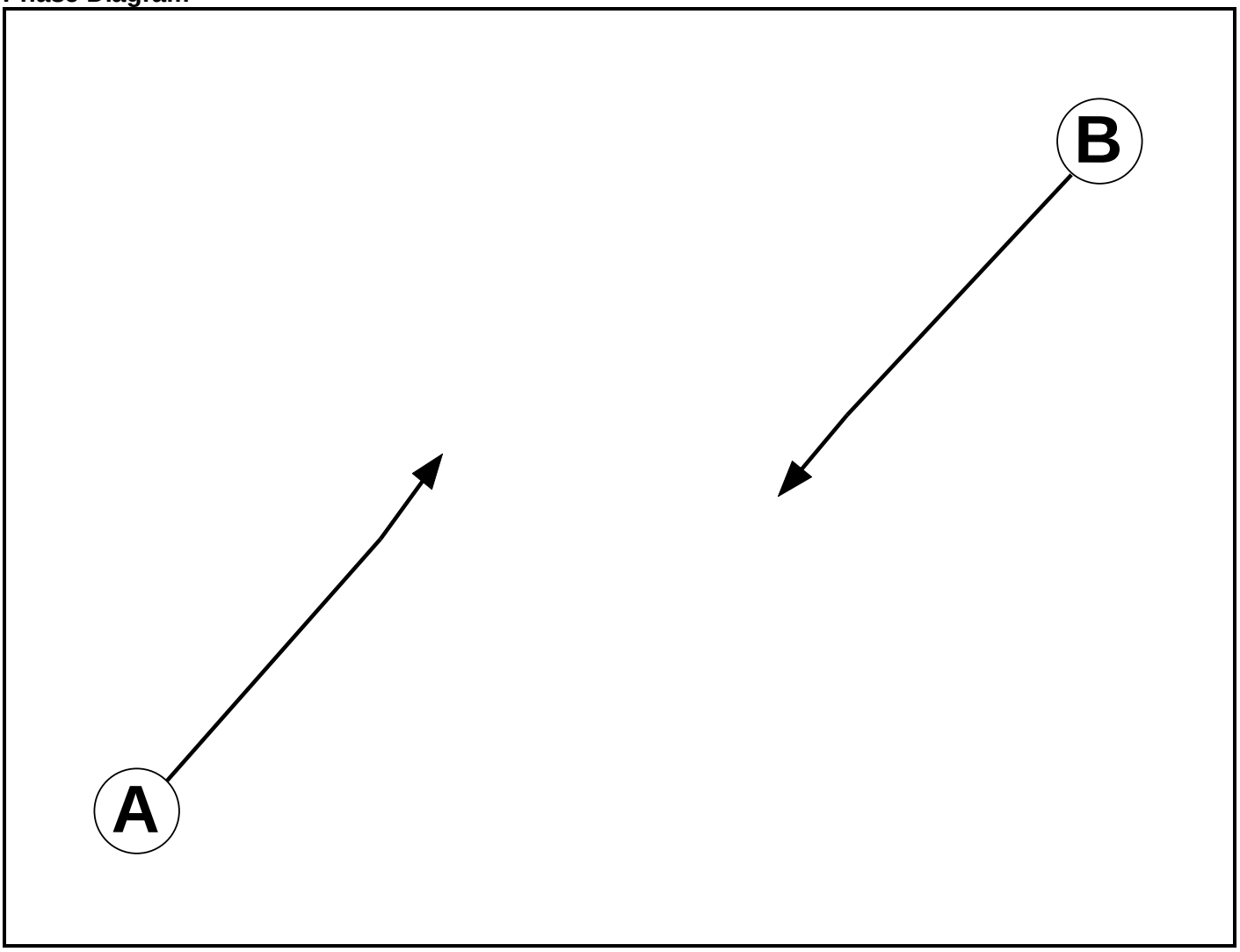
Project:	
Title:	**A3 London Road (south of Forest End Roundabout) shuttle working analysis**
Location:	
Additional detail:	
File name:	A3 London Road (south of Forest End Roundabout).lsg3x
Author:	
Company:	
Address:	

Full Input Data And Results

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

Phase Intergreens Matrix

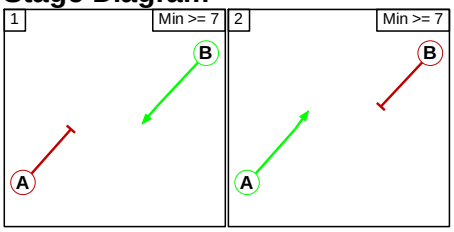
		Starting Phase	
		A	B
Terminating Phase	A		17
	B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		17
	2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A3 London Road (south of Forest End Roundabout)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A3 London Road (south of Forest End Roundabout)												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A3 London Road northbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (A3 London Road southbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	596	596
	B	428	0	428
	Tot.	428	596	1024

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: A3 London Road (south of Forest End Roundabout)	
1/1	596
2/1	428
3/1	428
4/1	596

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (south of Forest End Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	521	521
	B	598	0	598
	Tot.	598	521	1119

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: A3 London Road (south of Forest End Roundabout)	
1/1	521
2/1	598
3/1	598
4/1	521

Lane Saturation Flows

Junction: A3 London Road (south of Forest End Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	592	592
	B	439	0	439
	Tot.	439	592	1031

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: A3 London Road (south of Forest End Roundabout)	
1/1	592
2/1	439
3/1	439
4/1	592

Lane Saturation Flows

Junction: A3 London Road (south of Forest End Roundabout)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
Origin		A	B	Tot.
	A	0	513	513
	B	602	0	602
	Tot.	602	513	1115

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: A3 London Road (south of Forest End Roundabout)	
1/1	513
2/1	602
3/1	602
4/1	513

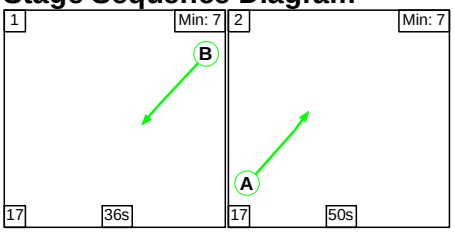
Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (south of Forest End Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

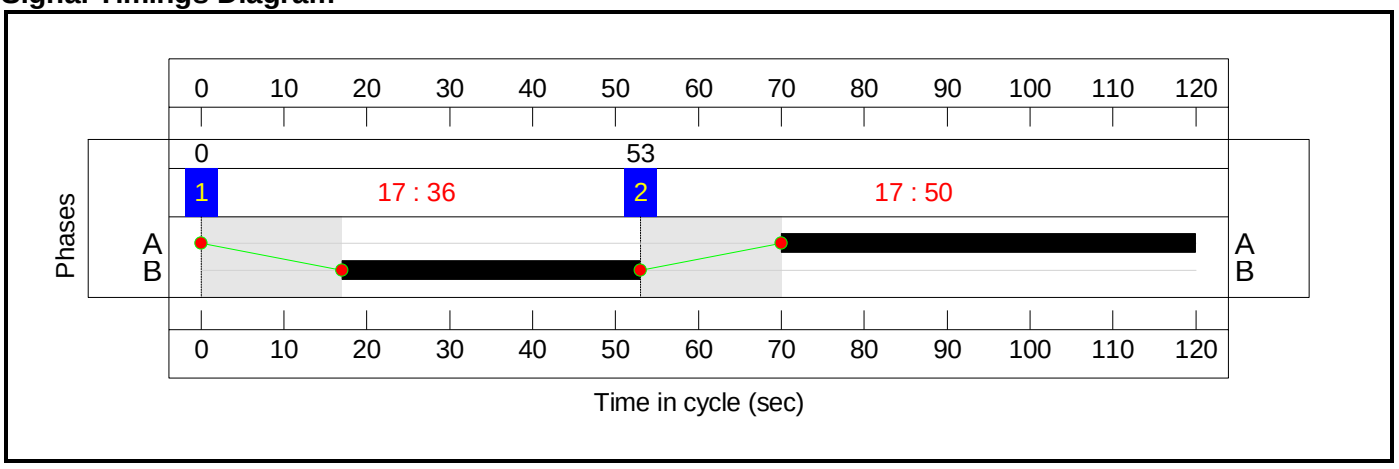
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	36	50
Change Point	0	53

Signal Timings Diagram



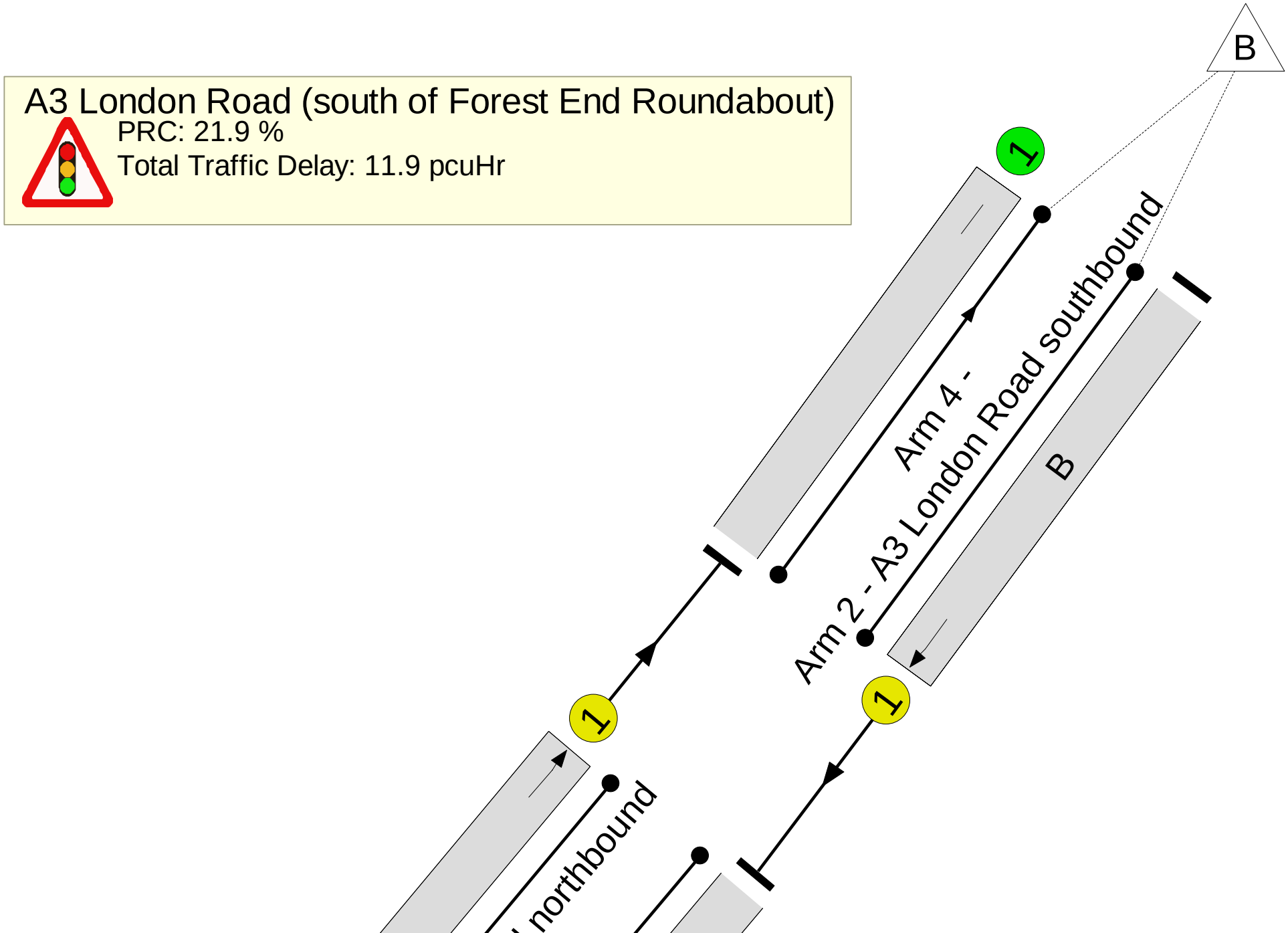
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Forest End Roundabout)

PRC: 21.9 %

Total Traffic Delay: 11.9 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.8%**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**73.8%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	50	-	596	1900	808	73.8%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	36	-	428	1900	586	73.1%
3/1		U	N/A	N/A	-		-	-	-	428	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%

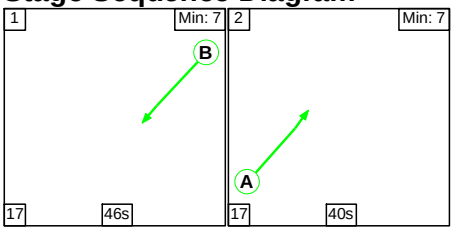
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.2**	**2.7**	**0.0**	**11.9**	**-**	**-**	**-**	**-**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**0**	**0**	**0**	**9.2**	**2.7**	**0.0**	**11.9**	**-**	**-**	**-**	**-**
1/1	596	596	-	-	-	4.8	1.4	-	6.2	37.3	16.6	1.4	17.9
2/1	428	428	-	-	-	4.4	1.3	-	5.7	48.3	12.7	1.3	14.1
3/1	428	428	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 21.9 Total Delay for Signalled Lanes (pcuHr): 11.91 Cycle Time (s): 120
PRC Over All Lanes (%): 21.9 Total Delay Over All Lanes(pcuHr): 11.91

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

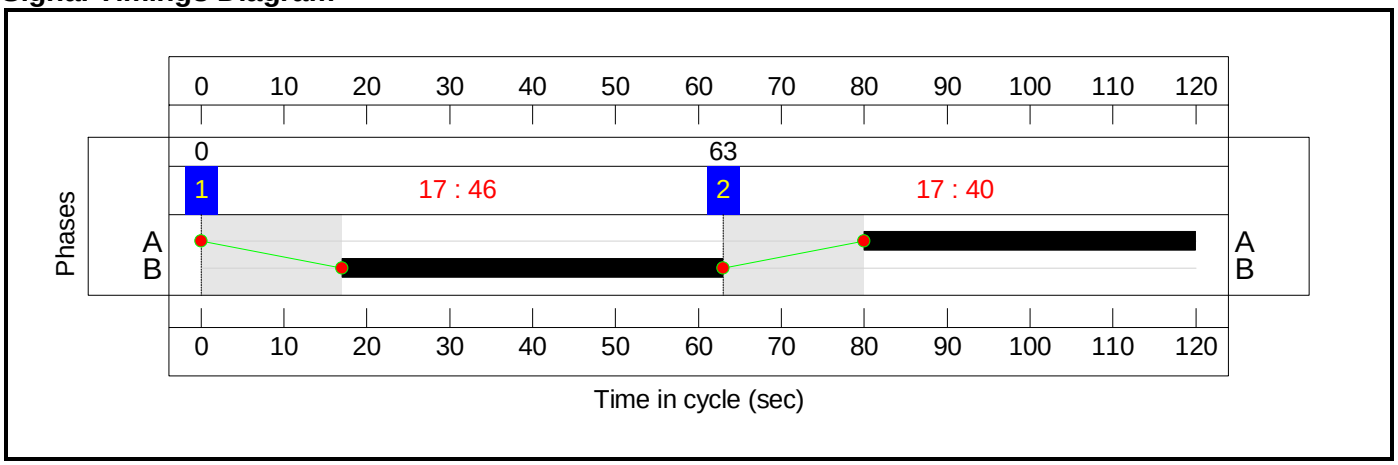
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	46	40
Change Point	0	63

Signal Timings Diagram



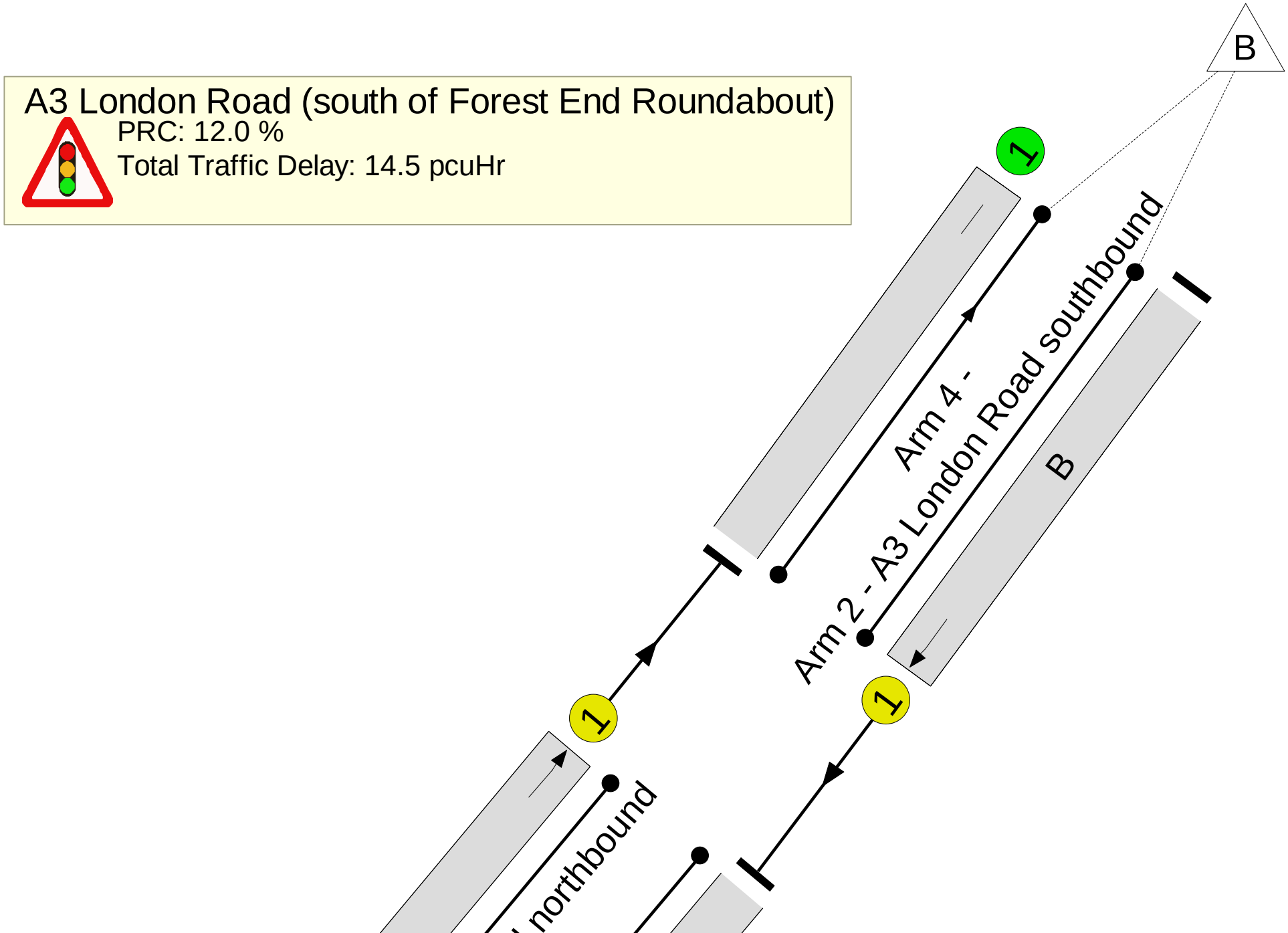
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Forest End Roundabout)

PRC: 12.0 %

Total Traffic Delay: 14.5 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.4%**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.4%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	40	-	521	1900	649	80.3%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	46	-	598	1900	744	80.4%
3/1		U	N/A	N/A	-		-	-	-	598	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%

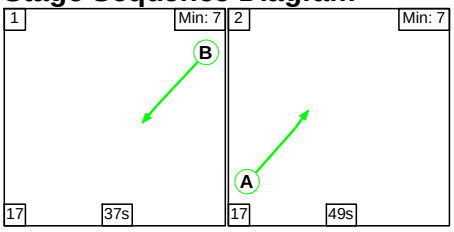
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.6**	**4.0**	**0.0**	**14.5**	**-**	**-**	**-**	**-**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.6**	**4.0**	**0.0**	**14.5**	**-**	**-**	**-**	**-**
1/1	521	521	-	-	-	5.2	2.0	-	7.2	49.5	15.6	2.0	17.6
2/1	598	598	-	-	-	5.4	2.0	-	7.4	44.4	17.6	2.0	19.6
3/1	598	598	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 12.0 Total Delay for Signalled Lanes (pcuHr): 14.53 Cycle Time (s): 120
PRC Over All Lanes (%): 12.0 Total Delay Over All Lanes(pcuHr): 14.53

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

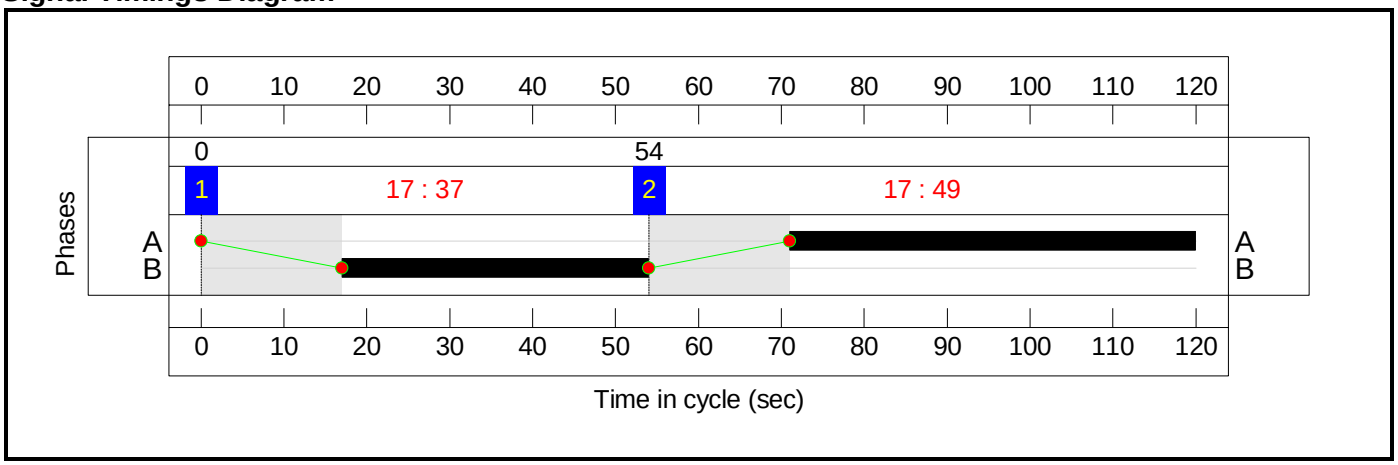
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	37	49
Change Point	0	54

Signal Timings Diagram



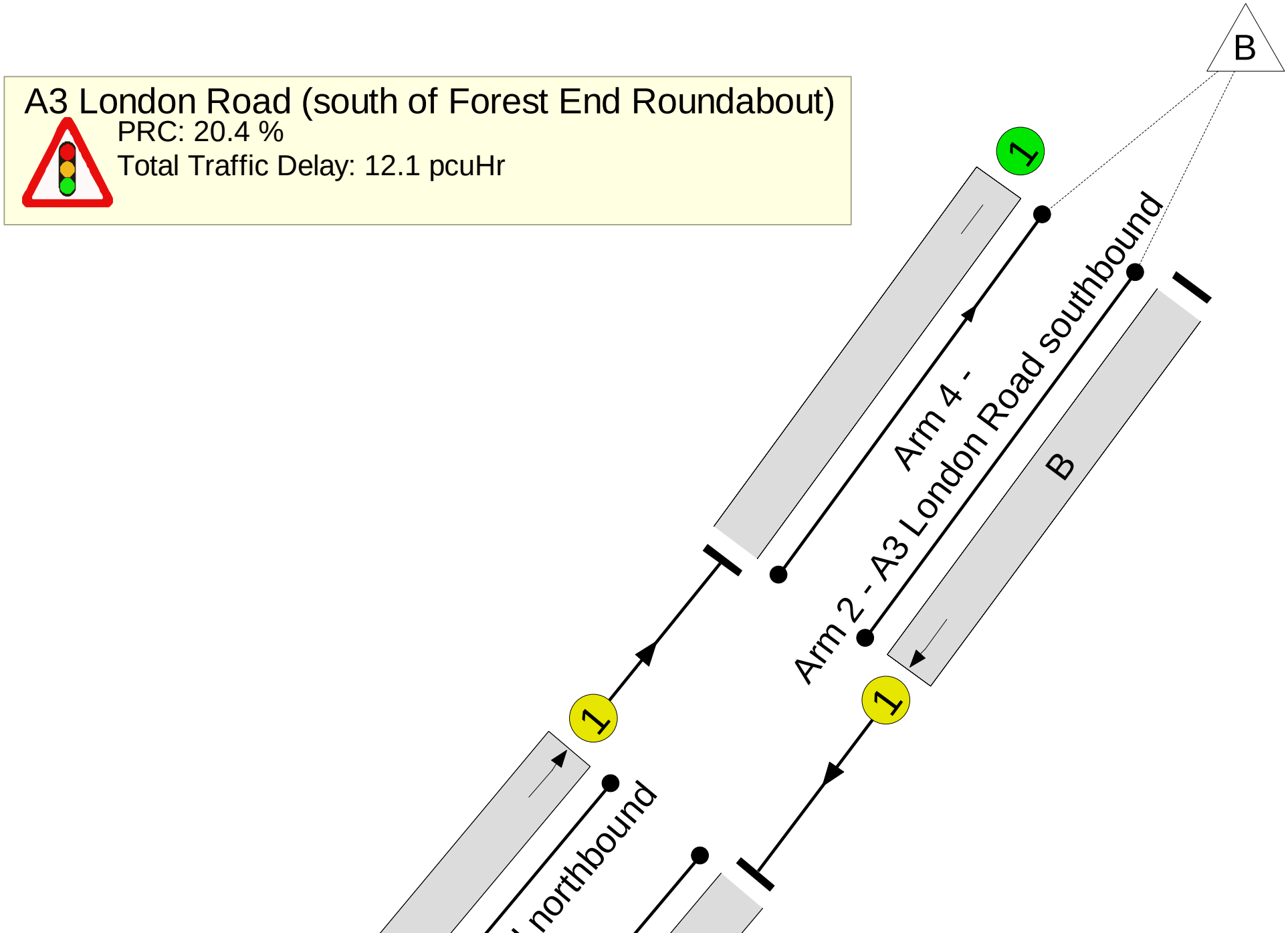
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Forest End Roundabout)

PRC: 20.4 %

Total Traffic Delay: 12.1 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.8%**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**74.8%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	49	-	592	1900	792	74.8%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	37	-	439	1900	602	73.0%
3/1		U	N/A	N/A	-		-	-	-	439	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	592	Inf	Inf	0.0%

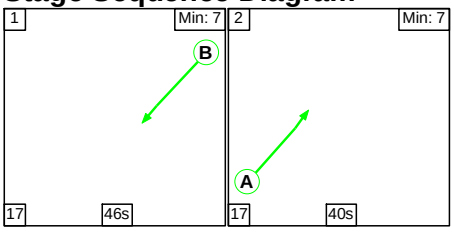
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.3**	**2.8**	**0.0**	**12.1**	**-**	**-**	**-**	**-**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**0**	**0**	**0**	**9.3**	**2.8**	**0.0**	**12.1**	**-**	**-**	**-**	**-**
1/1	592	592	-	-	-	4.9	1.5	-	6.3	38.5	16.6	1.5	18.1
2/1	439	439	-	-	-	4.4	1.3	-	5.8	47.3	12.9	1.3	14.3
3/1	439	439	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 20.4 Total Delay for Signalled Lanes (pcuHr): 12.11 Cycle Time (s): 120
PRC Over All Lanes (%): 20.4 Total Delay Over All Lanes(pcuHr): 12.11

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

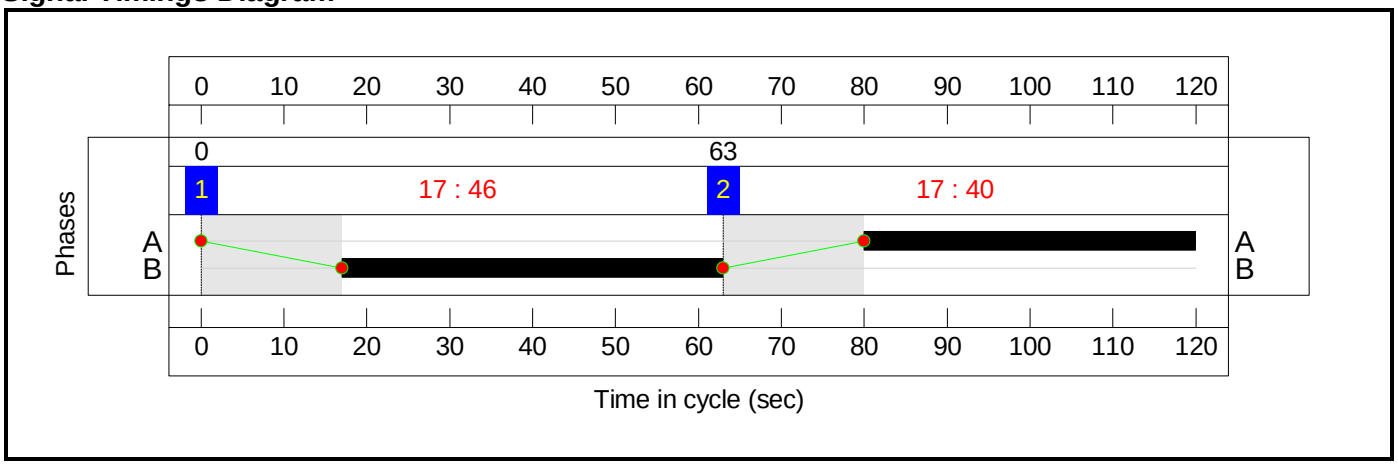
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	46	40
Change Point	0	63

Signal Timings Diagram



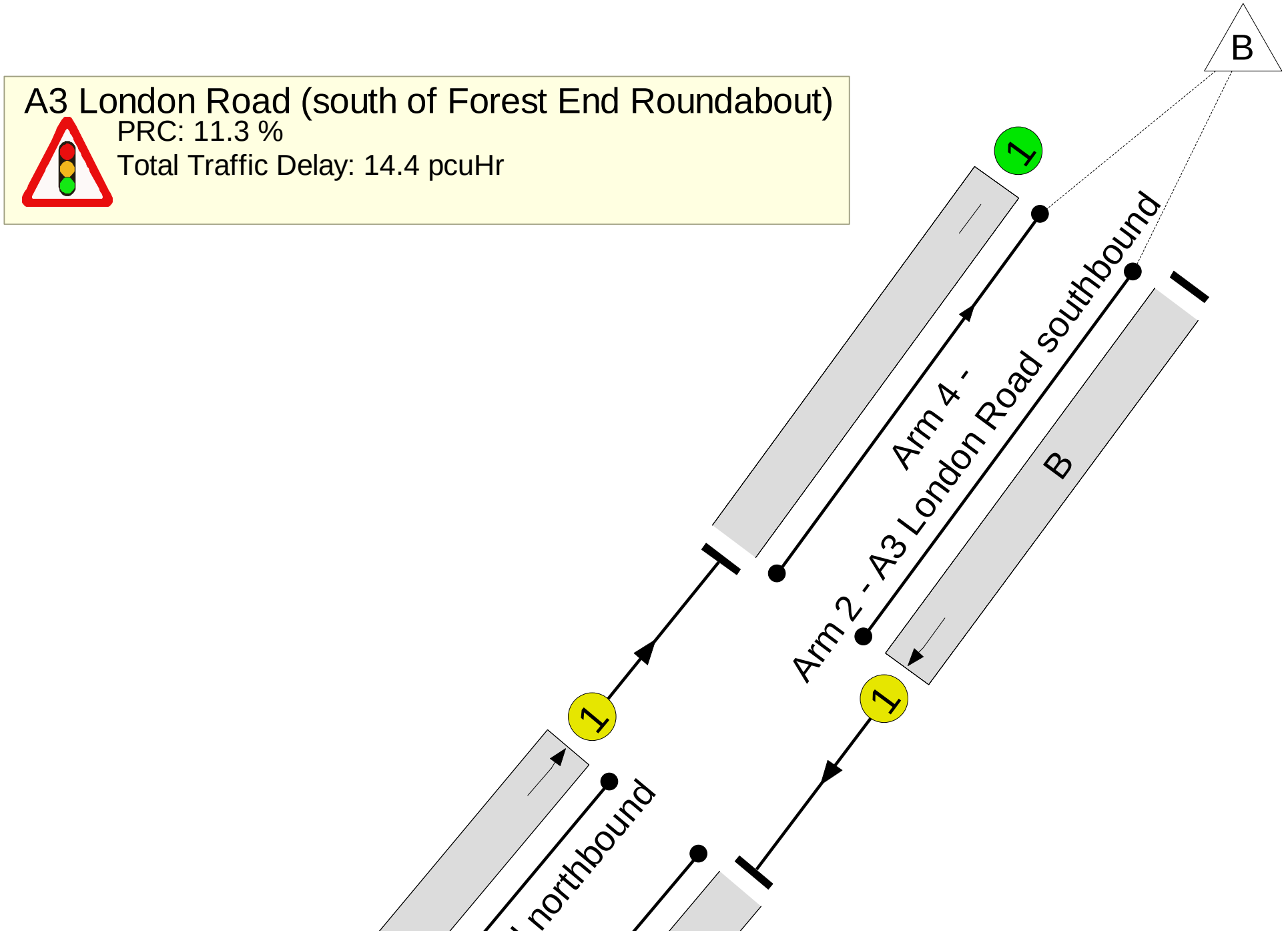
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Forest End Roundabout)

