

North East Lincolnshire Council  
**Stallingborough Interchange**  
Environmental Statement Vol 2  
Technical Appendices Part 2

EIA/248164/00

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**ARUP**

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## Appendix 7A

### Transport Assessment

North East Lincolnshire Council  
**Stallingborough Employment Site**  
Transport Assessment Addendum

ARUP-TR-01

Issue 1 | 22 December 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 248164

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## Executive Summary

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Ove Arup and Partners Ltd (Arup) has been appointed by ENGIE to prepare a Transport Assessment Addendum to consider changes to a proposed mixed-use development at Stallingborough in North East Lincolnshire.

The proposal is to redevelop the existing agricultural fields to deliver a mixed-use scheme comprising 1,737 sq m for business use, 21,455 sq m for general industry and 96,984 sq m for storage and distribution. The proposed development will be delivered in phases over the next 15 years with full completion anticipated in 2032.

Vehicular access to all phases of the development will be from the A1173 via a new four-arm roundabout on the A1173 and an improved southern arm to the existing A1173 / Kiln Lane roundabout.

In 2016, Fairhurst prepared a Transport Assessment to support a mixed-use scheme for a larger quantum of development (over four phases). Subsequently, ENGIE acknowledged that the delivery of all four phases is a long-term aspiration that is reliant on a number of factors and external market conditions. Therefore, ENGIE wish to deliver two phases of the mixed-use scheme, the consideration of this report, whilst also retaining flexibility in the scheme to deliver the remaining phases when market conditions allow.

The scope of this Transport Assessment Addendum captures the changes in the baseline conditions, sets out the development proposals and the mitigation required to accommodate the trips generated by the development on the highway network.

A review of the existing conditions in the vicinity of the site, connectivity to the site and changes to transport policy has been undertaken and considered in this report. This includes the updated Local Plan and Local Transport Plan policies, the opening of Matthew Ford Way, recent traffic count data and an additional number of committed development sites.

The highway assessment set out in the Fairhurst TA has also been revisited to establish the appropriate level of highway mitigation required to accommodate the development proposals. The junctions that were previously shown to operate beyond their theoretical capacity have been re-assessed and the junctions that previously accommodated the forecast trips from the larger scheme have not been re-assessed.

A trip generation exercise has been undertaken using the trip rates and HGV ratios previously agreed with the Highway Authorities. The forecast trips have then been distributed onto the highway network using the methodology set out in the Fairhurst TA that has previously been agreed with the Highway Authorities. The distribution and assignment of development trips at the proposed site access junctions have been calculated based on the estimated quantum of development served by each access.



Vehicular traffic count surveys undertaken in July 2017 were used to establish current traffic flow conditions on the highway network and to derive the periods for assessment.

The committed development schemes considered in the Fairhurst TA have been reconfirmed with the local highway authority and a number of additional committed schemes have been identified and considered in this study.

Future year assessments of the highway network for the year of opening (2019) and the year of completion of the final phase of development (2032) have been considered. This anticipates background traffic growth in the order of 3% to 2019 and 20% to 2032.

In addition to the changes in traffic flows, improvements to the highway network infrastructure as a result of the committed developments coming forward have also been considered in the assessment.

The assessment results for the proposed site access roundabout onto the A1173 shows that the new junction will operate within practical capacity in the future year scenarios with the inclusion of committed development flows and background traffic growth.

The assessment results for the A1173/Kiln Lane and A180/A1173 grade separated roundabouts show that highway improvements will be required at both locations to mitigate the impact of the development proposals.

The assessment results for Pyewipe Roundabout and Westgate Roundabout show that both junctions will operate above theoretical capacity in the future years with the inclusion of committed development trips and increased background traffic. This is largely due to existing and background traffic growth and these factors are already acknowledged in the Local Transport Plan which seeks to address the congestion associated with peak hour traffic at these junctions.

Considering the composition of development traffic at these junctions along with the increases in background traffic and the potential reductions in trips to be delivered through the site specific Travel Plan, it is reasonable to consider that mitigation at these locations would be disproportionate to the marginal impact on the junction's performance and therefore no mitigation is proposed at these locations.

It can be seen from National Planning Policy Framework guidance that the government requires the nature and location of the development to be taken into account when considering the opportunities for sustainable transport modes and then should only be prevented or refused on transport grounds where residual impacts on the development are considered severe. On this occasion, the development proposals meet the requirements of the test for making decisions and therefore should not be refused planning consent on transport grounds.

# 1 Introduction

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Ove Arup and Partners Ltd (Arup) has been appointed by ENGIE to prepare a Transport Assessment Addendum to consider changes to a proposed mixed-use development at Stallingborough in North East Lincolnshire.

The site is located on the north-eastern quadrant of the A180/A1173 junction and fronts both the A1173 and A180. However, access is only taken from the A1173.

The proposal is to redevelop the existing agricultural fields to deliver a mixed-use scheme comprising business use, general industry and B8 storage and distribution.

## 1.1 Background

In 2014, Arup prepared the ‘Feasibility Study for Strategic Employment Site Allocation’ for NELC (on behalf of Cofely) that initially considered the development options for the site and explored potential restrictions on progressing development.

In 2016, Fairhurst prepared a Transport Assessment (document ref.: D/I/D/114577/601 – “Fairhurst TA”) to support a mixed-use scheme to deliver the following quantum of development over four phases:

- 1,737 sq m GFA of business (use classes B1(b) and B1(c))
- 33,724 sq m GFA of general industry (use class B2); and
- 146,050 sq m GFA of storage and distribution (use class B8).

The Fairhurst TA considered the implementation of the full scheme along with a number of committed development schemes and associated highway works. The report also set out the highway mitigation that would be required to accommodate the forecast trips generated by the development proposals.

A Framework Travel Plan was also incorporated into the Fairhurst TA that sets out the opportunities and measures for encouraging mode transfer to non-car modes.

ENGIE acknowledge that the delivery of all four phases (as outlined above) is a long-term aspiration that is reliant on a number of factors and external market conditions. There is no certainty on the timescales to deliver all four phases nor of the quantum of development that is likely to be realised.

Therefore, ENGIE wish to deliver the first two phases of the mixed-use scheme, the consideration of this report, whilst also retaining flexibility in the scheme to deliver the remaining phases when market conditions allow.

## 1.2 Scope

The Fairhurst TA considers the full scheme against:

- site context

- relevant transport policy
- accessibility by sustainable transport
- highway safety; and
- impact on the highway network.

The scope of this Transport Assessment Addendum (“TA Addendum”) report captures the changes in the baseline conditions, sets out the development proposals (for Planning) and the mitigation required to accommodate the trips generated by the development on the highway network, the main points of which include:

- a review of the development mix and highlighting any changes;
- a review of the existing conditions and highlighting any changes;
- a review of trip generation and trip distribution for each proposed use;
- a review of the development proposals against relevant policy;
- a review of existing traffic patterns on the highway network;
- a review of growth factors for background traffic growth;
- a review of committed development schemes to be considered in the assessment;
- future year assessments for the year of opening and anticipated year of occupation; and
- re-assessment of the highway network to capture changes to the development mix.

Visits to the site and the surrounding area were undertaken on 3<sup>rd</sup> August 2017 to review accessibility to the site by a range of modes and to observe the operation of the highway network fronting the site.

The Framework Travel Plan contained within Section 7 of the Fairhurst TA is superseded by a standalone Framework Travel Plan (prepared by Arup) that should be read along with this document.

### 1.3 Summary

Ove Arup and Partners Ltd (Arup) has been appointed by ENGIE to prepare a Transport Assessment Addendum to consider changes to a proposed mixed-use development at Stallingborough in North East Lincolnshire.

The proposal is to redevelop the existing agricultural fields to deliver a mixed-use scheme comprising business use, general industry and B8 storage and distribution.

In 2016, Fairhurst prepared a Transport Assessment to support a mixed-use scheme for a larger quantum of development (over four phases). Subsequently, ENGIE acknowledge that the delivery of all four phases is a long-term aspiration

that is reliant on a number of factors and external market conditions. Therefore, ENGIE wish to deliver two phases of the mixed-use scheme, the consideration of this report, whilst also retaining flexibility in the scheme to deliver the remaining phases when market conditions allow.

The scope of this Transport Assessment Addendum captures the changes in the baseline conditions, sets out the development proposals and the mitigation required to accommodate the trips generated by the development on the highway network.

## 2 Changes to Baseline

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A review of the existing conditions in the vicinity of the site and the modes of travel that are available to/from the site has been undertaken. This section highlights material changes that have occurred since the writing of the Fairhurst TA.

### 2.1 Transport Policy

The Fairhurst TA refers to the comprehensive policy review included in the 'Feasibility Study for Strategic Employment Site Allocation' (2014). A summary of any additional or updated policy documents published since submission of the Fairhurst TA is provided below.

The North East Lincolnshire Local Plan was initially submitted for examination in December 2016, resulting in a number of proposed modifications being identified. NELC has since prepared an updated Local Plan, incorporating the proposed main modifications, which is currently out for consultation.

**Policy 35** relates to promoting sustainable transport. Notable updates/clarifications to this policy include:

- Proposals should seek to make appropriate provision for access to public transport and other alternative means of transport to the car; and
- Planning permission will be granted where a development that is expected to have significant transport implications delivers necessary mitigation measures to reduce residual impact on the highway network's functionality and safety.

The proposed development will only provide a quantum of parking necessary to meet the needs of the site, and the provision of cycle parking and implementation of a travel plan will further encourage use of sustainable modes. The vehicular traffic impact assessment set out in Section 6 of this report explores potential measures to mitigate against any residual traffic impact resulting from the proposed development. The proposed development is therefore considered to be in line with Policy 35 of the Local Plan.

North East Lincolnshire's Local Transport Plan (LTP) is a 15-year transport strategy setting out the vision for transport in the local area for the period up to 2032. The LTP is based on eight local transport challenges:

- to enable sustainable growth through effective transport provision;
- to reduce congestion and improve journey time reliability;
- to connect people to education and employment opportunities;
- to enable disadvantaged groups to access employment, health, social and leisure opportunities;
- improve health by encouraging and enabling active travel;
- provide safe access and reduce risk associated with transport collisions and crime;

- improve journey experience on the local transport network; and
- deliver low-carbon transport options to improve air quality and reduce emissions.

In addition to the above challenges, the A180 is highlighted within the LTP as a key route connecting North East Lincolnshire to the wider motorway network. The Plan states that the A180 currently has sufficient reserve capacity, despite localised congestion occurring at peak times. Key challenges identified for this route that will require consideration in the impact assessment for the proposed development, include:

- to maintain or improve the existing capacity and performance; and
- to address congestion associated with peak hour traffic at the Pyewipe Roundabout and Westgate Roundabout.

The transport challenges listed above have been taken into consideration when undertaking this transport assessment. Operational assessments of the Pyewipe Roundabout and Westgate Roundabout during peak times have been considered in Section 6 to understand the potential impact of the development on these key junctions, and to mitigate any residual impact as required.

## 2.2 Pedestrian / Cycle Facilities

No material changes to the pedestrian/cycle facility information presented in the Fairhurst TA.

## 2.3 Public Transport

The 5M bus service (operated by Stagecoach) continues to serve the nearby Stallingborough Industrial Park via Grimsby, Immingham and South Killingholme. At present, this service is limited and does not directly serve the site. However, NELC submitted a successful funding bid to the Department of Transport in 2016 through the *Sustainable Travel, Transition Year Revenue Competition 16/17* which will see an extension and improvements to the existing 5M service.

## 2.4 Changes to the Highway Network

With the exception of the opening of Matthew Ford Way, which was considered in the Fairhurst TA, there are no material changes to the highway network in the vicinity of the development site that requires consideration in this study.

## 2.5 Traffic Movements

The Fairhurst TA uses existing 2014 traffic survey data and applies growth factors to derive 2017 baseline traffic flows. Additionally, an Automatic Traffic Counter (ATC) was positioned on Matthew Ford Way in 2016 to record the number of vehicles utilising the newly opened link road. The results of these surveys

identified the 2014 network morning and evening peak periods to be 08:15-09:15hrs and 17:15-18:15hrs respectively.

However, in order to ensure that the baseline traffic flows used in this assessment accurately reflect the current situation, fully classified turning count surveys were undertaken across the whole study network on Tuesday 4<sup>th</sup> July 2017. Analysis of the survey results identified the morning and evening peak periods to be 07:30-08:30hrs and 16:30-17:30hrs, respectively. A copy of the traffic survey data is contained in Appendix A.

A comparison of the 2017 AM and PM peak hour total traffic movements set out in the Fairhurst TA against those obtained from the 2017 traffic surveys is presented below.

**Table 2.1: Comparison of 2017 AM and PM Peak Traffic Flows**

	Time Period	Total Traffic (Vehicles)
<b>2017 Estimated Flows (Fairhurst TA)</b>	AM Peak Hour	18,852
	PM Peak Hour	19,838
<b>2017 Surveyed Flows</b>	AM Peak Hour	17,123
	PM Peak Hour	18,496

The total traffic flows summarised in Table 2.1 suggest that the growth factors applied to the 2014 survey data in the Fairhurst TA have resulted in an overestimation of 2017 traffic flows across the study area – a difference of 1,729 in the AM peak hour and 1,342 in the PM peak hour.

## 2.6 Committed Development

A number of committed developments are considered in the Fairhurst TA and these are:

- Able UK;
- C-GEN Power Project;
- Paragon Car Import / Transportation;
- Great Coates Industrial Park; and
- Kings Road, Immingham.

These committed developments are due to become operational in the medium term and will therefore still require consideration in this assessment.

The Fairhurst TA highlighted that as part of the Able UK development, it is proposed that the main approaches to the A1173 / Kiln Lane roundabout are widened. For the purposes of this assessment, it is assumed that these highway improvements will be implemented prior to opening of the proposed development.

In addition to the committed schemes considered in the Fairhurst TA, the local highway authority has also identified the following committed schemes for consideration in the TA Addendum:

- Renewables Centre, Moody Lane (Ref. DM/1032/14/OUT);
- Queens Road, Immingham (Ref. DM/0802/16/FUL; DM/0246/16/FUL; DM/0402/15/FUL); and
- Stallingborough Rd, Healing (Ref. DM/0378/15/OUT).

The transport documentation submitted in support of the planning applications for the above committed developments has been considered. A review of the documents found that that no vehicle trips are shown to enter the junctions within our study network. As such, none of the above committed developments have been included in the traffic impact assessment.

## 2.7 Summary

A review of the existing conditions in the vicinity of the site, connectivity to the site and changes to transport policy has been undertaken and considered in this report.

This includes the updated Local Plan relating to the promotion of sustainable travel, Local Transport Plan policies, the opening of Matthew Ford Way, recent traffic count data and an additional number of committed development sites.



## 3 Changes to Development Proposals

This section of the report confirms the proposed development quantum, the relevant car parking standards and points of access into the site by all modes.

### 3.1 Proposed Development

The proposal is for a mixed-use employment site with Detailed Planning consent being sought for the site access junction and Outline consent being sought for the remainder of the scheme. The proposed uses and quantum of development are summarised in Table 3.1 and a plan showing the site extent is contained in Appendix B.

**Table 3.1: Proposed Development Mix**

Proposed Use	Quantum
Business – B1(b) and B1(c)	1,737 sq m
General Industry – B2	21,455 sq m
Storage and Distribution – B8	96,984 sq m

The quantum of development summarised in Table 3.1 is significantly less than that assessed in the Fairhurst TA. On this basis, the highway assessment set out in the Fairhurst TA has also been revisited to establish the appropriate level of highway mitigation required to accommodate the development proposals. This is discussed further in subsequent sections of this report.

The proposed development will be delivered in phases over the next 15 years (anticipated completion of final phase in 2032). Table 3.2 summarises the quantum of development being delivered for each phase and the anticipated construction/delivery timescales.

**Table 3.2: Anticipated Delivery Timescales (Phasing)**

Phase	Uses	Anticipated Delivery Timescales
Phase 1A	B1 – 1,737 sq m (1 unit) B2 – 9,195 sq m (3 units) B8 – 15,421 sq m (2 units)	2018 - 2022
Phase 1B	B2 – 6,130 sq m (2 units) B8 – 36,973 sq m (4 units)	2020 - 2024
Phase 2	B2 – 6,130 sq m (2 units) B8 – 44,590 sq m (6 units)	2023 - 2032

## 3.2 Proposed Site Access

Vehicular access to all phases of the development will be from the A1173 via the following junctions:

- A new four-arm roundabout on the A1173 between the A180 Stallingborough Interchange and the A1173 / Kiln Lane roundabout. The northern arm of the roundabout will provide access to part of Phase 1A, while the southern arm will provide access to the remainder of Phase 1A, the entirety of Phase 1B and part of Phase 2.
- An improved approach to the southern arm of the existing A1173 / Kiln Lane roundabout will provide access to the remainder of Phase 2.

A summary of the access proposals by phase and development quantum is provided in Table .

**Table 3.3: Access Proposals**

Access Junction	Phasing	Land Use Class	Development Quantum (sq m)
New A1173 Roundabout (North Access)	Phase 1A	B2	3,065
		B8	15,421
New A1173 Roundabout (South Access)	Phase 1A	B1	1,737
		B2	6,130
	Phase 1B	B2	6,130
		B8	36,973
	Phase 2	B2	6,130
		B8	18,393
Improved A1173 / Kiln Lane Roundabout	Phase 2	B8	26,197

## 3.3 Public Transport Improvements

A bus layby and footways between the site and the layby will be provided as part of the site access junction improvements. This provides the infrastructure for a future bus stop and potential to extend bus services to the site. The location of the bus stop and footway arrangements are shown on ENGIE drawing 000-01 contained in Appendix L.

## 3.4 Car Parking

Car parking will be provided in accordance with NELC parking standards and will comply with Policy 37 of the NELC Local Plan, which states:

*“Where private and/or public on-site parking for public use is to be provided at least 5% of parking bays, should be designed, set out and reserved for people with*

*mobility impairments. Such parking bays should be located as close to the main access to the building as possible.”*

The policy also states:

*“Where 100 or more parking places are to be provided to serve a commercial development, a minimum of three charging points should be provided for electric vehicles”.*

### 3.5 Summary

The proposal is for a mixed-use employment site with Detailed Planning consent being sought for the site access junction and Outline consent being sought for the remainder of the scheme which includes 1,737 sq m for business use, 21,455 sq m for general industry and 96,984 sq m for storage and distribution. The proposed development will be delivered in phases over the next 15 years with full completion anticipated in 2032.

This quantum of development is significantly less than that assessed in the Fairhurst TA. On this basis, the highway assessment set out in the Fairhurst TA has also been revisited to establish the appropriate level of highway mitigation required to accommodate the development proposals.

Vehicular access to all phases of the development will be from the A1173 via a new four-arm roundabout on the A1173 and an improved southern arm to the existing A1173 / Kiln Lane roundabout.

## 4 Trip Generation and Distribution

The forecast multi-modal trip generation for the proposed uses and the distribution of the forecast vehicular trips onto the highway network is reported in this section.

### 4.1 Trip Generation

The Fairhurst TA used the industry-standard database (TRICS 2015 v7.3) to derive trip generation rates for the proposed development. Separate trip rates were derived for each land use class (B1, B2 and B8) for both the AM and PM peak periods. Multi-modal surveys were also used to determine the proportion of HGVs generated by each development class.

The trip rates and HGV ratios (from the Fairhurst TA) have previously been approved by the Highway Authorities, and have therefore been used in the following assessment. The forecast trip generation for the revised quantum of development is presented in Table 4.1.