PRC: 11.3 %

Total Traffic Delay: 14.4 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.9%**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.9%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	40	-	513	1900	649	79.0%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	46	-	602	1900	744	80.9%
3/1		U	N/A	N/A	-		-	-	-	602	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.5**	**3.9**	**0.0**	**14.4**	**-**	**-**	**-**	**-**
A3 London Road (south of Forest End Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.5**	**3.9**	**0.0**	**14.4**	**-**	**-**	**-**	**-**
1/1	513	513	-	-	-	5.1	1.8	-	6.9	48.5	15.4	1.8	17.2
2/1	602	602	-	-	-	5.4	2.1	-	7.5	44.8	17.7	2.1	19.8
3/1	602	602	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.3 Total Delay for Signalled Lanes (pcuHr): 14.40 Cycle Time (s): 120
PRC Over All Lanes (%): 11.3 Total Delay Over All Lanes(pcuHr): 14.40

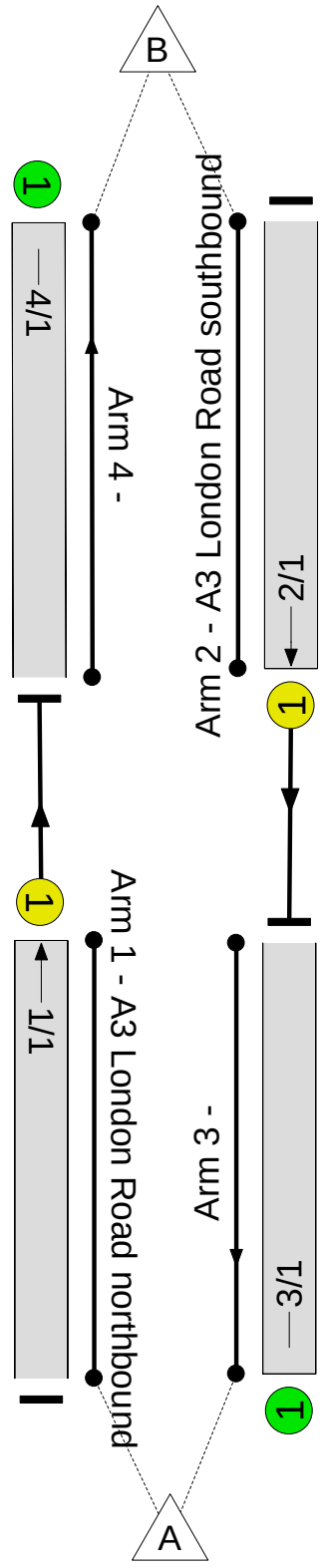
Full Input Data And Results

User and Project Details

Project:	
Title:	**A3 London Road (south of Ladybridge Roundabout) shuttle working analysis**
Location:	
Additional detail:	
File name:	A3 London Road (south of Ladybridge Roundabout).lsg3x
Author:	
Company:	
Address:	

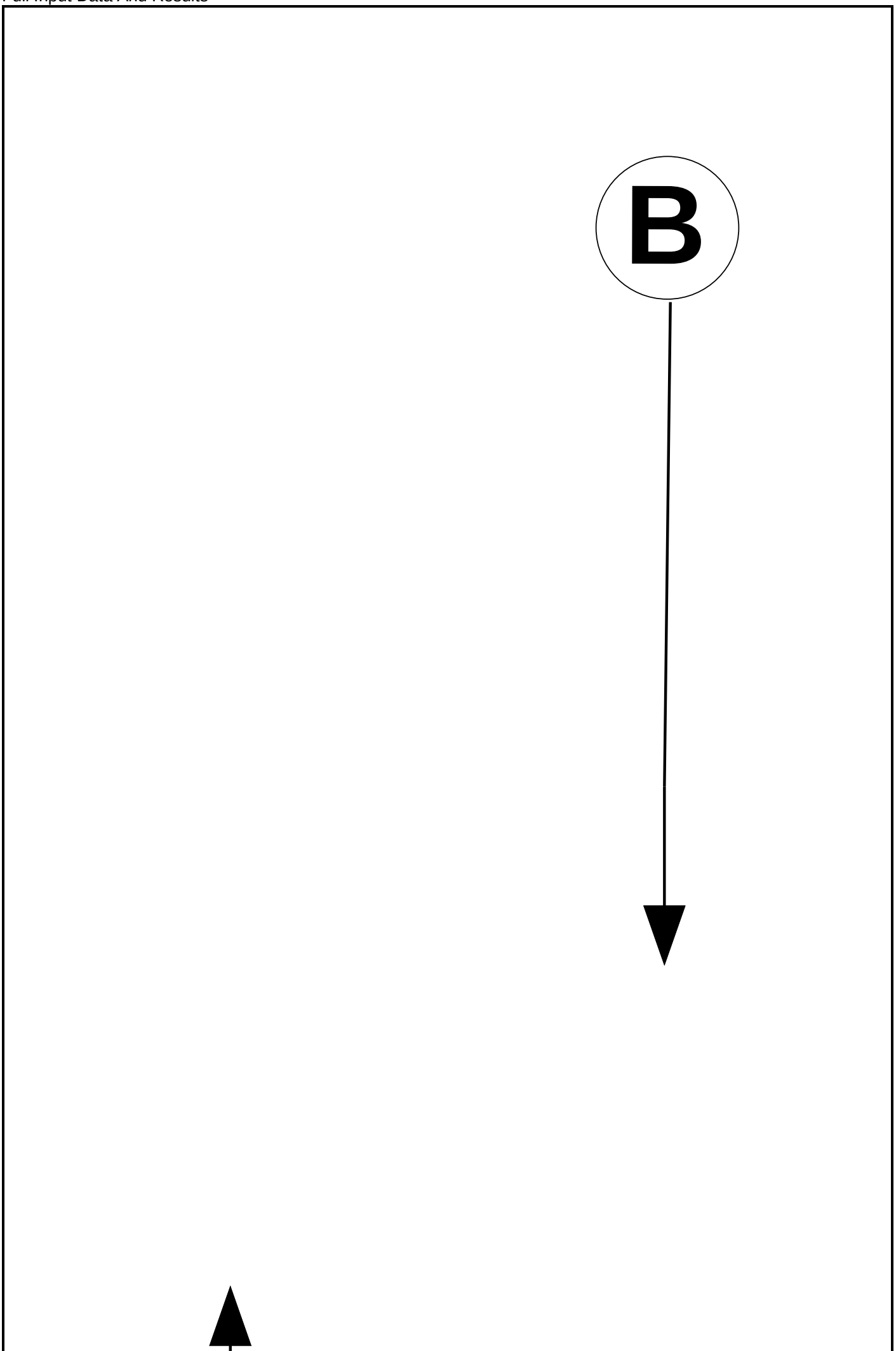
Network Layout Diagram

A3 London Road (south of Ladybridge Roundabout)



Full Input Data And Results

Phase Diagram


B

Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

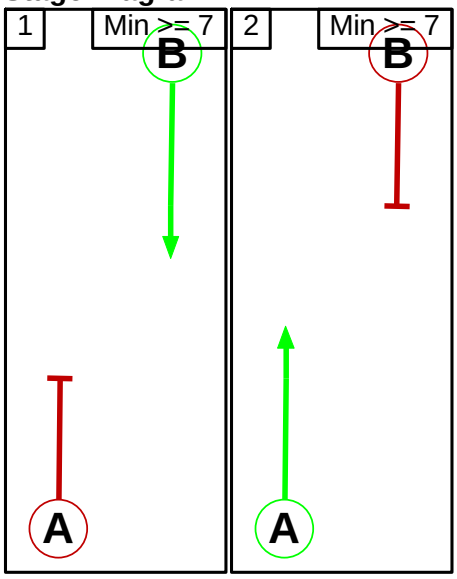
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B
A		17
B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		17
2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A3 London Road (south of Ladybridge Roundabout)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A3 London Road (south of Ladybridge Roundabout)												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (A3 London Road northbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (A3 London Road southbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	537	537
	B	564	0	564
	Tot.	564	537	1101

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: A3 London Road (south of Ladybridge Roundabout)	
1/1	537
2/1	564
3/1	564
4/1	537

Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (south of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	604	604
	B	549	0	549
	Tot.	549	604	1153

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: A3 London Road (south of Ladybridge Roundabout)	
1/1	604
2/1	549
3/1	549
4/1	604

Lane Saturation Flows

Junction: A3 London Road (south of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	533	533
	B	577	0	577
	Tot.	577	533	1110

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: A3 London Road (south of Ladybridge Roundabout)	
1/1	533
2/1	577
3/1	577
4/1	533

Lane Saturation Flows

Junction: A3 London Road (south of Ladybridge Roundabout)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	596	596
	B	558	0	558
	Tot.	558	596	1154

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: A3 London Road (south of Ladybridge Roundabout)	
1/1	596
2/1	558
3/1	558
4/1	596

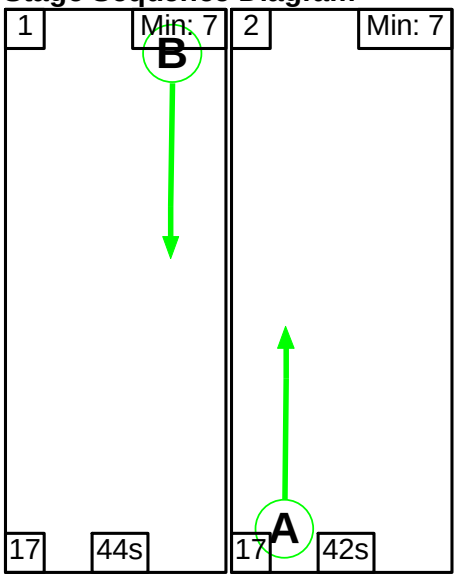
Full Input Data And Results

Lane Saturation Flows

Junction: A3 London Road (south of Ladybridge Roundabout)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A3 London Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (A3 London Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

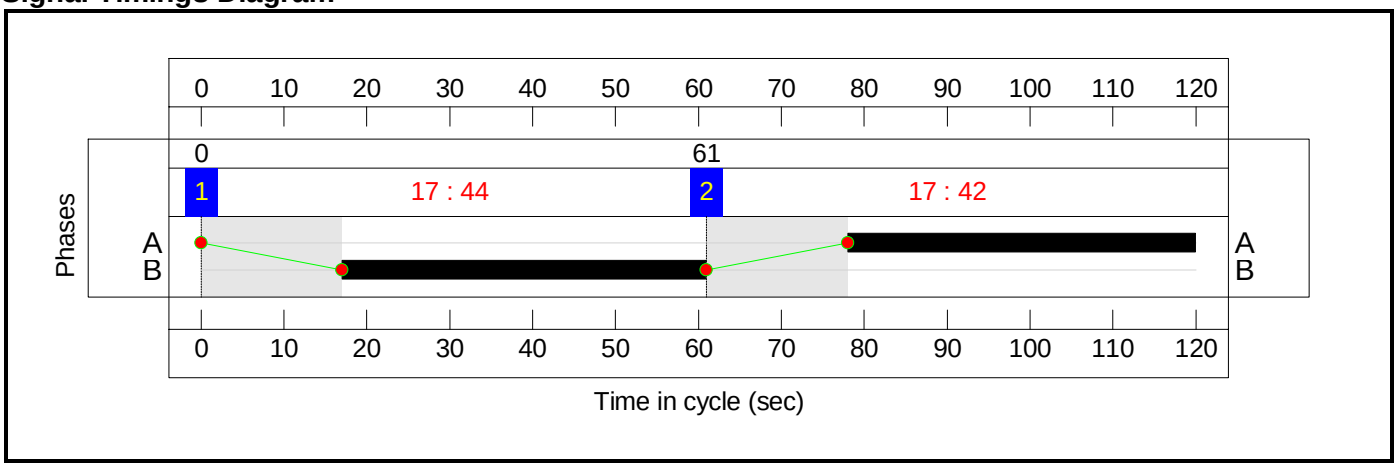
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	44	42
Change Point	0	61

Signal Timings Diagram



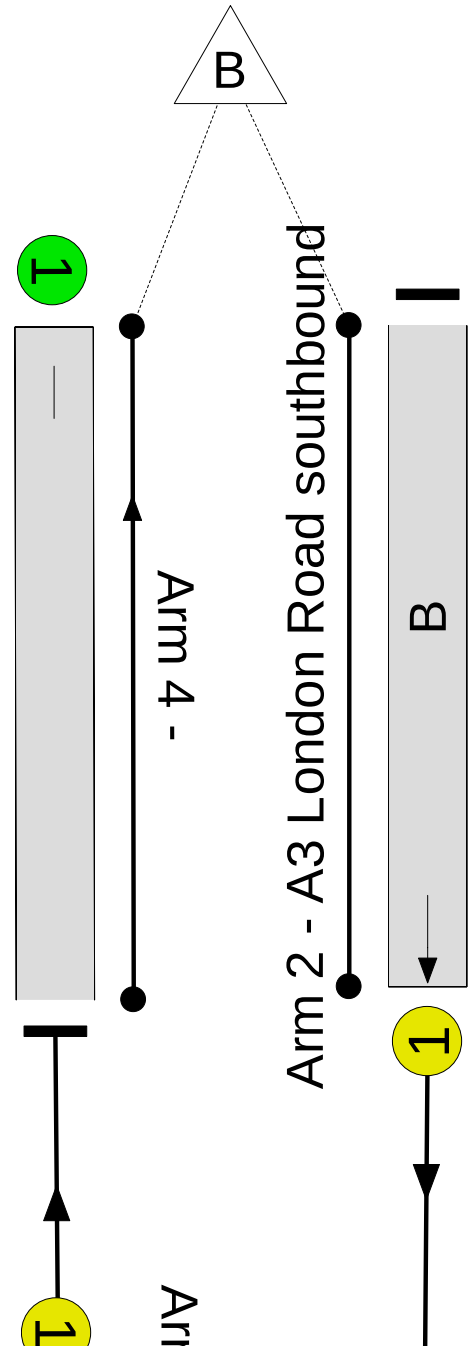
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Ladybridge Roundabout)

PRC: 13.7 %

Total Traffic Delay: 14.0 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.2%**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**79.2%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	42	-	537	1900	681	78.9%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	44	-	564	1900	713	79.2%
3/1		U	N/A	N/A	-		-	-	-	564	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	537	Inf	Inf	0.0%

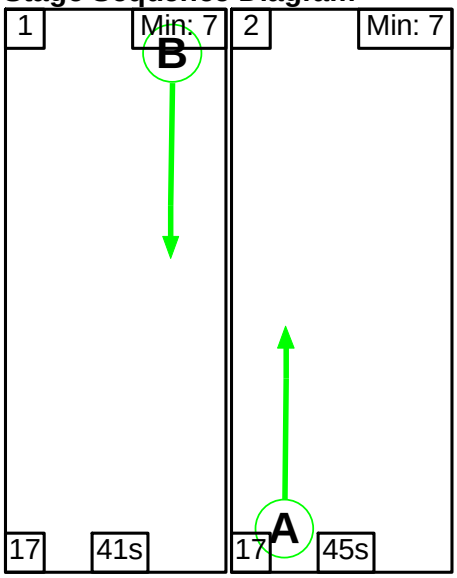
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.4**	**3.7**	**0.0**	**14.0**	**-**	**-**	**-**	**-**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.4**	**3.7**	**0.0**	**14.0**	**-**	**-**	**-**	**-**
1/1	537	537	-	-	-	5.1	1.8	-	7.0	46.6	16.0	1.8	17.8
2/1	564	564	-	-	-	5.2	1.9	-	7.1	45.2	16.6	1.9	18.5
3/1	564	564	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	537	537	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 13.7 Total Delay for Signalled Lanes (pcuHr): 14.03 Cycle Time (s): 120
PRC Over All Lanes (%): 13.7 Total Delay Over All Lanes(pcuHr): 14.03

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

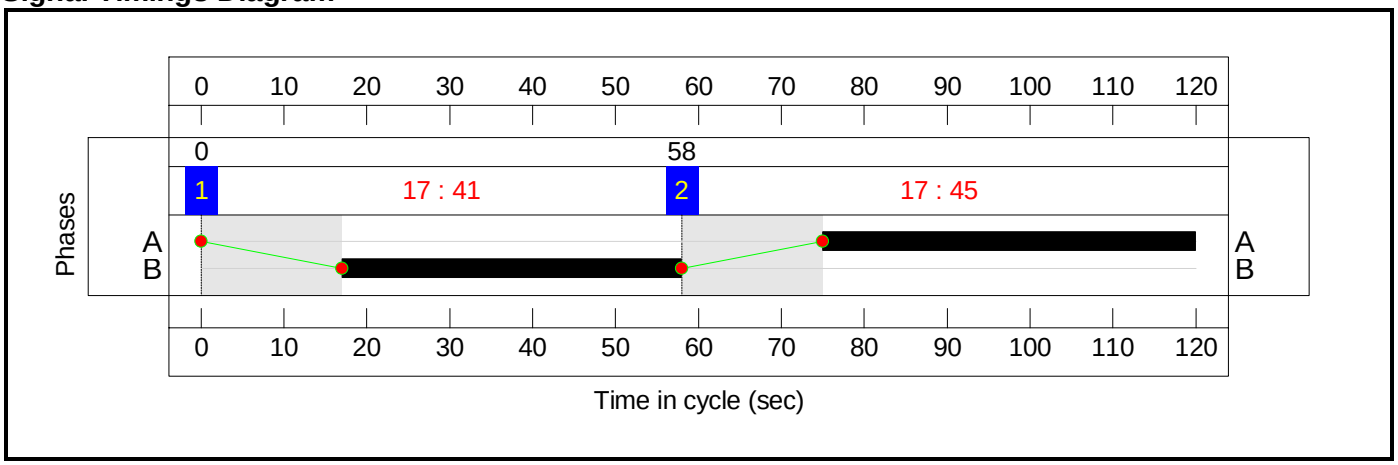
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	41	45
Change Point	0	58

Signal Timings Diagram



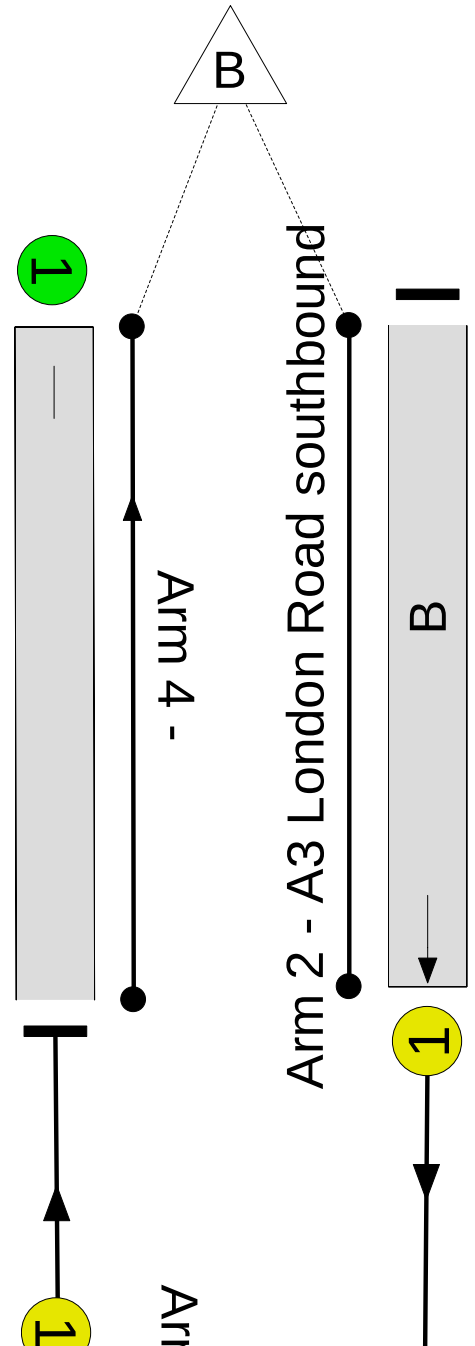
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Ladybridge Roundabout)

PRC: 8.5 %

Total Traffic Delay: 15.7 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.9%**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.9%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	45	-	604	1900	728	82.9%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	41	-	549	1900	665	82.6%
3/1		U	N/A	N/A	-		-	-	-	549	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%

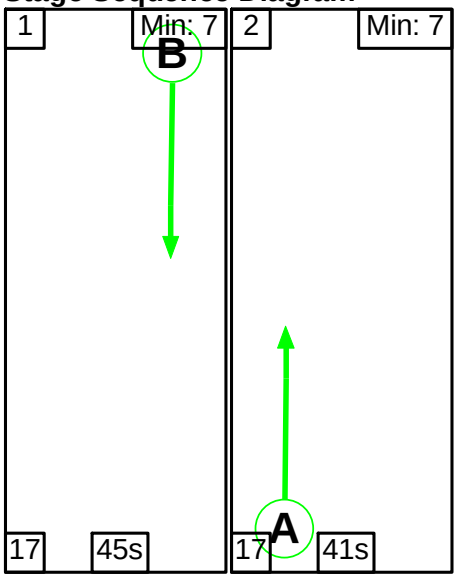
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.0**	**4.6**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**11.0**	**4.6**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
1/1	604	604	-	-	-	5.6	2.3	-	8.0	47.4	18.1	2.3	20.5
2/1	549	549	-	-	-	5.4	2.3	-	7.7	50.6	16.6	2.3	18.9
3/1	549	549	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 8.5 Total Delay for Signalled Lanes (pcuHr): 15.67 Cycle Time (s): 120
PRC Over All Lanes (%): 8.5 Total Delay Over All Lanes(pcuHr): 15.67

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

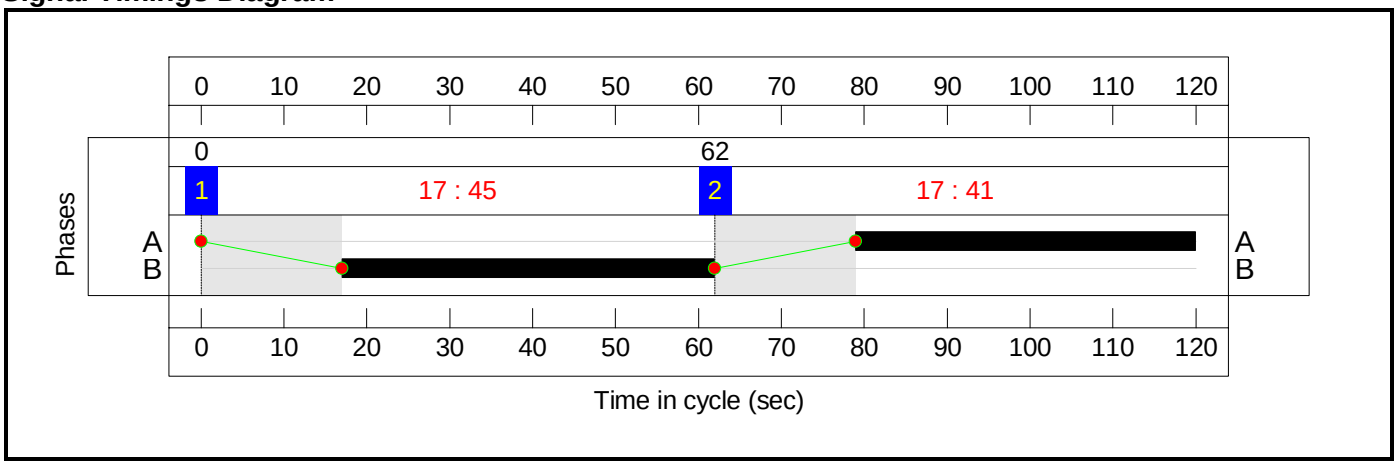
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	45	41
Change Point	0	62

Signal Timings Diagram



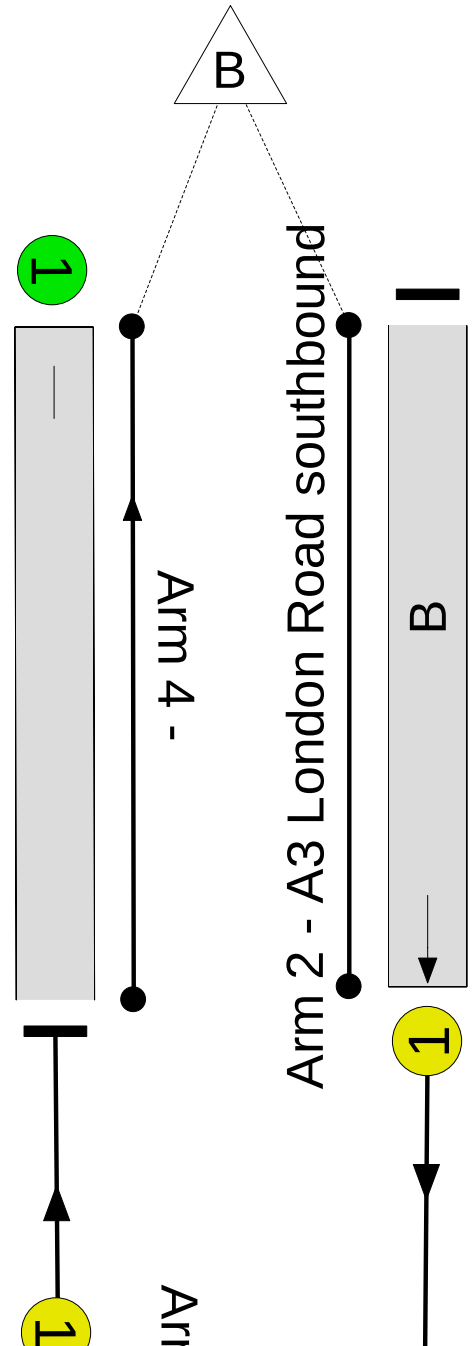
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Ladybridge Roundabout)

PRC: 12.3 %

Total Traffic Delay: 14.3 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.2%**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**80.2%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	41	-	533	1900	665	80.2%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	45	-	577	1900	728	79.2%
3/1		U	N/A	N/A	-		-	-	-	577	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	533	Inf	Inf	0.0%

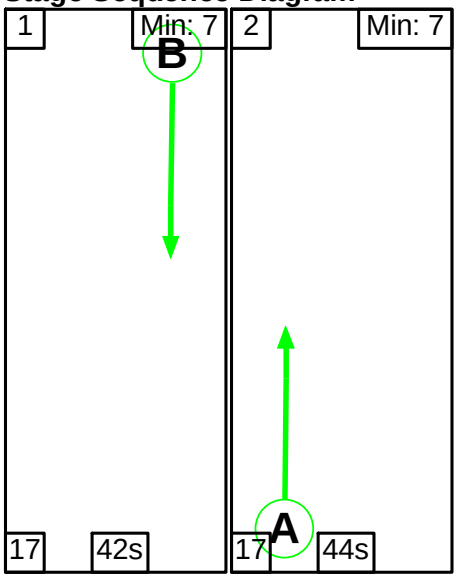
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.5**	**3.8**	**0.0**	**14.3**	**-**	**-**	**-**	**-**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**10.5**	**3.8**	**0.0**	**14.3**	**-**	**-**	**-**	**-**
1/1	533	533	-	-	-	5.2	2.0	-	7.2	48.5	16.0	2.0	18.0
2/1	577	577	-	-	-	5.3	1.9	-	7.1	44.4	17.0	1.9	18.9
3/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	533	533	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 12.3 Total Delay for Signalled Lanes (pcuHr): 14.29 Cycle Time (s): 120
PRC Over All Lanes (%): 12.3 Total Delay Over All Lanes(pcuHr): 14.29

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

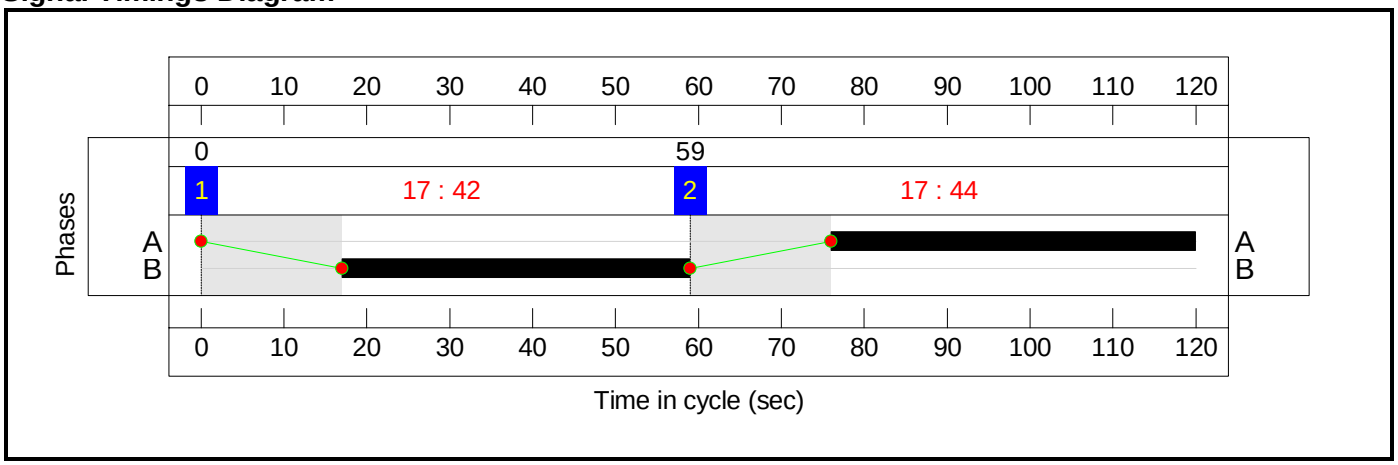
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	42	44
Change Point	0	59

Signal Timings Diagram



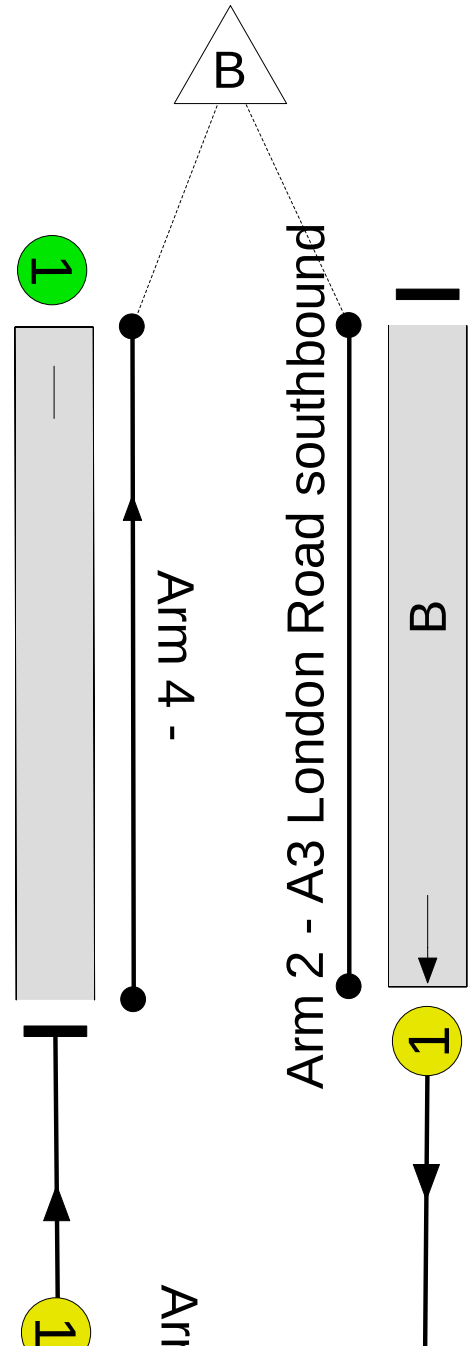
Full Input Data And Results

Network Layout Diagram

A3 London Road (south of Ladybridge Roundabout)

PRC: 7.6 %

Total Traffic Delay: 15.7 pcuHr



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.6%**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**83.6%**
1/1	A3 London Road northbound Ahead	U	N/A	N/A	A		1	44	-	596	1900	713	83.6%
2/1	A3 London Road southbound Ahead	U	N/A	N/A	B		1	42	-	558	1900	681	82.0%
3/1		U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.1**	**4.6**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
A3 London Road (south of Ladybridge Roundabout)	**-**	**-**	**0**	**0**	**0**	**11.1**	**4.6**	**0.0**	**15.7**	**-**	**-**	**-**	**-**
1/1	596	596	-	-	-	5.7	2.5	-	8.1	49.0	18.0	2.5	20.5
2/1	558	558	-	-	-	5.4	2.2	-	7.6	49.1	16.9	2.2	19.1
3/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

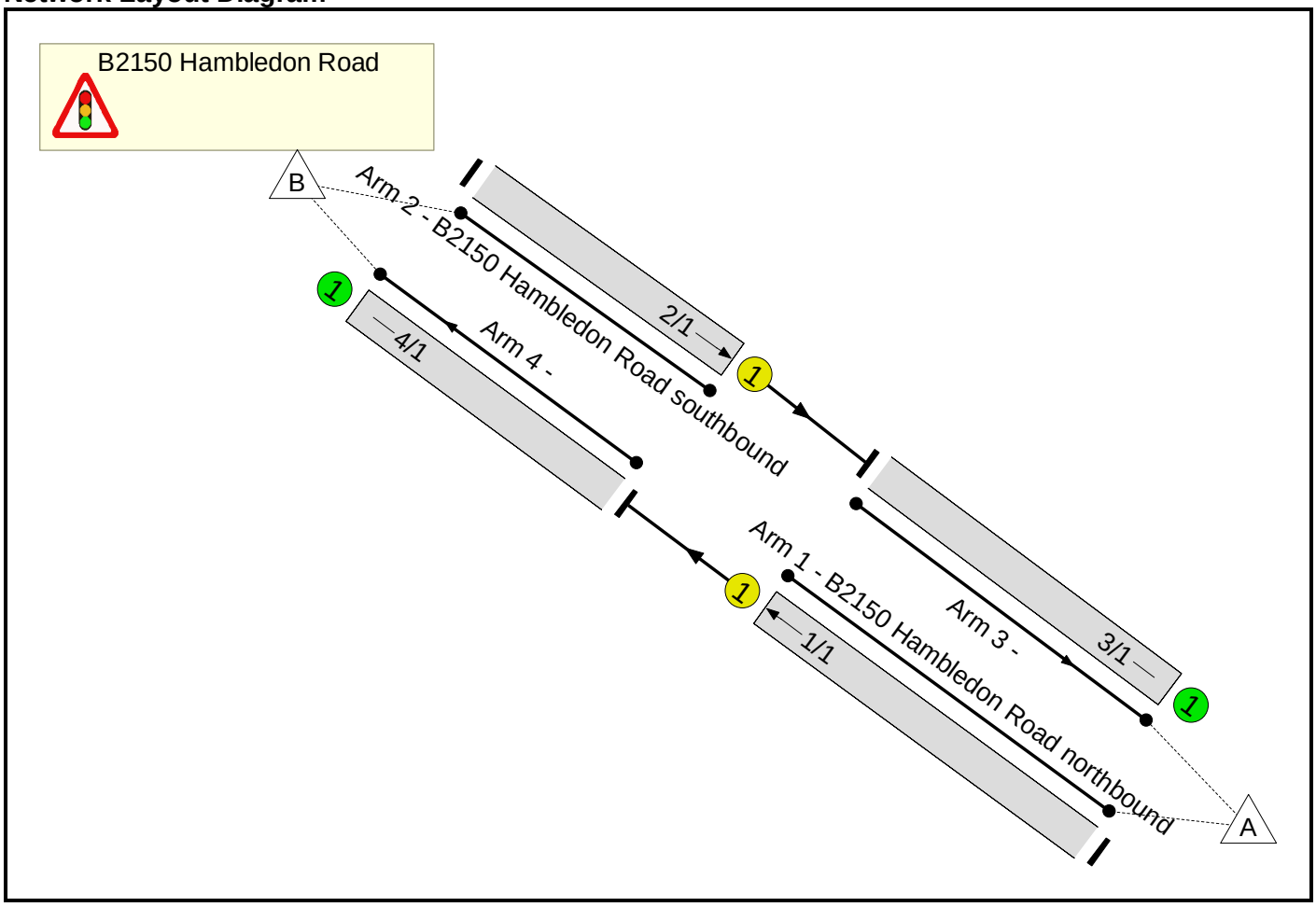
C1 PRC for Signalled Lanes (%): 7.6 Total Delay for Signalled Lanes (pcuHr): 15.72 Cycle Time (s): 120
PRC Over All Lanes (%): 7.6 Total Delay Over All Lanes(pcuHr): 15.72

Full Input Data And Results

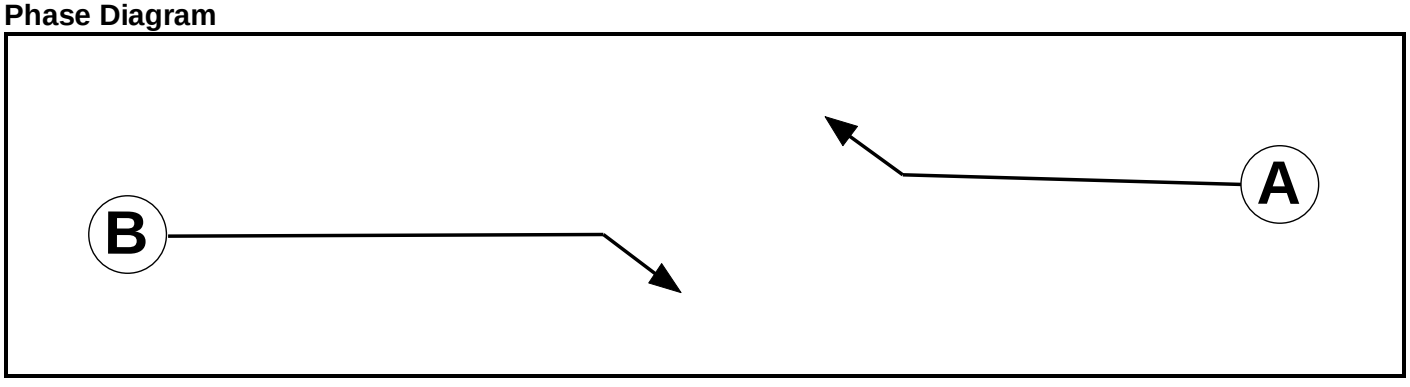
User and Project Details

Project:	
Title:	**B2150 Hambledon Road shuttle working analysis**
Location:	
Additional detail:	
File name:	B2150 Hambledon Road.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

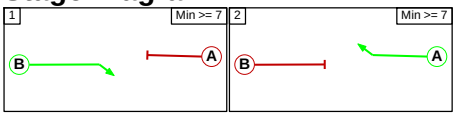
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B
A		17
B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		17
2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: B2150 Hambledon Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: B2150 Hambledon Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (B2150 Hambledon Road northbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (B2150 Hambledon Road southbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	719	719
	B	533	0	533
	Tot.	533	719	1252

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: B2150 Hambledon Road	
1/1	719
2/1	533
3/1	533
4/1	719

Full Input Data And Results

Lane Saturation Flows

Junction: B2150 Hambledon Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B2150 Hambledon Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B2150 Hambledon Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	660	660
	B	671	0	671
	Tot.	671	660	1331

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: B2150 Hambledon Road	
1/1	660
2/1	671
3/1	671
4/1	660

Lane Saturation Flows

Junction: B2150 Hambledon Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (B2150 Hambledon Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B2150 Hambledon Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	719	719
	B	534	0	534
	Tot.	534	719	1253

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: B2150 Hambledon Road	
1/1	719
2/1	534
3/1	534
4/1	719

Lane Saturation Flows

Junction: B2150 Hambledon Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2150 Hambledon Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B2150 Hambledon Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	659	659
	B	674	0	674
	Tot.	674	659	1333

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: B2150 Hambledon Road	
1/1	659
2/1	674
3/1	674
4/1	659

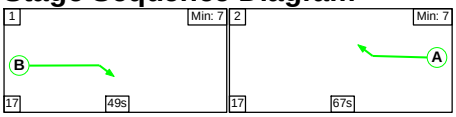
Lane Saturation Flows

Junction: B2150 Hambledon Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2150 Hambledon Road northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (B2150 Hambledon Road southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

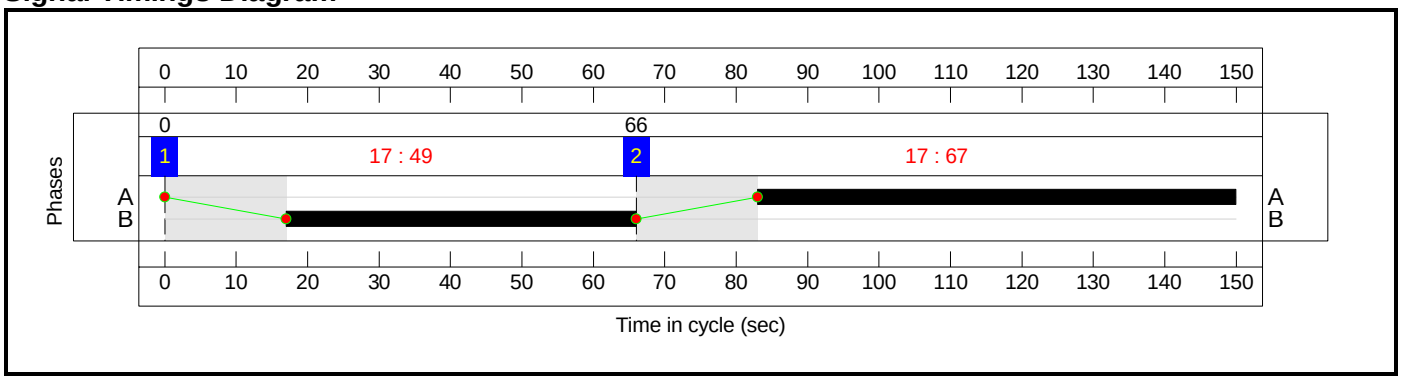
Stage Sequence Diagram



Stage Timings

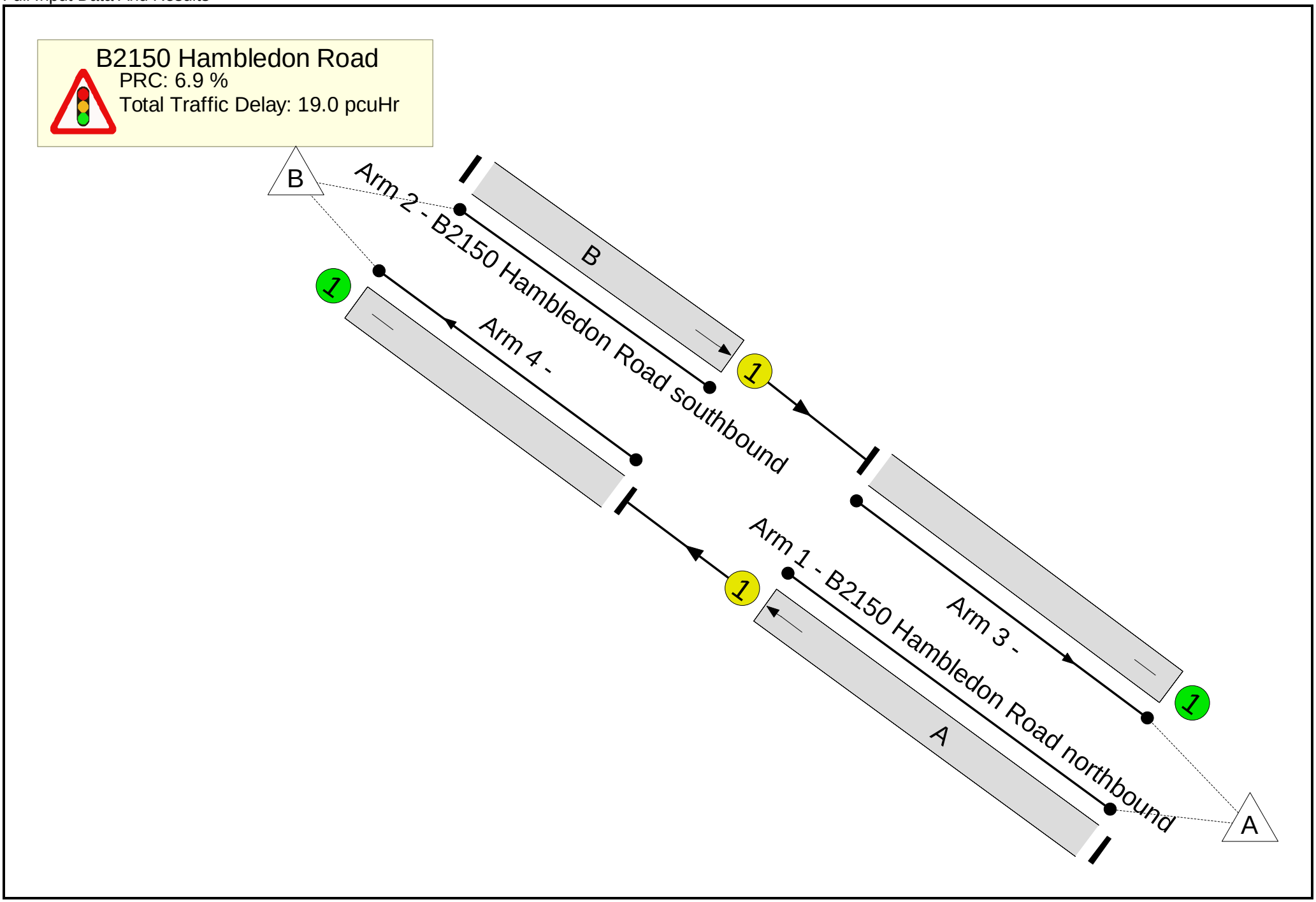
Stage	1	2
Duration	49	67
Change Point	0	66

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


B2150 Hambledon Road
PRC: 6.9 %
Total Traffic Delay: 19.0 pcuHr
B
Arm 2 - B2150 Hambledon Road southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - B2150 Hambledon Road northbound
A
A

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.2%**
B2150 Hambledon Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.2%**
1/1	B2150 Hambledon Road northbound Ahead	U	N/A	N/A	A		1	67	-	719	1900	861	83.5%
2/1	B2150 Hambledon Road southbound Ahead	U	N/A	N/A	B		1	49	-	533	1900	633	84.2%
3/1		U	N/A	N/A	-		-	-	-	533	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	719	Inf	Inf	0.0%

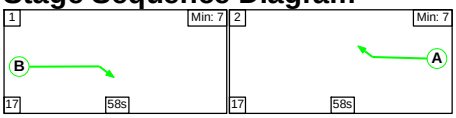
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.1**	**5.0**	**0.0**	**19.0**	**-**	**-**	**-**	**-**
B2150 Hambledon Road	**-**	**-**	**0**	**0**	**0**	**14.1**	**5.0**	**0.0**	**19.0**	**-**	**-**	**-**	**-**
1/1	719	719	-	-	-	7.2	2.4	-	9.6	48.3	26.2	2.4	28.6
2/1	533	533	-	-	-	6.9	2.5	-	9.4	63.4	20.4	2.5	23.0
3/1	533	533	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	719	719	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.9 Total Delay for Signalled Lanes (pcuHr): 19.03 Cycle Time (s): 150
PRC Over All Lanes (%): 6.9 Total Delay Over All Lanes(pcuHr): 19.03

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

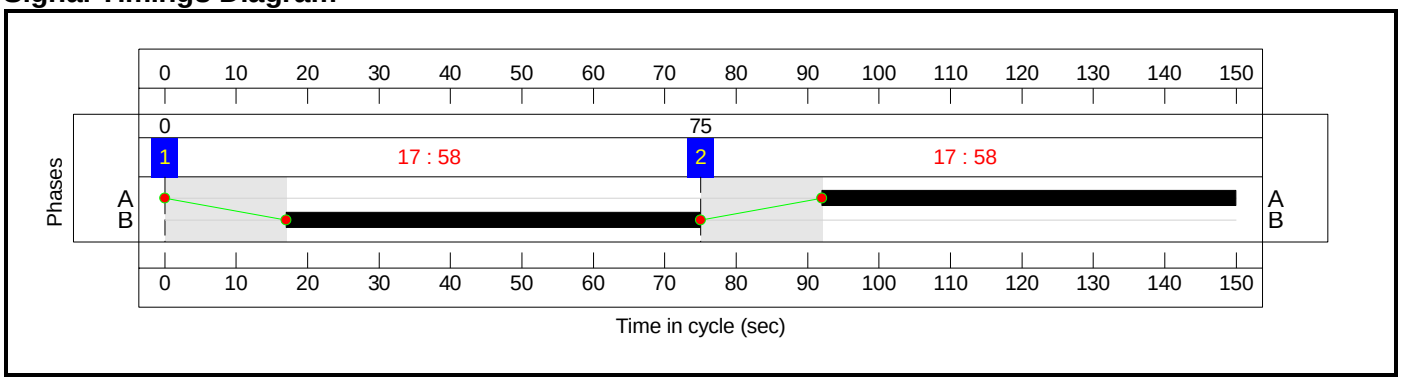
Stage Sequence Diagram



Stage Timings

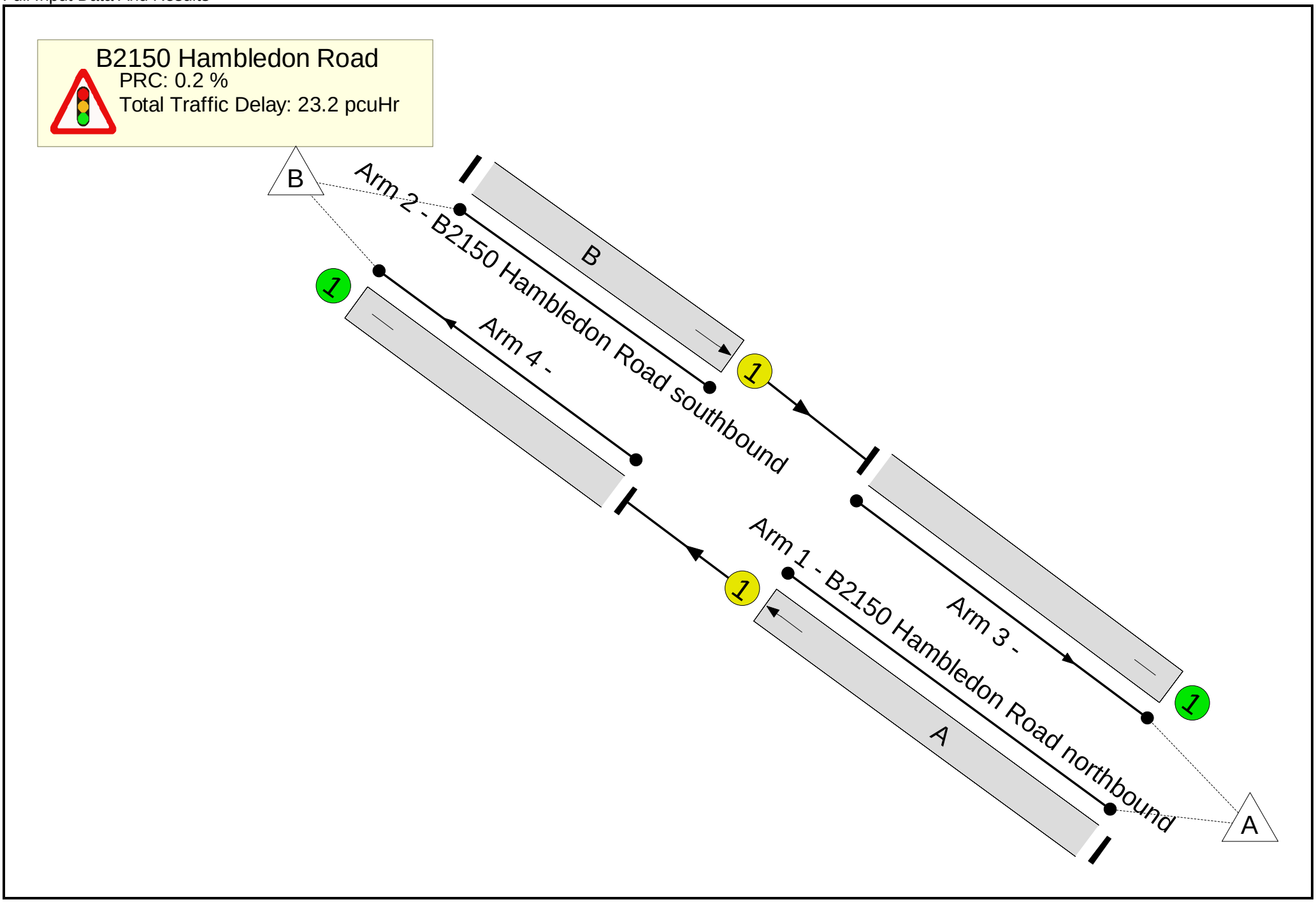
Stage	1	2
Duration	58	58
Change Point	0	75

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


B2150 Hambledon Road
PRC: 0.2 %
Total Traffic Delay: 23.2 pcuHr
B
Arm 2 - B2150 Hambledon Road southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - B2150 Hambledon Road northbound
A
A

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.8%**
B2150 Hambledon Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.8%**
1/1	B2150 Hambledon Road northbound Ahead	U	N/A	N/A	A		1	58	-	660	1900	747	88.3%
2/1	B2150 Hambledon Road southbound Ahead	U	N/A	N/A	B		1	58	-	671	1900	747	89.8%
3/1		U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	660	Inf	Inf	0.0%

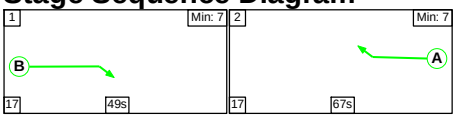
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.7**	**7.5**	**0.0**	**23.2**	**-**	**-**	**-**	**-**
B2150 Hambledon Road	**-**	**-**	**0**	**0**	**0**	**15.7**	**7.5**	**0.0**	**23.2**	**-**	**-**	**-**	**-**
1/1	660	660	-	-	-	7.8	3.5	-	11.3	61.4	25.5	3.5	29.0
2/1	671	671	-	-	-	8.0	4.0	-	11.9	64.0	26.1	4.0	30.1
3/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	660	660	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 0.2 Total Delay for Signalled Lanes (pcuHr): 23.19 Cycle Time (s): 150
PRC Over All Lanes (%): 0.2 Total Delay Over All Lanes(pcuHr): 23.19

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

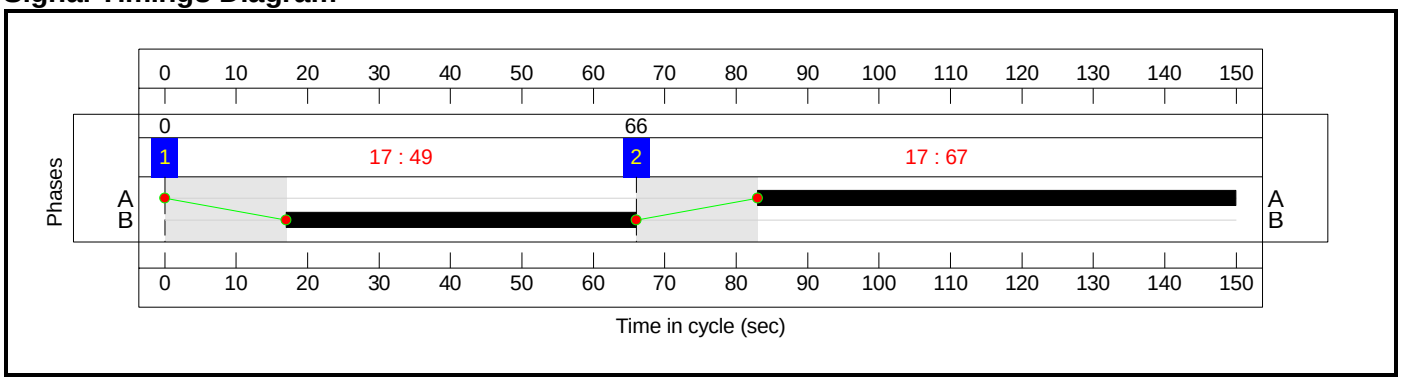
Stage Sequence Diagram



Stage Timings

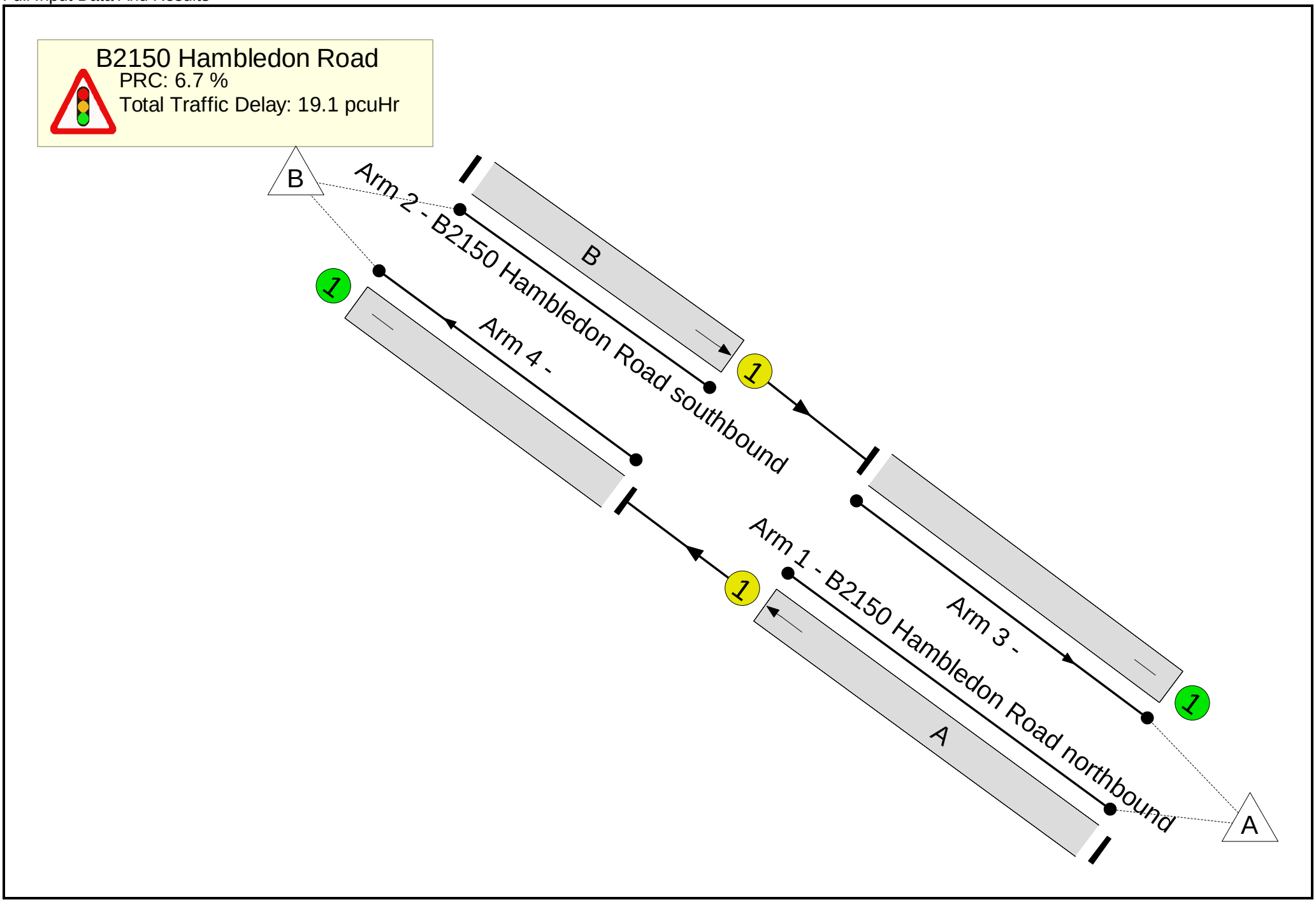
Stage	1	2
Duration	49	67
Change Point	0	66

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


B2150 Hambledon Road
PRC: 6.7 %
Total Traffic Delay: 19.1 pcuHr
B
Arm 2 - B2150 Hambledon Road southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - B2150 Hambledon Road northbound
A
A

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
B2150 Hambledon Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**84.3%**
1/1	B2150 Hambledon Road northbound Ahead	U	N/A	N/A	A		1	67	-	719	1900	861	83.5%
2/1	B2150 Hambledon Road southbound Ahead	U	N/A	N/A	B		1	49	-	534	1900	633	84.3%
3/1		U	N/A	N/A	-		-	-	-	534	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	719	Inf	Inf	0.0%

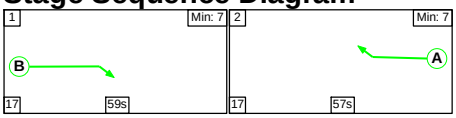
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**14.1**	**5.0**	**0.0**	**19.1**	**-**	**-**	**-**	**-**
B2150 Hambledon Road	**-**	**-**	**0**	**0**	**0**	**14.1**	**5.0**	**0.0**	**19.1**	**-**	**-**	**-**	**-**
1/1	719	719	-	-	-	7.2	2.4	-	9.6	48.3	26.2	2.4	28.6
2/1	534	534	-	-	-	6.9	2.6	-	9.4	63.6	20.6	2.6	23.2
3/1	534	534	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	719	719	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 6.7 Total Delay for Signalled Lanes (pcuHr): 19.08 Cycle Time (s): 150
PRC Over All Lanes (%): 6.7 Total Delay Over All Lanes(pcuHr): 19.08

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

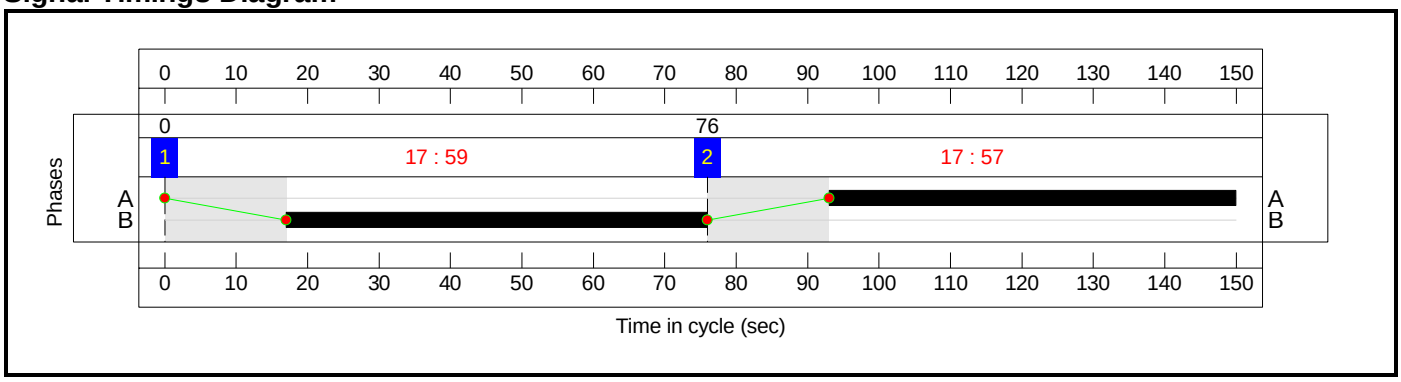
Stage Sequence Diagram



Stage Timings

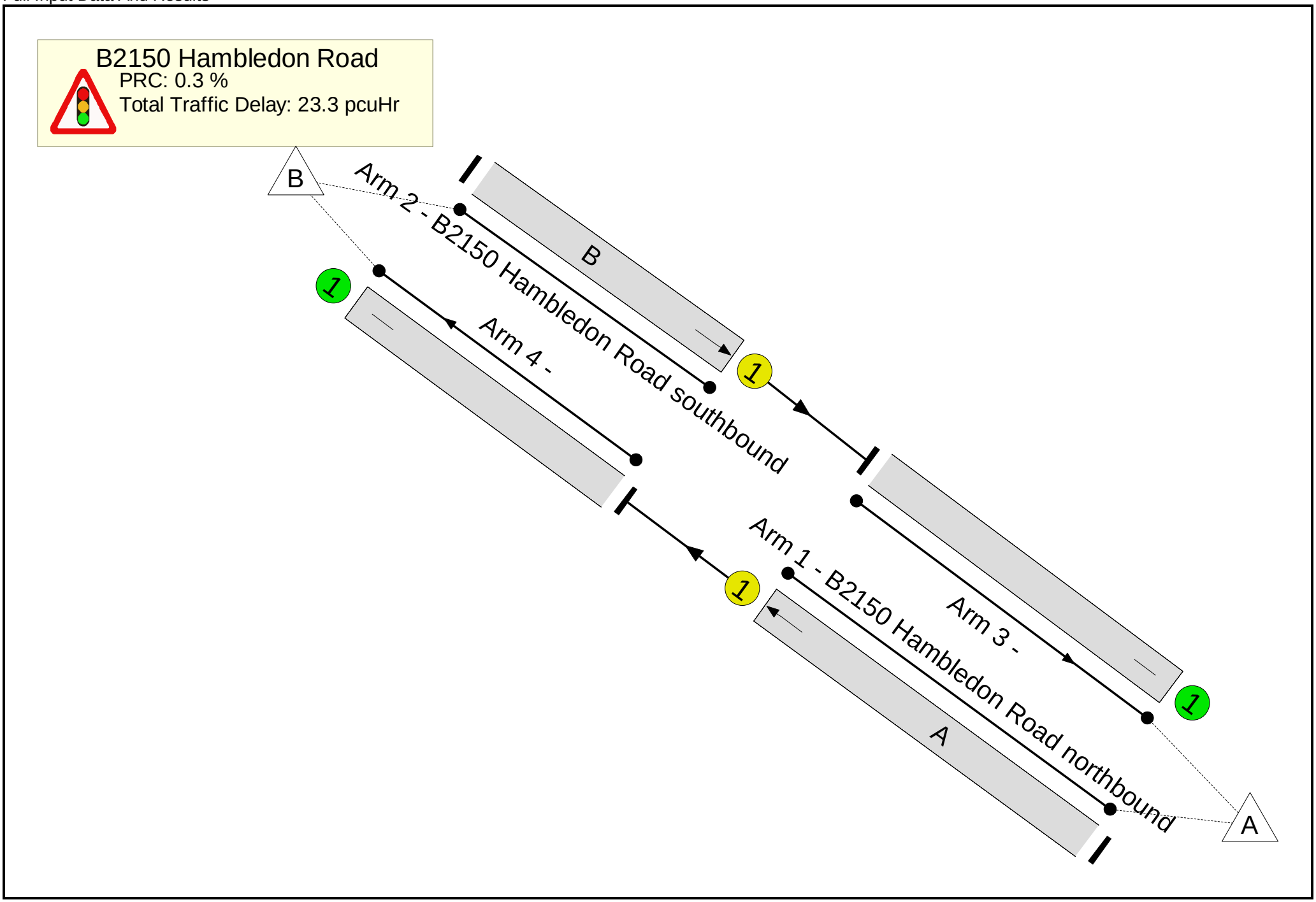
Stage	1	2
Duration	59	57
Change Point	0	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