**Table 4.1: Proposed Development Vehicle Trip Generation**

Vehicle Class	Peak Hour	Business Park (B1)		Industrial Estate (B1/B2/B8)		Warehousing (B8)		Combined	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Total Vehicles	AM	27	4	85	42	86	56	<b>199</b>	<b>102</b>
	PM	4	23	41	77	82	115	<b>127</b>	<b>216</b>
Of which HGVs	AM	0	0	3	3	19	36	<b>22</b>	<b>38</b>
	PM	0	0	2	3	51	29	<b>53</b>	<b>32</b>
PCUs	AM	27	4	89	45	111	102	<b>227</b>	<b>152</b>
	PM	4	23	44	81	148	153	<b>196</b>	<b>257</b>

The trip generation calculations predict a total of 301 and 343 two-way vehicle trips generated by the development in the AM and PM peak hours, respectively. Of these vehicle trips, 60 and 85 two-way trips would be by HGVs.

In terms of PCUs, the proposed development is anticipated to generate a total of 379 and 453 two-way PCU movements during the AM and PM peak hours, respectively.

The multi-modal trip rates used in the Fairhurst TA have also been used to forecast the sustainable trip generation for the proposed development. The results of the assessment are presented in Table 4.2.

**Table 4.2: Proposed Development Sustainable Trip Generation**

Vehicle Class	Peak Hour	Business Park (B1)		Industrial Estate (B1/B2/B8)		Warehousing (B8)		Combined	
		Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Pedestrians	AM	2	1	7	3	4	0	<b>13</b>	<b>4</b>
	PM	0	2	2	4	1	3	<b>3</b>	<b>9</b>
Cyclists	AM	0	0	5	1	1	0	<b>6</b>	<b>1</b>
	PM	0	0	1	3	0	1	<b>1</b>	<b>4</b>
Public Transport Users	AM	3	0	1	0	3	0	<b>7</b>	<b>0</b>
	PM	0	2	0	2	0	2	<b>0</b>	<b>6</b>

The sustainable trip generation calculations predict a total of 31 and 23 two-way person trips by sustainable modes in the AM and PM peak hours, respectively.

## 4.2 Trip Distribution

In the Fairhurst TA, development traffic was distributed and assigned across the study area on the following basis:

- HGV and light vehicle distributions taken from the A18 / A180 Link Road Business Case; and
- All trips to the south routed via the new link road (approximately 10%).

This methodology has previously been agreed with NELC and Highways England. The distribution across the wider study area (excluding site access junctions) detailed in the Fairhurst TA is therefore considered appropriate for this assessment.

The distribution and assignment of development trips between the three proposed site accesses has been calculated based on the estimated quantum of development served by each access. The predicted trip generation by access is summarised in Table 4.3.

**Table 4.3: Vehicle Trip Generation by Access**

Vehicle Class	Peak Hour	Existing Site Access (A1173/ Kiln Ln)		Proposed A1173 Access (North Arm)		Proposed A1173 Access (South Arm)	
		Arr	Dep	Arr	Dep	Arr	Dep
Total Vehicles	AM	23	15	26	15	149	72
	PM	22	31	19	29	85	155
Of which HGVs	AM	5	10	3	6	13	23
	PM	14	8	8	5	31	19
PCUs	AM	30	28	30	23	167	102
	PM	40	41	30	36	126	180

Traffic flow diagrams presenting the agreed car and HGV distributions are contained in Appendix C. The assignment of forecast trips using the agreed distributions are also contained in Appendix C.

### 4.3 Summary

A trip generation exercise has been undertaken using the trip rates and HGV ratios previously agreed with the Highway Authorities. Applying the agreed rates to the revised development quantum forecasts a total of 301 and 343 two-way trips generated in the AM and PM peak hours, respectively. Of these vehicle trips, 60 and 85 two-way trips would be by HGVs.

The forecast trips have then been distributed onto the highway network using the methodology set out in the Fairhurst TA that has previously been agreed with the Highway Authorities. The distribution and assignment of development trips at the proposed site access junctions have been calculated based on the estimated quantum of development served by each access.

## 5 Assessment Requirements

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This section of the report outlines the requirements for the vehicular traffic assessment including the flow conditions, the committed developments considered in the assessment, the assessment periods and the future assessment years.

### 5.1 Study Network

The Fairhurst TA considered a study area that comprised 10 junctions which were assessed against all four phases of the scheme. Figure 1, contained in Appendix D, shows the location of the 10 junctions.

The proposed scheme provides a significantly reduced quantum of development (see Section 4.1 of this report) and therefore the 10 junctions within the study area have been considered against the forecast trips generated by the reduced development quantum.

The results of the Fairhurst TA show that some of the junctions within the study area are likely to continue performing within theoretical capacity, i.e. accommodate the forecast trip rates following development, and therefore it is reasonable to assume that those junctions would also accommodate the trips generated by the development proposals. Table 5.1 lists the junctions assessed within the Fairhurst TA and provides commentary against each junction highlighting if it is likely to continue operating within theoretical capacity with the forecast development flows or if a re-assessment is required.

The junctions being re-assessed as part of this study are also shown on Figure 1, contained in Appendix D.

**Table 5.1: Commentary on Fairhurst Assessment Results**

Junction	Comment
A1173 Kings Road / Pelham Road roundabout	The results in the Fairhurst TA show that these junctions are likely to operate within theoretical capacity following development of the larger scheme (all four phases). Therefore it is likely that these junctions will also continue to perform within capacity with the forecast development flows and therefore have not been assessed further.
A1173 / Kings Road roundabout	
Kiln Lane / North Moss Lane / Trondheim Road roundabout	
Great Coates Interchange roundabout	
Queens Road / Laporte Road / Immingham Dock priority junction	
A1173 / Kiln Lane roundabout	These junctions are shown to operate above theoretical capacity following development of the larger scheme (all four phases) and require highway improvements. In order to consider the impact of the proposed scheme (reduced development quantum), <b>these junctions will be re-assessed.</b>
A180 / A1173 roundabout (grade separated)	
“Pyewipe” roundabout - A180 / Estate Road No. 2 / Estate Road No. 1 / Gilbey Road	
“Westgate” roundabout - A180 / Pyewipe Road / Birchin Way / Moody Lane	
New site access / A1173 roundabout	Two new site access junctions are proposed as part of the scheme – (1) via the A1173 / Kiln Lane roundabout; and (2) a new junction on the A1173. <b>These junctions will be re-assessed</b> considering the latest site layout proposal.

## 5.2 Existing Traffic Conditions

As detailed in Section 2.5, fully classified turning counts were undertaken at the four existing junctions being assessed as part of this study on Tuesday 4<sup>th</sup> July 2017. The four existing junctions being assessed are identified in Table 5.1.

Additionally, an ATC was positioned on the A1173, between the Site Access / A1173 roundabout and the A180 / A1173 roundabout, to record the number of vehicles passing along the site frontage over a seven-day period.

Based on the traffic count data, the network peak hours have been derived as between 07:30-08:30hrs for the AM Peak and 16:30-17:30hrs for the PM Peak. These peak periods differ from those in the Fairhurst TA, which were identified as 8:15-09:15hrs and 17:15-18:15hrs respectively.

Diagrams showing the 2017 base traffic flows are contained in Appendix E.

## 5.3 Committed Developments

As detailed in Section 2.6, a number of committed developments have been considered as part of this assessment. The following developments are expected to open before or by 2020, and have therefore been included in the 2019 scenarios. These include:



- Able UK;
- C-GEN Power Project; and
- Paragon Car Import / Transportation.

Information pertaining to the trip generation and distribution of these committed developments has been obtained from the transport documentation submitted with the planning applications for each site. The resultant traffic flows for the committed developments with an opening year of 2019 are contained in Appendix F.

The remaining committed developments are expected to open in 2029 and have therefore been included in the 2032 scenarios. These comprise:

- Great Coates Industrial Park; and
- Kings Road, Immingham.

The traffic flows for the committed developments to be included in the 2032 future year assessments are contained in Appendix F.

## 5.4 Future Year Assessments

Future year assessments of the highway network for the year of opening (2019) and the year of completion of the final phase of development (2032) have been considered. Therefore, based on the future year assessments, the following scenarios have been assessed:

- 2017 Base – this includes surveyed flows for the year of application.
- 2019 Do Minimum – this includes the background traffic growth to 2019 and trips generated by the committed developments due for completion by 2019.
- 2019 Do Something – this includes background traffic growth to 2019, trips generated by the committed developments and development trips associated with the proposed development.
- 2032 Do Minimum – this includes the background traffic growth to 2032 and trips generated by the committed developments.
- 2032 Do Something – this includes background traffic growth to 2032, trips generated by the committed developments and development trips associated with the proposed development.

In addition to the changes in traffic flows, improvements to the highway network infrastructure as a result of the committed developments coming forward have also been considered in the assessment (See Section 2.6).

## 5.5 Growth Factors

In order to account for increases in background traffic, NTM traffic growth factors have been applied to the highway network for the future year assessments.

NTM traffic growth factors have been extracted from TEMPro to consider the anticipated growth in background traffic for future years. Growth factors have been derived for the North East Lincolnshire Local Authority area. Table 5.2 summarises the NTM growth factors for the future years using 2017 as the base year for both the AM and PM peak hours.

**Table 5.2: NTM Growth Factors**

Peak Hour	2019	2032
AM	1.0313	1.1987
PM	1.0300	1.1927

*Growth factors shown are for North East Lincolnshire Local Authority area using NTM AF15 Dataset.*

## 5.6 Summary

The Fairhurst TA considered a study area that comprised 10 junctions which were assessed against the larger four-phase development scheme. The proposed scheme provides a significantly reduced quantum of development (over three phases) and therefore this study focuses on the junctions that were previously shown to operate beyond their theoretical capacity. Junctions that previously accommodated the forecast trips from the larger scheme have not been re-assessed.

Vehicular traffic count surveys undertaken in July 2017 are used to establish current traffic flow conditions on the highway network and to derive the periods for assessment.

The committed development schemes considered in the Fairhurst TA have been reconfirmed with the local highway authority and a number of additional committed schemes have been identified and considered in this study.

Future year assessments of the highway network for the year of opening (2019) and the year of completion of the final phase of development (2032) have been considered. NTM traffic growth factors have been extracted from TEMPro to consider the anticipated growth in background traffic and these have been calculated to be in the order of 3% to 2019 and 20% to 2032.

In addition to the changes in traffic flows, improvements to the highway network infrastructure as a result of the committed developments coming forward have also been considered in the assessment.

## 6 Vehicular Impact Assessment

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This section of the report summarises the modelling results of the junctions that have been re-assessed (as set out in Section 5.1). Highway mitigation works required to accommodate the vehicular trips generated by the development proposals are also set out in this section.

As all the junctions being assessed are priority-controlled roundabouts, the assessments have been undertaken in ‘Junctions 9’ modelling software, which calculates the Ratio to Flow Capacity (RFC) and average queues experienced by all vehicles on each arm of a junction. The RFC is a key indicator of the likely performance of a turning movement at a junction under a given set of traffic flows. It is generally accepted that a junction approach with an RFC value of less than 0.85 is operating within its practical capacity. A modelled RFC of greater than 1.0 indicates that an approach is operating in excess of theoretical capacity.

Another indicator is the Level of Service (LOS) outputs based on the ‘average delay per arriving vehicle’. The LOS system uses the letters A through to F as defined as follows:

- A: Free flow
- B: Reasonably free flow
- C: Stable flow
- D: Approaching unstable flow
- E: Unstable flow
- F: Forced or breakdown flow

The LOS indicator is generally shown in the assessment output files appended to the report and particularly discussed in Section 6.2.

It should be noted that a junction model operating beyond its theoretical capacity is considered to be sensitive to additional traffic and therefore a small increase in RFC value could significantly affect the end queue results.

### 6.1 A1173 / Kiln Lane Roundabout

The A1173 / Kiln Lane junction is a four-arm roundabout with the southern arm infrequently used to access arable farm land. The assessment results for this junction are summarised in Table 6.1 and the model output files are contained in Appendix G.

**Table 6.1: A1173 / Kiln Lane Roundabout Assessment Results**

Junction Layout	Assessment Scenario	RFC Value (End Queue in PCUs)	
		AM Peak	PM Peak
Existing	2017 Base	0.88 (7.6)	0.76 (3.4)
	2019 Do Minimum	1.00 (31.9)	0.89 (8.4)
	2019 Do Something	1.04 (55.1)	0.93 (12.2)
	2032 Do Minimum	1.23 (212.8)	1.13 (102.8)
	2032 Do Something	1.27 (269.2)	1.18 (132.1)
Committed Improvement Scheme	2019 Do Minimum	1.00 (31.9)	0.89 (8.4)
	2032 Do Minimum	1.23 (212.9)	1.13 (102.9)
Proposed Mitigation	2019 Do Something	0.89 (8.6)	0.83 (5.2)
	2032 Do Something	1.08 (94.0)	1.04 (49.8)

The results of the assessment of the existing roundabout shows the junction to operate within practical capacity in 2017 however achieved theoretical capacity by 2019 with the addition of committed development flows and increase in background traffic. By 2032, the capacity of the junction surpassed theoretical capacity during both peak hours with the addition of committed development flows and background traffic flows (see 2032 Do Minimum scenario).

A committed improvement scheme seeks to widen the eastern approach arm into the junction to provide a longer flared approach whilst maintaining a two-lane entry. However assessing the committed improvement scheme with the committed development flows and the forecast increase in background traffic shows the junction to operate above theoretical capacity in 2019 and 2032.

The addition of development traffic increases the RFC values and adds to the end queue. In order to mitigate the impact of the proposed development at this location, the proposal is to provide:

- an improved southern arm onto the roundabout and formalise the site access arrangement;
- marginally widen the A1173 northern arm into the roundabout to increase the flare length on the approach whilst maintaining a two-lane entry; and
- marginally widen the A1173 western arm into the roundabout to increase the flare length on the approach whilst maintaining a two-lane entry.

The assessment results for the proposed junction improvements (considering the future year scenarios) shows the impact of the development proposals are mitigated. The proposed junction improvements are shown on drawing 248164-SK-01 contained in Appendix H.

## 6.2 A180 / A1173 Grade Separated Roundabout

The A180 / A1173 grade separated junction is a four-arm roundabout that forms part of Highways England's Strategic Road Network. Traffic survey counts at the

junction show a number of the approach arms to only use one of the two lanes on approach (i.e. “lane starvation”) and therefore the ‘Lane Simulation’ mode within Junctions 9 has been used for the assessment. This allows lane specific movements for each approach to be considered resulting in LOS based on delay and queue. The assessment results for this junction are summarised in Table 6.2 and the model output files are contained in Appendix I.

**Table 6.2: A180 / A1173 Roundabout Assessment Results**

Junction Layout	Assessment Scenario	LOS (End Queue in PCUs)	
		AM Peak	PM Peak
Existing	2017 Base	A (1.4)	A (1.8)
	2019 Do Minimum	A (2.3)	A (2.1)
	2019 Do Something	A (3.1)	A (4.8)
	2032 Do Minimum	B (4.3)	B (6.4)
	2032 Do Something	B (6.6)	C (13.8)
Proposed Mitigation	2019 Do Something	A (3.0)	A (3.0)
	2032 Do Something	B (6.7)	A (6.3)

The results of the assessment of the existing roundabout shows the junction to operate within free flow conditions (LOS=A) in 2017 and continued to operate within free flow conditions (LOS=A) in 2019 with the addition of committed development flows and increase in background traffic. By 2032, the junction operates with reasonably free flow during the PM peak hour with the addition of committed development flows and background traffic flows (see 2032 Do Minimum scenario).

The addition of development traffic increases delay and adds to the end queue. The modelled junction is shown to operate with a ‘reasonably free flow’ during the AM peak hour however moves to ‘stable flow’ (LOS=C) indicating an operation above theoretical capacity during the PM peak hour in 2032.

In order to mitigate the impact of the proposed development at this location, the proposal is to provide marginally widen the northern arm (A1173) into the roundabout to increase the flare length on the approach whilst maintaining a two-lane entry.

The assessment results for the proposed junction improvements (considering the future year scenarios) shows the impact of the development proposals are mitigated to a similar (or better) LOS as the Do Minimum scenario for the same year. The proposed junction improvements are shown on drawing 248164-SK-02 contained in Appendix J.

### 6.3 New Site Access / A1173 Roundabout

The proposal is to provide a new four-arm roundabout on the A1173 between the A180 Stallingborough Interchange and the A1173 / Kiln Lane roundabout. The northern arm of the roundabout will provide access to part of Phase 1A, while the southern arm will provide access to the remainder of Phase 1A, the entirety of

Phase 1B and part of Phase 2. The assessment results for this junction are summarised in Table 6.3 and the model output files are contained in Appendix K.

**Table 6.3: New Site Access / A1173 Roundabout Assessment Results**

Junction Layout	Assessment Scenario	RFC Value (End Queue in PCUs)	
		AM Peak	PM Peak
Proposed Access	2019 Do Something	0.65 (2.1)	0.64 (2.0)
	2032 Do Something	0.76 (3.7)	0.76 (3.6)

The assessment results shows the proposed junction to operate within practical capacity in the future year scenarios with the inclusion of committed development flows and background traffic growth. The proposed junction layout is shown on ENGIE drawing 000-01 contained in Appendix L.

## 6.4 Pyewipe Roundabout

Pyewipe Roundabout is a large five-arm roundabout that forms part of Highways England's Strategic Road Network. The assessment results for this junction are summarised in Table 6.4 and the model output files are contained in Appendix M.

**Table 6.4: Pyewipe Roundabout Assessment Results**

Junction Layout	Assessment Scenario	RFC Value (End Queue in PCUs)	
		AM Peak	PM Peak
Existing	2017 Base	0.88 (7.5)	0.82 (4.5)
	2019 Do Minimum	0.91 (11.3)	0.85 (5.8)
	2019 Do Something	0.93 (13.1)	0.88 (7.6)
	2032 Do Minimum	1.11 (135.5)	1.02 (50.6)
	2032 Do Something	1.12 (149.6)	1.06 (83.8)

The results of the assessment of the existing roundabout shows the junction to operate above practical capacity and within theoretical capacity in 2017 and 2019 with the addition of committed development flows, increase in background traffic and proposed development flows.

By 2032, the capacity of the junction surpasses theoretical capacity during both peak hours due to the increase in background traffic flows. The performance of this junction is already acknowledged in the Local Transport Plan which seeks to address the congestion associated with peak hour traffic at this junction.

Furthermore, the composition of traffic at this junction has been analysed and the results, contained in Appendix M, shows that the development traffic at this location is likely to be in the order of 1.3% during the AM peak hour and 1.5% during the PM peak hour in the future years. This is without applying any potential reductions delivered through the site specific Travel Plan.

Considering the composition of development traffic at this junction along with the increases in background traffic, it is reasonable to consider that mitigation at this

location would be disproportionate to the marginal impact on the junction's performance. Therefore no mitigation is proposed at this location.

## 6.5 Westgate Roundabout

Westgate Roundabout is a large five-arm roundabout that forms part of the local road network. The assessment results for this junction are summarised in Table 6.5 and the model output files are contained in Appendix N.