B2150 Hambledon Road
PRC: 0.3 %
Total Traffic Delay: 23.3 pcuHr
B
Arm 2 - B2150 Hambledon Road southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - B2150 Hambledon Road northbound
A
A

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.7%**
B2150 Hambledon Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.7%**
1/1	B2150 Hambledon Road northbound Ahead	U	N/A	N/A	A		1	57	-	659	1900	735	89.7%
2/1	B2150 Hambledon Road southbound Ahead	U	N/A	N/A	B		1	59	-	674	1900	760	88.7%
3/1		U	N/A	N/A	-		-	-	-	674	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**15.7**	**7.6**	**0.0**	**23.3**	**-**	**-**	**-**	**-**
B2150 Hambledon Road	**-**	**-**	**0**	**0**	**0**	**15.7**	**7.6**	**0.0**	**23.3**	**-**	**-**	**-**	**-**
1/1	659	659	-	-	-	7.9	3.9	-	11.9	64.7	25.6	3.9	29.6
2/1	674	674	-	-	-	7.8	3.6	-	11.4	61.2	26.0	3.6	29.6
3/1	674	674	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	659	659	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

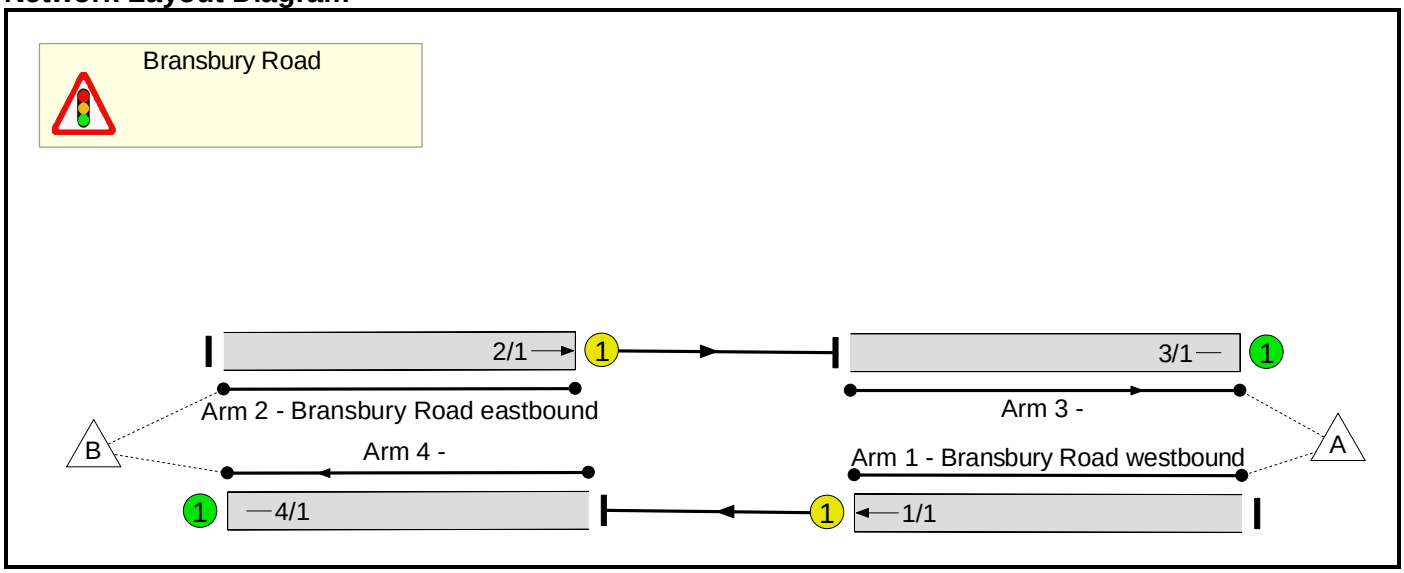
C1 PRC for Signalled Lanes (%): 0.3 Total Delay for Signalled Lanes (pcuHr): 23.30 Cycle Time (s): 150
PRC Over All Lanes (%): 0.3 Total Delay Over All Lanes(pcuHr): 23.30

Full Input Data And Results

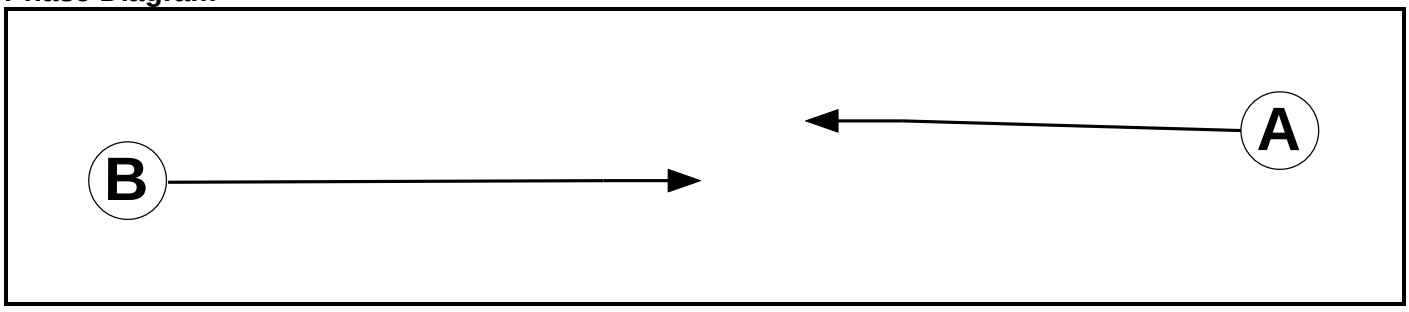
User and Project Details

Project:	
Title:	**Bransbury Road shuttle working analysis**
Location:	
Additional detail:	
File name:	Bransbury Road.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

Full Input Data And Results

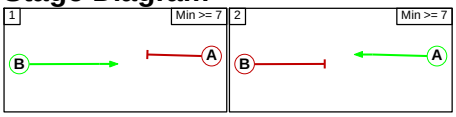
Phase Intergreens Matrix

	Starting Phase		
		A	B
Terminating Phase	A		17
	B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		17
	2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Bransbury Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Bransbury Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Bransbury Road westbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Bransbury Road eastbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	266	266
	B	137	0	137
	Tot.	137	266	403

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: Bransbury Road	
1/1	266
2/1	137
3/1	137
4/1	266

Full Input Data And Results

Lane Saturation Flows

Junction: Bransbury Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bransbury Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Bransbury Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	109	109
	B	234	0	234
	Tot.	234	109	343

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: Bransbury Road	
1/1	109
2/1	234
3/1	234
4/1	109

Lane Saturation Flows

Junction: Bransbury Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bransbury Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Bransbury Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	262	262
	B	137	0	137
	Tot.	137	262	399

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: Bransbury Road	
1/1	262
2/1	137
3/1	137
4/1	262

Lane Saturation Flows

Junction: Bransbury Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Bransbury Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Bransbury Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	107	107
	B	238	0	238
	Tot.	238	107	345

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: Bransbury Road	
1/1	107
2/1	238
3/1	238
4/1	107

Full Input Data And Results

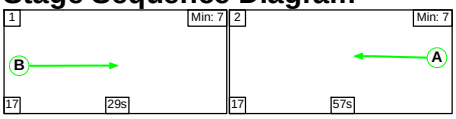
Lane Saturation Flows

Junction: Bransbury Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Bransbury Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Bransbury Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

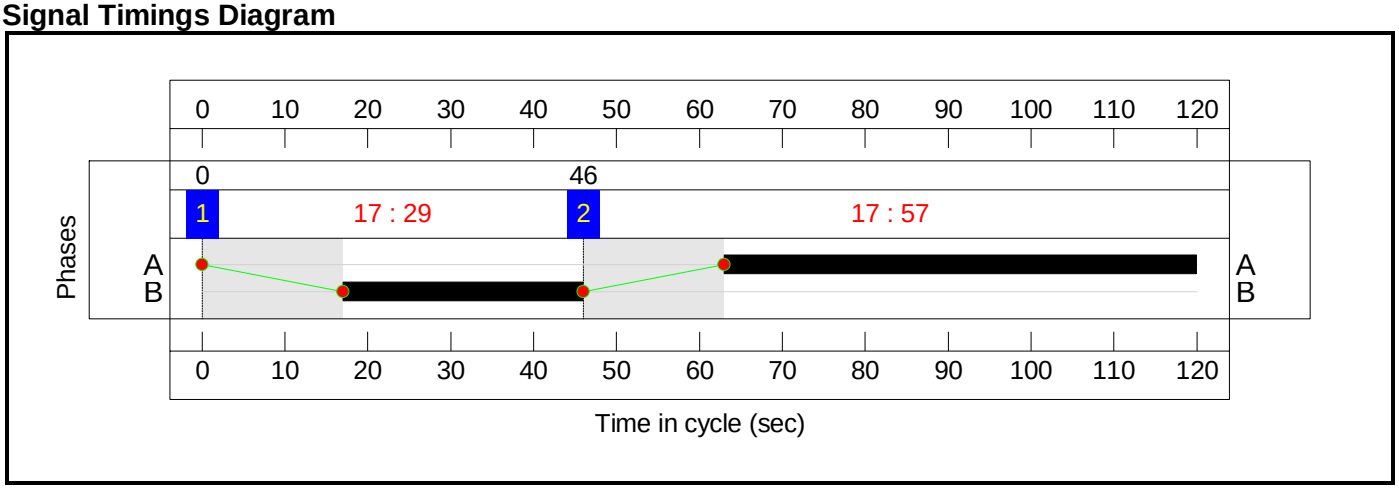
Stage Sequence Diagram



Stage Timings

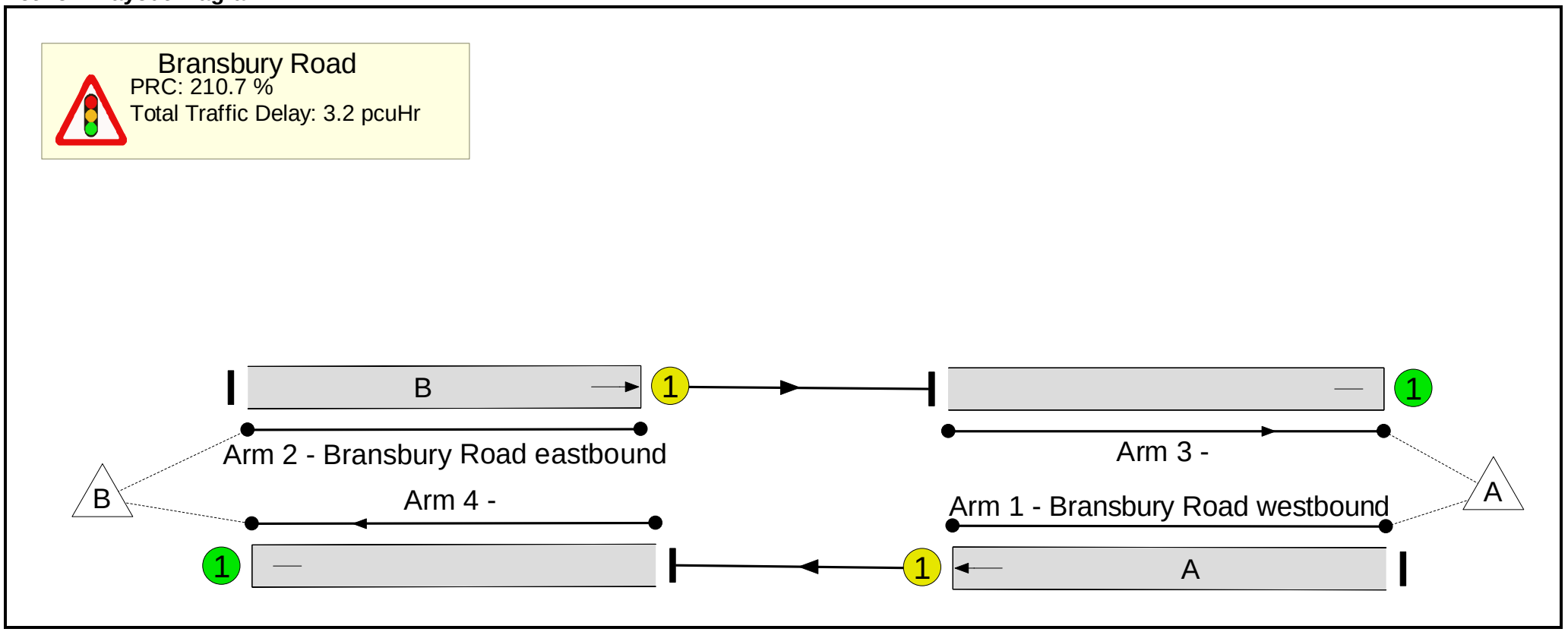
Stage	1	2
Duration	29	57
Change Point	0	46

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**29.0%**
Bransbury Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**29.0%**
1/1	Bransbury Road westbound Ahead	U	N/A	N/A	A		1	57	-	266	1900	918	29.0%
2/1	Bransbury Road eastbound Ahead	U	N/A	N/A	B		1	29	-	137	1900	475	28.8%
3/1		U	N/A	N/A	-		-	-	-	137	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	266	Inf	Inf	0.0%

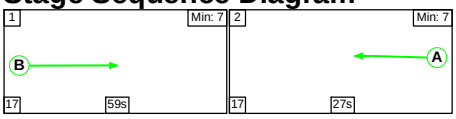
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.8**	**0.4**	**0.0**	**3.2**	**-**	**-**	**-**	**-**
Bransbury Road	**-**	**-**	**0**	**0**	**0**	**2.8**	**0.4**	**0.0**	**3.2**	**-**	**-**	**-**	**-**
1/1	266	266	-	-	-	1.4	0.2	-	1.6	21.4	5.3	0.2	5.5
2/1	137	137	-	-	-	1.4	0.2	-	1.6	41.7	3.7	0.2	3.9
3/1	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	266	266	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 210.7 Total Delay for Signalled Lanes (pcuHr): 3.17 Cycle Time (s): 120
PRC Over All Lanes (%): 210.7 Total Delay Over All Lanes(pcuHr): 3.17

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

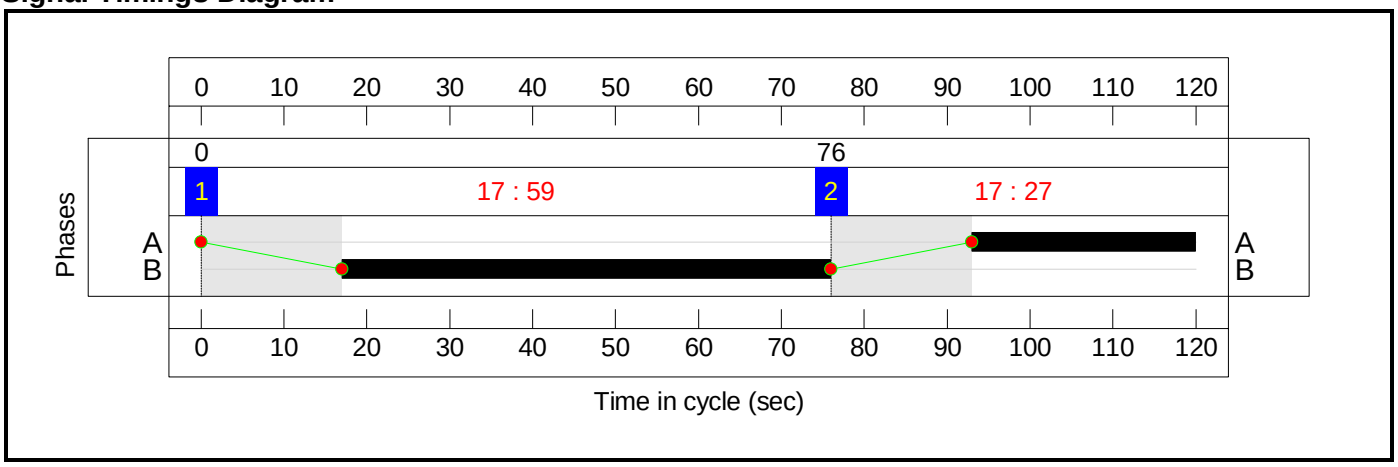
Stage Sequence Diagram



Stage Timings

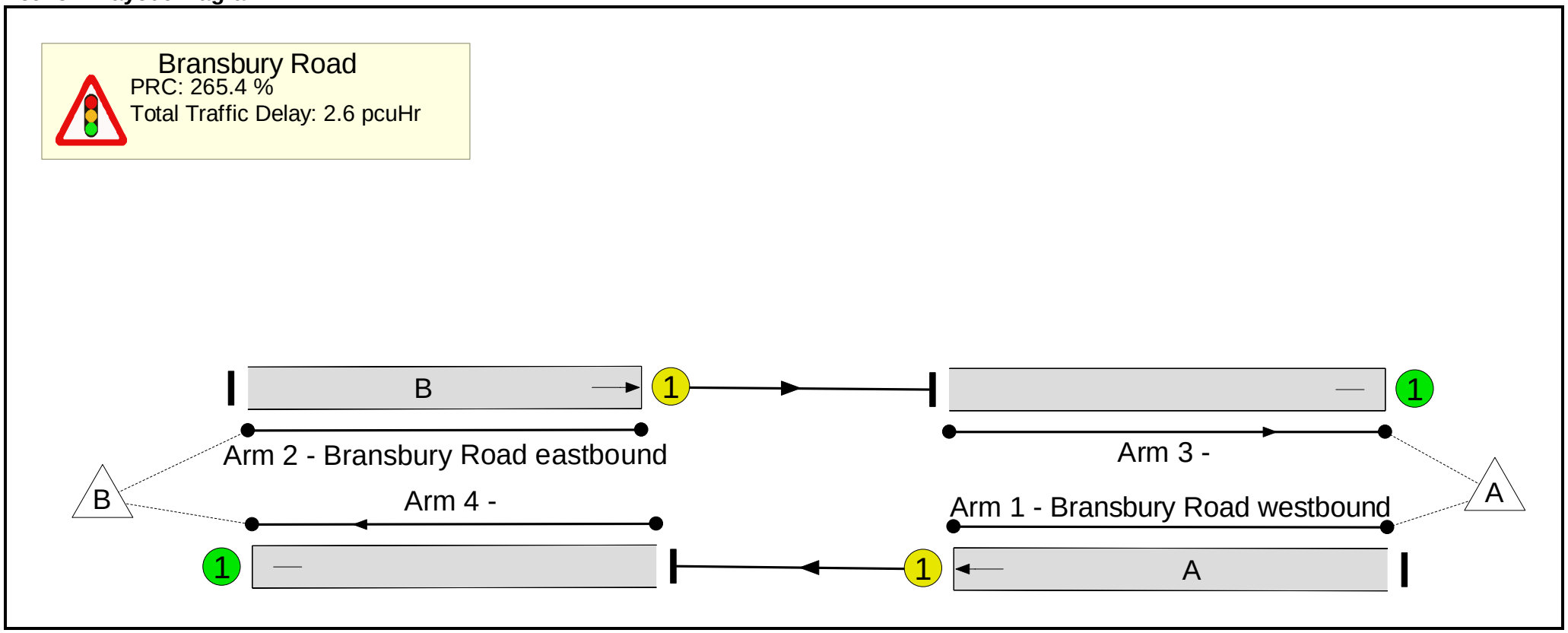
Stage	1	2
Duration	59	27
Change Point	0	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**24.6%**
Bransbury Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**24.6%**
1/1	Bransbury Road westbound Ahead	U	N/A	N/A	A		1	27	-	109	1900	443	24.6%
2/1	Bransbury Road eastbound Ahead	U	N/A	N/A	B		1	59	-	234	1900	950	24.6%
3/1		U	N/A	N/A	-		-	-	-	234	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	109	Inf	Inf	0.0%

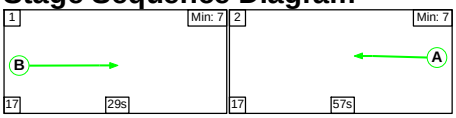
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.2**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
Bransbury Road	**-**	**-**	**0**	**0**	**0**	**2.2**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1	109	109	-	-	-	1.1	0.2	-	1.3	42.8	2.9	0.2	3.1
2/1	234	234	-	-	-	1.1	0.2	-	1.3	19.6	4.4	0.2	4.6
3/1	234	234	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 265.4 Total Delay for Signalled Lanes (pcuHr): 2.57 Cycle Time (s): 120
PRC Over All Lanes (%): 265.4 Total Delay Over All Lanes(pcuHr): 2.57

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

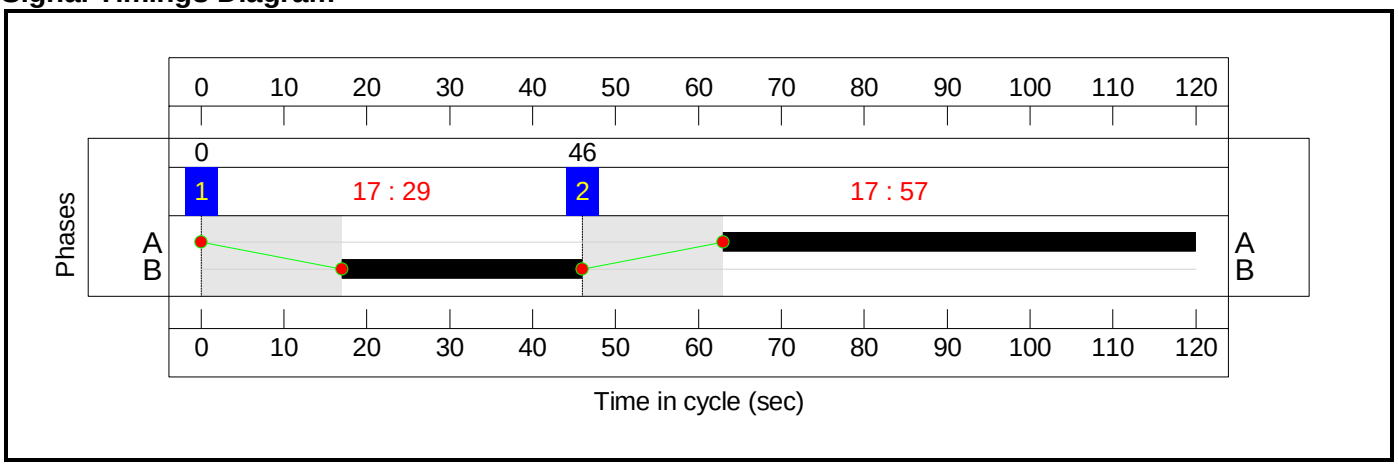
Stage Sequence Diagram



Stage Timings

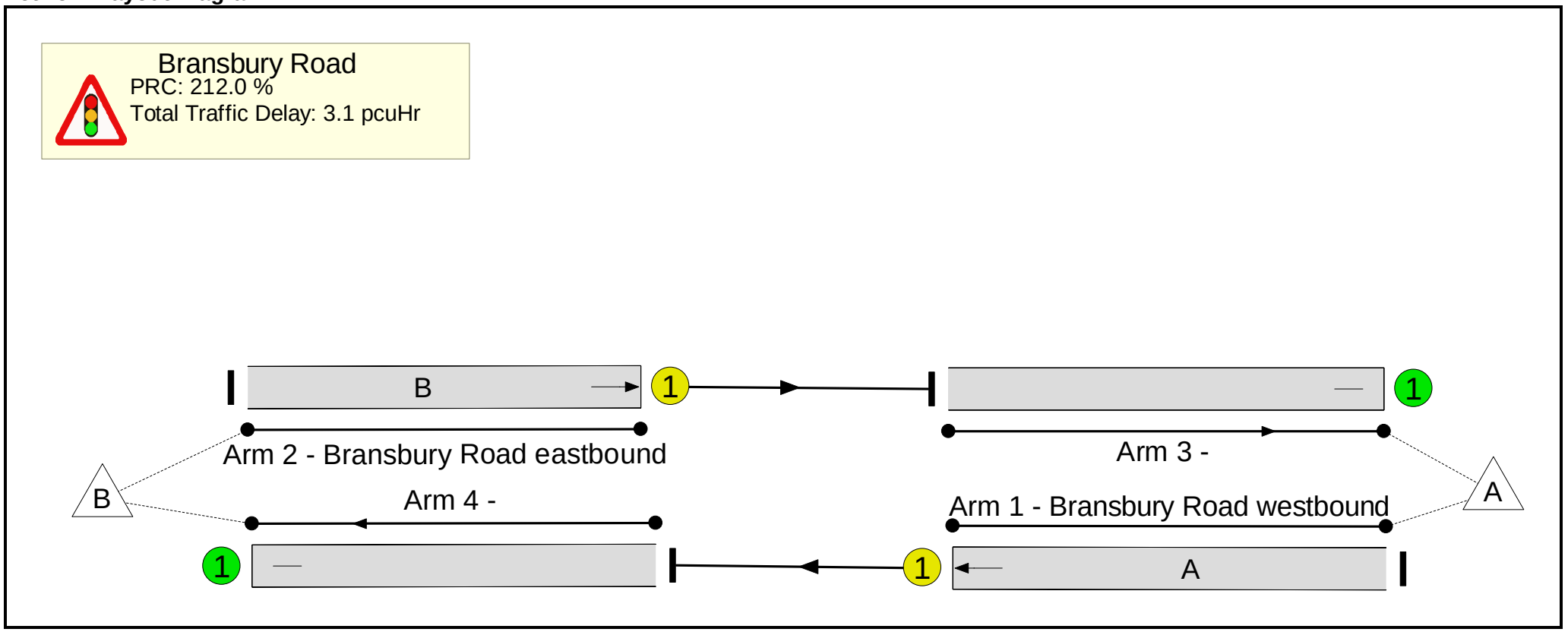
Stage	1	2
Duration	29	57
Change Point	0	46

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**28.8%**
Bransbury Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**28.8%**
1/1	Bransbury Road westbound Ahead	U	N/A	N/A	A		1	57	-	262	1900	918	28.5%
2/1	Bransbury Road eastbound Ahead	U	N/A	N/A	B		1	29	-	137	1900	475	28.8%
3/1		U	N/A	N/A	-		-	-	-	137	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%

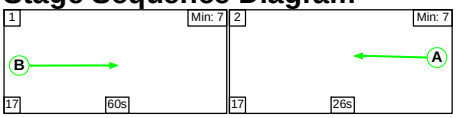
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.7**	**0.4**	**0.0**	**3.1**	**-**	**-**	**-**	**-**
Bransbury Road	**-**	**-**	**0**	**0**	**0**	**2.7**	**0.4**	**0.0**	**3.1**	**-**	**-**	**-**	**-**
1/1	262	262	-	-	-	1.4	0.2	-	1.6	21.3	5.2	0.2	5.4
2/1	137	137	-	-	-	1.4	0.2	-	1.6	41.7	3.7	0.2	3.9
3/1	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 212.0 Total Delay for Signalled Lanes (pcuHr): 3.14 Cycle Time (s): 120
PRC Over All Lanes (%): 212.0 Total Delay Over All Lanes(pcuHr): 3.14

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

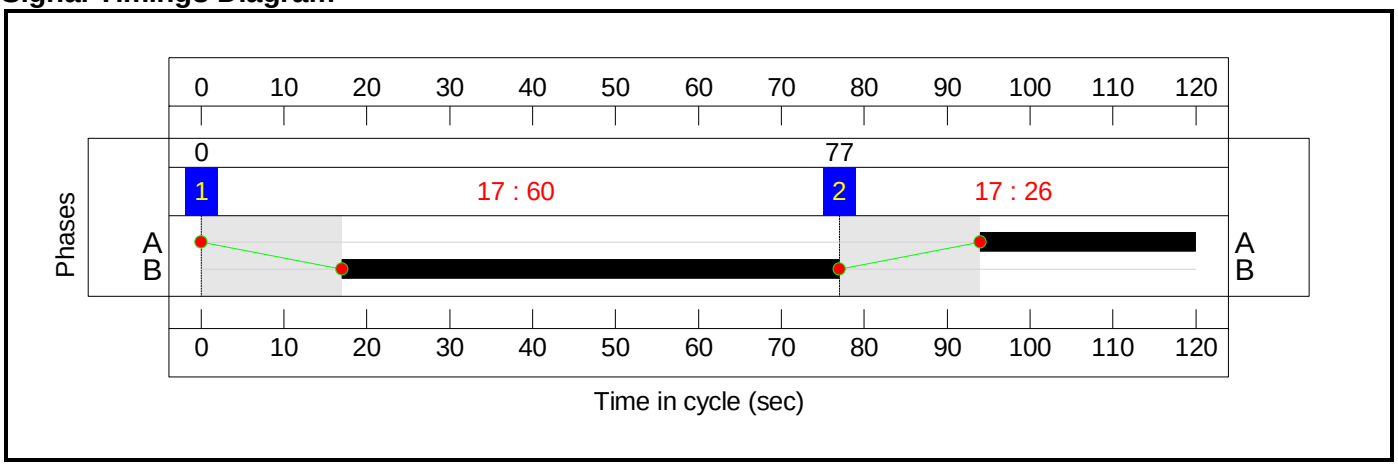
Stage Sequence Diagram



Stage Timings

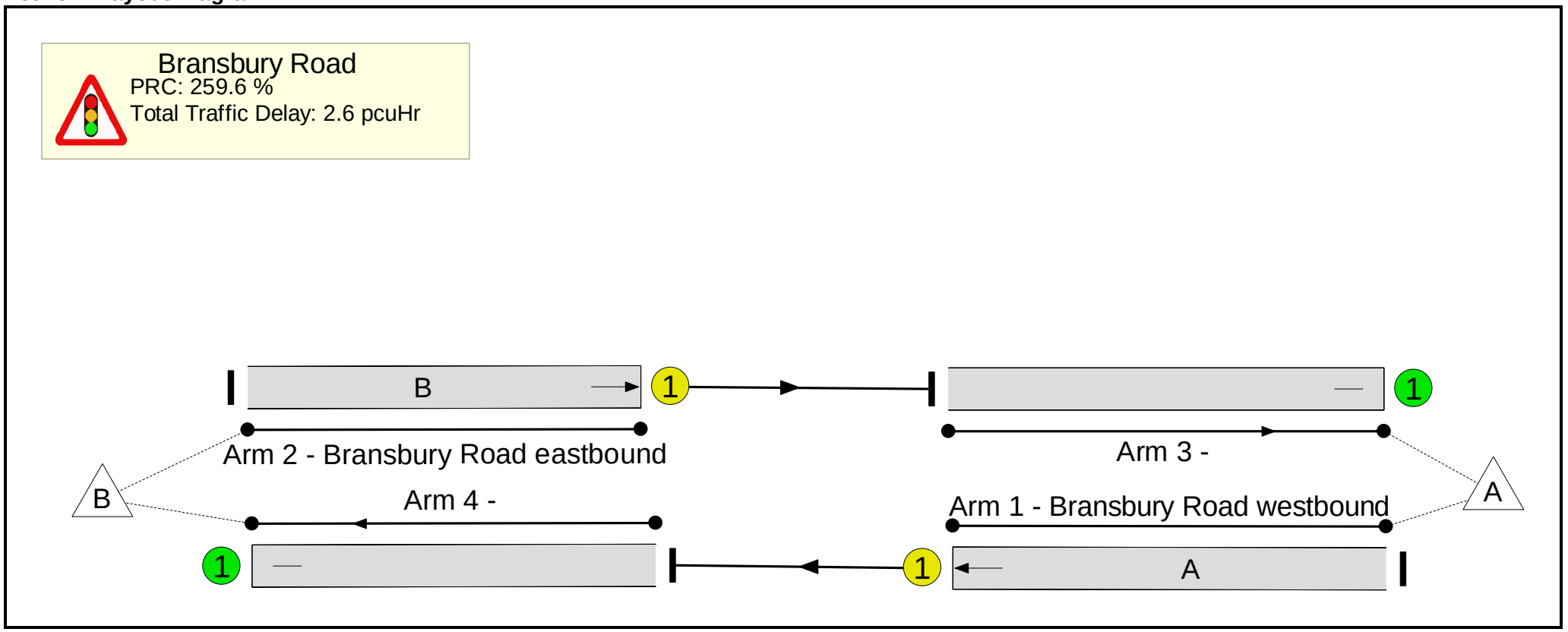
Stage	1	2
Duration	60	26
Change Point	0	77