**Table 6.5: Westgate Roundabout Assessment Results**

Junction Layout	Assessment Scenario	RFC Value (End Queue in PCUs)	
		AM Peak	PM Peak
Existing	2017 Base	1.05 (30.7)	1.27 (33.7)
	2019 Do Minimum	1.08 (40.1)	1.25 (34.2)
	2019 Do Something	1.09 (45.3)	1.18 (29.4)
	2032 Do Minimum	1.29 (297.3)	1.27 (330.3)
	2032 Do Something	1.32 (351.7)	1.31 (399.1)

The results of the assessment of the existing roundabout shows the junction to operate above theoretical capacity in both peak hours in 2017 largely due to existing traffic conditions. By 2019 and 2032, the junction continues to operate above theoretical capacity largely due to the increase in background traffic flows.

The performance of this junction is already acknowledged in the Local Transport Plan which seeks to address the congestion associated with peak hour traffic at this junction.

Furthermore, the composition of traffic at this junction has been analysed and the results, contained in Appendix N, shows that the development traffic at this location is likely to be in the order of 1.5% during the AM peak hour and between 2.1 and 2.5% during the PM peak hour in the future years. This is without applying any potential reductions delivered through the site specific Travel Plan.

Considering the composition of development traffic at this junction along with the increases in background traffic, it is reasonable to consider that mitigation at this location would be disproportionate to the marginal impact on the junction's performance. Therefore no mitigation is proposed at this location.

## 6.6 Summary

The following junctions have been assessed using industry standard modelling software to establish a baseline performance for each junction and assess the potential impact of the development proposals at each location:

- A1173 / Kiln Lane junction
- A180 / A1173 grade separated junction
- Site access roundabout on the A1173

- Pyewipe Roundabout
- Westgate Roundabout

The assessment results for the proposed site access roundabout onto the A1173 shows that the new junction will operate within practical capacity in the future year scenarios with the inclusion of committed development flows and background traffic growth.

The assessment results for the A1173/Kiln Lane and A180/A1173 grade separated roundabouts show that highway improvements will be required at both locations to mitigate the impact of the development proposals.

The assessment results for Pyewipe Roundabout and Westgate Roundabout show that both junctions will operate above theoretical capacity in the future years with the inclusion of committed development trips and increased background traffic. This is largely due to existing and background traffic growth and these factors are already acknowledged in the Local Transport Plan which seeks to address the congestion associated with peak hour traffic at this junction.

Furthermore, the composition of traffic at these junctions has been analysed and the results show that the development traffic will form a marginal proportion of traffic at this location. This is without applying any potential reductions delivered through the site specific Travel Plan.

Considering the composition of development traffic at this junction along with the increases in background traffic, it is reasonable to consider that mitigation at these locations would be disproportionate to the marginal impact on the junction's performance and therefore no mitigation is proposed at these locations.


It can be seen from National Planning Policy Framework guidance that the government requires the nature and location of the development to be taken into account when considering the opportunities for sustainable transport modes and then should only be prevented or refused on transport grounds where residual impacts on the development are considered severe. On this occasion, the development proposals meet the requirements of the test for making decisions and therefore should not be refused planning consent on transport grounds.



## Appendix A

### Traffic Survey Data



	<b>Site / Location:</b> Site 3, A1173 / Kiln Lane roundabout	<b>Project No.:</b> 7614	<b>Drawing No.:</b> 7614-03	<b>Drawn By:</b> EA
	<b>Survey Date:</b> Tuesday 4th July 2017	<b>Project Name:</b> Stallingborough		
	<b>Survey Times:</b> 07:00 to 10:00 & 16:00 to 19:00	<b>Drawing Title:</b> Site Layout and Observed Movements		



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	A to D							TOT	A to C							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	2	2	0	5	0	0	1	10	0	0	0	0	0	0	0	0	0
07:15	18	1	1	1	0	0	0	21	0	0	0	0	0	0	0	0	0
07:30	13	3	1	3	0	0	2	22	0	0	0	0	0	0	0	0	0
07:45	27	2	1	1	0	0	0	31	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>60</b>	<b>8</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>84</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	12	2	3	1	0	0	1	19	0	0	0	0	0	0	0	0	0
08:15	10	1	1	1	0	0	1	14	0	0	0	0	0	0	0	0	0
08:30	14	2	2	2	0	1	1	22	0	0	0	0	0	0	0	0	0
08:45	18	2	3	3	0	0	0	26	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>54</b>	<b>7</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>81</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	8	5	2	1	0	0	0	16	0	0	0	0	0	0	0	0	0
09:15	3	1	4	3	0	0	0	11	0	1	0	0	0	0	0	0	1
09:30	4	2	2	2	0	0	0	10	0	0	0	0	0	0	0	0	0
09:45	8	4	4	0	0	0	0	16	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>23</b>	<b>12</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>137</b>	<b>27</b>	<b>24</b>	<b>23</b>	<b>0</b>	<b>1</b>	<b>6</b>	<b>218</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

TIME	A to D							TOT	A to C							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	14	5	4	11	0	0	0	34	0	0	0	0	0	0	0	0	0
16:15	9	3	5	4	1	0	0	22	2	0	0	0	0	0	0	0	2
16:30	14	2	6	7	0	0	0	29	0	0	0	0	0	0	0	0	0
16:45	15	2	4	5	0	1	1	28	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>52</b>	<b>12</b>	<b>19</b>	<b>27</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>113</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
17:00	8	3	5	4	0	0	0	20	0	0	0	0	0	0	0	0	0
17:15	12	2	4	1	1	0	0	20	0	0	0	0	0	0	0	0	0
17:30	10	2	7	2	0	1	0	22	0	0	0	0	0	0	0	0	0
17:45	12	2	3	3	0	0	0	20	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>42</b>	<b>9</b>	<b>19</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>82</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	5	0	9	2	0	0	0	16	0	0	0	0	0	0	0	0	0
18:15	3	0	3	2	0	0	0	8	0	0	0	0	0	0	0	0	0
18:30	6	0	6	4	0	0	0	16	0	0	0	0	0	0	0	0	0
18:45	3	1	5	4	0	0	0	13	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>17</b>	<b>1</b>	<b>23</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>53</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>111</b>	<b>22</b>	<b>61</b>	<b>49</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>248</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	A to B							TOT	A to A							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	18	2	2	8	0	0	0	30	0	0	0	0	0	0	0	0	0
07:15	29	1	0	9	1	0	0	40	0	0	0	0	0	0	0	0	0
07:30	38	0	2	13	0	0	0	53	0	0	0	0	0	0	0	0	0
07:45	36	9	4	13	1	0	0	63	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	121	12	8	43	2	0	0	186	0	0	0	0	0	0	0	0	0
08:00	33	5	4	7	0	0	0	49	0	0	0	0	0	0	0	0	0
08:15	42	6	2	11	0	0	0	61	0	0	0	0	0	0	0	0	0
08:30	28	6	5	9	0	0	0	48	0	0	0	0	0	0	0	0	0
08:45	36	18	1	13	0	0	0	68	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	139	35	12	40	0	0	0	226	0	0	0	0	0	0	0	0	0
09:00	33	9	7	8	2	0	1	60	0	0	0	0	0	0	0	0	0
09:15	25	6	4	15	0	0	0	50	1	0	0	0	0	0	0	0	1
09:30	35	6	1	15	0	0	0	57	0	0	0	0	0	0	0	0	0
09:45	25	2	5	9	0	0	0	41	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	118	23	17	47	2	0	1	208	1	0	0	0	0	0	0	0	1
<b>P/TOT</b>	378	70	37	130	4	0	1	620	1	0	0	0	0	0	0	0	1

TIME	A to B							TOT	A to A							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	164	18	2	18	0	1	0	203	0	0	0	0	0	0	0	0	0
16:15	110	20	4	10	1	3	0	148	0	0	0	0	0	0	0	0	0
16:30	181	20	4	7	0	5	0	217	1	0	0	0	0	0	0	0	1
16:45	145	17	2	6	0	1	0	171	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	600	75	12	41	1	10	0	739	1	0	0	0	0	0	0	0	1
17:00	203	21	2	6	0	2	0	234	0	0	0	0	0	0	0	0	0
17:15	142	12	2	8	0	0	0	164	0	0	0	0	0	0	0	0	0
17:30	117	15	2	13	0	3	0	150	0	0	0	0	0	0	0	0	0
17:45	92	9	0	7	0	1	0	109	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	554	57	6	34	0	6	0	657	0	0	0	0	0	0	0	0	0
18:00	110	9	3	5	1	2	0	130	0	0	0	0	0	0	0	0	0
18:15	44	5	0	6	0	1	0	56	0	0	0	0	0	0	0	0	0
18:30	55	3	0	4	1	0	0	63	0	0	0	0	0	0	0	0	0
18:45	47	4	1	1	0	1	1	55	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	256	21	4	16	2	4	1	304	0	0	0	0	0	0	0	0	0
<b>P/TOT</b>	1410	153	22	91	3	20	1	1700	1	0	0	0	0	0	0	0	1



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	B to A								TOT	B to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	142	18	2	9	0	1	0	172	80	18	3	9	0	2	0	112		
07:15	170	34	2	12	3	6	0	227	92	12	10	12	0	3	0	129		
07:30	170	24	4	20	0	4	0	222	82	26	8	9	0	0	0	125		
07:45	163	26	7	6	0	2	0	204	122	20	6	14	1	0	0	163		
<b>H/TOT</b>	<b>645</b>	<b>102</b>	<b>15</b>	<b>47</b>	<b>3</b>	<b>13</b>	<b>0</b>	<b>825</b>	<b>376</b>	<b>76</b>	<b>27</b>	<b>44</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>529</b>		
08:00	81	11	2	10	1	0	0	105	94	14	9	10	1	1	1	130		
08:15	78	13	4	10	0	0	0	105	77	18	7	4	0	0	0	106		
08:30	63	17	3	6	0	0	0	89	51	3	5	7	0	1	0	67		
08:45	107	11	6	18	2	2	0	146	90	10	8	13	0	0	0	121		
<b>H/TOT</b>	<b>329</b>	<b>52</b>	<b>15</b>	<b>44</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>445</b>	<b>312</b>	<b>45</b>	<b>29</b>	<b>34</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>424</b>		
09:00	39	10	1	10	1	0	0	61	29	13	1	5	1	0	0	49		
09:15	36	9	3	11	0	1	0	60	26	12	4	5	1	1	0	49		
09:30	45	8	7	6	0	0	0	66	21	7	8	9	0	0	0	45		
09:45	28	8	6	10	1	0	0	53	17	6	5	6	0	0	0	34		
<b>H/TOT</b>	<b>148</b>	<b>35</b>	<b>17</b>	<b>37</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>240</b>	<b>93</b>	<b>38</b>	<b>18</b>	<b>25</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>177</b>		
<b>P/TOT</b>	<b>1122</b>	<b>189</b>	<b>47</b>	<b>128</b>	<b>8</b>	<b>16</b>	<b>0</b>	<b>1510</b>	<b>781</b>	<b>159</b>	<b>74</b>	<b>103</b>	<b>4</b>	<b>8</b>	<b>1</b>	<b>1130</b>		

TIME	B to A								TOT	B to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	47	5	3	7	0	0	0	62	15	7	8	9	0	0	0	39		
16:15	37	9	2	16	0	1	0	65	11	3	4	12	0	0	0	30		
16:30	31	7	1	2	0	1	0	42	16	1	7	9	0	1	0	34		
16:45	42	4	1	8	1	0	0	56	13	5	3	10	0	0	0	31		
<b>H/TOT</b>	<b>157</b>	<b>25</b>	<b>7</b>	<b>33</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>225</b>	<b>55</b>	<b>16</b>	<b>22</b>	<b>40</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>134</b>		
17:00	60	5	2	4	0	1	0	72	18	2	3	10	0	0	0	33		
17:15	60	3	3	6	0	0	0	72	14	3	7	7	0	0	0	31		
17:30	49	2	1	4	0	0	0	56	20	3	4	8	0	0	0	35		
17:45	37	2	2	4	0	1	0	46	21	1	4	8	0	0	0	34		
<b>H/TOT</b>	<b>206</b>	<b>12</b>	<b>8</b>	<b>18</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>246</b>	<b>73</b>	<b>9</b>	<b>18</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>133</b>		
18:00	41	3	1	5	0	0	0	50	23	1	1	8	0	0	1	34		
18:15	47	2	1	1	0	1	0	52	18	2	2	8	0	1	0	31		
18:30	33	4	0	2	0	0	0	39	19	3	1	2	0	0	0	25		
18:45	25	1	0	0	0	0	0	26	11	0	1	4	0	0	0	16		
<b>H/TOT</b>	<b>146</b>	<b>10</b>	<b>2</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>167</b>	<b>71</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>106</b>		
<b>P/TOT</b>	<b>509</b>	<b>47</b>	<b>17</b>	<b>59</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>638</b>	<b>199</b>	<b>31</b>	<b>45</b>	<b>95</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>373</b>		



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	B to C							TOT	B to B							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

TIME	B to C							TOT	B to B							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	C to B							TOT	C to A							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

TIME	C to B							TOT	C to A							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	C to D								TOT	C to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TIME	C to D								TOT	C to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>P/TOT</b>	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0





SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	D to C							TOT	D to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0	16	3	1	13	0	0	0	33
07:15	0	0	0	0	0	0	0	0	13	0	4	6	0	0	0	23
07:30	0	0	0	0	0	0	0	0	7	2	4	10	0	0	0	23
07:45	0	0	0	0	0	0	0	0	14	3	13	14	0	0	0	44
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>	<b>8</b>	<b>22</b>	<b>43</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123</b>
08:00	0	0	0	0	0	0	0	0	18	4	7	10	0	0	0	39
08:15	0	0	0	0	0	0	0	0	20	5	6	6	1	0	0	38
08:30	0	0	0	0	0	0	0	0	12	10	7	7	1	0	0	37
08:45	0	0	0	0	0	0	0	0	11	3	4	8	0	0	0	26
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>22</b>	<b>24</b>	<b>31</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>140</b>
09:00	0	0	0	0	0	0	0	0	8	16	0	21	0	0	0	45
09:15	0	0	0	0	0	0	0	0	12	5	8	6	0	0	0	31
09:30	0	0	0	0	0	0	0	0	8	7	7	9	0	0	0	31
09:45	1	0	0	0	0	0	0	1	8	8	3	11	0	0	0	30
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>36</b>	<b>36</b>	<b>18</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>137</b>
<b>P/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>147</b>	<b>66</b>	<b>64</b>	<b>121</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>400</b>

TIME	D to C							TOT	D to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0	101	15	6	8	1	2	0	133
16:15	0	0	0	0	0	0	0	0	70	16	2	5	0	1	0	94
16:30	0	0	0	0	0	0	0	0	96	14	7	17	0	0	0	134
16:45	0	0	0	0	0	0	0	0	76	7	4	8	0	0	0	95
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>343</b>	<b>52</b>	<b>19</b>	<b>38</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>456</b>
17:00	0	0	0	0	0	0	0	0	100	10	2	11	0	1	0	124
17:15	0	0	0	0	0	0	0	0	77	2	6	7	0	0	0	92
17:30	0	0	0	0	0	0	0	0	85	9	3	7	0	1	0	105
17:45	0	0	0	0	0	0	0	0	85	8	2	5	0	3	0	103
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>347</b>	<b>29</b>	<b>13</b>	<b>30</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>424</b>
18:00	0	0	0	0	0	0	0	0	70	7	1	5	1	1	0	85
18:15	0	0	0	0	0	0	0	0	44	4	0	10	0	1	0	59
18:30	0	0	0	0	0	0	0	0	44	1	0	4	0	0	0	49
18:45	1	0	0	0	0	0	0	1	35	0	2	7	0	1	0	45
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>193</b>	<b>12</b>	<b>3</b>	<b>26</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>238</b>
<b>P/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>883</b>	<b>93</b>	<b>35</b>	<b>94</b>	<b>2</b>	<b>11</b>	<b>0</b>	<b>1118</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	D to A							TOT	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	4	0	3	3	0	0	0	10	0	0	0	0	0	0	0	0
07:15	4	2	2	3	0	0	0	11	0	0	0	0	0	0	0	0
07:30	5	2	3	3	0	0	0	13	0	0	0	0	0	0	0	0
07:45	13	1	3	7	0	0	0	24	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>26</b>	<b>5</b>	<b>11</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>58</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	6	1	1	3	0	0	0	11	0	0	0	0	0	0	0	0
08:15	9	0	1	6	0	0	1	17	0	0	0	0	0	0	0	0
08:30	7	0	2	2	0	0	0	11	0	0	0	0	0	0	0	0
08:45	5	0	3	4	0	0	0	12	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>27</b>	<b>1</b>	<b>7</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	5	6	3	0	0	0	0	14	0	0	0	0	0	0	0	0
09:15	7	8	3	4	0	0	0	22	0	0	0	0	0	0	0	0
09:30	4	6	1	6	1	0	0	18	0	0	0	0	0	0	0	0
09:45	6	2	2	0	0	0	0	10	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>22</b>	<b>22</b>	<b>9</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>75</b>	<b>28</b>	<b>27</b>	<b>41</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>173</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

TIME	D to A							TOT	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	24	7	1	1	0	1	0	34	0	0	0	0	0	0	0	0
16:15	11	5	1	4	0	0	0	21	0	0	0	0	0	0	0	0
16:30	10	0	2	3	0	0	0	15	0	0	1	0	0	0	0	1
16:45	11	5	0	6	0	0	0	22	0	1	0	0	0	0	0	1
<b>H/TOT</b>	<b>56</b>	<b>17</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>92</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
17:00	28	7	1	2	0	0	0	38	1	0	0	0	0	0	0	1
17:15	10	1	1	2	0	0	0	14	0	0	0	0	0	0	0	0
17:30	14	2	3	4	0	0	0	23	0	0	0	0	0	0	0	0
17:45	10	2	0	2	0	1	0	15	0	0	0	1	0	0	0	1
<b>H/TOT</b>	<b>62</b>	<b>12</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>90</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
18:00	10	1	2	1	0	1	0	15	0	0	0	0	0	0	0	0
18:15	9	0	3	2	0	0	2	16	0	0	0	0	0	0	0	0
18:30	6	0	1	1	0	1	0	9	0	0	0	0	0	0	0	0
18:45	5	3	0	2	0	1	0	11	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>30</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>148</b>	<b>33</b>	<b>15</b>	<b>30</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>233</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	146	18	5	12	0	1	0	182	20	4	2	13	0	0	1	40		
07:15	174	36	4	15	3	6	0	238	47	2	1	10	1	0	0	61		
07:30	175	26	7	23	0	4	0	235	51	3	3	16	0	0	2	75		
07:45	176	27	10	13	0	2	0	228	63	11	5	14	1	0	0	94		
<b>H/TOT</b>	<b>671</b>	<b>107</b>	<b>26</b>	<b>63</b>	<b>3</b>	<b>13</b>	<b>0</b>	<b>883</b>	<b>181</b>	<b>20</b>	<b>11</b>	<b>53</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>270</b>		
08:00	87	12	3	13	1	0	0	116	45	7	7	8	0	0	1	68		
08:15	87	13	5	16	0	0	1	122	52	7	3	12	0	0	1	75		
08:30	70	17	5	8	0	0	0	100	42	8	7	11	0	1	1	70		
08:45	112	11	9	22	2	2	0	158	54	20	4	16	0	0	0	94		
<b>H/TOT</b>	<b>356</b>	<b>53</b>	<b>22</b>	<b>59</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>496</b>	<b>193</b>	<b>42</b>	<b>21</b>	<b>47</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>307</b>		
09:00	44	16	4	10	1	0	0	75	41	14	9	9	2	0	1	76		
09:15	44	17	6	15	0	1	0	83	29	8	8	18	0	0	0	63		
09:30	49	14	8	12	1	0	0	84	39	8	3	17	0	0	0	67		
09:45	34	10	8	10	1	0	0	63	33	6	9	9	0	0	0	57		
<b>H/TOT</b>	<b>171</b>	<b>57</b>	<b>26</b>	<b>47</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>305</b>	<b>142</b>	<b>36</b>	<b>29</b>	<b>53</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>263</b>		
<b>P/TOT</b>	<b>1198</b>	<b>217</b>	<b>74</b>	<b>169</b>	<b>9</b>	<b>16</b>	<b>1</b>	<b>1684</b>	<b>516</b>	<b>98</b>	<b>61</b>	<b>153</b>	<b>4</b>	<b>1</b>	<b>7</b>	<b>840</b>		

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	71	12	4	8	0	1	0	96	178	23	6	29	0	1	0	237		
16:15	48	14	3	20	0	1	0	86	121	23	9	14	2	3	0	172		
16:30	42	7	3	5	0	1	0	58	196	22	10	14	0	5	0	247		
16:45	53	9	1	14	1	0	0	78	160	19	6	11	0	2	1	199		
<b>H/TOT</b>	<b>214</b>	<b>42</b>	<b>11</b>	<b>47</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>318</b>	<b>655</b>	<b>87</b>	<b>31</b>	<b>68</b>	<b>2</b>	<b>11</b>	<b>1</b>	<b>855</b>		
17:00	88	12	3	6	0	1	0	110	211	24	7	10	0	2	0	254		
17:15	70	4	4	8	0	0	0	86	154	14	6	9	1	0	0	184		
17:30	63	4	4	8	0	0	0	79	127	17	9	15	0	4	0	172		
17:45	47	4	2	6	0	2	0	61	104	11	3	10	0	1	0	129		
<b>H/TOT</b>	<b>268</b>	<b>24</b>	<b>13</b>	<b>28</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>336</b>	<b>596</b>	<b>66</b>	<b>25</b>	<b>44</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>739</b>		
18:00	51	4	3	6	0	1	0	65	115	9	12	7	1	2	0	146		
18:15	56	2	4	3	0	1	2	68	47	5	3	8	0	1	0	64		
18:30	39	4	1	3	0	1	0	48	61	3	6	8	1	0	0	79		
18:45	30	4	0	2	0	1	0	37	50	5	6	5	0	1	1	68		
<b>H/TOT</b>	<b>176</b>	<b>14</b>	<b>8</b>	<b>14</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>218</b>	<b>273</b>	<b>22</b>	<b>27</b>	<b>28</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>357</b>		
<b>P/TOT</b>	<b>658</b>	<b>80</b>	<b>32</b>	<b>89</b>	<b>1</b>	<b>10</b>	<b>2</b>	<b>872</b>	<b>1524</b>	<b>175</b>	<b>83</b>	<b>140</b>	<b>5</b>	<b>22</b>	<b>2</b>	<b>1951</b>		



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	34	5	3	21	0	0	0	63	222	36	5	18	0	3	0	284		
07:15	42	1	4	15	1	0	0	63	262	46	12	24	3	9	0	356		
07:30	45	2	6	23	0	0	0	76	252	50	12	29	0	4	0	347		
07:45	50	12	17	27	1	0	0	107	285	46	13	20	1	2	0	367		
<b>H/TOT</b>	171	20	30	86	2	0	0	309	1021	178	42	91	4	18	0	1354		
08:00	51	9	11	17	0	0	0	88	175	25	11	20	2	1	1	235		
08:15	62	11	8	17	1	0	0	99	155	31	11	14	0	0	0	211		
08:30	40	16	12	16	1	0	0	85	114	20	8	13	0	1	0	156		
08:45	47	21	5	21	0	0	0	94	197	21	14	31	2	2	0	267		
<b>H/TOT</b>	200	57	36	71	2	0	0	366	641	97	44	78	4	4	1	869		
09:00	42	25	7	29	2	0	1	106	68	23	2	15	2	0	0	110		
09:15	37	11	12	21	0	0	0	81	62	21	7	16	1	2	0	109		
09:30	43	13	8	24	0	0	0	88	66	15	15	15	0	0	0	111		
09:45	33	10	8	20	0	0	0	71	45	14	11	16	1	0	0	87		
<b>H/TOT</b>	155	59	35	94	2	0	1	346	241	73	35	62	4	2	0	417		
<b>P/TOT</b>	526	136	101	251	6	0	1	1021	1903	348	121	231	12	24	1	2640		

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	265	33	8	26	1	3	0	336	62	12	11	16	0	0	0	101		
16:15	180	36	6	15	1	4	0	242	48	12	6	28	0	1	0	95		
16:30	278	34	11	24	0	5	0	352	47	8	8	11	0	2	0	76		
16:45	221	24	6	14	0	1	0	266	55	9	4	18	1	0	0	87		
<b>H/TOT</b>	944	127	31	79	2	13	0	1196	212	41	29	73	1	3	0	359		
17:00	303	31	4	17	0	3	0	358	78	7	5	14	0	1	0	105		
17:15	219	14	8	15	0	0	0	256	74	6	10	13	0	0	0	103		
17:30	202	24	5	20	0	4	0	255	69	5	5	12	0	0	0	91		
17:45	177	17	2	12	0	4	0	212	58	3	6	12	0	1	0	80		
<b>H/TOT</b>	901	86	19	64	0	11	0	1081	279	21	26	51	0	2	0	379		
18:00	180	16	4	10	2	3	0	215	64	4	2	13	0	0	1	84		
18:15	88	9	0	16	0	2	0	115	65	4	3	9	0	2	0	83		
18:30	99	4	0	8	1	0	0	112	52	7	1	4	0	0	0	64		
18:45	82	4	3	8	0	2	1	100	36	1	1	4	0	0	0	42		
<b>H/TOT</b>	449	33	7	42	3	7	1	542	217	16	7	30	0	2	1	273		
<b>P/TOT</b>	2294	246	57	185	5	31	1	2819	708	78	62	154	1	7	1	1011		



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	TO ARM C							TOT	FROM ARM C							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
09:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
09:15	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

TIME	TO ARM C							TOT	FROM ARM C							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	2	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

DAY: Tuesday

TIME	TO ARM D								TOT	FROM ARM D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	82	20	3	14	0	2	1	122	20	3	4	16	0	0	0	43		
07:15	110	13	11	13	0	3	0	150	17	2	6	9	0	0	0	34		
07:30	95	29	9	12	0	0	2	147	12	4	7	13	0	0	0	36		
07:45	149	22	7	15	1	0	0	194	27	4	16	21	0	0	0	68		
<b>H/TOT</b>	<b>436</b>	<b>84</b>	<b>30</b>	<b>54</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>613</b>	<b>76</b>	<b>13</b>	<b>33</b>	<b>59</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>181</b>		
08:00	106	16	12	11	1	1	2	149	24	5	8	13	0	0	0	50		
08:15	87	19	8	5	0	0	1	120	29	5	7	12	1	0	1	55		
08:30	65	5	7	9	0	2	1	89	19	10	9	9	1	0	0	48		
08:45	108	12	11	16	0	0	0	147	16	3	7	12	0	0	0	38		
<b>H/TOT</b>	<b>366</b>	<b>52</b>	<b>38</b>	<b>41</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>505</b>	<b>88</b>	<b>23</b>	<b>31</b>	<b>46</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>191</b>		
09:00	37	18	3	6	1	0	0	65	13	22	3	21	0	0	0	59		
09:15	29	13	8	8	1	1	0	60	19	13	11	10	0	0	0	53		
09:30	25	9	10	11	0	0	0	55	12	13	8	15	1	0	0	49		
09:45	25	10	9	6	0	0	0	50	15	10	5	11	0	0	0	41		
<b>H/TOT</b>	<b>116</b>	<b>50</b>	<b>30</b>	<b>31</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>230</b>	<b>59</b>	<b>58</b>	<b>27</b>	<b>57</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>202</b>		
<b>P/TOT</b>	<b>918</b>	<b>186</b>	<b>98</b>	<b>126</b>	<b>4</b>	<b>9</b>	<b>7</b>	<b>1348</b>	<b>223</b>	<b>94</b>	<b>91</b>	<b>162</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>574</b>		

TIME	TO ARM D								TOT	FROM ARM D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	29	12	12	20	0	0	0	73	125	22	7	9	1	3	0	167		
16:15	21	6	9	16	1	0	0	53	81	21	3	9	0	1	0	115		
16:30	30	3	14	16	0	1	0	64	106	14	10	20	0	0	0	150		
16:45	28	8	7	15	0	1	1	60	87	13	4	14	0	0	0	118		
<b>H/TOT</b>	<b>108</b>	<b>29</b>	<b>42</b>	<b>67</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>250</b>	<b>399</b>	<b>70</b>	<b>24</b>	<b>52</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>550</b>		
17:00	27	5	8	14	0	0	0	54	129	17	3	13	0	1	0	163		
17:15	26	5	11	8	1	0	0	51	87	3	7	9	0	0	0	106		
17:30	30	5	11	10	0	1	0	57	99	11	6	11	0	1	0	128		
17:45	33	3	7	12	0	0	0	55	95	10	2	8	0	4	0	119		
<b>H/TOT</b>	<b>116</b>	<b>18</b>	<b>37</b>	<b>44</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>217</b>	<b>410</b>	<b>41</b>	<b>18</b>	<b>41</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>516</b>		
18:00	28	1	10	10	0	0	1	50	80	8	3	6	1	2	0	100		
18:15	21	2	5	10	0	1	0	39	53	4	3	12	0	1	2	75		
18:30	25	3	7	6	0	0	0	41	50	1	1	5	0	1	0	58		
18:45	14	1	6	8	0	0	0	29	41	3	2	9	0	2	0	57		
<b>H/TOT</b>	<b>88</b>	<b>7</b>	<b>28</b>	<b>34</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>159</b>	<b>224</b>	<b>16</b>	<b>9</b>	<b>32</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>290</b>		
<b>P/TOT</b>	<b>312</b>	<b>54</b>	<b>107</b>	<b>145</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>626</b>	<b>1033</b>	<b>127</b>	<b>51</b>	<b>125</b>	<b>2</b>	<b>16</b>	<b>2</b>	<b>1356</b>		



SITE: 3

DATE: 04/07/2017

LOCATION: A1173 / Kiln Lane roundabout

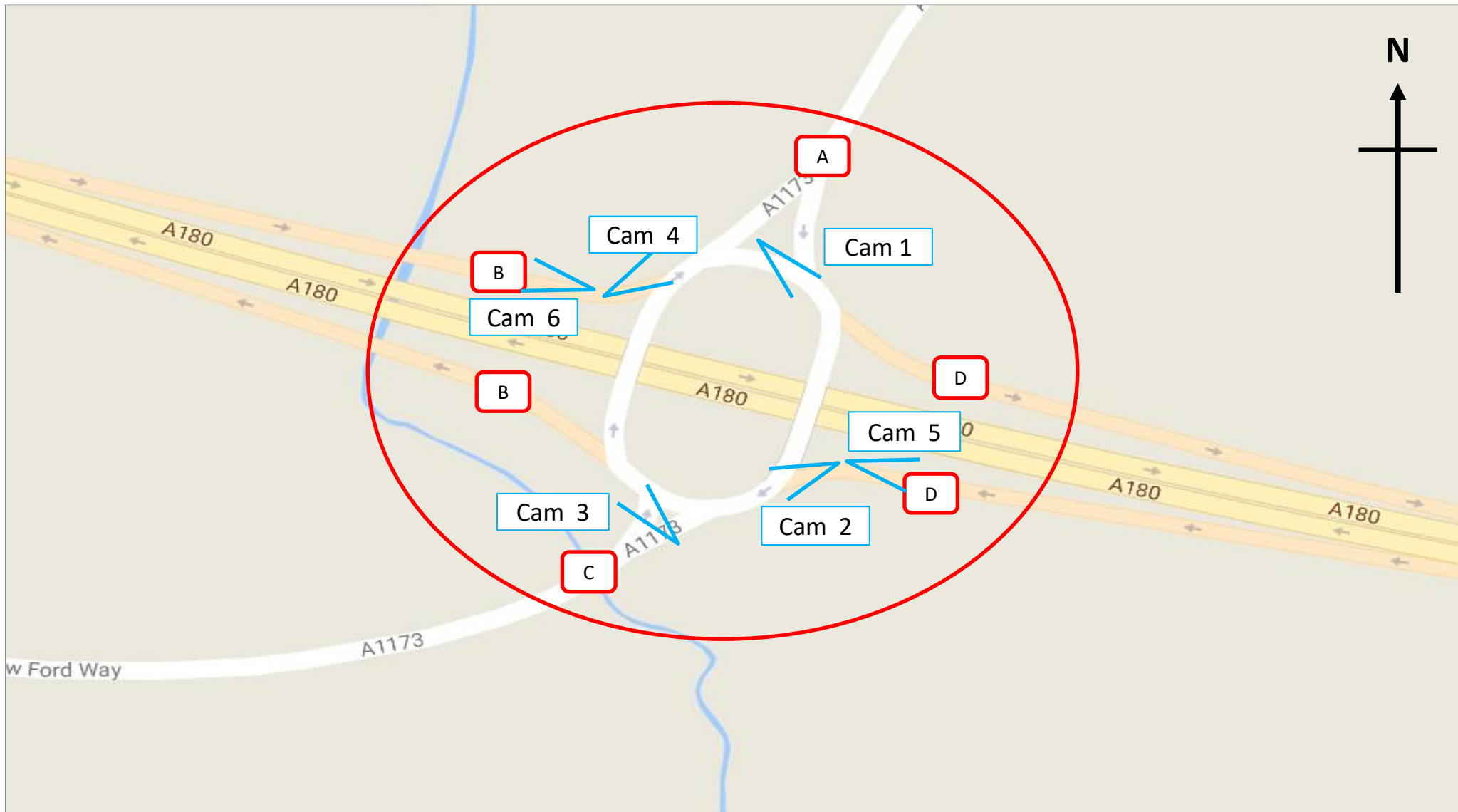
DAY: Tuesday

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	262	43	11	47	0	3	1	367
07:15	326	50	19	43	4	9	0	451
07:30	315	57	22	58	0	4	2	458
07:45	375	61	34	55	2	2	0	529
<b>H/TOT</b>	<b>1278</b>	<b>211</b>	<b>86</b>	<b>203</b>	<b>6</b>	<b>18</b>	<b>3</b>	<b>1805</b>
08:00	244	37	26	41	2	1	2	353
08:15	236	43	21	38	1	0	2	341
08:30	175	38	24	33	1	2	1	274
08:45	267	44	25	59	2	2	0	399
<b>H/TOT</b>	<b>922</b>	<b>162</b>	<b>96</b>	<b>171</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>1367</b>
09:00	123	59	14	45	4	0	1	246
09:15	110	42	26	44	1	2	0	225
09:30	117	36	26	47	1	0	0	227
09:45	93	30	25	36	1	0	0	185
<b>H/TOT</b>	<b>443</b>	<b>167</b>	<b>91</b>	<b>172</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>883</b>
<b>P/TOT</b>	<b>2643</b>	<b>540</b>	<b>273</b>	<b>546</b>	<b>19</b>	<b>25</b>	<b>9</b>	<b>4055</b>

PEAK HOUR	
CALCULATION	TOT
07:00 to 08:00	1805
07:15 to 08:15	1791
07:30 to 08:30	1681
07:45 to 08:45	1497
08:00 to 09:00	1367
08:15 to 09:15	1260
08:30 to 09:30	1144
08:45 to 09:45	1097
09:00 to 10:00	883
<b>PEAK VALUE</b>	<b>1805</b>

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	365	57	24	54	1	4	0	505
16:15	251	56	18	51	2	5	0	383
16:30	350	44	28	45	0	7	0	474
16:45	302	41	14	43	1	2	1	404
<b>H/TOT</b>	<b>1268</b>	<b>198</b>	<b>84</b>	<b>193</b>	<b>4</b>	<b>18</b>	<b>1</b>	<b>1766</b>
17:00	418	48	15	37	0	4	0	522
17:15	315	23	23	31	1	0	0	393
17:30	295	33	20	38	0	5	0	391
17:45	257	24	11	30	0	6	0	328
<b>H/TOT</b>	<b>1285</b>	<b>128</b>	<b>69</b>	<b>136</b>	<b>1</b>	<b>15</b>	<b>0</b>	<b>1634</b>
18:00	259	21	17	26	2	4	1	330
18:15	165	13	9	29	0	4	2	222
18:30	163	11	8	17	1	1	0	201
18:45	127	9	9	18	0	3	1	167
<b>H/TOT</b>	<b>714</b>	<b>54</b>	<b>43</b>	<b>90</b>	<b>3</b>	<b>12</b>	<b>4</b>	<b>920</b>
<b>P/TOT</b>	<b>3267</b>	<b>380</b>	<b>196</b>	<b>419</b>	<b>8</b>	<b>45</b>	<b>5</b>	<b>4320</b>

PEAK HOUR	
CALCULATION	TOT
16:00 to 17:00	1766
16:15 to 17:15	1783
16:30 to 17:30	1793
16:45 to 17:45	1710
17:00 to 18:00	1634
17:15 to 18:15	1442
17:30 to 18:30	1271
17:45 to 18:45	1081
18:00 to 19:00	920
<b>PEAK VALUE</b>	<b>1793</b>



<b>Site / Location:</b>	Site 5, A180 / A1173 / Matthew Ford Way	<b>Project No:</b>	7614	<b>Drawing No:</b>	7614-05	<b>Drawn By:</b>	EA		
	<b>Survey Date:</b>		Wednesday 5th July 2017		<b>Project Name:</b>		Stallingborough		
	<b>Survey Times:</b>		07:00 to 10:00 & 16:00 to 19:00				<b>Drawing Title:</b>	Site Layout and Observed Movements	





SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	A to D								TOT	A to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	33	5	1	6	0	1	0	46	4	1	4	0	0	0	0	9		
07:15	29	2	1	2	0	0	0	34	1	0	1	3	0	0	0	5		
07:30	32	6	4	1	0	0	0	43	1	0	1	2	0	0	0	4		
07:45	48	3	4	4	1	0	0	60	5	1	0	3	0	0	0	9		
<b>H/TOT</b>	142	16	10	13	1	1	0	183	11	2	6	8	0	0	0	27		
08:00	48	7	8	11	0	0	0	74	4	2	2	4	0	0	0	12		
08:15	46	11	6	6	0	0	0	69	1	0	0	1	0	0	0	2		
08:30	34	10	5	6	0	0	0	55	3	3	4	4	0	0	0	14		
08:45	42	14	3	5	0	0	0	64	2	0	1	5	0	0	0	8		
<b>H/TOT</b>	170	42	22	28	0	0	0	262	10	5	7	14	0	0	0	36		
09:00	41	18	4	6	2	0	0	71	2	0	0	1	0	0	0	3		
09:15	24	9	10	2	0	0	0	45	2	2	0	2	0	0	0	6		
09:30	32	18	7	3	0	0	0	60	4	0	1	3	0	0	0	8		
09:45	35	15	12	5	0	0	0	67	0	0	0	1	0	0	0	1		
<b>H/TOT</b>	132	60	33	16	2	0	0	243	8	2	1	7	0	0	0	18		
<b>P/TOT</b>	444	118	65	57	3	1	0	688	29	9	14	29	0	0	0	81		