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**25.0%**
Bransbury Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**25.0%**
1/1	Bransbury Road westbound Ahead	U	N/A	N/A	A		1	26	-	107	1900	428	25.0%
2/1	Bransbury Road eastbound Ahead	U	N/A	N/A	B		1	60	-	238	1900	966	24.6%
3/1		U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	107	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.2**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
Bransbury Road	**-**	**-**	**0**	**0**	**0**	**2.2**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1	107	107	-	-	-	1.1	0.2	-	1.3	43.8	2.9	0.2	3.1
2/1	238	238	-	-	-	1.1	0.2	-	1.3	19.1	4.4	0.2	4.6
3/1	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

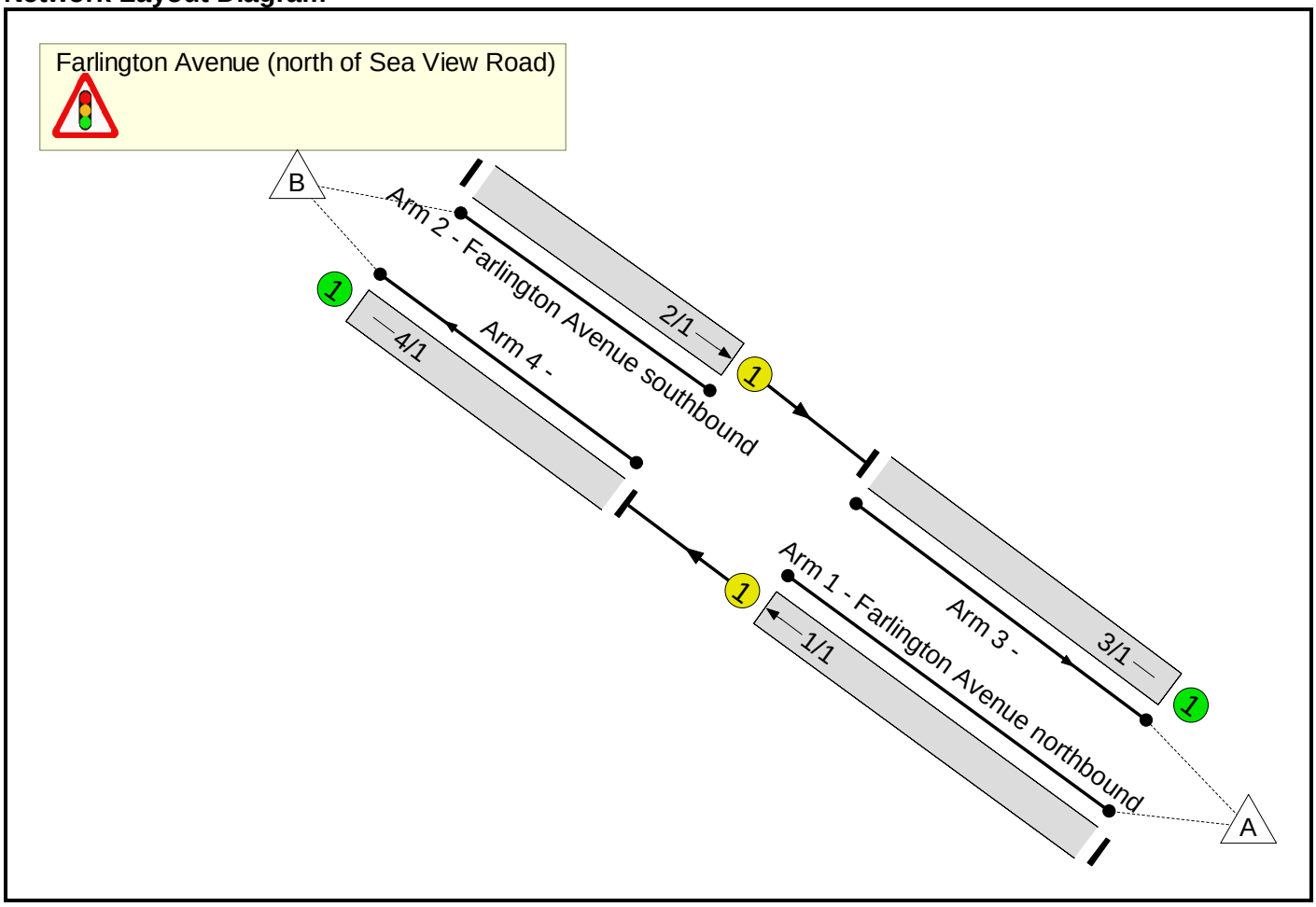
C1 PRC for Signalled Lanes (%): 259.6 Total Delay for Signalled Lanes (pcuHr): 2.56 Cycle Time (s): 120
PRC Over All Lanes (%): 259.6 Total Delay Over All Lanes(pcuHr): 2.56

Full Input Data And Results

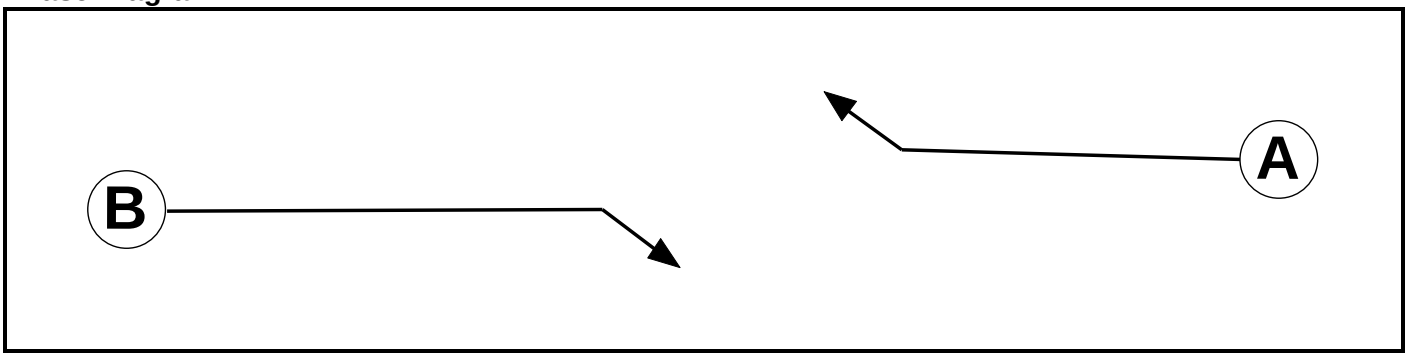
User and Project Details

Project:	
Title:	**Farlington Avenue (north of Sea View Road) shuttle working analysis**
Location:	
Additional detail:	
File name:	Farlington Avenue (north of Sea View Road).lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

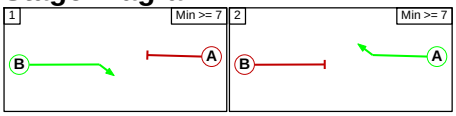
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B
A		17
B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		17
2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Farlington Avenue (north of Sea View Road)
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Farlington Avenue (north of Sea View Road)												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Farlington Avenue northbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Farlington Avenue southbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	205	205
	B	76	0	76
	Tot.	76	205	281

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: Farlington Avenue (north of Sea View Road)	
1/1	205
2/1	76
3/1	76
4/1	205

Full Input Data And Results

Lane Saturation Flows

Junction: Farlington Avenue (north of Sea View Road)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Farlington Avenue northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Farlington Avenue southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	264	264
	B	130	0	130
	Tot.	130	264	394

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: Farlington Avenue (north of Sea View Road)	
1/1	264
2/1	130
3/1	130
4/1	264

Lane Saturation Flows

Junction: Farlington Avenue (north of Sea View Road)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Farlington Avenue northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Farlington Avenue southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination		
	A	B	Tot.
A	0	204	204
B	76	0	76
Tot.	76	204	280

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: Farlington Avenue (north of Sea View Road)	
1/1	204
2/1	76
3/1	76
4/1	204

Lane Saturation Flows

Junction: Farlington Avenue (north of Sea View Road)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Farlington Avenue northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Farlington Avenue southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination		
	A	B	Tot.
A	0	238	238
B	135	0	135
Tot.	135	238	373

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: Farlington Avenue (north of Sea View Road)	
1/1	238
2/1	135
3/1	135
4/1	238

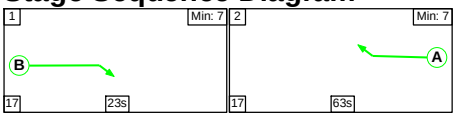
Lane Saturation Flows

Junction: Farlington Avenue (north of Sea View Road)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Farlington Avenue northbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Farlington Avenue southbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

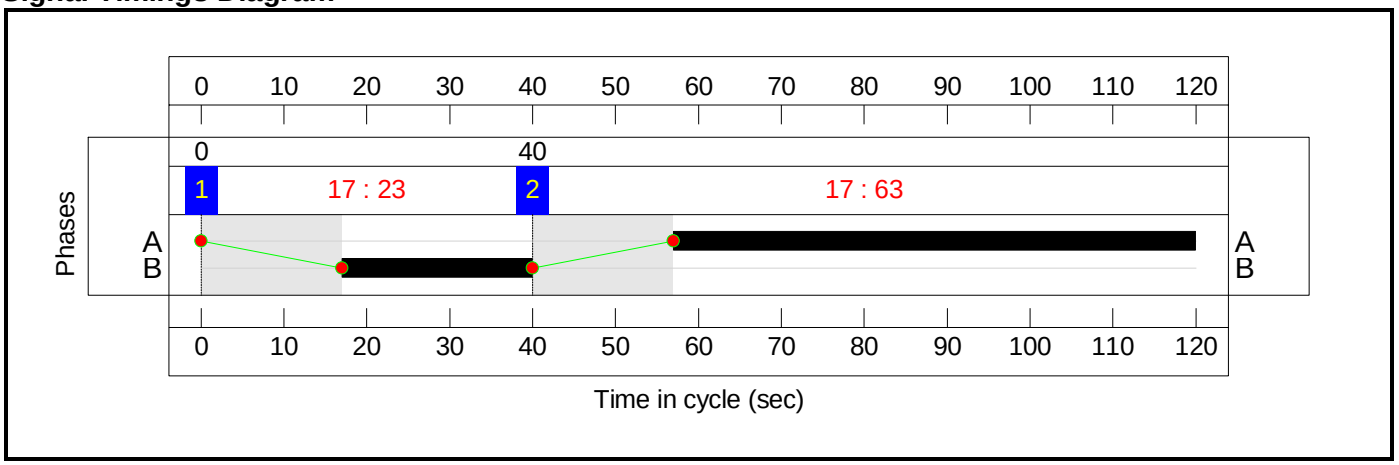
Stage Sequence Diagram



Stage Timings

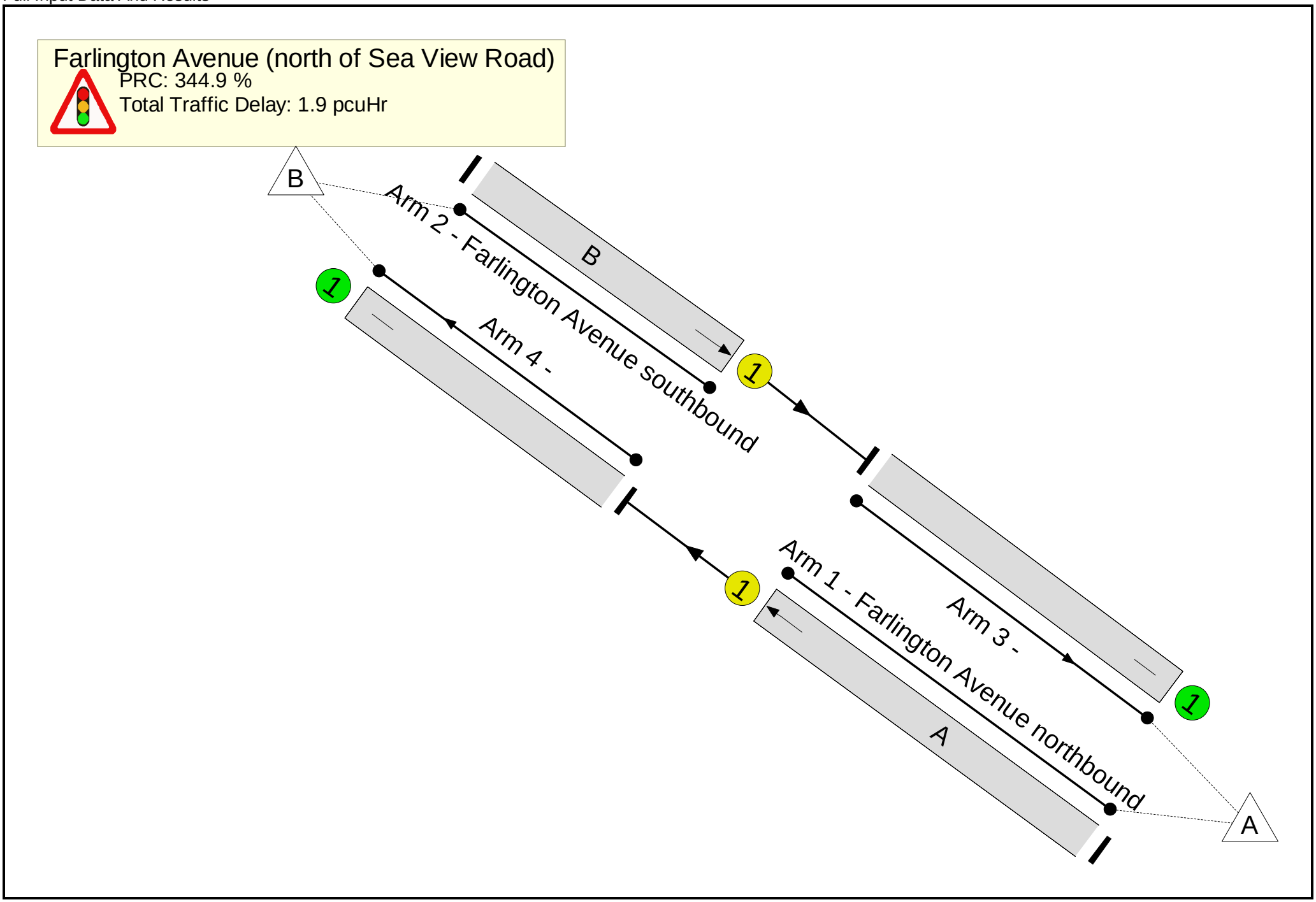
Stage	1	2
Duration	23	63
Change Point	0	40

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Farlington Avenue (north of Sea View Road)
PRC: 344.9 %
Total Traffic Delay: 1.9 pcuHr
B
Arm 2 - Farlington Avenue southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - Farlington Avenue northbound
A
A

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**20.2%**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**20.2%**
1/1	Farlington Avenue northbound Ahead	U	N/A	N/A	A		1	63	-	205	1900	1013	20.2%
2/1	Farlington Avenue southbound Ahead	U	N/A	N/A	B		1	23	-	76	1900	380	20.0%
3/1		U	N/A	N/A	-		-	-	-	76	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	205	Inf	Inf	0.0%

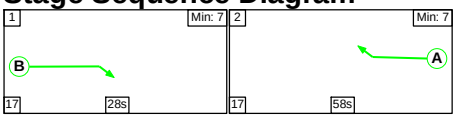
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**1.7**	**0.3**	**0.0**	**1.9**	**-**	**-**	**-**	**-**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**0**	**0**	**0**	**1.7**	**0.3**	**0.0**	**1.9**	**-**	**-**	**-**	**-**
1/1	205	205	-	-	-	0.8	0.1	-	1.0	16.9	3.5	0.1	3.7
2/1	76	76	-	-	-	0.8	0.1	-	1.0	45.9	2.1	0.1	2.2
3/1	76	76	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	205	205	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 344.9 Total Delay for Signalled Lanes (pcuHr): 1.93 Cycle Time (s): 120
PRC Over All Lanes (%): 344.9 Total Delay Over All Lanes(pcuHr): 1.93

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

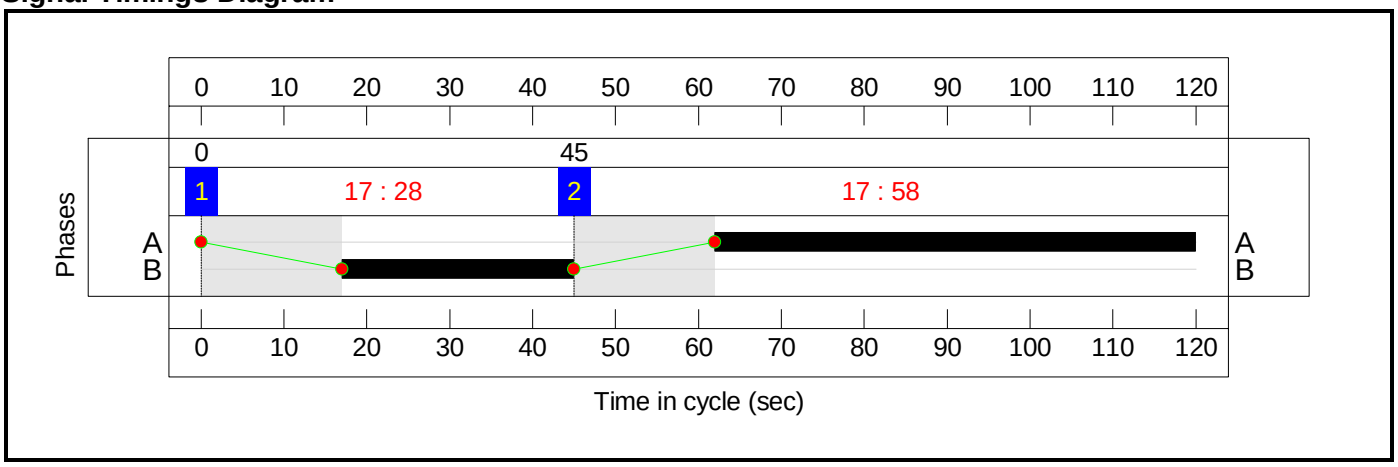
Stage Sequence Diagram



Stage Timings

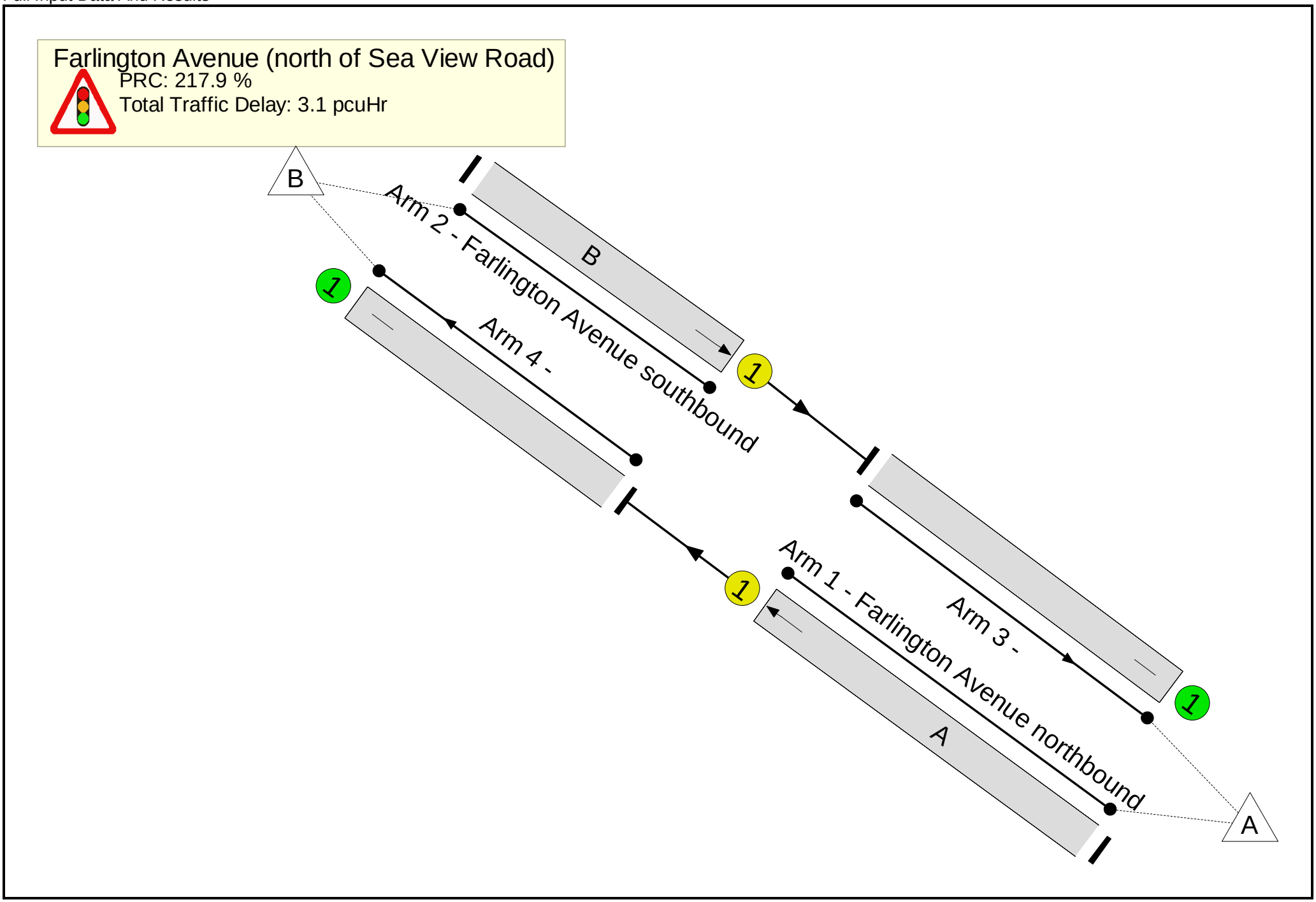
Stage	1	2
Duration	28	58
Change Point	0	45

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Farlington Avenue (north of Sea View Road)
PRC: 217.9 %
Total Traffic Delay: 3.1 pcuHr
B
Arm 2 - Farlington Avenue southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - Farlington Avenue northbound
A
A

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**28.3%**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**28.3%**
1/1	Farlington Avenue northbound Ahead	U	N/A	N/A	A		1	58	-	264	1900	934	28.3%
2/1	Farlington Avenue southbound Ahead	U	N/A	N/A	B		1	28	-	130	1900	459	28.3%
3/1		U	N/A	N/A	-		-	-	-	130	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%

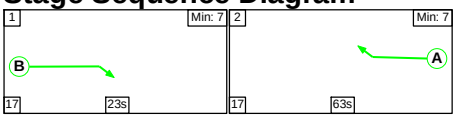
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.7**	**0.4**	**0.0**	**3.1**	**-**	**-**	**-**	**-**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**0**	**0**	**0**	**2.7**	**0.4**	**0.0**	**3.1**	**-**	**-**	**-**	**-**
1/1	264	264	-	-	-	1.3	0.2	-	1.5	20.7	5.1	0.2	5.3
2/1	130	130	-	-	-	1.3	0.2	-	1.5	42.5	3.5	0.2	3.7
3/1	130	130	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 217.9 Total Delay for Signalled Lanes (pcuHr): 3.05 Cycle Time (s): 120
PRC Over All Lanes (%): 217.9 Total Delay Over All Lanes(pcuHr): 3.05

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

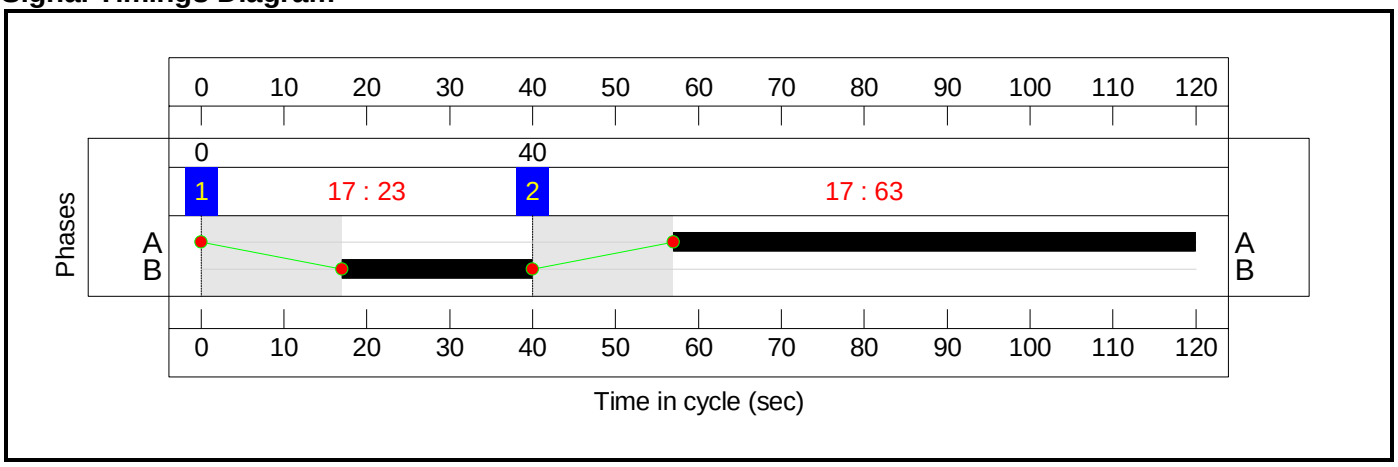
Stage Sequence Diagram



Stage Timings

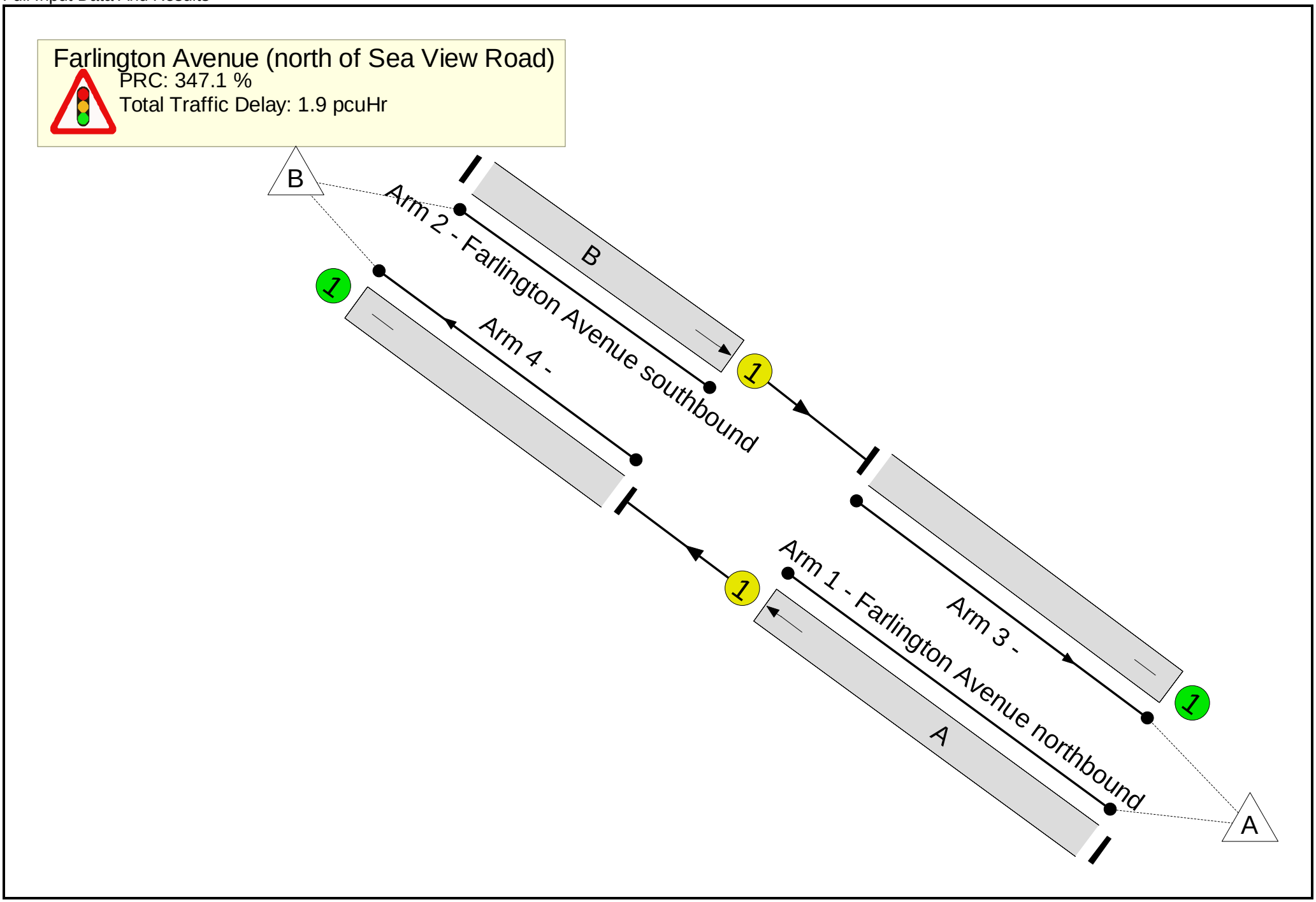
Stage	1	2
Duration	23	63
Change Point	0	40

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Farlington Avenue (north of Sea View Road)
PRC: 347.1 %
Total Traffic Delay: 1.9 pcuHr
B
Arm 2 - Farlington Avenue southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - Farlington Avenue northbound
A
A

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**20.1%**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**20.1%**
1/1	Farlington Avenue northbound Ahead	U	N/A	N/A	A		1	63	-	204	1900	1013	20.1%
2/1	Farlington Avenue southbound Ahead	U	N/A	N/A	B		1	23	-	76	1900	380	20.0%
3/1		U	N/A	N/A	-		-	-	-	76	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%

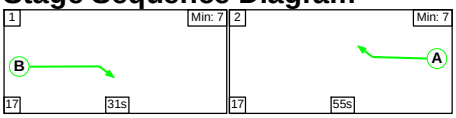
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**1.7**	**0.3**	**0.0**	**1.9**	**-**	**-**	**-**	**-**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**0**	**0**	**0**	**1.7**	**0.3**	**0.0**	**1.9**	**-**	**-**	**-**	**-**
1/1	204	204	-	-	-	0.8	0.1	-	1.0	16.9	3.5	0.1	3.6
2/1	76	76	-	-	-	0.8	0.1	-	1.0	45.9	2.1	0.1	2.2
3/1	76	76	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	204	204	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 347.1 Total Delay for Signalled Lanes (pcuHr): 1.93 Cycle Time (s): 120
PRC Over All Lanes (%): 347.1 Total Delay Over All Lanes(pcuHr): 1.93