TIME	A to D								TOT	A to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	206	27	11	5	1	2	0	252	19	2	0	1	0	0	0	22		
16:15	136	40	4	3	2	0	1	186	21	2	0	3	0	0	0	26		
16:30	239	25	7	3	0	6	0	280	22	3	0	2	0	0	0	27		
16:45	179	27	4	1	0	4	0	215	27	3	0	4	0	0	0	34		
<b>H/TOT</b>	760	119	26	12	3	12	1	933	89	10	0	10	0	0	0	109		
17:00	215	25	3	6	0	1	0	250	36	3	3	3	0	1	1	47		
17:15	122	7	1	5	0	2	0	137	30	2	1	1	0	0	0	34		
17:30	136	19	2	3	0	2	0	162	23	6	1	4	0	0	0	34		
17:45	100	16	6	2	0	2	0	126	14	2	0	1	0	0	0	17		
<b>H/TOT</b>	573	67	12	16	0	7	0	675	103	13	5	9	0	1	1	132		
18:00	141	18	1	2	2	0	0	164	13	4	1	1	0	0	0	19		
18:15	70	8	5	3	0	1	0	87	10	0	0	0	0	0	0	10		
18:30	84	10	0	1	0	1	0	96	4	1	0	2	0	0	0	7		
18:45	69	7	1	2	0	1	0	80	1	1	0	0	0	1	0	3		
<b>H/TOT</b>	364	43	7	8	2	3	0	427	28	6	1	3	0	1	0	39		
<b>P/TOT</b>	1697	229	45	36	5	22	1	2035	220	29	6	22	0	2	1	280		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	A to B								TOT	A to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	2	2	3	13	0	0	0	20	0	0	0	0	0	0	0	0		
07:15	11	0	3	11	0	0	0	25	0	0	0	0	0	0	0	0		
07:30	2	1	3	17	0	0	0	23	0	0	0	0	0	0	0	0		
07:45	5	1	5	15	0	0	0	26	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>20</b>	<b>4</b>	<b>14</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>94</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
08:00	3	2	0	15	0	0	0	20	0	0	0	0	0	0	0	0		
08:15	6	2	3	12	0	0	0	23	1	0	0	0	0	0	0	1		
08:30	13	1	2	11	0	0	0	27	0	0	1	0	0	0	0	1		
08:45	3	9	4	16	0	0	0	32	1	0	0	0	0	0	0	1		
<b>H/TOT</b>	<b>25</b>	<b>14</b>	<b>9</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>		
09:00	5	2	1	15	0	0	0	23	0	0	0	0	0	0	0	0		
09:15	4	3	2	17	0	0	0	26	0	0	0	0	0	0	0	0		
09:30	4	3	0	13	0	0	0	20	0	0	0	0	0	0	0	0		
09:45	3	3	5	20	0	0	0	31	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>16</b>	<b>11</b>	<b>8</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>61</b>	<b>29</b>	<b>31</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>296</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>		

TIME	A to B								TOT	A to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	34	11	2	17	0	0	0	64	0	0	0	0	0	0	0	0		
16:15	27	11	3	9	0	2	0	52	0	0	0	0	0	0	0	0		
16:30	50	6	0	8	0	0	0	64	0	0	0	0	0	0	0	0		
16:45	33	5	3	9	0	0	0	50	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>144</b>	<b>33</b>	<b>8</b>	<b>43</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
17:00	25	5	2	5	0	0	0	37	0	0	0	0	0	0	0	0		
17:15	30	5	2	11	0	1	0	49	0	0	0	0	0	0	0	0		
17:30	23	5	1	11	0	0	0	40	0	0	0	0	0	0	0	0		
17:45	34	2	0	5	1	2	0	44	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>112</b>	<b>17</b>	<b>5</b>	<b>32</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>170</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
18:00	25	2	1	3	0	0	0	31	0	0	0	0	0	0	0	0		
18:15	13	0	0	7	0	0	0	20	0	0	0	0	0	0	0	0		
18:30	6	1	2	5	0	0	0	14	0	0	0	0	0	0	0	0		
18:45	3	2	0	11	0	0	0	16	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>47</b>	<b>5</b>	<b>3</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>81</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>303</b>	<b>55</b>	<b>16</b>	<b>101</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>481</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	B to A								TOT	B to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	31	7	2	11	0	0	0	51	0	0	0	0	0	0	0	0	0	
07:15	38	12	2	15	0	1	0	68	0	0	0	0	0	0	0	0	0	
07:30	39	12	1	14	0	0	0	66	1	0	0	0	0	0	0	0	1	
07:45	50	10	1	13	0	0	0	74	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>158</b>	<b>41</b>	<b>6</b>	<b>53</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>259</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
08:00	28	8	3	9	0	0	0	48	1	0	0	0	0	0	0	0	1	
08:15	27	7	2	6	0	1	0	43	0	0	0	0	0	0	0	0	0	
08:30	28	7	1	11	0	0	0	47	0	0	0	0	0	0	0	0	0	
08:45	26	2	2	15	0	0	0	45	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>109</b>	<b>24</b>	<b>8</b>	<b>41</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>183</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
09:00	13	8	2	13	1	0	0	37	0	0	0	0	0	0	0	0	0	
09:15	11	7	3	17	2	0	0	40	0	0	0	0	0	0	0	0	0	
09:30	8	4	1	14	0	0	0	27	0	0	0	0	0	0	0	0	0	
09:45	10	12	2	27	0	0	0	51	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>42</b>	<b>31</b>	<b>8</b>	<b>71</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>155</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>P/TOT</b>	<b>309</b>	<b>96</b>	<b>22</b>	<b>165</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>597</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	

TIME	B to A								TOT	B to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	3	3	2	12	0	0	0	20	0	0	0	0	0	0	0	0	0	
16:15	1	0	1	22	0	0	0	24	0	0	0	0	0	0	0	0	0	
16:30	8	0	2	9	0	0	0	19	0	0	0	0	0	0	0	0	0	
16:45	5	2	0	11	0	0	0	18	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>17</b>	<b>5</b>	<b>5</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>81</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
17:00	6	2	2	9	0	0	0	19	1	0	0	0	0	0	0	0	1	
17:15	10	1	1	12	0	0	0	24	1	0	0	0	0	0	0	0	1	
17:30	10	0	3	3	0	0	0	16	0	0	0	0	0	0	0	0	0	
17:45	7	0	1	6	0	0	0	14	0	0	0	1	0	0	0	0	1	
<b>H/TOT</b>	<b>33</b>	<b>3</b>	<b>7</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	
18:00	7	0	0	13	0	0	0	20	0	0	0	0	0	0	0	0	0	
18:15	8	2	0	7	0	0	0	17	0	0	0	0	0	0	0	0	0	
18:30	9	0	1	6	0	0	0	16	0	0	0	0	0	0	0	0	0	
18:45	3	1	2	2	0	0	0	8	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>27</b>	<b>3</b>	<b>3</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>P/TOT</b>	<b>77</b>	<b>11</b>	<b>15</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>215</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	B to C								TOT	B to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0		
07:15	2	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0		
07:30	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0		
07:45	2	1	1	1	0	0	0	5	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
08:00	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0		
08:15	2	1	0	2	0	0	0	5	0	0	0	0	0	0	0	0		
08:30	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	2		
08:45	2	0	0	0	0	1	0	3	1	0	1	0	0	0	0	2		
<b>H/TOT</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>		
09:00	1	0	0	0	0	1	0	2	0	0	1	0	0	0	0	1		
09:15	2	2	0	0	0	0	0	4	0	0	0	0	0	0	0	0		
09:30	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1		
09:45	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	6		
<b>H/TOT</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>		
<b>P/TOT</b>	<b>16</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>30</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>		

TIME	B to C								TOT	B to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	9	4	1	0	0	1	0	15	0	0	0	0	0	0	0	0		
16:15	9	4	1	0	0	0	0	14	0	0	0	0	0	0	0	0		
16:30	10	3	0	0	0	0	0	13	0	0	0	0	0	0	0	0		
16:45	15	2	0	0	0	0	0	17	0	1	0	0	0	0	0	1		
<b>H/TOT</b>	<b>43</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>59</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>		
17:00	16	2	0	1	0	0	0	19	0	0	0	0	0	0	0	0		
17:15	14	0	0	2	0	0	0	16	1	0	0	2	0	0	0	3		
17:30	12	1	0	0	0	0	0	13	0	0	0	0	0	0	0	0		
17:45	12	0	1	0	0	0	0	13	0	0	0	2	0	0	0	2		
<b>H/TOT</b>	<b>54</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>		
18:00	6	2	0	1	0	0	0	9	0	0	0	0	0	0	0	0		
18:15	9	0	0	0	0	0	0	9	2	0	0	0	0	0	0	2		
18:30	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0		
18:45	6	0	0	0	0	1	0	7	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>33</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>		
<b>P/TOT</b>	<b>126</b>	<b>18</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>153</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	C to B								TOT	C to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	13	4	0	0	0	0	0	17	17	3	1	1	0	0	0	22		
07:15	12	3	0	0	0	0	0	15	13	4	0	2	0	2	0	21		
07:30	16	2	0	1	0	0	0	19	27	7	1	4	0	0	0	39		
07:45	19	3	1	0	0	0	0	23	28	4	0	0	0	0	0	32		
<b>H/TOT</b>	<b>60</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>85</b>	<b>18</b>	<b>2</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>114</b>		
08:00	14	3	0	0	0	1	0	18	21	1	0	5	0	0	0	27		
08:15	9	3	1	0	0	0	0	13	33	2	1	1	0	1	1	39		
08:30	7	1	0	0	0	0	0	8	23	1	1	2	0	0	0	27		
08:45	7	0	0	0	0	0	0	7	21	2	2	3	0	0	0	28		
<b>H/TOT</b>	<b>37</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>46</b>	<b>98</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>121</b>		
09:00	6	0	0	0	0	0	0	6	4	0	1	2	1	0	0	8		
09:15	4	0	0	0	0	0	0	4	5	0	0	3	0	0	0	8		
09:30	4	1	1	1	0	0	0	7	6	2	1	2	0	0	0	11		
09:45	5	2	1	1	0	0	0	9	7	1	1	4	0	0	0	13		
<b>H/TOT</b>	<b>19</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>22</b>	<b>3</b>	<b>3</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>40</b>		
<b>P/TOT</b>	<b>116</b>	<b>22</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>146</b>	<b>205</b>	<b>27</b>	<b>9</b>	<b>29</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>275</b>		

TIME	C to B								TOT	C to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	3	1	0	0	0	0	0	4	4	0	1	3	0	1	0	9		
16:15	2	0	0	0	0	0	0	2	7	0	0	5	0	0	0	12		
16:30	2	0	0	0	0	0	0	2	6	1	4	4	0	0	0	15		
16:45	2	1	0	0	0	0	0	3	4	1	1	1	0	0	0	7		
<b>H/TOT</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>21</b>	<b>2</b>	<b>6</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>43</b>		
17:00	5	0	0	0	0	0	0	5	1	0	1	2	0	0	0	4		
17:15	8	1	0	0	0	1	0	10	2	1	1	0	0	0	0	4		
17:30	5	1	0	0	0	0	0	6	4	0	0	0	0	0	0	4		
17:45	5	0	0	0	0	1	0	6	4	0	1	2	0	0	0	7		
<b>H/TOT</b>	<b>23</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>27</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>		
18:00	4	1	0	0	0	0	0	5	2	1	0	2	0	1	0	6		
18:15	4	0	0	0	0	0	0	4	7	2	1	1	0	0	0	11		
18:30	5	1	1	0	0	0	0	7	3	1	0	1	0	0	0	5		
18:45	0	0	0	0	0	0	0	0	4	0	0	2	0	0	0	6		
<b>H/TOT</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>28</b>		
<b>P/TOT</b>	<b>45</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>54</b>	<b>48</b>	<b>7</b>	<b>10</b>	<b>23</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>90</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	C to D								TOT	C to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	18	4	1	0	0	0	0	23	0	0	0	0	0	0	0	0		
07:15	26	2	0	0	0	0	0	28	0	0	0	0	0	0	0	0		
07:30	31	8	2	0	0	1	0	42	0	0	0	0	0	0	0	0		
07:45	49	8	2	0	0	1	0	60	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>124</b>	<b>22</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>153</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
08:00	52	4	0	0	0	0	0	56	0	0	0	0	0	0	0	0		
08:15	46	5	2	0	0	0	0	53	0	0	0	0	0	0	0	0		
08:30	41	4	0	0	0	0	0	45	0	0	0	0	0	0	0	0		
08:45	30	4	0	0	0	0	0	34	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>169</b>	<b>17</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>188</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
09:00	32	1	1	1	0	0	0	35	0	0	0	0	0	0	0	0		
09:15	32	1	0	0	0	0	0	33	0	0	0	0	0	0	0	0		
09:30	15	5	1	0	1	1	0	23	0	0	0	0	0	0	0	0		
09:45	18	1	0	0	0	0	0	19	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>97</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>390</b>	<b>47</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>451</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		

TIME	C to D								TOT	C to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	13	7	2	0	1	0	0	23	1	0	0	0	0	0	0	1		
16:15	17	1	0	0	1	0	0	19	0	0	0	0	0	0	0	0		
16:30	24	2	0	0	0	0	0	26	1	0	0	0	0	0	0	1		
16:45	20	2	1	0	0	0	0	23	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>74</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>		
17:00	20	3	1	0	0	0	0	24	0	0	0	0	0	0	0	0		
17:15	16	2	0	0	0	0	0	18	0	0	0	0	0	0	0	0		
17:30	26	3	2	0	0	0	0	31	0	0	0	0	0	0	0	0		
17:45	27	1	0	0	0	0	0	28	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>89</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
18:00	21	2	0	0	1	0	0	24	0	0	0	0	0	0	0	0		
18:15	16	3	0	1	0	1	0	21	0	0	0	0	0	0	0	0		
18:30	19	0	0	0	1	1	0	21	0	0	0	0	0	0	0	0		
18:45	14	2	1	0	0	0	0	17	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>70</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>83</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>233</b>	<b>28</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>275</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	D to C							TOT	D to B							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	10	1	1	0	0	0	0	12	0	0	0	0	0	0	0	0	0
07:15	9	4	2	0	1	2	0	18	0	0	0	0	0	0	0	0	0
07:30	13	1	2	0	1	0	0	17	0	0	0	0	0	0	0	0	0
07:45	16	2	1	0	2	0	0	21	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>48</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	18	0	0	0	1	0	0	19	0	0	0	0	0	0	0	0	0
08:15	18	1	1	0	0	0	0	20	0	0	0	0	0	0	0	0	0
08:30	17	3	1	0	0	0	0	21	1	0	0	0	0	0	0	0	1
08:45	8	5	0	0	1	0	0	14	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>61</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
09:00	15	4	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0
09:15	11	4	0	0	0	1	0	16	0	0	0	0	0	0	0	0	0
09:30	5	5	2	0	0	0	0	12	0	0	0	0	0	0	0	0	0
09:45	13	1	0	1	0	0	0	15	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>44</b>	<b>14</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>153</b>	<b>31</b>	<b>10</b>	<b>1</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>204</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

TIME	D to C							TOT	D to B							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	33	4	1	0	0	0	0	38	0	0	0	0	0	0	0	0	0
16:15	39	8	0	0	0	0	0	47	0	0	1	0	0	0	0	0	1
16:30	37	9	2	1	0	0	0	49	0	0	0	0	0	0	0	0	0
16:45	39	5	1	0	0	1	0	46	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>148</b>	<b>26</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>180</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
17:00	75	7	0	0	0	1	0	83	0	0	0	0	0	0	0	0	0
17:15	67	2	0	0	0	2	0	71	0	0	0	0	0	0	0	0	0
17:30	32	2	0	0	0	1	0	35	2	0	0	1	0	0	0	0	3
17:45	40	2	1	0	0	0	0	43	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>214</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>232</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
18:00	34	3	0	0	0	1	0	38	0	0	0	0	0	0	0	0	0
18:15	26	1	0	0	0	1	0	28	1	0	0	0	0	0	0	0	1
18:30	31	1	1	0	0	0	0	33	0	0	0	0	0	0	0	0	0
18:45	27	3	0	0	0	0	0	30	1	0	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>118</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>129</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>P/TOT</b>	<b>480</b>	<b>47</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>541</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	D to A							TOT	D to D							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	183	30	5	1	0	3	0	222	0	0	0	0	0	0	0	0	0
07:15	224	38	4	4	2	5	0	277	0	0	0	0	0	0	0	0	0
07:30	225	27	1	2	0	4	0	259	0	0	0	0	0	0	0	0	0
07:45	164	30	5	6	2	3	0	210	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>796</b>	<b>125</b>	<b>15</b>	<b>13</b>	<b>4</b>	<b>15</b>	<b>0</b>	<b>968</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
08:00	114	31	8	7	1	1	0	162	0	0	0	0	0	0	0	0	0
08:15	117	24	8	5	1	0	0	155	0	1	0	0	0	0	0	0	1
08:30	94	14	6	7	2	0	0	123	0	0	0	0	0	0	0	0	0
08:45	90	12	6	6	1	0	0	115	1	0	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>415</b>	<b>81</b>	<b>28</b>	<b>25</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>555</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
09:00	46	10	2	4	1	1	0	64	0	0	0	0	0	0	0	0	0
09:15	38	14	8	6	0	1	0	67	1	0	0	0	0	0	0	0	1
09:30	40	20	4	2	0	1	0	67	0	0	0	0	0	0	0	0	0
09:45	33	17	7	3	0	1	0	61	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>157</b>	<b>61</b>	<b>21</b>	<b>15</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>259</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>1368</b>	<b>267</b>	<b>64</b>	<b>53</b>	<b>10</b>	<b>20</b>	<b>0</b>	<b>1782</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

TIME	D to A							TOT	D to D							TOT	
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	52	10	4	9	0	0	0	75	0	0	0	0	0	0	0	0	0
16:15	49	4	3	1	0	2	0	59	0	0	0	0	0	0	0	0	0
16:30	56	8	1	7	1	0	0	73	0	0	0	0	0	0	0	0	0
16:45	38	8	5	4	0	0	0	55	1	0	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>195</b>	<b>30</b>	<b>13</b>	<b>21</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>262</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
17:00	68	10	1	4	0	1	0	84	0	0	1	0	0	0	0	0	1
17:15	61	4	6	2	0	1	0	74	0	0	0	0	0	0	0	0	0
17:30	43	3	0	4	0	1	0	51	1	0	0	0	0	0	0	0	1
17:45	48	1	3	2	0	1	0	55	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>220</b>	<b>18</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>264</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
18:00	61	10	1	1	0	1	0	74	0	0	0	0	0	0	0	0	0
18:15	52	4	0	1	0	2	0	59	0	0	1	0	0	0	0	0	1
18:30	43	1	4	0	0	1	0	49	0	0	0	0	0	0	0	0	0
18:45	21	5	1	3	1	1	0	32	0	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>177</b>	<b>20</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>214</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>592</b>	<b>68</b>	<b>29</b>	<b>38</b>	<b>2</b>	<b>11</b>	<b>0</b>	<b>740</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>





SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	TO ARM A							TOT	FROM ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	231	40	8	13	0	3	0	295	39	8	8	19	0	1	0	75
07:15	275	54	6	21	2	8	0	366	41	2	5	16	0	0	0	64
07:30	291	46	3	20	0	4	0	364	35	7	8	20	0	0	0	70
07:45	242	44	6	19	2	3	0	316	58	5	9	22	1	0	0	95
<b>H/TOT</b>	<b>1039</b>	<b>184</b>	<b>23</b>	<b>73</b>	<b>4</b>	<b>18</b>	<b>0</b>	<b>1341</b>	<b>173</b>	<b>22</b>	<b>30</b>	<b>77</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>304</b>
08:00	163	40	11	21	1	1	0	237	55	11	10	30	0	0	0	106
08:15	178	33	11	12	1	2	1	238	54	13	9	19	0	0	0	95
08:30	145	22	9	20	2	0	0	198	50	14	12	21	0	0	0	97
08:45	138	16	10	24	1	0	0	189	48	23	8	26	0	0	0	105
<b>H/TOT</b>	<b>624</b>	<b>111</b>	<b>41</b>	<b>77</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>862</b>	<b>207</b>	<b>61</b>	<b>39</b>	<b>96</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>403</b>
09:00	63	18	5	19	3	1	0	109	48	20	5	22	2	0	0	97
09:15	54	21	11	26	2	1	0	115	30	14	12	21	0	0	0	77
09:30	54	26	6	18	0	1	0	105	40	21	8	19	0	0	0	88
09:45	50	30	10	34	0	1	0	125	38	18	17	26	0	0	0	99
<b>H/TOT</b>	<b>221</b>	<b>95</b>	<b>32</b>	<b>97</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>454</b>	<b>156</b>	<b>73</b>	<b>42</b>	<b>88</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>361</b>
<b>P/TOT</b>	<b>1884</b>	<b>390</b>	<b>96</b>	<b>247</b>	<b>14</b>	<b>25</b>	<b>1</b>	<b>2657</b>	<b>536</b>	<b>156</b>	<b>111</b>	<b>261</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1068</b>

TIME	TO ARM A							TOT	FROM ARM A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	59	13	7	24	0	1	0	104	259	40	13	23	1	2	0	338
16:15	57	4	4	28	0	2	0	95	184	53	7	15	2	2	1	264
16:30	70	9	7	20	1	0	0	107	311	34	7	13	0	6	0	371
16:45	47	11	6	16	0	0	0	80	239	35	7	14	0	4	0	299
<b>H/TOT</b>	<b>233</b>	<b>37</b>	<b>24</b>	<b>88</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>386</b>	<b>993</b>	<b>162</b>	<b>34</b>	<b>65</b>	<b>3</b>	<b>14</b>	<b>1</b>	<b>1272</b>
17:00	75	12	4	15	0	1	0	107	276	33	8	14	0	2	1	334
17:15	73	6	8	14	0	1	0	102	182	14	4	17	0	3	0	220
17:30	57	3	3	7	0	1	0	71	182	30	4	18	0	2	0	236
17:45	59	1	5	10	0	1	0	76	148	20	6	8	1	4	0	187
<b>H/TOT</b>	<b>264</b>	<b>22</b>	<b>20</b>	<b>46</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>356</b>	<b>788</b>	<b>97</b>	<b>22</b>	<b>57</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>977</b>
18:00	70	11	1	16	0	2	0	100	179	24	3	6	2	0	0	214
18:15	67	8	1	9	0	2	0	87	93	8	5	10	0	1	0	117
18:30	55	2	5	7	0	1	0	70	94	12	2	8	0	1	0	117
18:45	28	6	3	7	1	1	0	46	73	10	1	13	0	2	0	99
<b>H/TOT</b>	<b>220</b>	<b>27</b>	<b>10</b>	<b>39</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>303</b>	<b>439</b>	<b>54</b>	<b>11</b>	<b>37</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>547</b>
<b>P/TOT</b>	<b>717</b>	<b>86</b>	<b>54</b>	<b>173</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>1045</b>	<b>2220</b>	<b>313</b>	<b>67</b>	<b>159</b>	<b>6</b>	<b>29</b>	<b>2</b>	<b>2796</b>



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	15	6	3	13	0	0	0	37	31	7	2	12	0	0	0	52		
07:15	23	3	3	11	0	0	0	40	40	12	2	16	0	1	0	71		
07:30	18	3	3	18	0	0	0	42	43	12	1	14	0	0	0	70		
07:45	24	4	6	15	0	0	0	49	52	11	2	14	0	0	0	79		
<b>H/TOT</b>	<b>80</b>	<b>16</b>	<b>15</b>	<b>57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>168</b>	<b>166</b>	<b>42</b>	<b>7</b>	<b>56</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>272</b>		
08:00	17	5	0	15	0	1	0	38	31	8	3	9	0	0	0	51		
08:15	15	5	4	12	0	0	0	36	29	8	2	8	0	1	0	48		
08:30	23	2	2	11	0	0	0	38	30	7	2	11	0	0	0	50		
08:45	11	9	5	16	0	0	0	41	29	2	3	15	0	1	0	50		
<b>H/TOT</b>	<b>66</b>	<b>21</b>	<b>11</b>	<b>54</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>153</b>	<b>119</b>	<b>25</b>	<b>10</b>	<b>43</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>199</b>		
09:00	11	2	2	15	0	0	0	30	14	8	3	13	1	1	0	40		
09:15	8	3	2	17	0	0	0	30	13	9	3	17	2	0	0	44		
09:30	8	5	1	14	0	0	0	28	8	5	2	14	0	0	0	29		
09:45	9	7	9	21	0	0	0	46	11	14	5	27	0	0	0	57		
<b>H/TOT</b>	<b>36</b>	<b>17</b>	<b>14</b>	<b>67</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>134</b>	<b>46</b>	<b>36</b>	<b>13</b>	<b>71</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>170</b>		
<b>P/TOT</b>	<b>182</b>	<b>54</b>	<b>40</b>	<b>178</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>455</b>	<b>331</b>	<b>103</b>	<b>30</b>	<b>170</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>641</b>		

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	37	12	2	17	0	0	0	68	12	7	3	12	0	1	0	35		
16:15	29	11	4	9	0	2	0	55	10	4	2	22	0	0	0	38		
16:30	52	6	0	8	0	0	0	66	18	3	2	9	0	0	0	32		
16:45	35	7	3	9	0	0	0	54	20	5	0	11	0	0	0	36		
<b>H/TOT</b>	<b>153</b>	<b>36</b>	<b>9</b>	<b>43</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>243</b>	<b>60</b>	<b>19</b>	<b>7</b>	<b>54</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>141</b>		
17:00	30	5	2	5	0	0	0	42	23	4	2	10	0	0	0	39		
17:15	39	6	2	13	0	2	0	62	26	1	1	16	0	0	0	44		
17:30	30	6	1	12	0	0	0	49	22	1	3	3	0	0	0	29		
17:45	39	2	0	7	1	3	0	52	19	0	2	9	0	0	0	30		
<b>H/TOT</b>	<b>138</b>	<b>19</b>	<b>5</b>	<b>37</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>205</b>	<b>90</b>	<b>6</b>	<b>8</b>	<b>38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142</b>		
18:00	29	3	1	3	0	0	0	36	13	2	0	14	0	0	0	29		
18:15	20	0	0	7	0	0	0	27	19	2	0	7	0	0	0	28		
18:30	11	2	3	5	0	0	0	21	17	0	1	6	0	0	0	24		
18:45	4	2	0	11	0	0	0	17	9	1	2	2	0	1	0	15		
<b>H/TOT</b>	<b>64</b>	<b>7</b>	<b>4</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>101</b>	<b>58</b>	<b>5</b>	<b>3</b>	<b>29</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>96</b>		
<b>P/TOT</b>	<b>355</b>	<b>62</b>	<b>18</b>	<b>106</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>549</b>	<b>208</b>	<b>30</b>	<b>18</b>	<b>121</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>379</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	14	2	5	1	0	0	0	22	48	11	2	1	0	0	0	62		
07:15	12	4	3	4	1	2	0	26	51	9	0	2	0	2	0	64		
07:30	17	1	3	2	1	0	0	24	74	17	3	5	0	1	0	100		
07:45	23	4	2	4	2	0	0	35	96	15	3	0	0	1	0	115		
<b>H/TOT</b>	<b>66</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>107</b>	<b>269</b>	<b>52</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>341</b>		
08:00	24	2	2	4	1	0	0	33	87	8	0	5	0	1	0	101		
08:15	21	2	1	3	0	0	0	27	88	10	4	1	0	1	1	105		
08:30	20	6	6	4	0	0	0	36	71	6	1	2	0	0	0	80		
08:45	12	5	1	5	1	1	0	25	58	6	2	3	0	0	0	69		
<b>H/TOT</b>	<b>77</b>	<b>15</b>	<b>10</b>	<b>16</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>121</b>	<b>304</b>	<b>30</b>	<b>7</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>355</b>		
09:00	18	4	0	1	0	1	0	24	42	1	2	3	1	0	0	49		
09:15	15	8	0	2	0	1	0	26	41	1	0	3	0	0	0	45		
09:30	9	5	4	3	0	0	0	21	25	8	3	3	1	1	0	41		
09:45	13	1	0	2	0	0	0	16	30	4	2	5	0	0	0	41		
<b>H/TOT</b>	<b>55</b>	<b>18</b>	<b>4</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>87</b>	<b>138</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>176</b>		
<b>P/TOT</b>	<b>198</b>	<b>44</b>	<b>27</b>	<b>35</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>315</b>	<b>711</b>	<b>96</b>	<b>22</b>	<b>33</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>872</b>		

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	62	10	2	1	0	1	0	76	21	8	3	3	1	1	0	37		
16:15	69	14	1	3	0	0	0	87	26	1	0	5	1	0	0	33		
16:30	70	15	2	3	0	0	0	90	33	3	4	4	0	0	0	44		
16:45	81	10	1	4	0	1	0	97	26	4	2	1	0	0	0	33		
<b>H/TOT</b>	<b>282</b>	<b>49</b>	<b>6</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>350</b>	<b>106</b>	<b>16</b>	<b>9</b>	<b>13</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>147</b>		
17:00	127	12	3	4	0	2	1	149	26	3	2	2	0	0	0	33		
17:15	111	4	1	3	0	2	0	121	26	4	1	0	0	1	0	32		
17:30	67	9	1	4	0	1	0	82	35	4	2	0	0	0	0	41		
17:45	66	4	2	1	0	0	0	73	36	1	1	2	0	1	0	41		
<b>H/TOT</b>	<b>371</b>	<b>29</b>	<b>7</b>	<b>12</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>425</b>	<b>123</b>	<b>12</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>147</b>		
18:00	53	9	1	2	0	1	0	66	27	4	0	2	1	1	0	35		
18:15	45	1	0	0	0	1	0	47	27	5	1	2	0	1	0	36		
18:30	43	2	1	2	0	0	0	48	27	2	1	1	1	1	0	33		
18:45	34	4	0	0	0	2	0	40	18	2	1	2	0	0	0	23		
<b>H/TOT</b>	<b>175</b>	<b>16</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>201</b>	<b>99</b>	<b>13</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>127</b>		
<b>P/TOT</b>	<b>828</b>	<b>94</b>	<b>15</b>	<b>27</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>976</b>	<b>328</b>	<b>41</b>	<b>18</b>	<b>24</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>421</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

DAY: Wednesday

TIME	TO ARM D								TOT	FROM ARM D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	51	9	2	6	0	1	0	69	193	31	6	1	0	3	0	234		
07:15	55	4	1	2	0	0	0	62	233	42	6	4	3	7	0	295		
07:30	64	14	6	1	0	1	0	86	238	28	3	2	1	4	0	276		
07:45	97	11	6	4	1	1	0	120	180	32	6	6	4	3	0	231		
<b>H/TOT</b>	<b>267</b>	<b>38</b>	<b>15</b>	<b>13</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>337</b>	<b>844</b>	<b>133</b>	<b>21</b>	<b>13</b>	<b>8</b>	<b>17</b>	<b>0</b>	<b>1036</b>		
08:00	101	11	8	11	0	0	0	131	132	31	8	7	2	1	0	181		
08:15	92	17	8	6	0	0	0	123	135	26	9	5	1	0	0	176		
08:30	75	14	5	6	0	0	0	100	112	17	7	7	2	0	0	145		
08:45	73	18	3	5	0	0	0	99	99	17	6	6	2	0	0	130		
<b>H/TOT</b>	<b>341</b>	<b>60</b>	<b>24</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>453</b>	<b>478</b>	<b>91</b>	<b>30</b>	<b>25</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>632</b>		
09:00	73	19	5	7	2	0	0	106	61	14	2	4	1	1	0	83		
09:15	57	10	10	2	0	0	0	79	50	18	8	6	0	2	0	84		
09:30	47	23	8	3	1	1	0	83	45	25	6	2	0	1	0	79		
09:45	53	16	12	5	0	0	0	86	46	18	7	4	0	1	0	76		
<b>H/TOT</b>	<b>230</b>	<b>68</b>	<b>35</b>	<b>17</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>354</b>	<b>202</b>	<b>75</b>	<b>23</b>	<b>16</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>322</b>		
<b>P/TOT</b>	<b>838</b>	<b>166</b>	<b>74</b>	<b>58</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>1144</b>	<b>1524</b>	<b>299</b>	<b>74</b>	<b>54</b>	<b>16</b>	<b>23</b>	<b>0</b>	<b>1990</b>		

TIME	TO ARM D								TOT	FROM ARM D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	219	34	13	5	2	2	0	275	85	14	5	9	0	0	0	113		
16:15	153	41	4	3	3	0	1	205	88	12	4	1	0	2	0	107		
16:30	263	27	7	3	0	6	0	306	93	17	3	8	1	0	0	122		
16:45	200	29	5	1	0	4	0	239	78	13	6	4	0	1	0	102		
<b>H/TOT</b>	<b>835</b>	<b>131</b>	<b>29</b>	<b>12</b>	<b>5</b>	<b>12</b>	<b>1</b>	<b>1025</b>	<b>344</b>	<b>56</b>	<b>18</b>	<b>22</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>444</b>		
17:00	236	28	5	6	0	1	0	276	143	17	2	4	0	2	0	168		
17:15	139	9	1	5	0	2	0	156	128	6	6	2	0	3	0	145		
17:30	163	22	4	3	0	2	0	194	78	5	0	5	0	2	0	90		
17:45	127	17	6	3	0	2	0	155	88	3	4	2	0	1	0	98		
<b>H/TOT</b>	<b>665</b>	<b>76</b>	<b>16</b>	<b>17</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>781</b>	<b>437</b>	<b>31</b>	<b>12</b>	<b>13</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>501</b>		
18:00	162	20	1	2	3	0	0	188	95	13	1	1	0	2	0	112		
18:15	86	11	6	4	0	2	0	109	79	5	1	1	0	3	0	89		
18:30	103	10	0	1	1	2	0	117	74	2	5	0	0	1	0	82		
18:45	83	9	2	2	0	1	0	97	49	8	1	3	1	1	0	63		
<b>H/TOT</b>	<b>434</b>	<b>50</b>	<b>9</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>511</b>	<b>297</b>	<b>28</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>346</b>		
<b>P/TOT</b>	<b>1934</b>	<b>257</b>	<b>54</b>	<b>38</b>	<b>9</b>	<b>24</b>	<b>1</b>	<b>2317</b>	<b>1078</b>	<b>115</b>	<b>38</b>	<b>40</b>	<b>2</b>	<b>18</b>	<b>0</b>	<b>1291</b>		



SITE: 5

DATE: 05/07/2017

LOCATION: A180 / A1173 / Matthew Ford Way

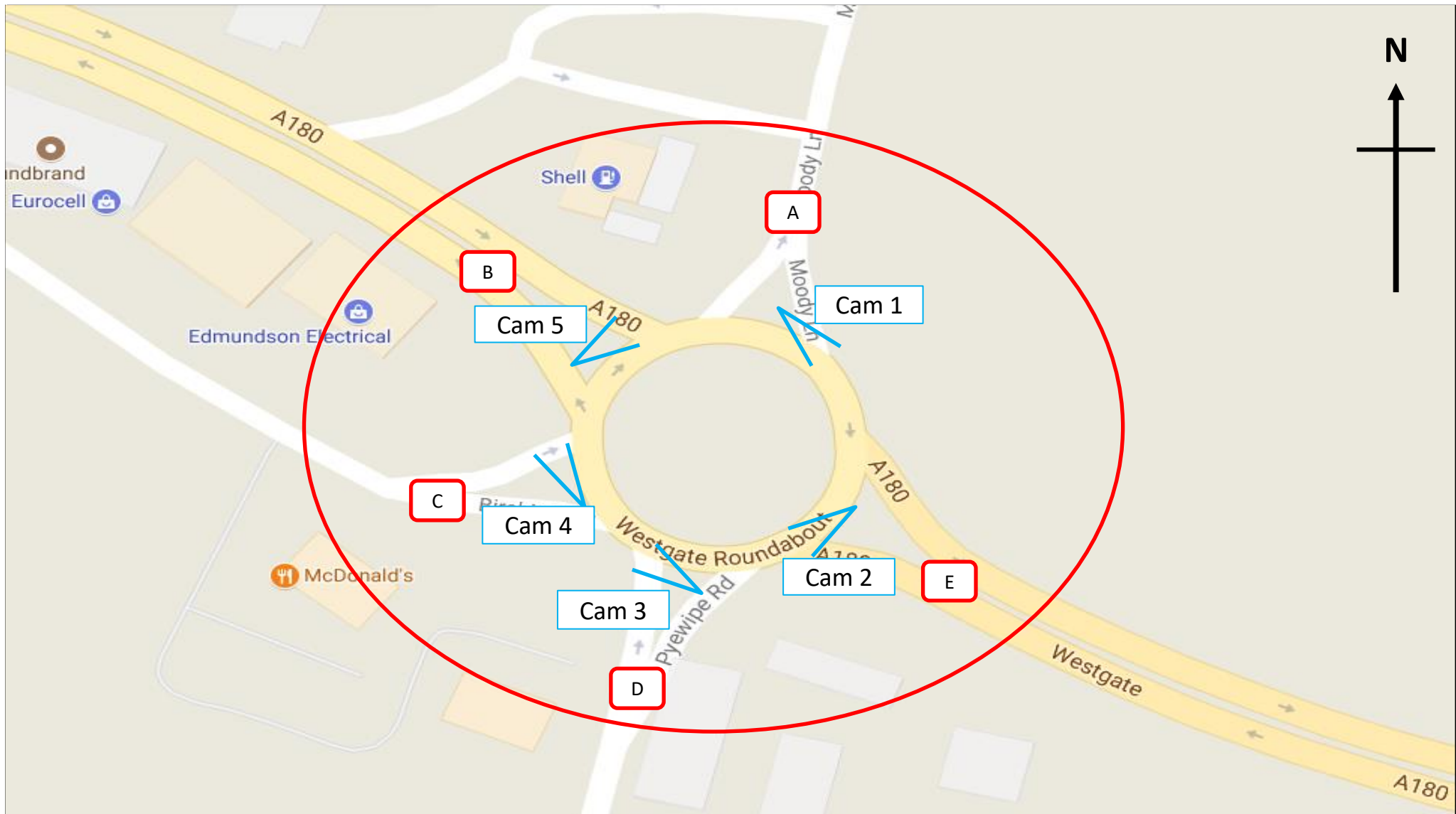
DAY: Wednesday

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	311	57	18	33	0	4	0	423
07:15	365	65	13	38	3	10	0	494
07:30	390	64	15	41	1	5	0	516
07:45	386	63	20	42	5	4	0	520
<b>H/TOT</b>	<b>1452</b>	<b>249</b>	<b>66</b>	<b>154</b>	<b>9</b>	<b>23</b>	<b>0</b>	<b>1953</b>
08:00	305	58	21	51	2	2	0	439
08:15	306	57	24	33	1	2	1	424
08:30	263	44	22	41	2	0	0	372
08:45	234	48	19	50	2	1	0	354
<b>H/TOT</b>	<b>1108</b>	<b>207</b>	<b>86</b>	<b>175</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>1589</b>
09:00	165	43	12	42	5	2	0	269
09:15	134	42	23	47	2	2	0	250
09:30	118	59	19	38	1	2	0	237
09:45	125	54	31	62	0	1	0	273
<b>H/TOT</b>	<b>542</b>	<b>198</b>	<b>85</b>	<b>189</b>	<b>8</b>	<b>7</b>	<b>0</b>	<b>1029</b>
<b>P/TOT</b>	<b>3102</b>	<b>654</b>	<b>237</b>	<b>518</b>	<b>24</b>	<b>35</b>	<b>1</b>	<b>4571</b>