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

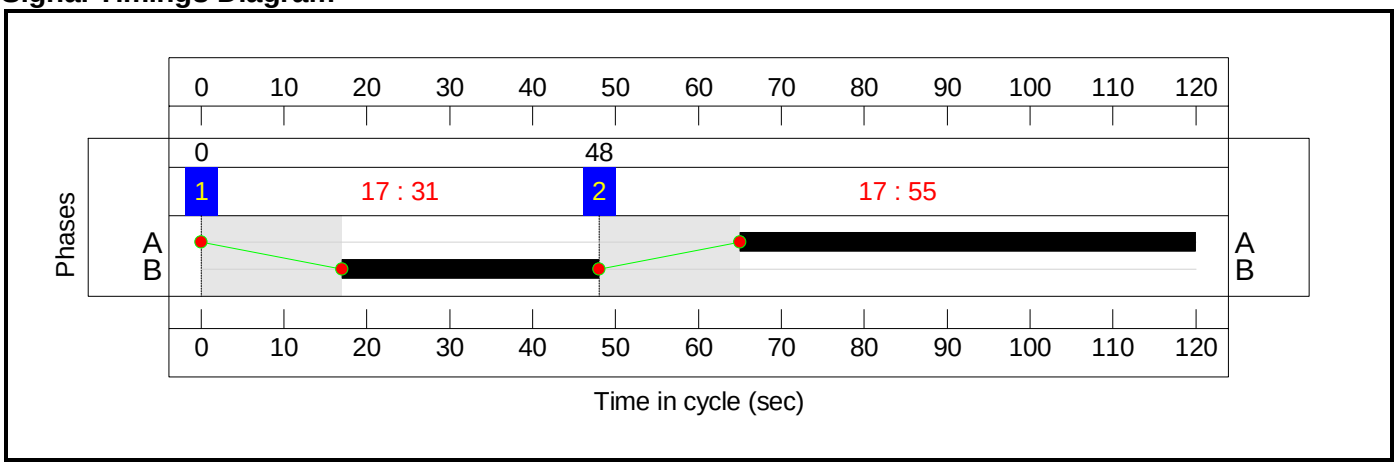
Stage Sequence Diagram



Stage Timings

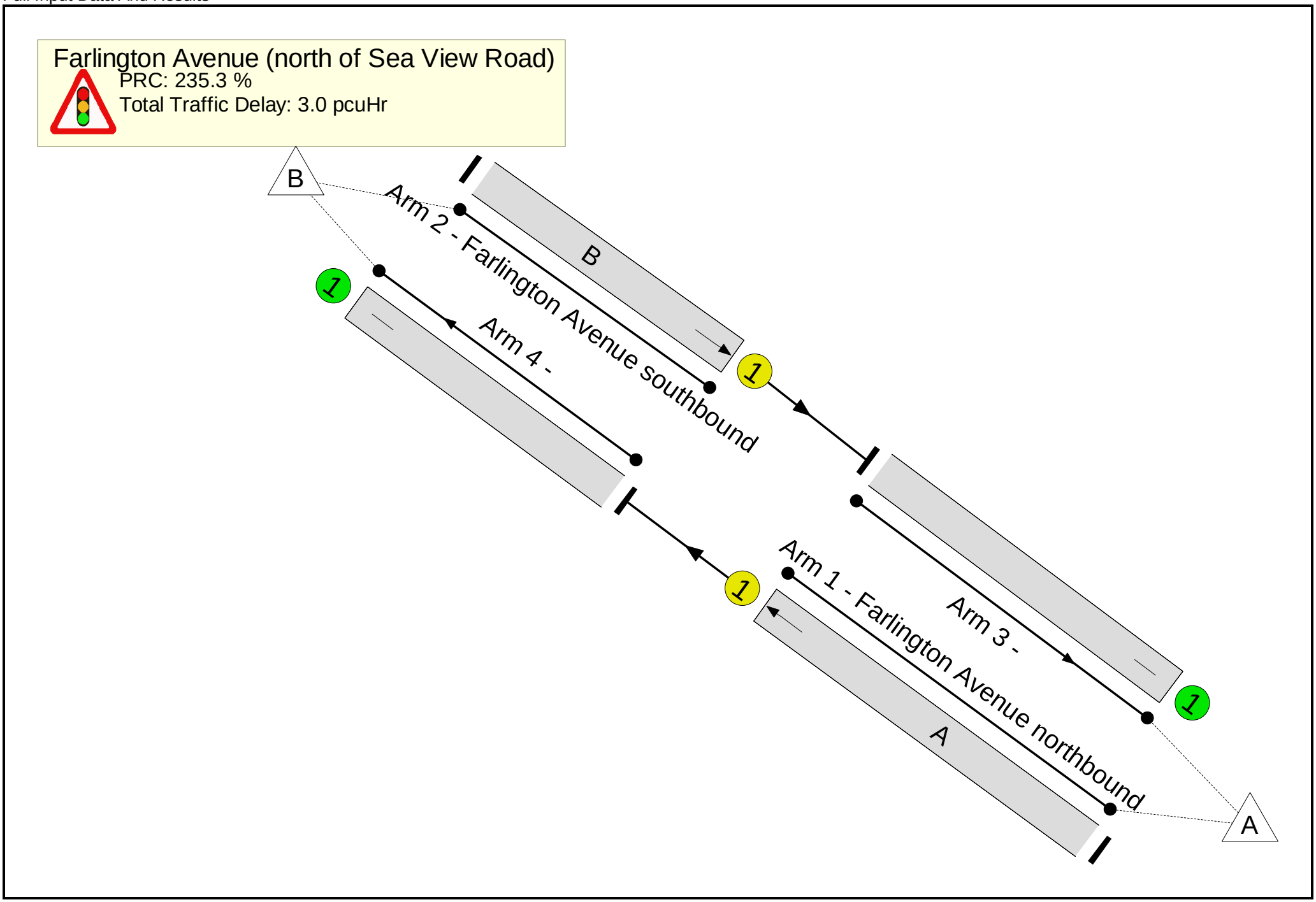
Stage	1	2
Duration	31	55
Change Point	0	48

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram


Farlington Avenue (north of Sea View Road)
PRC: 235.3 %
Total Traffic Delay: 3.0 pcuHr
B
Arm 2 - Farlington Avenue southbound
B
1
1
Arm 4 -
Arm 3 -
1
1
Arm 1 - Farlington Avenue northbound
A
A

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**26.8%**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**26.8%**
1/1	Farlington Avenue northbound Ahead	U	N/A	N/A	A		1	55	-	238	1900	887	26.8%
2/1	Farlington Avenue southbound Ahead	U	N/A	N/A	B		1	31	-	135	1900	507	26.6%
3/1		U	N/A	N/A	-		-	-	-	135	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.6**	**0.4**	**0.0**	**3.0**	**-**	**-**	**-**	**-**
Farlington Avenue (north of Sea View Road)	**-**	**-**	**0**	**0**	**0**	**2.6**	**0.4**	**0.0**	**3.0**	**-**	**-**	**-**	**-**
1/1	238	238	-	-	-	1.3	0.2	-	1.5	22.3	4.8	0.2	5.0
2/1	135	135	-	-	-	1.3	0.2	-	1.5	39.6	3.5	0.2	3.7
3/1	135	135	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

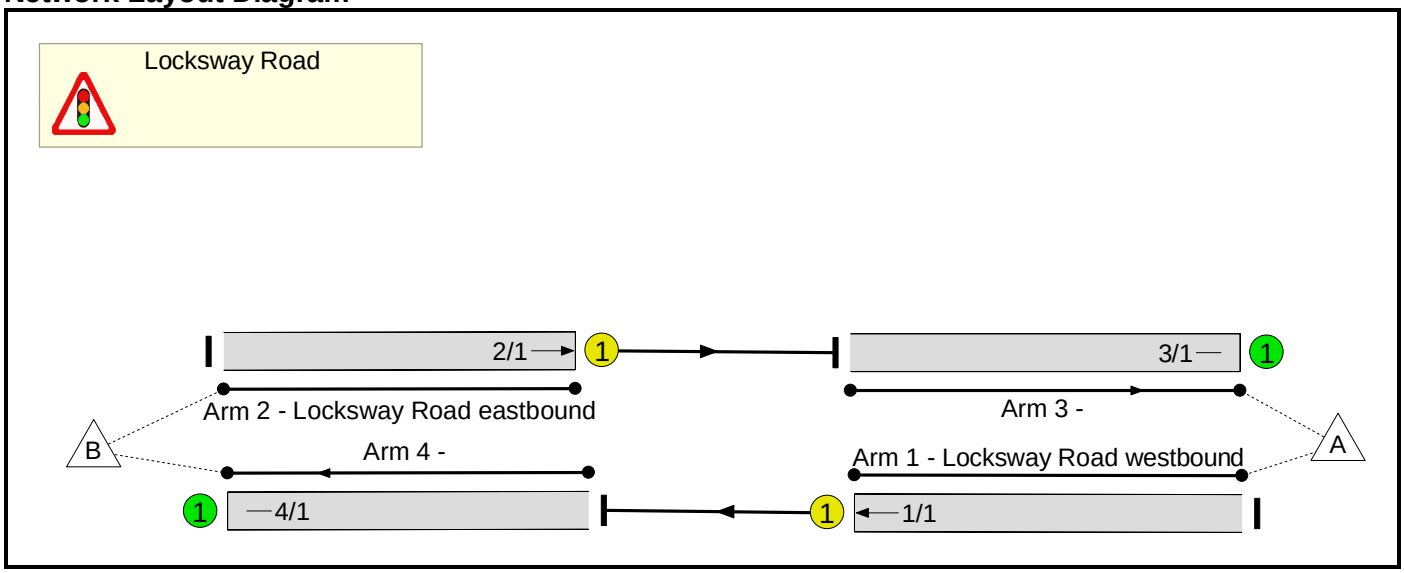
C1 PRC for Signalled Lanes (%): 235.3 Total Delay for Signalled Lanes (pcuHr): 2.96 Cycle Time (s): 120
PRC Over All Lanes (%): 235.3 Total Delay Over All Lanes(pcuHr): 2.96

Full Input Data And Results

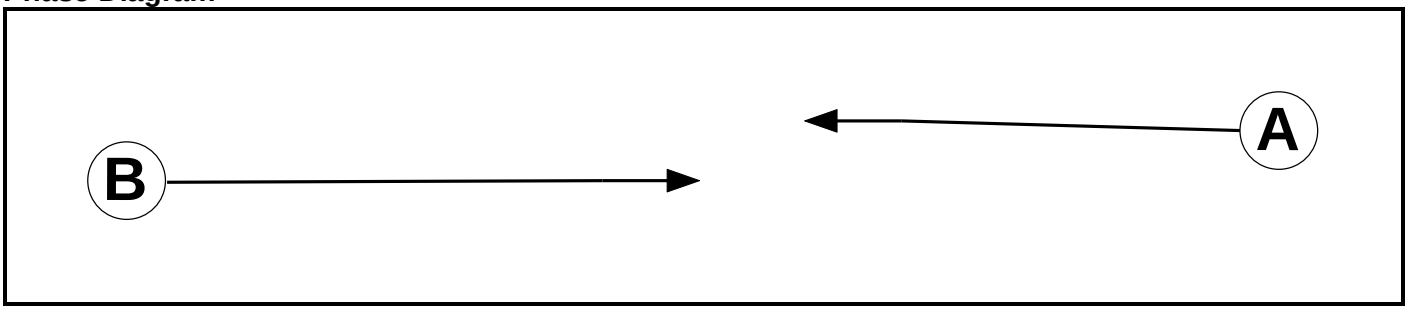
User and Project Details

Project:	
Title:	**Locksway Road shuttle working analysis**
Location:	
Additional detail:	
File name:	Locksway Road.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

Full Input Data And Results

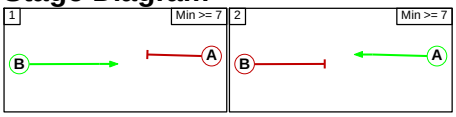
Phase Intergreens Matrix

	Starting Phase		
		A	B
Terminating Phase	A		17
	B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		17
	2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Locksway Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Locksway Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Locksway Road westbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Locksway Road eastbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	17	17
	B	13	0	13
	Tot.	13	17	30

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: Locksway Road	
1/1	17
2/1	13
3/1	13
4/1	17

Full Input Data And Results

Lane Saturation Flows

Junction: Locksway Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Locksway Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Locksway Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	13	13
	B	17	0	17
	Tot.	17	13	30

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: Locksway Road	
1/1	13
2/1	17
3/1	17
4/1	13

Lane Saturation Flows

Junction: Locksway Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Locksway Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Locksway Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	17	17
	B	13	0	13
	Tot.	13	17	30

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: Locksway Road	
1/1	17
2/1	13
3/1	13
4/1	17

Lane Saturation Flows

Junction: Locksway Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Locksway Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Locksway Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
Origin		A	B	Tot.
	A	0	13	13
	B	17	0	17
	Tot.	17	13	30

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: Locksway Road	
1/1	13
2/1	17
3/1	17
4/1	13

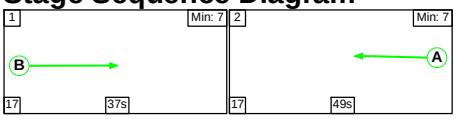
Full Input Data And Results

Lane Saturation Flows

Junction: Locksway Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Locksway Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Locksway Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

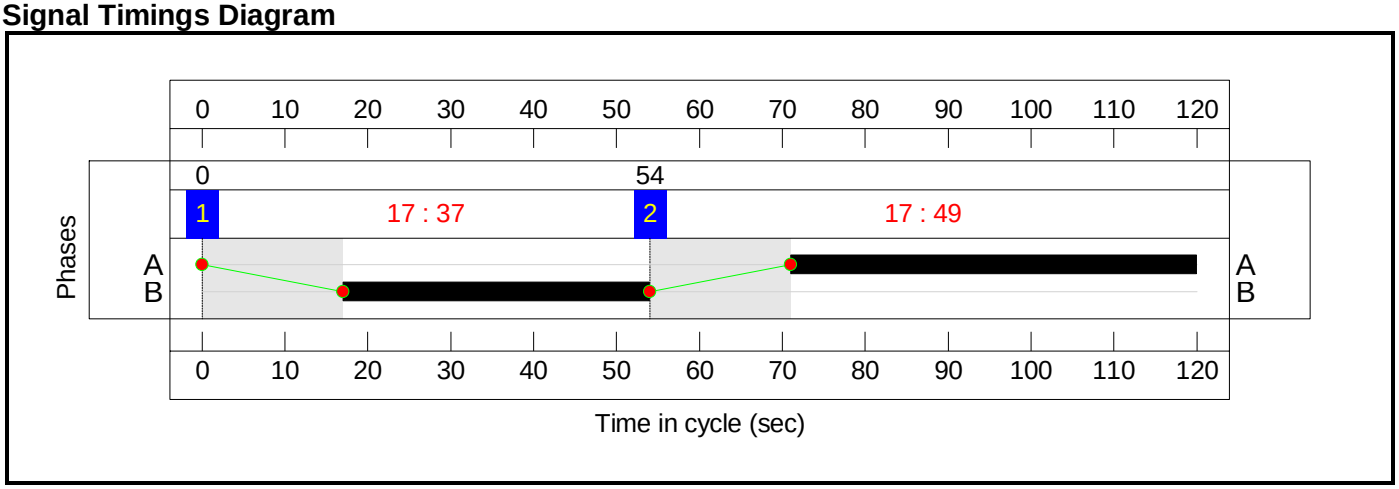
Stage Sequence Diagram



Stage Timings

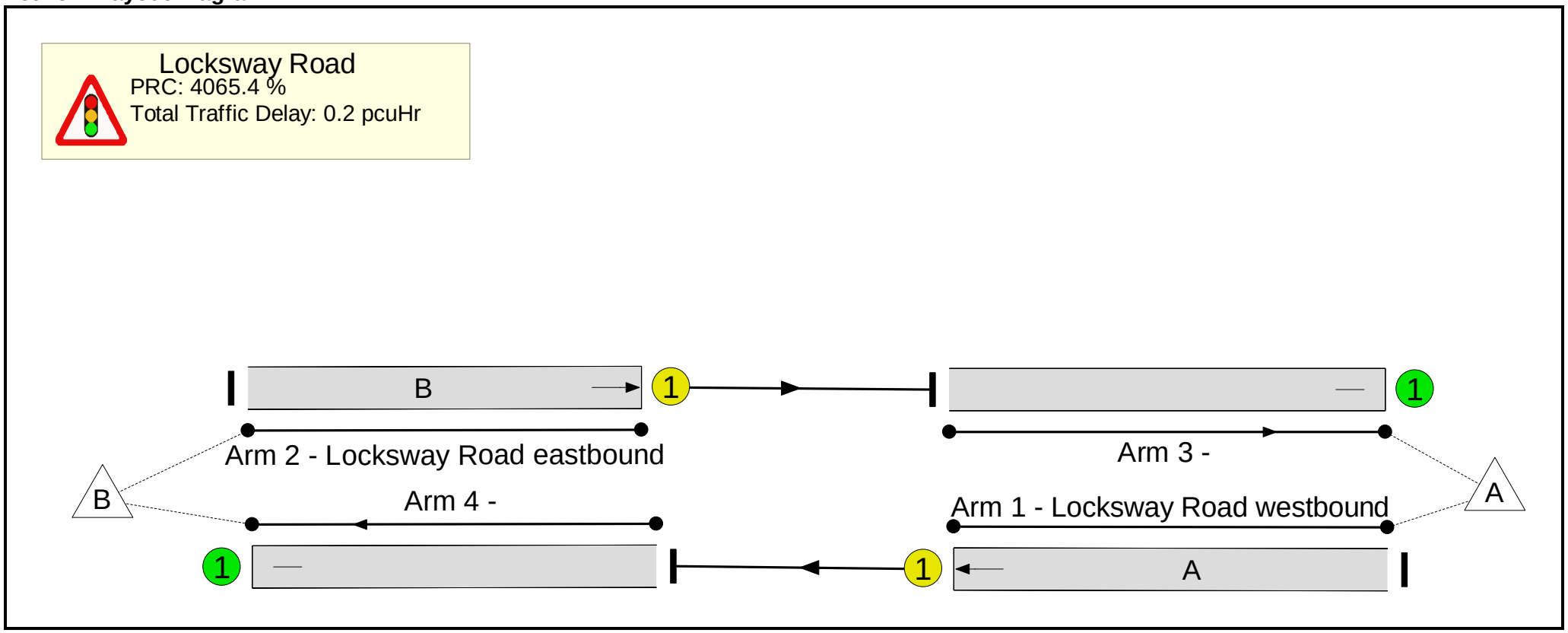
Stage	1	2
Duration	37	49
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
Locksway Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
1/1	Locksway Road westbound Ahead	U	N/A	N/A	A		1	49	-	17	1900	792	2.1%
2/1	Locksway Road eastbound Ahead	U	N/A	N/A	B		1	37	-	13	1900	602	2.2%
3/1		U	N/A	N/A	-		-	-	-	13	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%

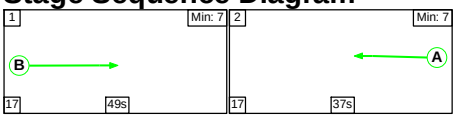
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
Locksway Road	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
1/1	17	17	-	-	-	0.1	0.0	-	0.1	23.0	0.3	0.0	0.3
2/1	13	13	-	-	-	0.1	0.0	-	0.1	31.4	0.3	0.0	0.3
3/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4065.4 Total Delay for Signalled Lanes (pcuHr): 0.22 Cycle Time (s): 120
PRC Over All Lanes (%): 4065.4 Total Delay Over All Lanes(pcuHr): 0.22

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

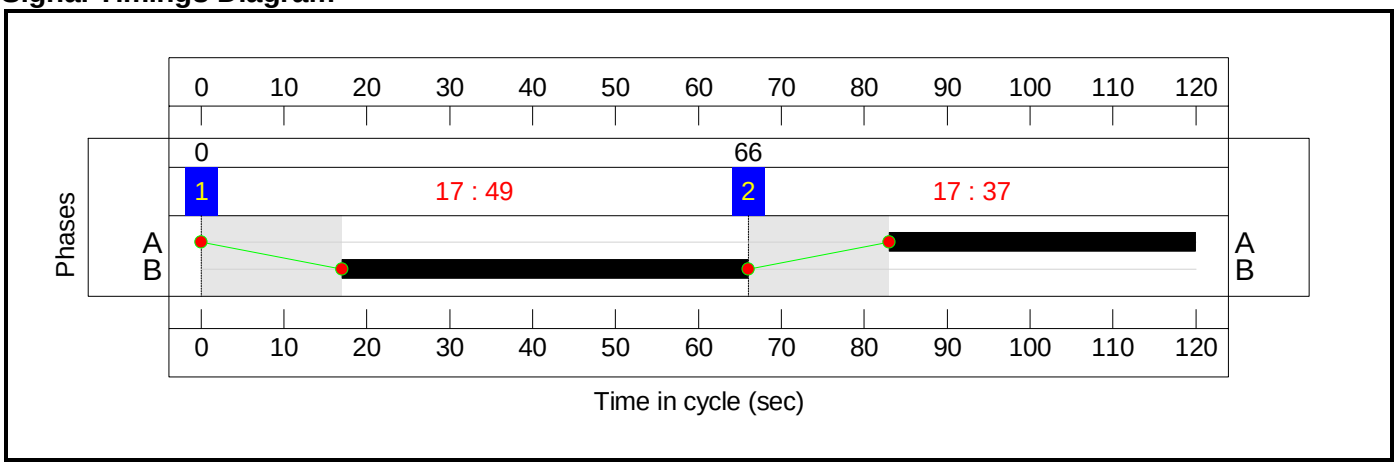
Stage Sequence Diagram



Stage Timings

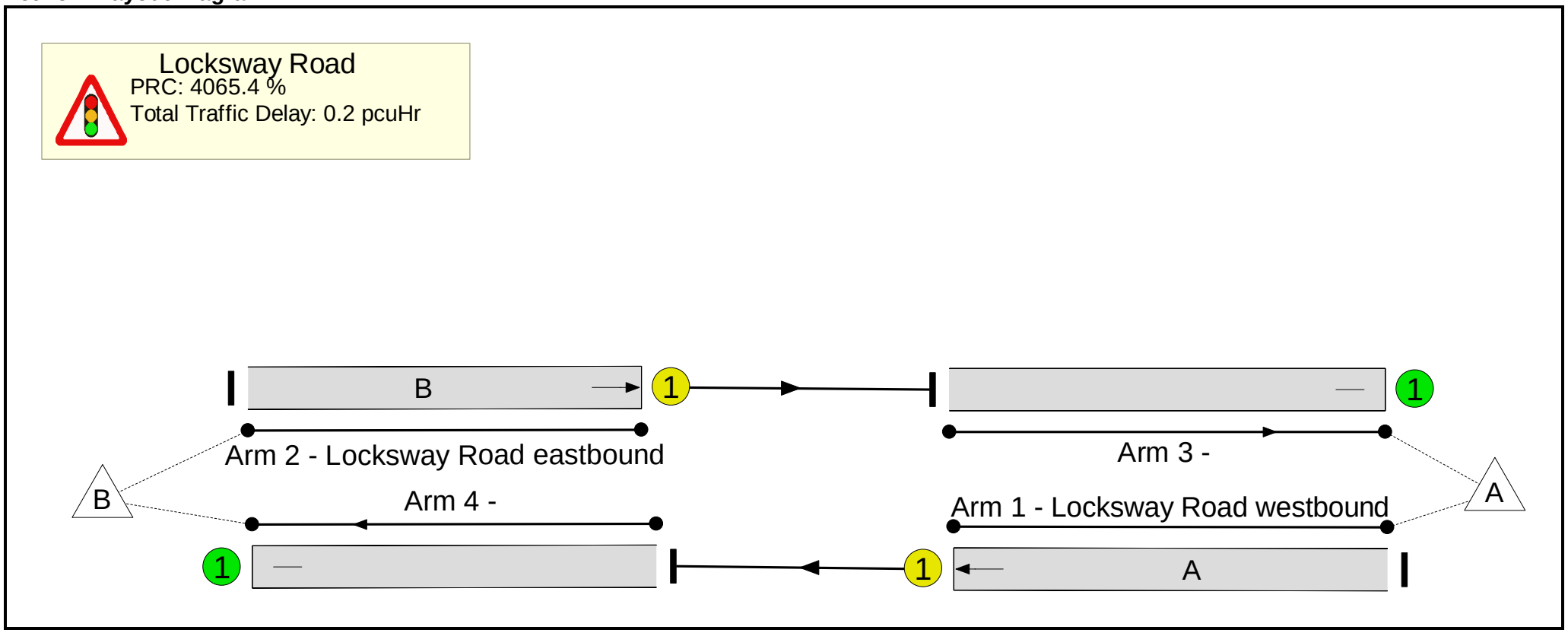
Stage	1	2
Duration	49	37
Change Point	0	66

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
Locksway Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
1/1	Locksway Road westbound Ahead	U	N/A	N/A	A		1	37	-	13	1900	602	2.2%
2/1	Locksway Road eastbound Ahead	U	N/A	N/A	B		1	49	-	17	1900	792	2.1%
3/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	13	Inf	Inf	0.0%

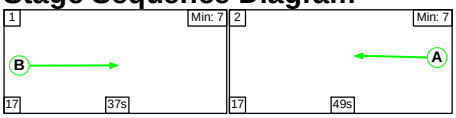
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
Locksway Road	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
1/1	13	13	-	-	-	0.1	0.0	-	0.1	31.4	0.3	0.0	0.3
2/1	17	17	-	-	-	0.1	0.0	-	0.1	23.0	0.3	0.0	0.3
3/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4065.4 Total Delay for Signalled Lanes (pcuHr): 0.22 Cycle Time (s): 120
PRC Over All Lanes (%): 4065.4 Total Delay Over All Lanes(pcuHr): 0.22

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

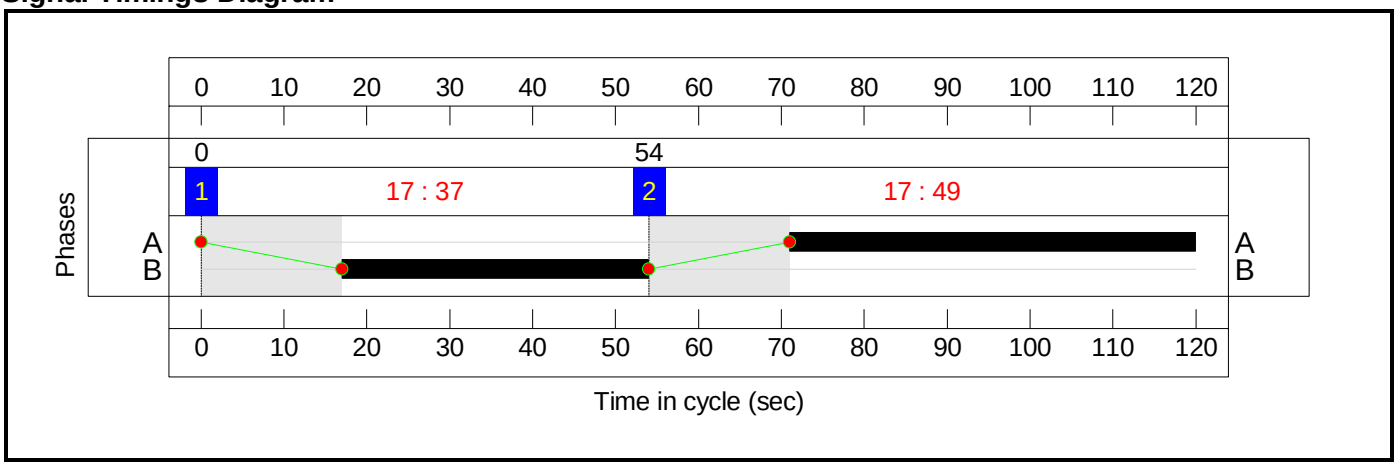
Stage Sequence Diagram



Stage Timings

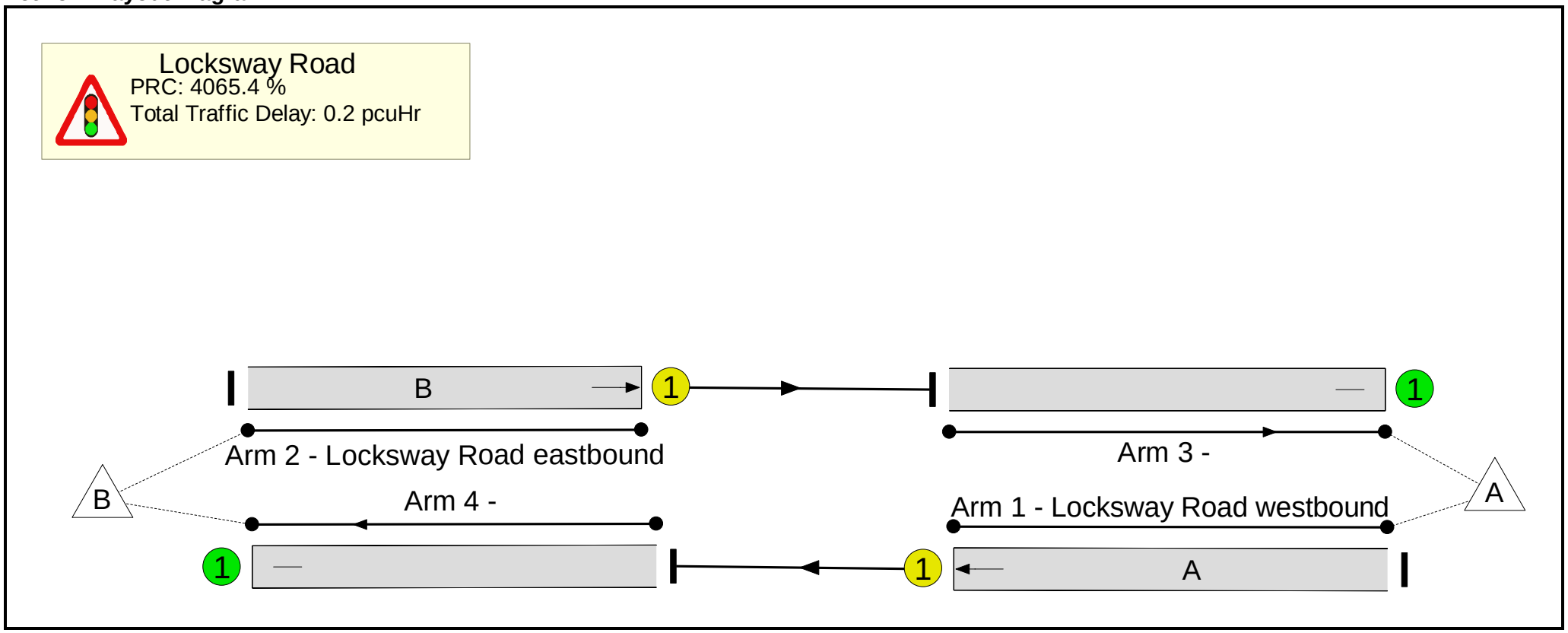
Stage	1	2
Duration	37	49
Change Point	0	54

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
Locksway Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
1/1	Locksway Road westbound Ahead	U	N/A	N/A	A		1	49	-	17	1900	792	2.1%
2/1	Locksway Road eastbound Ahead	U	N/A	N/A	B		1	37	-	13	1900	602	2.2%
3/1		U	N/A	N/A	-		-	-	-	13	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%

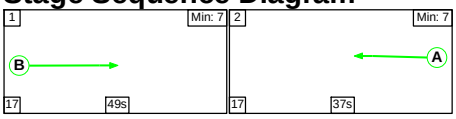
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
Locksway Road	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
1/1	17	17	-	-	-	0.1	0.0	-	0.1	23.0	0.3	0.0	0.3
2/1	13	13	-	-	-	0.1	0.0	-	0.1	31.4	0.3	0.0	0.3
3/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4065.4 Total Delay for Signalled Lanes (pcuHr): 0.22 Cycle Time (s): 120
PRC Over All Lanes (%): 4065.4 Total Delay Over All Lanes(pcuHr): 0.22

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

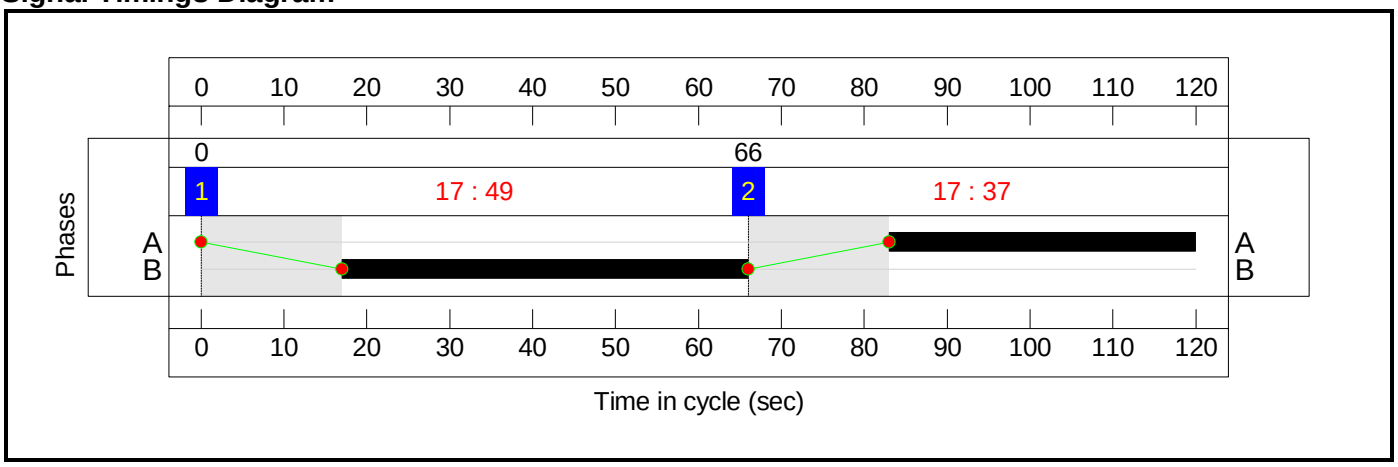
Stage Sequence Diagram



Stage Timings

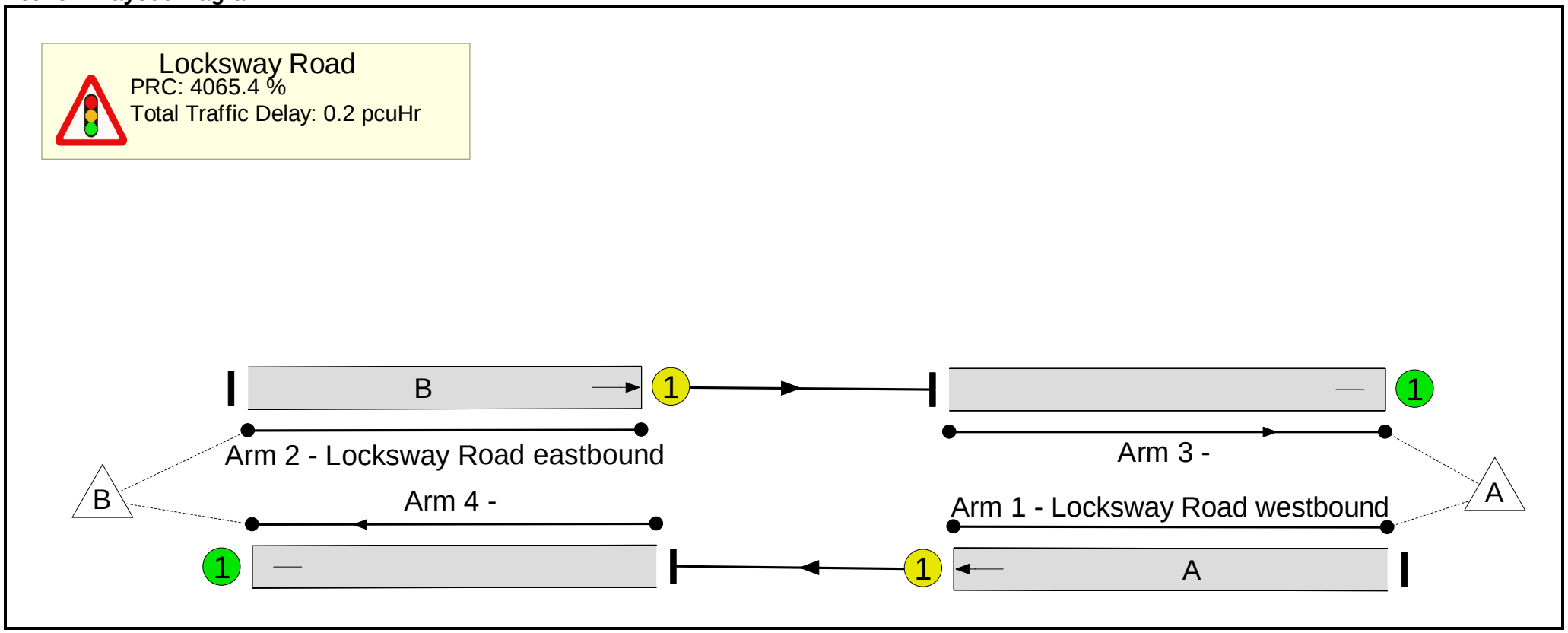
Stage	1	2
Duration	49	37
Change Point	0	66