PEAK HOUR	
CALCULATION	TOT
07:00 to 08:00	1953
07:15 to 08:15	<b>1969</b>
07:30 to 08:30	1899
07:45 to 08:45	1755
08:00 to 09:00	1589
08:15 to 09:15	1419
08:30 to 09:30	1245
08:45 to 09:45	1110
09:00 to 10:00	1029
<b>PEAK VALUE</b>	<b>1969</b>

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	377	69	24	47	2	4	0	523
16:15	308	70	13	43	3	4	1	442
16:30	455	57	16	34	1	6	0	569
16:45	363	57	15	30	0	5	0	470
<b>H/TOT</b>	<b>1503</b>	<b>253</b>	<b>68</b>	<b>154</b>	<b>6</b>	<b>19</b>	<b>1</b>	<b>2004</b>
17:00	468	57	14	30	0	4	1	574
17:15	362	25	12	35	0	7	0	441
17:30	317	40	9	26	0	4	0	396
17:45	291	24	13	21	1	6	0	356
<b>H/TOT</b>	<b>1438</b>	<b>146</b>	<b>48</b>	<b>112</b>	<b>1</b>	<b>21</b>	<b>1</b>	<b>1767</b>
18:00	314	43	4	23	3	3	0	390
18:15	218	20	7	20	0	5	0	270
18:30	212	16	9	15	1	3	0	256
18:45	149	21	5	20	1	4	0	200
<b>H/TOT</b>	<b>893</b>	<b>100</b>	<b>25</b>	<b>78</b>	<b>5</b>	<b>15</b>	<b>0</b>	<b>1116</b>
<b>P/TOT</b>	<b>3834</b>	<b>499</b>	<b>141</b>	<b>344</b>	<b>12</b>	<b>55</b>	<b>2</b>	<b>4887</b>

PEAK HOUR	
CALCULATION	TOT
16:00 to 17:00	2004
16:15 to 17:15	<b>2055</b>
16:30 to 17:30	2054
16:45 to 17:45	1881
17:00 to 18:00	1767
17:15 to 18:15	1583
17:30 to 18:30	1412
17:45 to 18:45	1272
18:00 to 19:00	1116
<b>PEAK VALUE</b>	<b>2055</b>



<b>Site / Location:</b>	Site 7, A180 / Pyewipe Road / Birchin Way / Moody Lane	<b>Project No:</b>	7614	<b>Drawing No:</b>	7614-07	<b>Drawn By:</b>	EA
	<b>Survey Date:</b>		Thursday 6th July 2017		<b>Project Name:</b>		Stallingborough
	<b>Survey Times:</b>	07:00 to 10:00 & 16:00 to 19:00	<b>Drawing Title:</b>	Site Layout and Observed Movements			



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	A to E								TOT	A to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	22	3	3	1	0	0	0	29	10	1	0	0	0	0	1	12		
07:15	9	1	2	0	0	0	0	12	3	0	0	0	0	0	3			
07:30	4	2	1	2	0	0	0	9	3	0	3	0	0	0	6			
07:45	12	5	5	2	0	0	0	24	6	2	0	0	0	0	8			
<b>H/TOT</b>	47	11	11	5	0	0	0	74	22	3	3	0	0	1	29			
08:00	8	3	4	3	0	0	0	18	2	1	2	0	0	0	5			
08:15	10	5	0	4	0	0	0	19	4	0	3	0	0	0	7			
08:30	17	2	2	1	0	1	0	23	4	2	1	1	0	0	8			
08:45	18	5	6	2	0	0	0	31	4	5	1	0	0	0	10			
<b>H/TOT</b>	53	15	12	10	0	1	0	91	14	8	7	1	0	0	30			
09:00	11	7	2	2	0	0	0	22	3	2	2	0	0	0	7			
09:15	15	6	0	1	0	0	0	22	11	2	4	0	0	0	17			
09:30	10	5	4	5	0	0	0	24	5	5	2	0	0	0	12			
09:45	11	5	2	0	0	0	0	18	6	2	1	0	0	0	9			
<b>H/TOT</b>	47	23	8	8	0	0	0	86	25	11	9	0	0	0	45			
<b>P/TOT</b>	147	49	31	23	0	1	0	251	61	22	19	1	0	1	104			

TIME	A to E								TOT	A to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	28	3	1	0	0	2	0	34	13	1	0	0	0	1	15			
16:15	32	5	0	0	0	0	0	37	3	3	0	0	0	0	6			
16:30	24	6	0	0	0	2	7	39	12	3	0	1	0	1	17			
16:45	38	2	1	2	0	2	2	47	18	1	0	0	0	0	19			
<b>H/TOT</b>	122	16	2	2	0	6	9	157	46	8	0	1	0	2	57			
17:00	42	4	0	1	0	0	0	47	19	1	0	0	0	0	20			
17:15	25	3	0	1	0	0	3	32	12	1	0	0	1	0	14			
17:30	25	3	0	0	0	0	2	30	20	2	0	0	0	0	22			
17:45	23	0	0	0	0	0	0	23	15	1	0	0	0	0	16			
<b>H/TOT</b>	115	10	0	2	0	0	5	132	66	5	0	0	1	0	72			
18:00	33	0	0	1	0	1	0	35	20	0	0	0	0	1	21			
18:15	17	5	0	0	0	1	4	27	11	0	0	0	0	2	13			
18:30	9	2	1	0	0	0	1	13	12	0	0	0	0	0	12			
18:45	20	2	2	1	0	1	0	26	7	0	1	0	0	1	9			
<b>H/TOT</b>	79	9	3	2	0	3	5	101	50	0	1	0	0	4	55			
<b>P/TOT</b>	316	35	5	6	0	9	19	390	162	13	1	1	0	6	184			



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	A to C								TOT	A to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	3	0	0	0	0	0	0	3	3	2	0	2	0	0	0	7		
07:15	0	1	0	0	0	0	0	1	15	1	2	4	0	0	0	22		
07:30	3	0	0	0	0	0	0	3	7	1	0	6	0	0	0	14		
07:45	1	2	0	0	0	0	0	3	2	1	3	3	1	0	0	10		
<b>H/TOT</b>	<b>7</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>27</b>	<b>5</b>	<b>5</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>53</b>		
08:00	0	0	0	0	0	0	0	0	6	1	2	5	1	0	0	15		
08:15	0	1	0	0	0	0	0	1	4	1	1	2	0	0	0	8		
08:30	2	0	0	0	0	0	0	2	5	0	0	4	0	0	0	9		
08:45	1	0	1	0	0	0	0	2	5	1	0	3	1	0	0	10		
<b>H/TOT</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>20</b>	<b>3</b>	<b>3</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>42</b>		
09:00	0	4	0	0	0	0	0	4	6	1	1	3	0	0	0	11		
09:15	3	0	0	0	0	0	0	3	4	1	0	2	0	0	0	7		
09:30	0	2	0	1	0	0	0	3	4	4	1	1	0	0	0	10		
09:45	1	0	2	0	0	0	0	3	4	5	1	3	0	0	0	13		
<b>H/TOT</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>18</b>	<b>11</b>	<b>3</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>41</b>		
<b>P/TOT</b>	<b>14</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>65</b>	<b>19</b>	<b>11</b>	<b>38</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>136</b>		

TIME	A to C								TOT	A to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	3	0	0	0	0	0	0	3	5	2	0	4	0	0	0	11		
16:15	1	0	0	0	0	0	0	1	4	2	0	7	0	0	0	13		
16:30	0	1	0	0	0	0	0	1	3	3	0	2	0	0	0	8		
16:45	2	0	0	0	0	0	0	2	4	0	0	3	0	0	0	7		
<b>H/TOT</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>16</b>	<b>7</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>		
17:00	2	0	0	0	0	0	0	2	8	2	0	2	0	0	0	12		
17:15	1	0	0	0	0	0	0	1	10	0	0	2	0	0	0	12		
17:30	0	0	0	0	0	0	0	0	10	1	0	5	0	0	0	16		
17:45	2	0	0	0	0	0	0	2	7	2	0	3	0	0	0	12		
<b>H/TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>35</b>	<b>5</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>52</b>		
18:00	1	0	0	0	0	0	0	1	7	1	0	3	0	0	0	11		
18:15	1	0	0	1	0	0	0	2	4	1	0	3	0	0	0	8		
18:30	2	0	1	0	0	0	0	3	4	1	0	0	0	0	0	5		
18:45	3	0	0	0	0	0	0	3	7	2	0	3	0	0	0	12		
<b>H/TOT</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>22</b>	<b>5</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>		
<b>P/TOT</b>	<b>18</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>73</b>	<b>17</b>	<b>0</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>127</b>		





SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	A to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	0	0	0	0	0	0

TIME	A to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	1	0	0	0	1
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	1	0	0	0	1
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	0	1	0	0	0	1



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	B to A								TOT	B to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	1	0	0	7	0	0	0	8	91	34	15	16	0	2	0	158		
07:15	1	2	0	1	0	0	0	4	81	32	14	10	5	0	0	142		
07:30	1	0	0	2	0	0	0	3	115	31	15	13	2	4	0	180		
07:45	3	0	0	5	0	0	0	8	201	47	17	9	0	0	0	274		
<b>H/TOT</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>488</b>	<b>144</b>	<b>61</b>	<b>48</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>754</b>		
08:00	3	2	1	3	0	0	0	9	205	41	10	13	1	3	0	273		
08:15	0	1	0	3	0	0	0	4	199	30	13	5	3	0	0	250		
08:30	1	1	0	0	0	0	0	2	185	28	19	14	1	0	0	247		
08:45	3	1	0	1	0	0	0	5	187	49	15	7	0	0	0	258		
<b>H/TOT</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>776</b>	<b>148</b>	<b>57</b>	<b>39</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>1028</b>		
09:00	0	2	1	2	0	0	0	5	170	35	16	13	0	2	0	236		
09:15	2	0	1	3	0	0	0	6	166	40	18	13	2	2	0	241		
09:30	2	1	0	3	0	0	0	6	165	40	15	13	1	3	0	237		
09:45	2	1	0	5	0	0	0	8	167	43	19	15	2	1	0	247		
<b>H/TOT</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>668</b>	<b>158</b>	<b>68</b>	<b>54</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>961</b>		
<b>P/TOT</b>	<b>19</b>	<b>11</b>	<b>3</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>68</b>	<b>1932</b>	<b>450</b>	<b>186</b>	<b>141</b>	<b>17</b>	<b>17</b>	<b>0</b>	<b>2743</b>		

TIME	B to A								TOT	B to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	0	0	0	2	0	0	0	2	283	67	7	3	1	4	1	366		
16:15	2	0	0	3	0	0	0	5	275	43	8	4	2	6	0	338		
16:30	0	0	1	5	0	0	0	6	289	44	2	3	1	4	0	343		
16:45	1	0	0	2	0	0	0	3	338	54	9	2	1	4	0	408		
<b>H/TOT</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>1185</b>	<b>208</b>	<b>26</b>	<b>12</b>	<b>5</b>	<b>18</b>	<b>1</b>	<b>1455</b>		
17:00	0	1	0	0	0	0	0	1	359	57	4	3	0	6	0	429		
17:15	0	0	0	1	0	0	0	1	347	49	4	7	1	6	0	414		
17:30	2	0	0	2	0	0	0	4	319	35	3	7	1	1	0	366		
17:45	0	0	0	0	0	0	0	0	229	35	2	6	0	4	0	276		
<b>H/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1254</b>	<b>176</b>	<b>13</b>	<b>23</b>	<b>2</b>	<b>17</b>	<b>0</b>	<b>1485</b>		
18:00	3	0	0	2	0	0	0	5	268	30	6	4	2	1	1	312		
18:15	1	1	0	0	0	0	0	2	205	26	4	4	0	2	1	242		
18:30	1	0	0	0	0	0	0	1	180	18	2	2	1	1	0	204		
18:45	1	0	1	2	0	0	0	4	141	12	0	3	3	1	0	160		
<b>H/TOT</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>794</b>	<b>86</b>	<b>12</b>	<b>13</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>918</b>		
<b>P/TOT</b>	<b>11</b>	<b>2</b>	<b>2</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>3233</b>	<b>470</b>	<b>51</b>	<b>48</b>	<b>13</b>	<b>40</b>	<b>3</b>	<b>3858</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	B to D								TOT	B to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	26	7	19	0	3	0	0	55	9	6	4	0	0	0	0	19		
07:15	28	11	2	1	1	0	0	43	5	2	0	2	0	0	0	9		
07:30	38	8	2	2	2	0	0	52	7	4	1	1	0	0	0	13		
07:45	82	11	1	2	3	1	0	100	7	3	3	2	0	0	0	15		
<b>H/TOT</b>	<b>174</b>	<b>37</b>	<b>24</b>	<b>5</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>250</b>	<b>28</b>	<b>15</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>		
08:00	85	23	5	0	2	0	0	115	5	3	4	2	0	0	0	14		
08:15	101	19	1	2	1	0	0	124	0	5	1	0	0	0	0	6		
08:30	79	13	3	2	0	0	0	97	3	0	1	2	0	0	0	6		
08:45	90	13	3	2	0	0	0	108	4	5	1	2	0	0	0	12		
<b>H/TOT</b>	<b>355</b>	<b>68</b>	<b>12</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>444</b>	<b>12</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38</b>		
09:00	72	7	4	2	1	0	0	86	7	3	3	0	0	0	0	13		
09:15	69	15	4	3	0	0	0	91	6	6	3	1	0	0	0	16		
09:30	61	29	5	2	1	0	0	98	3	8	1	0	0	0	0	12		
09:45	59	15	3	0	0	0	0	77	5	1	3	1	0	1	0	11		
<b>H/TOT</b>	<b>261</b>	<b>66</b>	<b>16</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>352</b>	<b>21</b>	<b>18</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>52</b>		
<b>P/TOT</b>	<b>790</b>	<b>171</b>	<b>52</b>	<b>18</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>1046</b>	<b>61</b>	<b>46</b>	<b>25</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>146</b>		

TIME	B to D								TOT	B to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	84	17	3	2	2	0	0	108	7	4	1	1	0	0	0	13		
16:15	86	22	1	1	1	0	0	111	10	7	1	2	0	0	0	20		
16:30	90	20	2	0	1	2	0	115	6	2	0	0	0	0	0	8		
16:45	90	22	2	0	0	0	0	114	11	6	0	2	0	0	0	19		
<b>H/TOT</b>	<b>350</b>	<b>81</b>	<b>8</b>	<b>3</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>448</b>	<b>34</b>	<b>19</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>		
17:00	90	9	1	0	1	0	0	101	10	2	1	0	0	0	0	13		
17:15	101	12	3	0	0	0	0	116	8	2	0	1	0	0	0	11		
17:30	88	13	1	1	1	0	0	104	14	2	0	0	0	0	0	16		
17:45	63	8	1	1	0	0	0	73	8	2	0	0	0	0	0	10		
<b>H/TOT</b>	<b>342</b>	<b>42</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>394</b>	<b>40</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>50</b>		
18:00	82	12	1	0	1	1	0	97	13	1	0	0	0	0	0	14		
18:15	65	10	2	0	0	1	0	78	8	3	1	0	0	0	0	12		
18:30	57	6	0	0	0	0	0	63	10	2	0	0	0	0	0	12		
18:45	41	5	1	0	0	0	0	47	14	2	0	1	0	0	0	17		
<b>H/TOT</b>	<b>245</b>	<b>33</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>285</b>	<b>45</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>55</b>		
<b>P/TOT</b>	<b>937</b>	<b>156</b>	<b>18</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>1127</b>	<b>119</b>	<b>35</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>165</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	B to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	1	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	1	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	1	0	0	0	0	1

TIME	B to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	1	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	2	0	0	0	0	0	0	2
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	1	0	0	0	0	0	0	1
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	1	0	0	0	0	0	0	1
<b>P/TOT</b>	4	0	0	0	0	0	0	4



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	C to B							TOT	C to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	5	2	2	0	0	0	0	9	0	1	0	0	0	0	0	1
07:15	11	4	1	1	1	0	0	18	0	0	0	0	0	0	0	0
07:30	10	4	0	1	0	0	0	15	1	0	0	0	0	0	0	1
07:45	4	6	1	1	0	0	0	12	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>30</b>	<b>16</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
08:00	15	14	3	1	0	0	0	33	3	1	0	0	0	0	0	4
08:15	11	5	1	2	0	0	0	19	0	1	0	0	0	0	0	1
08:30	11	8	1	2	0	0	0	22	1	0	0	0	0	0	0	1
08:45	9	8	3	1	0	0	0	21	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>46</b>	<b>35</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>95</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>
09:00	11	6	3	3	0	0	0	23	2	0	0	0	0	0	0	2
09:15	13	8	1	1	0	1	0	24	1	0	0	0	0	0	0	1
09:30	18	7	4	0	0	0	0	29	1	0	2	0	0	0	0	3
09:45	16	5	0	0	1	1	0	23	2	0	0	0	0	0	0	2
<b>H/TOT</b>	<b>58</b>	<b>26</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>99</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>P/TOT</b>	<b>134</b>	<b>77</b>	<b>20</b>	<b>13</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>248</b>	<b>13</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>

TIME	C to B							TOT	C to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	21	10	1	1	0	0	1	34	3	2	0	0	0	0	0	5
16:15	9	4	0	1	0	0	0	14	1	0	0	0	0	0	0	1
16:30	12	2	1	0	0	0	0	15	1	0	0	0	0	0	0	1
16:45	17	5	1	1	0	1	0	25	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>59</b>	<b>21</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>88</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
17:00	25	3	1	1	0	0	0	30	0	0	1	0	0	0	0	1
17:15	22	2	0	0	0	0	0	24	0	0	0	0	0	0	0	0
17:30	20	2	0	0	0	0	0	22	1	1	0	0	0	0	0	2
17:45	18	2	0	0	0	0	0	20	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>85</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>96</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
18:00	8	3	0	1	0	0	0	12	1	0	0	0	0	0	0	1
18:15	15	1	1	0	0	0	0	17	2	0	0	0	0	0	0	2
18:30	16	4	0	1	0	0	0	21	2	0	0	0	0	0	0	2
18:45	15	2	0	0	0	0	0	17	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>54</b>	<b>10</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
<b>P/TOT</b>	<b>198</b>	<b>40</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>251</b>	<b>12</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	C to E								TOT	C to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	1	0	0	1	0	0	0	2	3	1	0	0	0	0	0	4		
07:15	3	4	1	1	0	0	0	9	2	0	0	1	0	0	0	3		
07:30	4	2	0	0	0	0	0	6	3	2	2	0	0	0	0	7		
07:45	10	1	1	2	0	0	0	14	9	2	1	0	0	0	0	12		
<b>H/TOT</b>	<b>18</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>17</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>		
08:00	5	1	1	0	0	0	0	7	5	6	1	0	0	0	0	12		
08:15	1	7	1	1	0	0	0	10	7	8	1	0	0	0	0	16		
08:30	10	2	1	2	0	0	0	15	9	3	1	0	0	0	0	13		
08:45	3	3	0	0	0	0	0	6	3	1	0	0	0	0	0	4		
<b>H/TOT</b>	<b>19</b>	<b>13</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>24</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>		
09:00	11	5	1	0	0	0	0	17	6	4	0	0	0	1	0	11		
09:15	9	3	3	1	0	0	0	16	12	5	0	0	0	0	0	17		
09:30	8	3	1	0	0	0	0	12	17	9	0	0	0	0	0	26		
09:45	14	10	0	2	0	0	0	26	7	5	1	0	0	0	0	13		
<b>H/TOT</b>	<b>42</b>	<b>21</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>71</b>	<b>42</b>	<b>23</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>67</b>		
<b>P/TOT</b>	<b>79</b>	<b>41</b>	<b>10</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>83</b>	<b>46</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>138</b>		