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
Locksway Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**2.2%**
1/1	Locksway Road westbound Ahead	U	N/A	N/A	A		1	37	-	13	1900	602	2.2%
2/1	Locksway Road eastbound Ahead	U	N/A	N/A	B		1	49	-	17	1900	792	2.1%
3/1		U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	13	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
Locksway Road	**-**	**-**	**0**	**0**	**0**	**0.2**	**0.0**	**0.0**	**0.2**	**-**	**-**	**-**	**-**
1/1	13	13	-	-	-	0.1	0.0	-	0.1	31.4	0.3	0.0	0.3
2/1	17	17	-	-	-	0.1	0.0	-	0.1	23.0	0.3	0.0	0.3
3/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	13	13	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

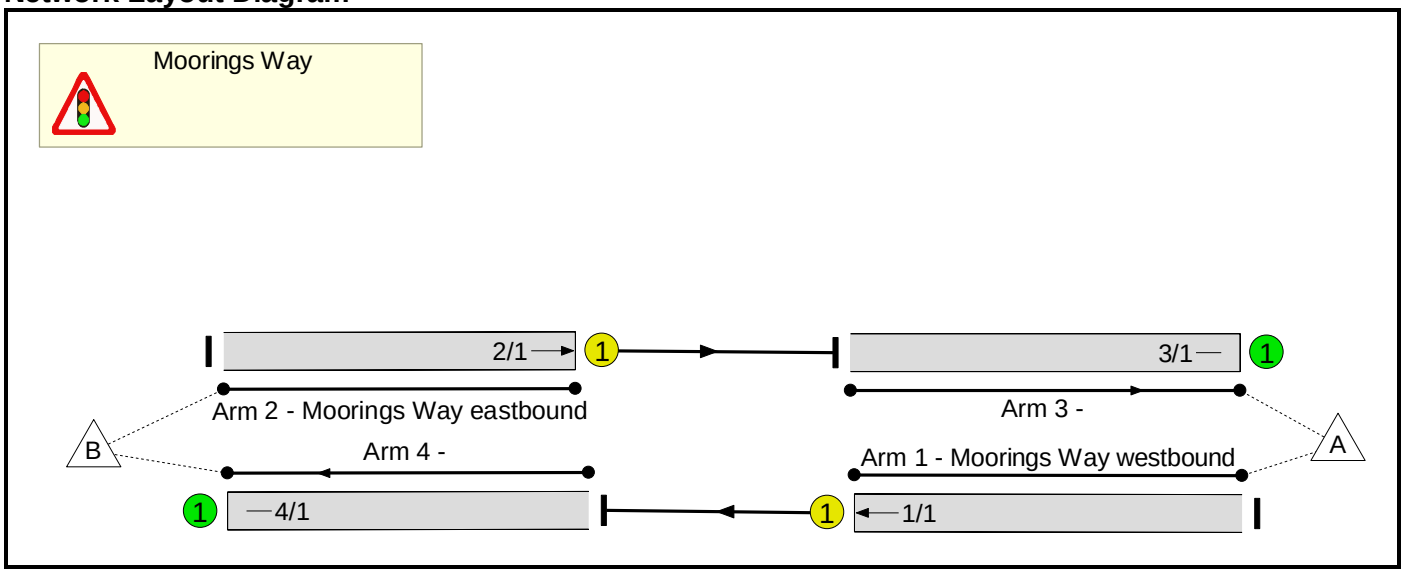
C1 PRC for Signalled Lanes (%): 4065.4 Total Delay for Signalled Lanes (pcuHr): 0.22 Cycle Time (s): 120
PRC Over All Lanes (%): 4065.4 Total Delay Over All Lanes(pcuHr): 0.22

Full Input Data And Results

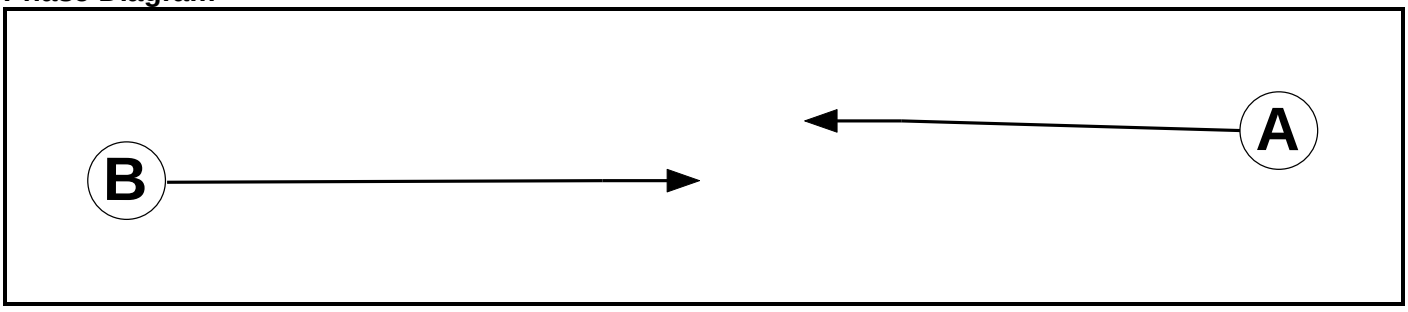
User and Project Details

Project:	
Title:	**Moorings Way shuttle working analysis**
Location:	
Additional detail:	
File name:	Moorings Way.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

Full Input Data And Results

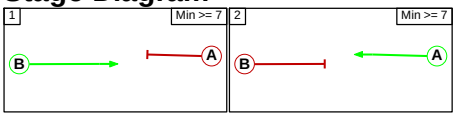
Phase Intergreens Matrix

	Starting Phase		
		A	B
Terminating Phase	A		17
	B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		17
	2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Moorings Way
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Moorings Way												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Moorings Way westbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Moorings Way eastbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	192	192
	B	131	0	131
	Tot.	131	192	323

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: Moorings Way	
1/1	192
2/1	131
3/1	131
4/1	192

Full Input Data And Results

Lane Saturation Flows

Junction: Moorings Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Moorings Way westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Moorings Way eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	148	148
	B	169	0	169
	Tot.	169	148	317

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: Moorings Way	
1/1	148
2/1	169
3/1	169
4/1	148

Lane Saturation Flows

Junction: Moorings Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Moorings Way westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Moorings Way eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	192	192
	B	131	0	131
	Tot.	131	192	323

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: Moorings Way	
1/1	192
2/1	131
3/1	131
4/1	192

Lane Saturation Flows

Junction: Moorings Way Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Moorings Way westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Moorings Way eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	148	148
	B	176	0	176
	Tot.	176	148	324

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: Moorings Way	
1/1	148
2/1	176
3/1	176
4/1	148

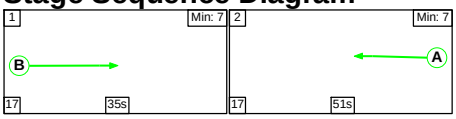
Full Input Data And Results

Lane Saturation Flows

Junction: Moorings Way								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Moorings Way westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Moorings Way eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

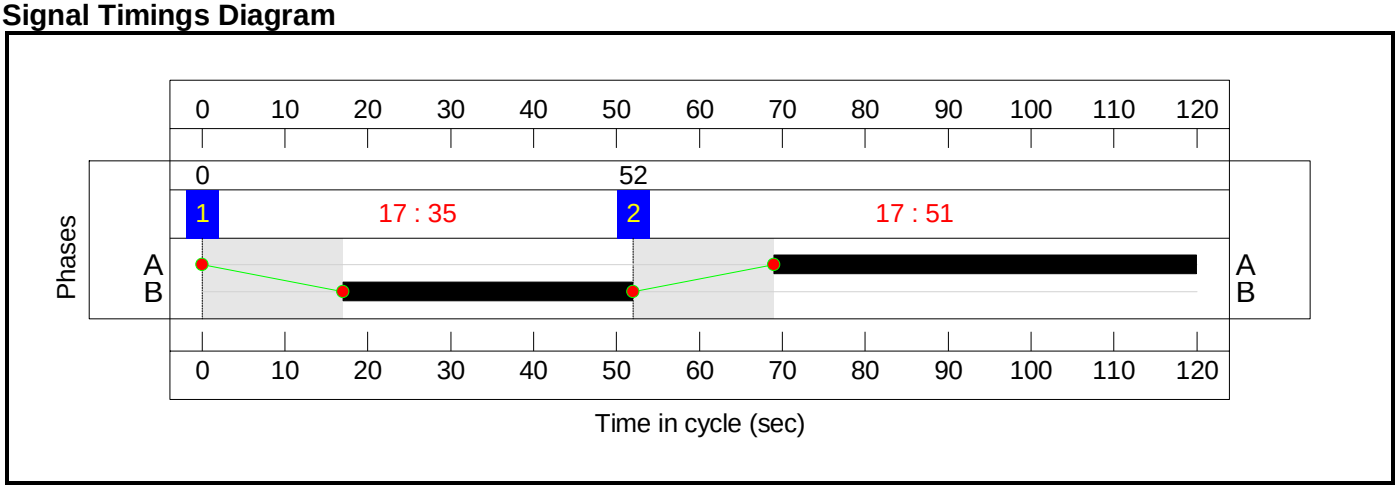
Stage Sequence Diagram



Stage Timings

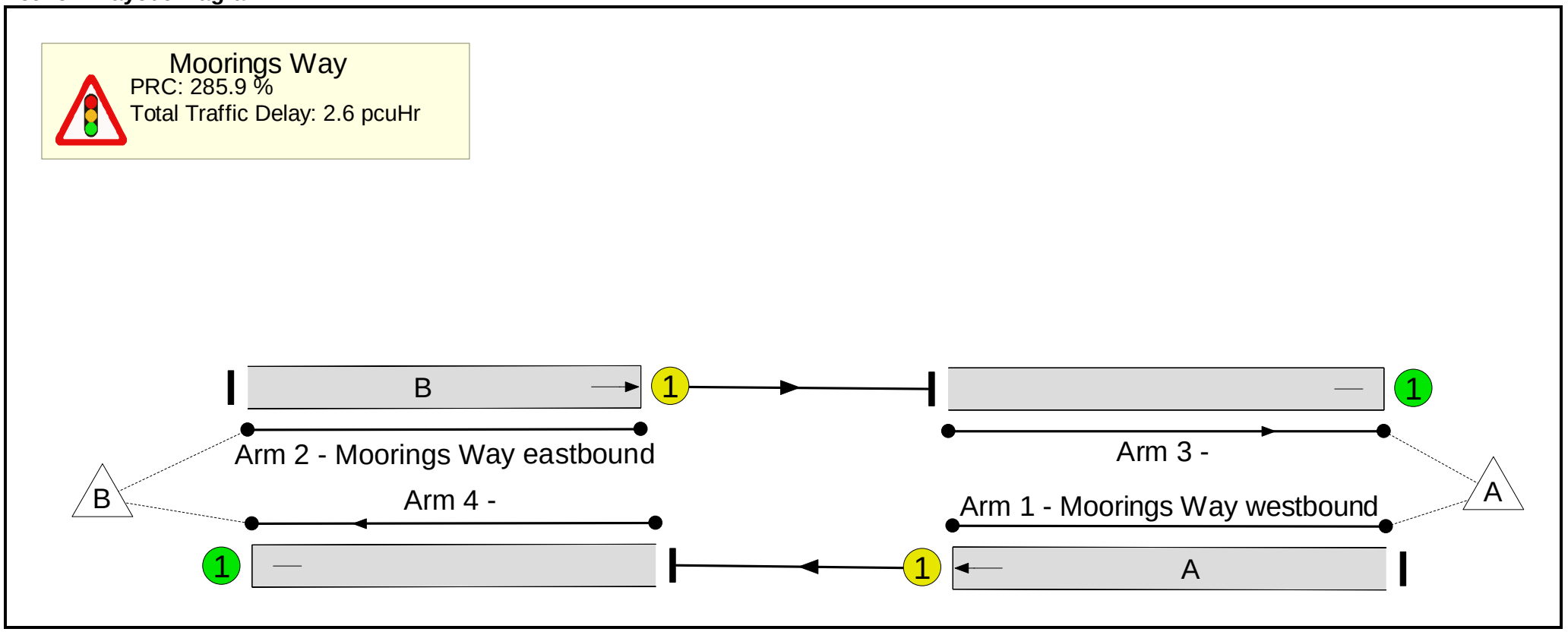
Stage	1	2
Duration	35	51
Change Point	0	52

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.3%**
Moorings Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.3%**
1/1	Moorings Way westbound Ahead	U	N/A	N/A	A		1	51	-	192	1900	823	23.3%
2/1	Moorings Way eastbound Ahead	U	N/A	N/A	B		1	35	-	131	1900	570	23.0%
3/1		U	N/A	N/A	-		-	-	-	131	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	192	Inf	Inf	0.0%

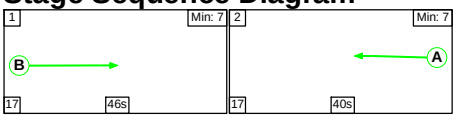
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
Moorings Way	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1	192	192	-	-	-	1.1	0.2	-	1.3	24.3	4.0	0.2	4.2
2/1	131	131	-	-	-	1.1	0.1	-	1.3	35.7	3.3	0.1	3.4
3/1	131	131	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 285.9 Total Delay for Signalled Lanes (pcuHr): 2.59 Cycle Time (s): 120
PRC Over All Lanes (%): 285.9 Total Delay Over All Lanes(pcuHr): 2.59

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

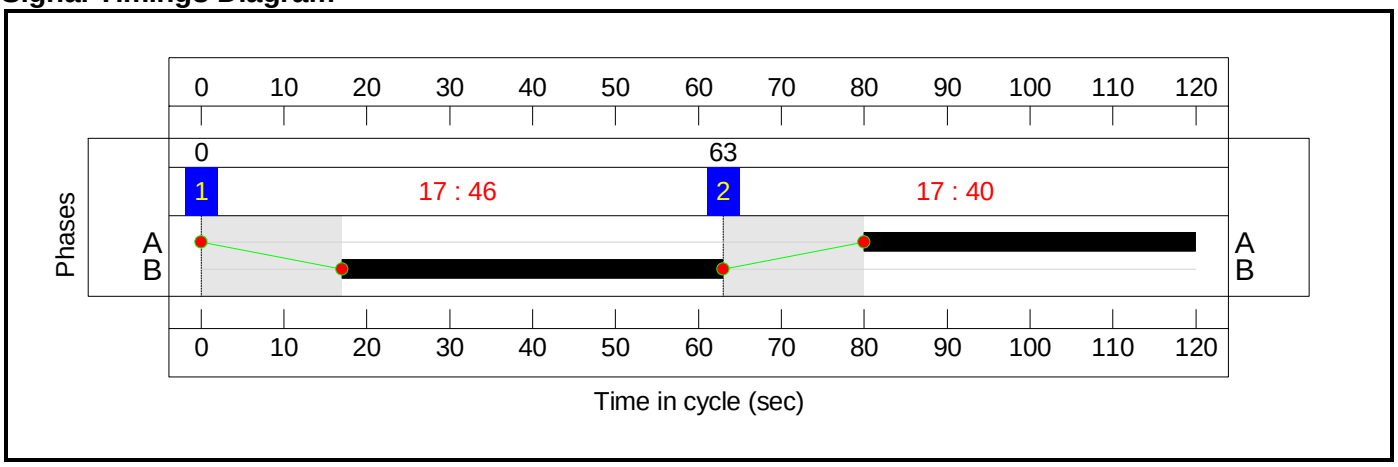
Stage Sequence Diagram



Stage Timings

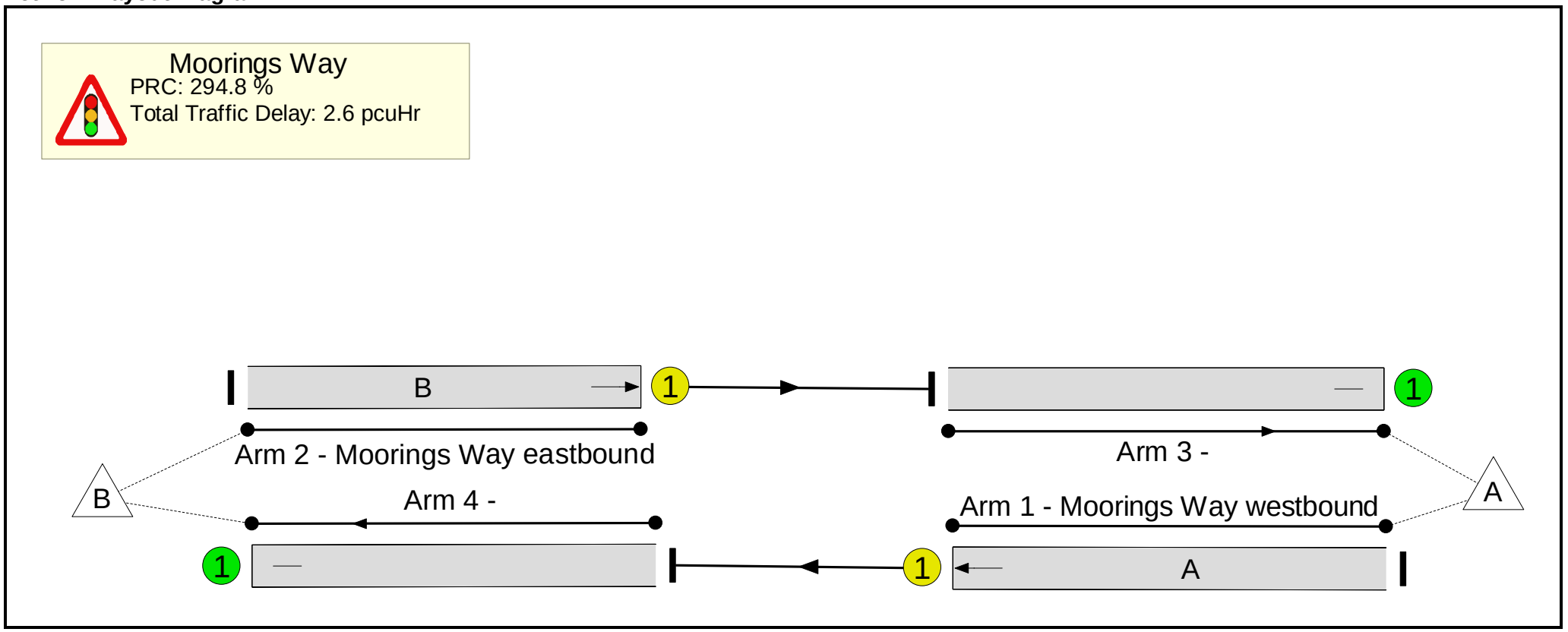
Stage	1	2
Duration	46	40
Change Point	0	63

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**22.8%**
Moorings Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**22.8%**
1/1	Moorings Way westbound Ahead	U	N/A	N/A	A		1	40	-	148	1900	649	22.8%
2/1	Moorings Way eastbound Ahead	U	N/A	N/A	B		1	46	-	169	1900	744	22.7%
3/1		U	N/A	N/A	-		-	-	-	169	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	148	Inf	Inf	0.0%

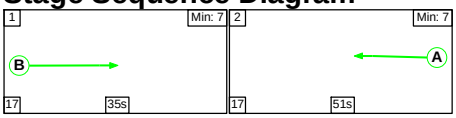
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
Moorings Way	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1	148	148	-	-	-	1.2	0.1	-	1.3	31.8	3.5	0.1	3.6
2/1	169	169	-	-	-	1.1	0.1	-	1.3	27.5	3.8	0.1	3.9
3/1	169	169	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	148	148	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 294.8 Total Delay for Signalled Lanes (pcuHr): 2.60 Cycle Time (s): 120
PRC Over All Lanes (%): 294.8 Total Delay Over All Lanes(pcuHr): 2.60

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

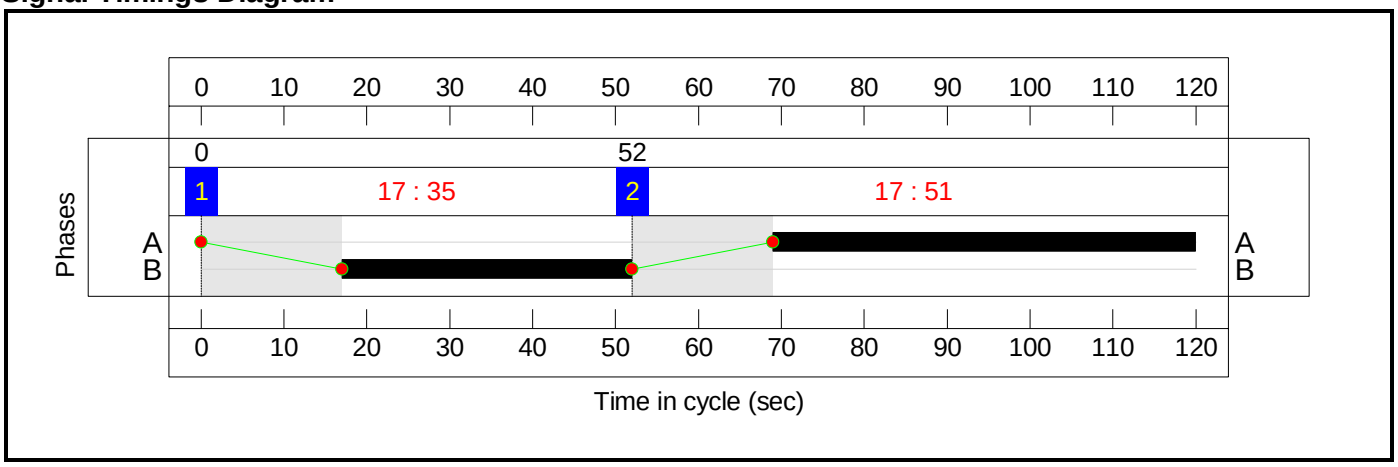
Stage Sequence Diagram



Stage Timings

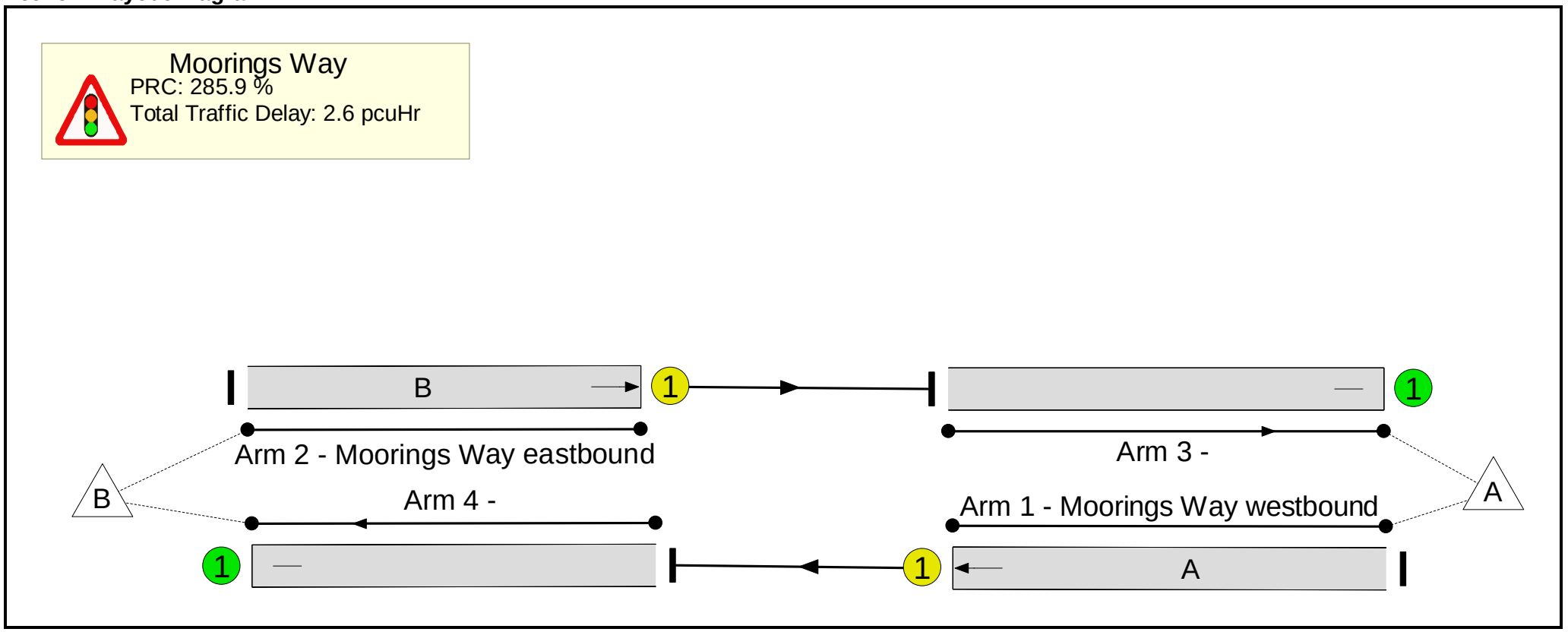
Stage	1	2
Duration	35	51
Change Point	0	52

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.3%**
Moorings Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.3%**
1/1	Moorings Way westbound Ahead	U	N/A	N/A	A		1	51	-	192	1900	823	23.3%
2/1	Moorings Way eastbound Ahead	U	N/A	N/A	B		1	35	-	131	1900	570	23.0%
3/1		U	N/A	N/A	-		-	-	-	131	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	192	Inf	Inf	0.0%

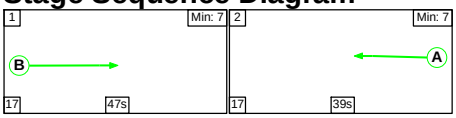
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
Moorings Way	**-**	**-**	**0**	**0**	**0**	**2.3**	**0.3**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1	192	192	-	-	-	1.1	0.2	-	1.3	24.3	4.0	0.2	4.2
2/1	131	131	-	-	-	1.1	0.1	-	1.3	35.7	3.3	0.1	3.4
3/1	131	131	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 285.9 Total Delay for Signalled Lanes (pcuHr): 2.59 Cycle Time (s): 120
PRC Over All Lanes (%): 285.9 Total Delay Over All Lanes(pcuHr): 2.59

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

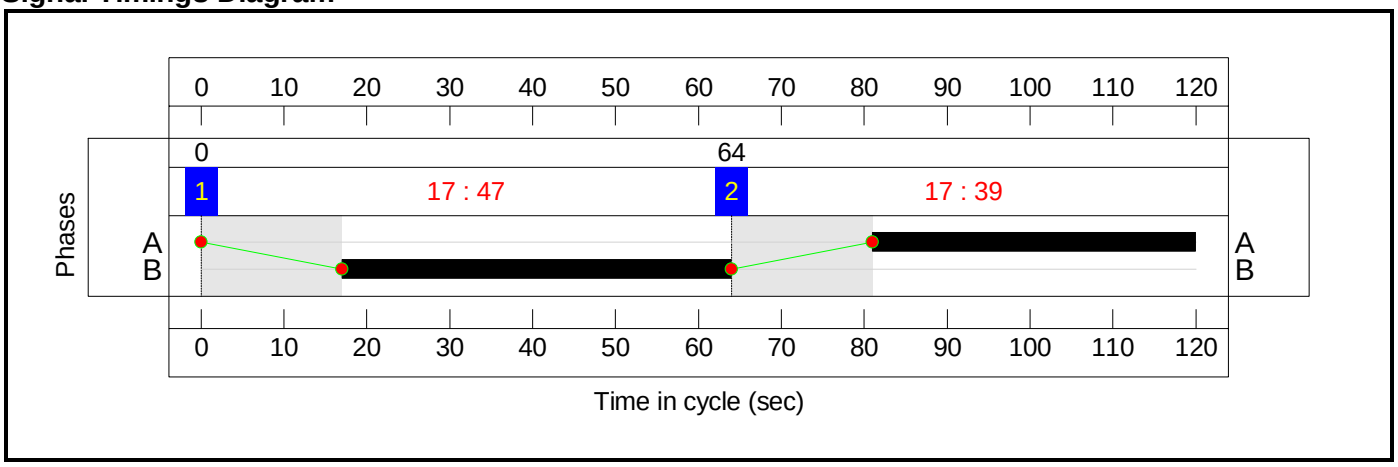
Stage Sequence Diagram



Stage Timings

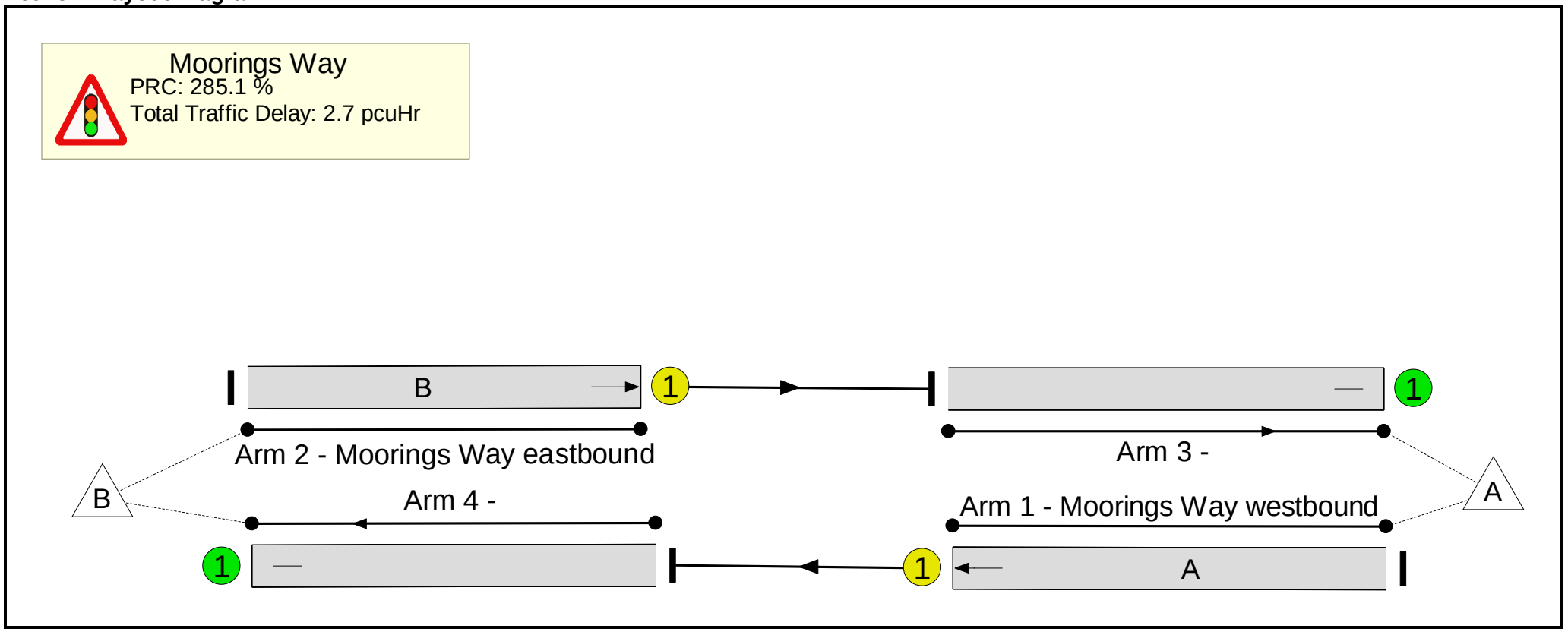
Stage	1	2
Duration	47	39
Change Point	0	64

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.4%**
Moorings Way	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**23.4%**
1/1	Moorings Way westbound Ahead	U	N/A	N/A	A		1	39	-	148	1900	633	23.4%
2/1	Moorings Way eastbound Ahead	U	N/A	N/A	B		1	47	-	176	1900	760	23.2%
3/1		U	N/A	N/A	-		-	-	-	176	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	148	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.3**	**0.0**	**2.7**	**-**	**-**	**-**	**-**
Moorings Way	**-**	**-**	**0**	**0**	**0**	**2.4**	**0.3**	**0.0**	**2.7**	**-**	**-**	**-**	**-**
1/1	148	148	-	-	-	1.2	0.2	-	1.3	32.6	3.5	0.2	3.7
2/1	176	176	-	-	-	1.2	0.2	-	1.3	26.9	3.9	0.2	4.0
3/1	176	176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	148	148	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

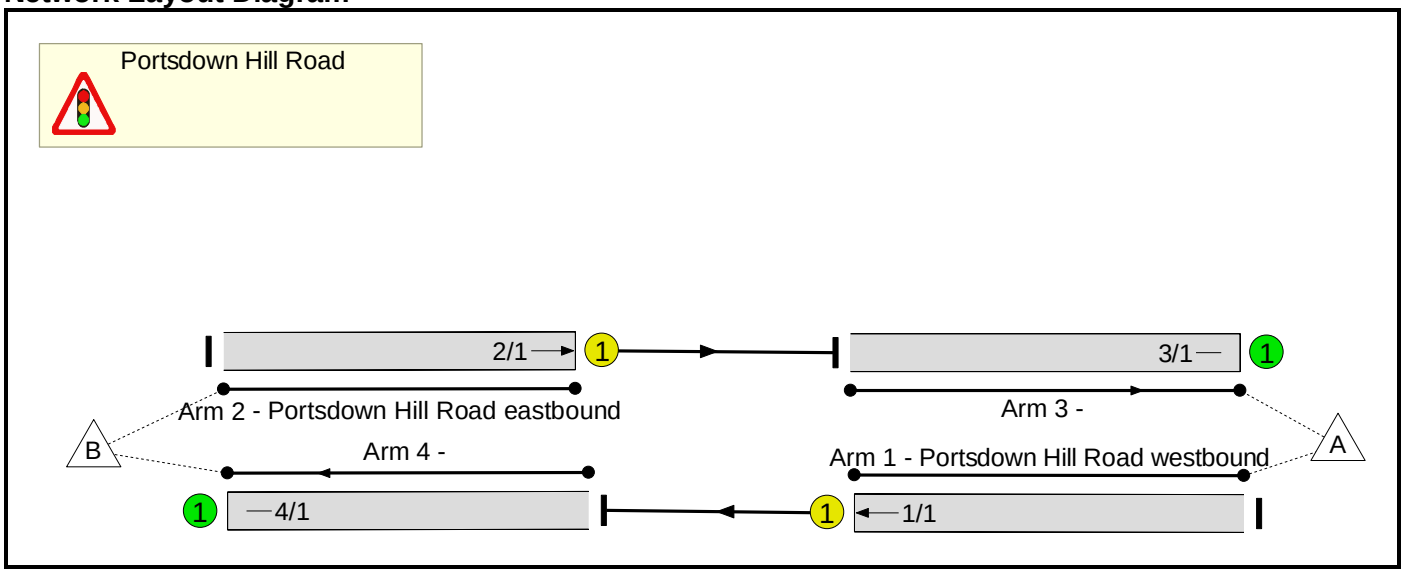
C1 PRC for Signalled Lanes (%): 285.1 Total Delay for Signalled Lanes (pcuHr): 2.66 Cycle Time (s): 120
PRC Over All Lanes (%): 285.1 Total Delay Over All Lanes(pcuHr): 2.66

Full Input Data And Results

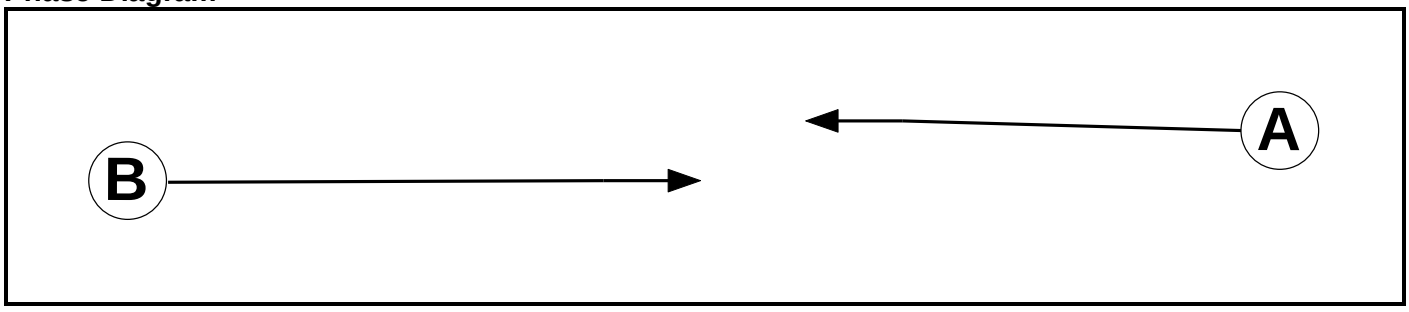
User and Project Details

Project:	
Title:	**Portsdown Hill Road shuttle working analysis**
Location:	
Additional detail:	
File name:	Portsdown Hill Road.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7

Full Input Data And Results

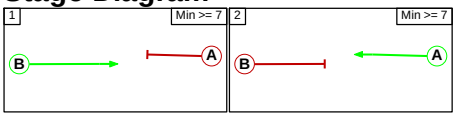
Phase Intergreens Matrix

	Starting Phase		
		A	B
Terminating Phase	A		17
	B	17	

Phases in Stage

Stage No.	Phases in Stage
1	B
2	A

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		17
	2	17	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Portsdown Hill Road
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Portsdown Hill Road												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Portsdown Hill Road westbound)	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Portsdown Hill Road eastbound)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'EMM - DS1 AM Peak'	08:00	09:00	01:00	
2: 'EMM - DS1 PM Peak'	17:00	18:00	01:00	
3: 'EML - DS2 AM Peak'	08:00	09:00	01:00	
4: 'EML - DS2 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	579	579
	B	519	0	519
	Tot.	519	579	1098

Traffic Lane Flows

Lane	Scenario 1: EMM - DS1 AM
Junction: Portsdown Hill Road	
1/1	579
2/1	519
3/1	519
4/1	579

Full Input Data And Results

Lane Saturation Flows

Junction: Portsdown Hill Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Portsdown Hill Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Portsdown Hill Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination		
		A	B	Tot.
Origin	A	0	555	555
	B	699	0	699
	Tot.	699	555	1254

Traffic Lane Flows

Lane	Scenario 2: EMM - DS1 PM
Junction: Portsdown Hill Road	
1/1	555
2/1	699
3/1	699
4/1	555

Lane Saturation Flows

Junction: Portsdown Hill Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Portsdown Hill Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Portsdown Hill Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	575	575
	B	529	0	529
	Tot.	529	575	1104

Traffic Lane Flows

Lane	Scenario 3: EML - DS2 AM
Junction: Portsdown Hill Road	
1/1	575
2/1	529
3/1	529
4/1	575

Lane Saturation Flows

Junction: Portsdown Hill Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Portsdown Hill Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Portsdown Hill Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin		Destination		
		A	B	Tot.
	A	0	557	557
	B	699	0	699
	Tot.	699	557	1256

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: EML - DS2 PM
Junction: Portsdown Hill Road	
1/1	557
2/1	699
3/1	699
4/1	557

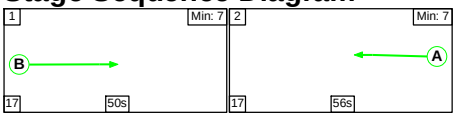
Lane Saturation Flows

Junction: Portsdown Hill Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Portsdown Hill Road westbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Portsdown Hill Road eastbound Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/1	Infinite Saturation Flow						Inf	Inf
4/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'EMM - DS1 AM' (FG1: 'EMM - DS1 AM Peak', Plan 1: 'Network Control Plan 1')

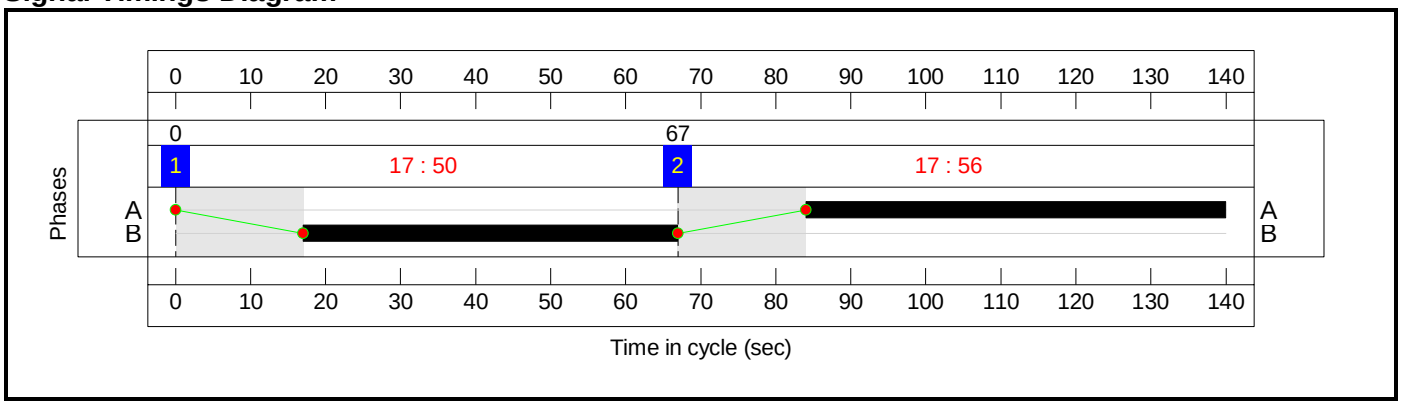
Stage Sequence Diagram



Stage Timings

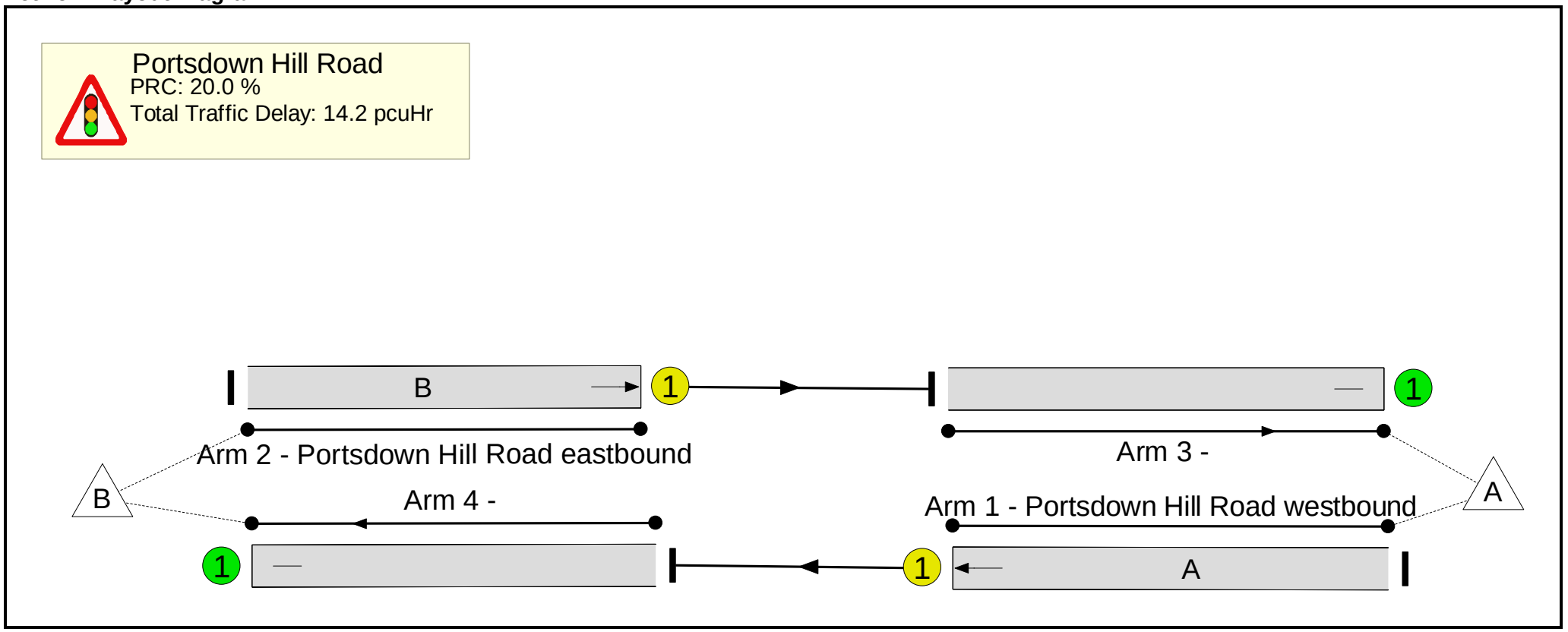
Stage	1	2
Duration	50	56
Change Point	0	67

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.0%**
Portsdown Hill Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.0%**
1/1	Portsdown Hill Road westbound Ahead	U	N/A	N/A	A		1	56	-	579	1900	774	74.8%
2/1	Portsdown Hill Road eastbound Ahead	U	N/A	N/A	B		1	50	-	519	1900	692	75.0%
3/1		U	N/A	N/A	-		-	-	-	519	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	579	Inf	Inf	0.0%

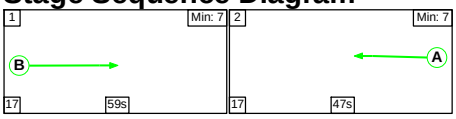
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.3**	**2.9**	**0.0**	**14.2**	**-**	**-**	**-**	**-**
Portsdown Hill Road	**-**	**-**	**0**	**0**	**0**	**11.3**	**2.9**	**0.0**	**14.2**	**-**	**-**	**-**	**-**
1/1	579	579	-	-	-	5.7	1.5	-	7.2	44.5	19.1	1.5	20.6
2/1	519	519	-	-	-	5.6	1.5	-	7.1	49.1	17.6	1.5	19.1
3/1	519	519	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	579	579	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 20.0 Total Delay for Signalled Lanes (pcuHr): 14.24 Cycle Time (s): 140
PRC Over All Lanes (%): 20.0 Total Delay Over All Lanes(pcuHr): 14.24

Full Input Data And Results

Scenario 2: 'EMM - DS1 PM' (FG2: 'EMM - DS1 PM Peak', Plan 1: 'Network Control Plan 1')

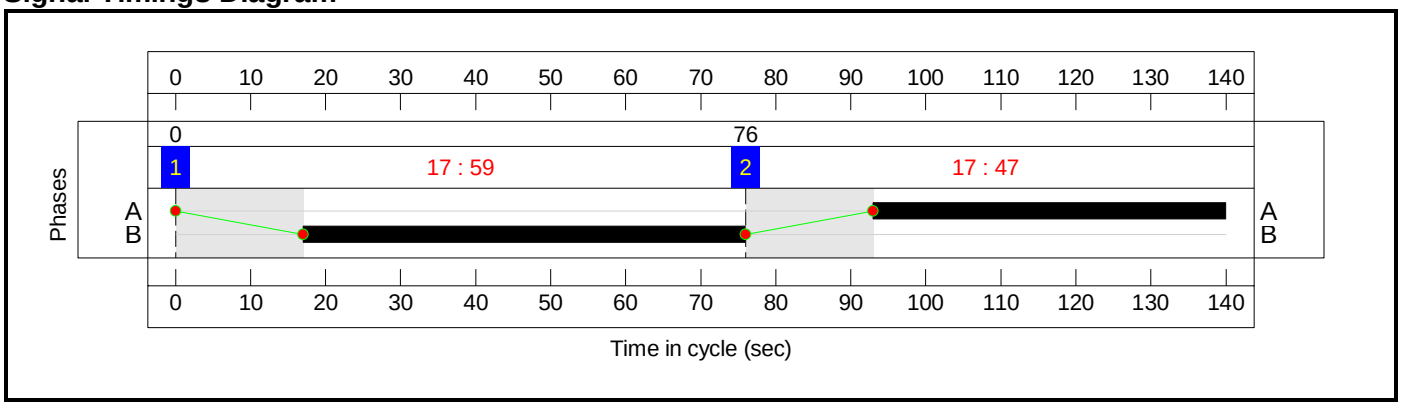
Stage Sequence Diagram



Stage Timings

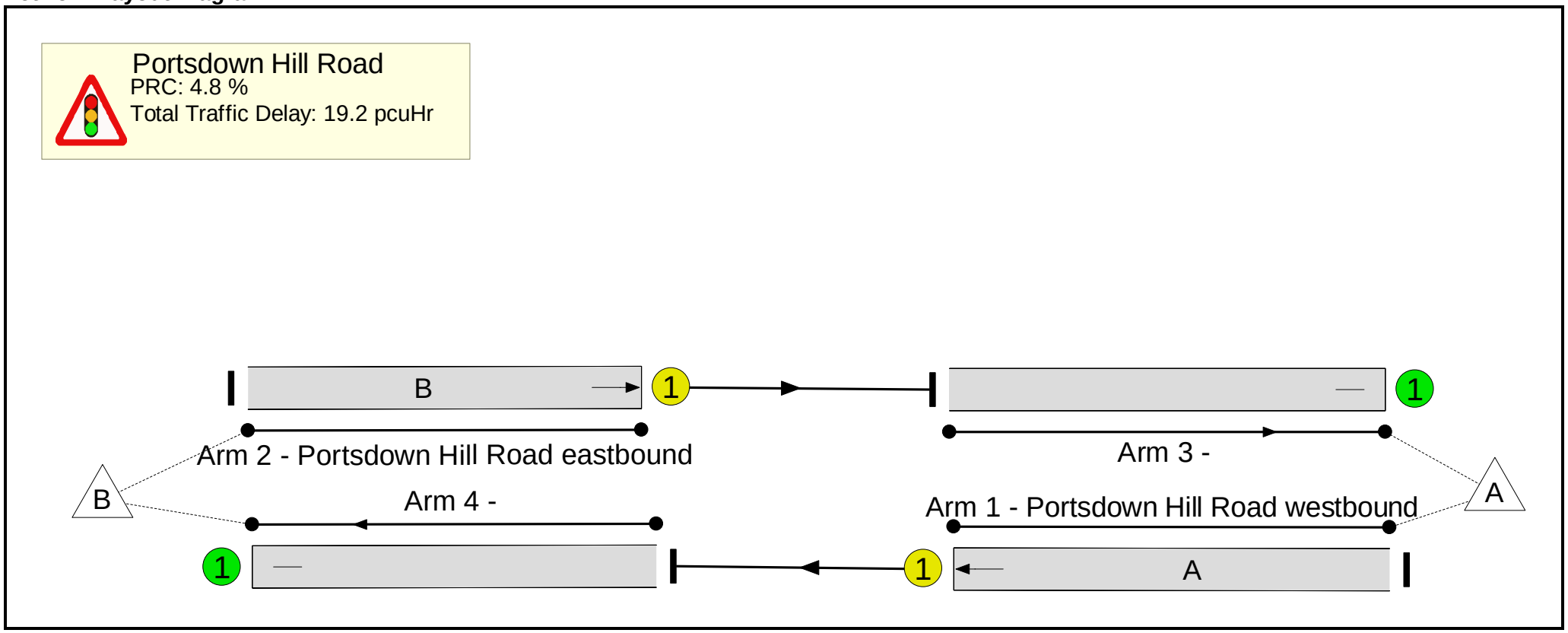
Stage	1	2
Duration	59	47
Change Point	0	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
Portsdown Hill Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
1/1	Portsdown Hill Road westbound Ahead	U	N/A	N/A	A		1	47	-	555	1900	651	85.2%
2/1	Portsdown Hill Road eastbound Ahead	U	N/A	N/A	B		1	59	-	699	1900	814	85.8%
3/1		U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	555	Inf	Inf	0.0%

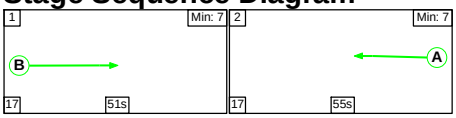
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.6**	**5.6**	**0.0**	**19.2**	**-**	**-**	**-**	**-**
Portsdown Hill Road	**-**	**-**	**0**	**0**	**0**	**13.6**	**5.6**	**0.0**	**19.2**	**-**	**-**	**-**	**-**
1/1	555	555	-	-	-	6.6	2.7	-	9.3	60.4	19.9	2.7	22.6
2/1	699	699	-	-	-	7.0	2.9	-	9.9	51.0	24.5	2.9	27.4
3/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	555	555	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 19.22 Cycle Time (s): 140
PRC Over All Lanes (%): 4.8 Total Delay Over All Lanes(pcuHr): 19.22

Full Input Data And Results

Scenario 3: 'EML - DS2 AM' (FG3: 'EML - DS2 AM Peak', Plan 1: 'Network Control Plan 1')

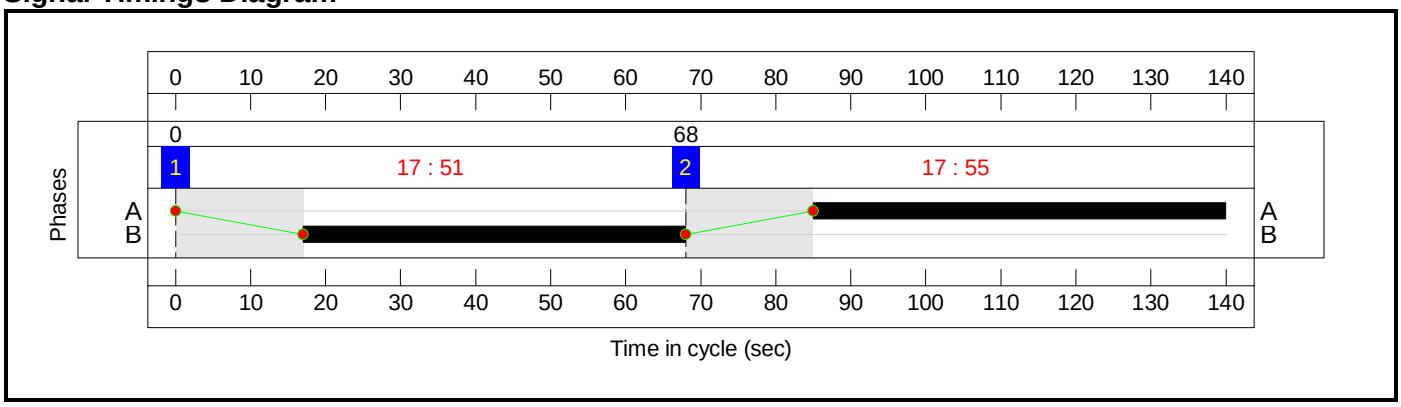
Stage Sequence Diagram



Stage Timings

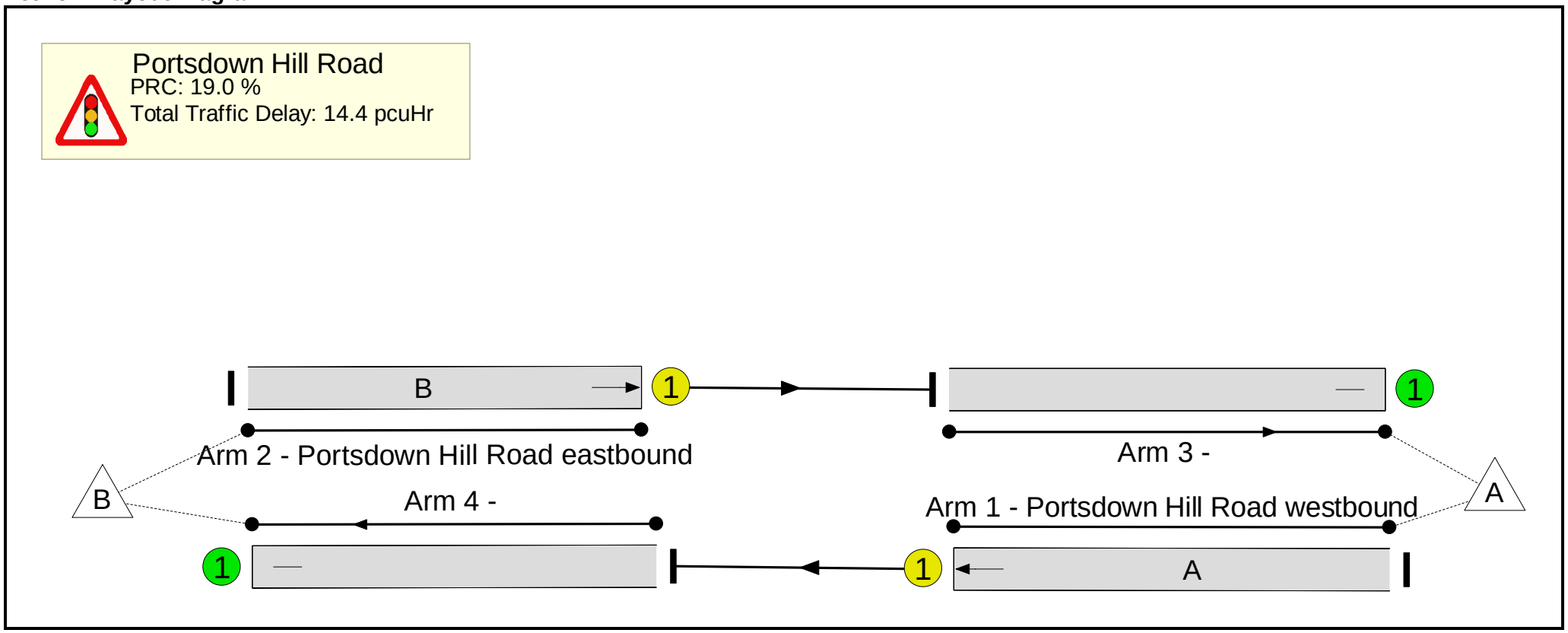
Stage	1	2
Duration	51	55
Change Point	0	68

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.7%**
Portsdown Hill Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**75.7%**
1/1	Portsdown Hill Road westbound Ahead	U	N/A	N/A	A		1	55	-	575	1900	760	75.7%
2/1	Portsdown Hill Road eastbound Ahead	U	N/A	N/A	B		1	51	-	529	1900	706	75.0%
3/1		U	N/A	N/A	-		-	-	-	529	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%

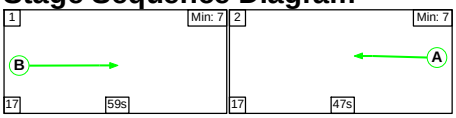
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.4**	**3.0**	**0.0**	**14.4**	**-**	**-**	**-**	**-**
Portsdown Hill Road	**-**	**-**	**0**	**0**	**0**	**11.4**	**3.0**	**0.0**	**14.4**	**-**	**-**	**-**	**-**
1/1	575	575	-	-	-	5.8	1.5	-	7.3	45.7	19.2	1.5	20.7
2/1	529	529	-	-	-	5.6	1.5	-	7.1	48.3	17.8	1.5	19.3
3/1	529	529	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 19.0 Total Delay for Signalled Lanes (pcuHr): 14.41 Cycle Time (s): 140
PRC Over All Lanes (%): 19.0 Total Delay Over All Lanes(pcuHr): 14.41

Full Input Data And Results

Scenario 4: 'EML - DS2 PM' (FG4: 'EML - DS2 PM Peak', Plan 1: 'Network Control Plan 1')

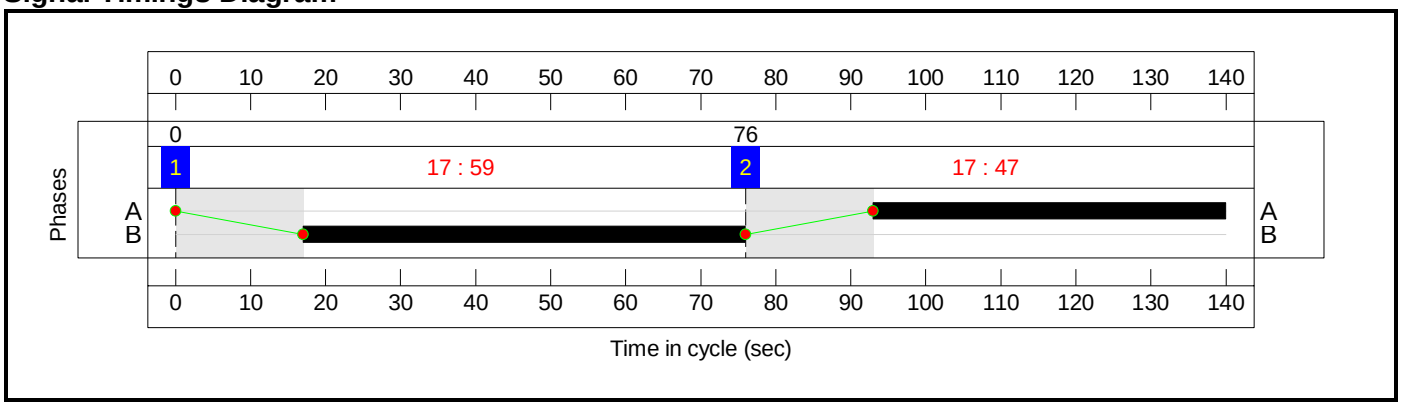
Stage Sequence Diagram



Stage Timings

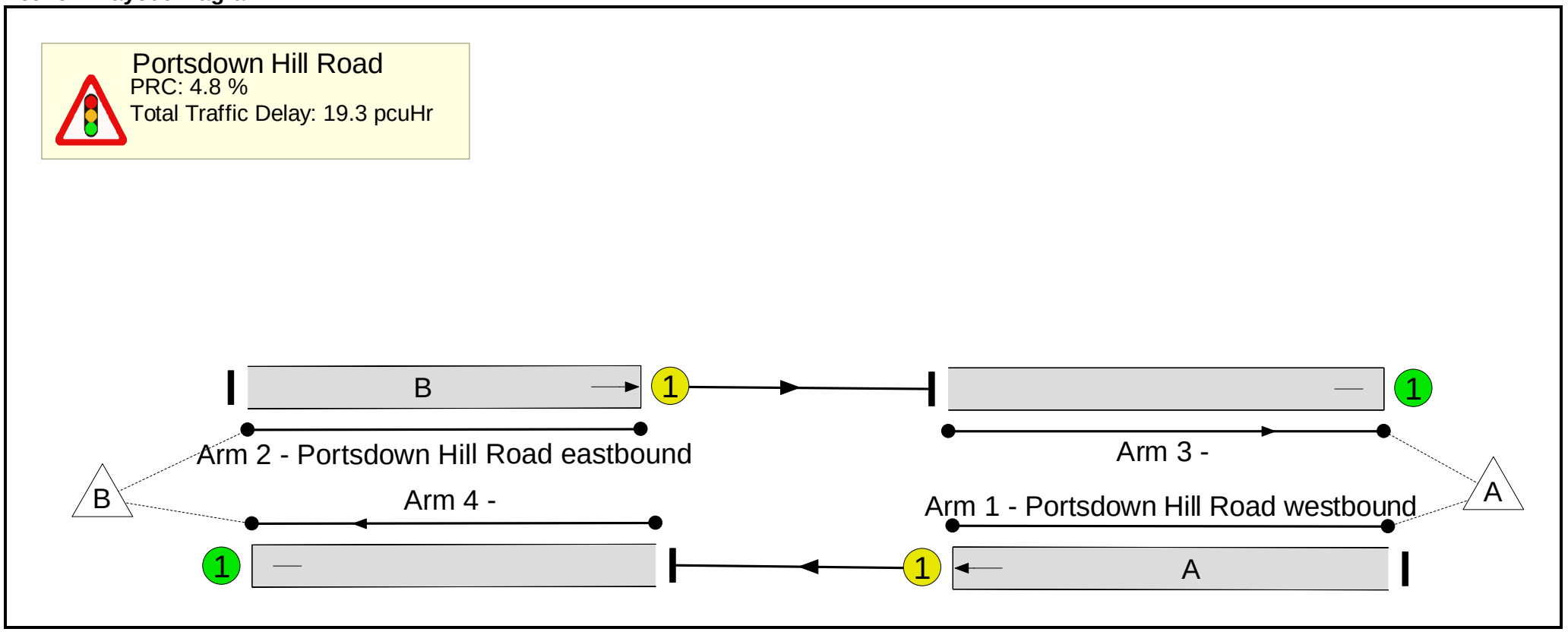
Stage	1	2
Duration	59	47
Change Point	0	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
Portsdown Hill Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**
1/1	Portsdown Hill Road westbound Ahead	U	N/A	N/A	A		1	47	-	557	1900	651	85.5%
2/1	Portsdown Hill Road eastbound Ahead	U	N/A	N/A	B		1	59	-	699	1900	814	85.8%
3/1		U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	557	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**13.6**	**5.7**	**0.0**	**19.3**	**-**	**-**	**-**	**-**
Portsdown Hill Road	**-**	**-**	**0**	**0**	**0**	**13.6**	**5.7**	**0.0**	**19.3**	**-**	**-**	**-**	**-**
1/1	557	557	-	-	-	6.6	2.8	-	9.4	60.8	20.1	2.8	22.9
2/1	699	699	-	-	-	7.0	2.9	-	9.9	51.0	24.5	2.9	27.4
3/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 19.31 Cycle Time (s): 140
PRC Over All Lanes (%): 4.8 Total Delay Over All Lanes(pcuHr): 19.31