TIME	C to E								TOT	C to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	12	4	0	1	0	0	0	17	11	3	0	0	0	0	0	14		
16:15	16	5	1	0	0	0	0	22	17	1	0	0	0	0	0	18		
16:30	15	9	0	0	0	0	0	24	17	2	0	0	0	0	0	19		
16:45	17	1	2	0	0	0	0	20	21	1	0	0	0	0	0	22		
<b>H/TOT</b>	<b>60</b>	<b>19</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>66</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>		
17:00	15	0	0	0	0	2	0	17	23	1	0	0	0	0	0	24		
17:15	13	0	0	0	0	0	0	13	12	3	0	0	0	0	0	15		
17:30	18	13	0	0	0	0	0	31	16	2	0	0	0	0	0	18		
17:45	8	0	1	0	0	0	0	9	16	2	1	0	0	0	0	19		
<b>H/TOT</b>	<b>54</b>	<b>13</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>70</b>	<b>67</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>		
18:00	17	3	0	0	0	0	0	20	18	1	0	0	0	0	0	19		
18:15	9	1	0	0	0	0	0	10	23	1	0	0	0	0	0	24		
18:30	11	2	0	0	0	0	0	13	12	1	0	0	0	1	0	14		
18:45	14	3	0	0	0	0	0	17	20	1	0	0	0	0	0	21		
<b>H/TOT</b>	<b>51</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>73</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>78</b>		
<b>P/TOT</b>	<b>165</b>	<b>41</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>213</b>	<b>206</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>227</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	C to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	1	0	0	0	0	1
<b>H/TOT</b>	0	0	1	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	1	0	0	0	0	1

TIME	C to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
18:00	1	0	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	1	0	0	0	0	0	0	1
<b>P/TOT</b>	1	0	0	0	0	0	0	1



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	D to C								TOT	D to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	10	0	0	0	0	0	0	10	57	34	3	0	0	0	0	94		
07:15	7	0	2	0	0	0	0	9	65	13	3	0	1	1	0	83		
07:30	9	0	0	0	0	0	0	9	85	10	4	0	0	1	0	100		
07:45	10	3	1	0	0	0	0	14	85	20	3	0	0	1	0	109		
<b>H/TOT</b>	<b>36</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>292</b>	<b>77</b>	<b>13</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>386</b>		
08:00	12	6	2	0	0	0	0	20	54	19	5	1	2	0	0	81		
08:15	15	4	0	0	0	0	0	19	88	23	7	2	1	0	0	121		
08:30	12	4	0	0	0	0	0	16	65	14	4	2	0	0	0	85		
08:45	14	4	0	0	0	0	0	18	69	10	2	0	1	1	0	83		
<b>H/TOT</b>	<b>53</b>	<b>18</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>276</b>	<b>66</b>	<b>18</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>370</b>		
09:00	16	3	0	0	0	0	0	19	52	16	4	1	0	0	0	73		
09:15	16	2	0	0	0	1	0	19	57	20	6	1	2	0	0	86		
09:30	13	4	0	0	0	0	0	17	59	18	5	2	2	0	0	86		
09:45	15	6	0	0	1	0	0	22	59	18	6	2	2	0	0	87		
<b>H/TOT</b>	<b>60</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>77</b>	<b>227</b>	<b>72</b>	<b>21</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>332</b>		
<b>P/TOT</b>	<b>149</b>	<b>36</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>192</b>	<b>795</b>	<b>215</b>	<b>52</b>	<b>11</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>1088</b>		

TIME	D to C								TOT	D to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	16	6	1	0	0	2	0	25	64	12	4	3	2	0	0	85		
16:15	12	0	0	0	0	0	0	12	72	12	2	4	3	0	0	93		
16:30	14	3	0	0	0	0	0	17	78	9	4	0	2	1	0	94		
16:45	27	1	1	0	0	2	0	31	85	4	0	0	2	2	0	93		
<b>H/TOT</b>	<b>69</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>85</b>	<b>299</b>	<b>37</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>365</b>		
17:00	15	2	0	0	0	0	0	17	99	1	1	1	0	0	0	102		
17:15	16	1	0	0	0	0	0	17	94	3	0	0	1	2	0	100		
17:30	18	0	1	0	0	0	0	19	86	5	0	0	0	0	0	91		
17:45	15	1	0	0	0	0	0	16	64	8	0	0	1	1	0	74		
<b>H/TOT</b>	<b>64</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>69</b>	<b>343</b>	<b>17</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>367</b>		
18:00	13	2	0	0	0	0	0	15	59	5	2	0	0	1	0	67		
18:15	14	0	0	0	0	0	0	14	44	3	2	0	0	1	0	50		
18:30	20	1	0	0	0	0	0	21	52	0	0	0	0	0	0	52		
18:45	21	3	0	0	0	0	0	24	39	3	0	1	0	1	0	44		
<b>H/TOT</b>	<b>68</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>194</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>213</b>		
<b>P/TOT</b>	<b>201</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>228</b>	<b>836</b>	<b>65</b>	<b>15</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>945</b>		





SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	D to A								TOT	D to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	15	2	1	1	0	1	0	20	11	1	1	0	0	0	0	13		
07:15	13	5	1	0	0	0	0	19	16	4	1	0	0	0	0	21		
07:30	20	1	1	0	0	1	0	23	15	5	1	1	0	0	0	22		
07:45	30	2	0	0	0	0	0	32	25	4	2	1	0	0	0	32		
<b>H/TOT</b>	<b>78</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>94</b>	<b>67</b>	<b>14</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>88</b>		
08:00	15	4	1	1	0	0	0	21	28	10	3	1	0	0	0	42		
08:15	25	2	0	0	0	0	0	27	38	8	3	0	0	0	0	49		
08:30	8	4	3	0	0	0	0	15	63	9	5	1	2	0	0	80		
08:45	10	1	1	0	0	0	0	12	44	5	6	2	1	1	0	59		
<b>H/TOT</b>	<b>58</b>	<b>11</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>173</b>	<b>32</b>	<b>17</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>230</b>		
09:00	11	2	2	1	0	0	0	16	69	6	0	1	2	0	0	78		
09:15	5	3	1	0	1	0	0	10	50	6	3	0	2	0	0	61		
09:30	12	3	3	1	0	0	0	19	46	6	3	0	0	0	0	55		
09:45	11	2	4	0	0	0	1	18	44	11	0	1	0	0	0	56		
<b>H/TOT</b>	<b>39</b>	<b>10</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>63</b>	<b>209</b>	<b>29</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>250</b>		
<b>P/TOT</b>	<b>175</b>	<b>31</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>232</b>	<b>449</b>	<b>75</b>	<b>28</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>568</b>		

TIME	D to A								TOT	D to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	3	1	0	0	0	0	0	4	44	4	2	0	0	0	0	50		
16:15	5	1	0	0	0	0	0	6	43	7	2	0	0	0	0	52		
16:30	1	0	0	0	0	0	0	1	59	10	2	0	1	0	0	72		
16:45	10	0	0	0	0	0	0	10	38	4	1	0	0	0	0	43		
<b>H/TOT</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>184</b>	<b>25</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>217</b>		
17:00	11	0	0	0	0	0	0	11	52	2	0	0	0	0	0	54		
17:15	9	1	0	0	0	0	0	10	45	2	2	0	0	1	0	50		
17:30	4	0	0	0	0	0	0	4	55	4	0	0	0	1	0	60		
17:45	5	0	0	0	0	0	0	5	50	6	0	0	0	1	0	57		
<b>H/TOT</b>	<b>29</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>202</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>221</b>		
18:00	7	2	0	1	0	0	0	10	45	1	1	0	0	2	0	49		
18:15	3	1	0	0	0	0	0	4	57	5	0	0	0	2	0	64		
18:30	5	0	0	0	0	0	0	5	54	1	0	1	0	0	0	56		
18:45	4	1	0	0	0	0	0	5	41	1	0	0	0	1	0	43		
<b>H/TOT</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>197</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>212</b>		
<b>P/TOT</b>	<b>67</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>583</b>	<b>47</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>650</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	0	0	0	0	0	0

TIME	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
18:00	0	1	0	0	0	0	0	1
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	1
<b>P/TOT</b>	0	1	0	0	0	0	0	1



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	E to D							TOT	E to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	20	6	0	1	0	0	0	27	5	3	0	0	1	0	0	9
07:15	18	4	1	1	0	0	0	24	16	10	1	1	0	0	0	28
07:30	22	10	2	0	0	0	0	34	12	4	0	1	0	0	0	17
07:45	23	5	8	0	0	0	0	36	17	3	0	0	0	0	0	20
<b>H/TOT</b>	<b>83</b>	<b>25</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>121</b>	<b>50</b>	<b>20</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>74</b>
08:00	21	5	2	0	0	0	0	28	16	6	1	1	0	0	1	25
08:15	34	5	1	0	0	0	0	40	10	7	1	0	0	0	0	18
08:30	32	9	3	1	0	0	0	45	11	4	0	1	0	0	0	16
08:45	31	8	4	1	0	0	0	44	10	4	0	1	0	0	0	15
<b>H/TOT</b>	<b>118</b>	<b>27</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>157</b>	<b>47</b>	<b>21</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>74</b>
09:00	46	8	4	1	1	0	0	60	16	5	1	2	0	1	0	25
09:15	58	16	5	1	1	0	0	81	18	8	2	1	0	0	0	29
09:30	66	16	4	0	0	1	0	87	12	4	1	1	0	0	0	18
09:45	72	8	3	0	1	0	0	84	12	3	1	0	0	0	0	16
<b>H/TOT</b>	<b>242</b>	<b>48</b>	<b>16</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>312</b>	<b>58</b>	<b>20</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>88</b>
<b>P/TOT</b>	<b>443</b>	<b>100</b>	<b>37</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>590</b>	<b>155</b>	<b>61</b>	<b>8</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>236</b>

TIME	E to D							TOT	E to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	68	13	5	0	0	0	1	87	13	1	0	0	0	0	0	14
16:15	65	5	0	0	0	1	1	72	12	5	3	0	0	0	0	20
16:30	71	8	1	0	0	0	0	80	15	1	1	0	0	1	0	18
16:45	67	7	1	0	1	1	0	77	12	3	1	1	0	0	0	17
<b>H/TOT</b>	<b>271</b>	<b>33</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>316</b>	<b>52</b>	<b>10</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>69</b>
17:00	60	10	1	0	0	1	0	72	10	1	1	0	0	0	0	12
17:15	49	9	1	0	1	1	1	62	12	2	1	0	0	0	0	15
17:30	61	6	0	0	1	1	0	69	16	1	0	0	0	0	0	17
17:45	62	4	0	0	0	3	0	69	16	2	0	1	0	0	0	19
<b>H/TOT</b>	<b>232</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>272</b>	<b>54</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>
18:00	66	4	0	0	0	0	0	70	16	0	0	0	0	1	0	17
18:15	60	5	0	0	0	0	0	65	17	0	0	0	0	0	0	17
18:30	61	2	1	0	0	2	0	66	11	2	0	0	0	0	0	13
18:45	61	4	1	0	1	0	0	67	9	3	0	0	0	0	0	12
<b>H/TOT</b>	<b>248</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>268</b>	<b>53</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>59</b>
<b>P/TOT</b>	<b>751</b>	<b>77</b>	<b>11</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>3</b>	<b>856</b>	<b>159</b>	<b>21</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>191</b>



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	E to B								TOT	E to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	251	48	13	9	1	2	1	325	33	2	1	0	0	1	0	37		
07:15	317	69	7	7	3	4	0	407	40	6	0	3	0	0	1	50		
07:30	348	70	6	6	1	1	0	432	54	7	1	2	0	2	0	66		
07:45	282	55	13	11	1	4	0	366	42	7	5	0	0	1	0	55		
<b>H/TOT</b>	<b>1198</b>	<b>242</b>	<b>39</b>	<b>33</b>	<b>6</b>	<b>11</b>	<b>1</b>	<b>1530</b>	<b>169</b>	<b>22</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>208</b>		
08:00	246	66	9	6	2	2	0	331	27	5	2	2	0	1	0	37		
08:15	179	41	11	5	1	1	0	238	41	5	0	0	0	1	0	47		
08:30	170	32	5	5	0	1	0	213	59	10	4	2	1	1	0	77		
08:45	128	31	12	13	0	3	0	187	20	1	1	1	0	0	0	23		
<b>H/TOT</b>	<b>723</b>	<b>170</b>	<b>37</b>	<b>29</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>969</b>	<b>147</b>	<b>21</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>184</b>		
09:00	139	45	19	11	2	1	0	217	22	4	1	1	0	0	0	28		
09:15	158	47	23	7	2	3	0	240	19	7	3	2	1	0	0	32		
09:30	104	35	11	10	0	1	0	161	14	7	1	1	0	0	0	23		
09:45	116	31	17	16	0	1	0	181	17	5	1	2	0	0	0	25		
<b>H/TOT</b>	<b>517</b>	<b>158</b>	<b>70</b>	<b>44</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>799</b>	<b>72</b>	<b>23</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>108</b>		
<b>P/TOT</b>	<b>2438</b>	<b>570</b>	<b>146</b>	<b>106</b>	<b>13</b>	<b>24</b>	<b>1</b>	<b>3298</b>	<b>388</b>	<b>66</b>	<b>20</b>	<b>16</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>500</b>		

TIME	E to B								TOT	E to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	181	25	9	3	0	2	0	220	10	0	1	1	0	0	0	12		
16:15	189	37	8	8	2	2	0	246	12	4	1	0	0	0	0	17		
16:30	196	31	4	8	2	3	0	244	16	3	1	0	0	0	0	20		
16:45	187	19	6	4	2	1	0	219	15	1	0	0	0	0	0	16		
<b>H/TOT</b>	<b>753</b>	<b>112</b>	<b>27</b>	<b>23</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>929</b>	<b>53</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>		
17:00	208	25	3	1	2	7	1	247	12	2	0	0	0	0	0	14		
17:15	205	20	5	10	0	3	0	243	11	3	0	0	0	0	0	14		
17:30	176	15	2	8	0	3	0	204	8	2	0	0	0	0	0	10		
17:45	162	11	1	4	0	0	0	178	17	2	0	0	0	0	0	19		
<b>H/TOT</b>	<b>751</b>	<b>71</b>	<b>11</b>	<b>23</b>	<b>2</b>	<b>13</b>	<b>1</b>	<b>872</b>	<b>48</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>57</b>		
18:00	186	18	3	4	1	1	0	213	10	0	0	0	0	0	0	10		
18:15	146	14	4	3	1	1	0	169	4	0	0	0	0	0	0	4		
18:30	106	15	3	3	0	1	0	128	13	3	0	0	0	1	0	17		
18:45	104	5	2	3	0	0	1	115	8	1	0	0	0	0	0	9		
<b>H/TOT</b>	<b>542</b>	<b>52</b>	<b>12</b>	<b>13</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>625</b>	<b>35</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>40</b>		
<b>P/TOT</b>	<b>2046</b>	<b>235</b>	<b>50</b>	<b>59</b>	<b>10</b>	<b>24</b>	<b>2</b>	<b>2426</b>	<b>136</b>	<b>21</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>162</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	E to E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	1	0	0	0	1
07:15	0	0	0	0	0	0	0	0
07:30	0	1	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	1	0	0	0	2
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	1	0	0	0	0	1
08:45	3	1	0	0	0	0	0	4
<b>H/TOT</b>	3	1	1	0	0	0	0	5
09:00	5	1	0	0	0	0	0	6
09:15	2	2	0	0	0	0	0	4
09:30	0	0	0	0	0	0	0	0
09:45	2	0	0	0	0	0	0	2
<b>H/TOT</b>	9	3	0	0	0	0	0	12
<b>P/TOT</b>	12	5	1	1	0	0	0	19

TIME	E to E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	2	1	0	0	0	0	0	3
16:15	2	0	0	0	1	0	0	3
16:30	0	0	0	0	0	0	0	0
16:45	2	0	0	0	0	0	0	2
<b>H/TOT</b>	6	1	0	0	1	0	0	8
17:00	0	0	0	0	0	0	0	0
17:15	2	0	0	0	0	0	0	2
17:30	1	0	0	0	0	0	0	1
17:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	4	0	0	0	0	0	0	4
18:00	0	0	0	0	0	0	0	0
18:15	2	0	0	0	0	0	0	2
18:30	2	0	0	0	0	0	0	2
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	4	0	0	0	0	0	0	4
<b>P/TOT</b>	14	1	0	0	1	0	0	16



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	49	5	2	8	0	2	0	66	38	6	3	3	0	0	1	51		
07:15	54	13	1	4	0	0	1	73	27	3	4	4	0	0	0	38		
07:30	76	8	2	4	0	3	0	93	17	3	4	8	0	0	0	32		
07:45	76	9	5	5	0	1	0	96	21	10	8	5	1	0	0	45		
<b>H/TOT</b>	<b>255</b>	<b>35</b>	<b>10</b>	<b>21</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>328</b>	<b>103</b>	<b>22</b>	<b>19</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>166</b>		
08:00	48	12	4	6	0	1	0	71	16	5	8	8	1	0	0	38		
08:15	66	9	0	3	0	1	0	79	18	7	4	6	0	0	0	35		
08:30	69	15	7	2	1	1	0	95	28	4	3	6	0	1	0	42		
08:45	34	3	2	2	0	0	0	41	28	11	8	5	1	0	0	53		
<b>H/TOT</b>	<b>217</b>	<b>39</b>	<b>13</b>	<b>13</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>286</b>	<b>90</b>	<b>27</b>	<b>23</b>	<b>25</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>168</b>		
09:00	35	8	4	4	0	0	0	51	20	14	5	5	0	0	0	44		
09:15	27	10	5	5	2	0	0	49	33	9	4	3	0	0	0	49		
09:30	29	11	6	5	0	0	0	51	19	16	7	7	0	0	0	49		
09:45	32	8	5	7	0	0	1	53	22	12	6	3	0	0	0	43		
<b>H/TOT</b>	<b>123</b>	<b>37</b>	<b>20</b>	<b>21</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>204</b>	<b>94</b>	<b>51</b>	<b>22</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>185</b>		
<b>P/TOT</b>	<b>595</b>	<b>111</b>	<b>43</b>	<b>55</b>	<b>3</b>	<b>9</b>	<b>2</b>	<b>818</b>	<b>287</b>	<b>100</b>	<b>64</b>	<b>63</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>519</b>		

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	16	3	1	4	0	0	0	24	49	6	1	5	0	2	1	64		
16:15	20	5	1	3	0	0	0	29	40	10	0	7	0	0	0	57		
16:30	18	3	2	5	0	0	0	28	39	13	0	3	0	2	8	65		
16:45	27	1	0	2	0	0	0	30	62	3	1	5	0	2	2	75		
<b>H/TOT</b>	<b>81</b>	<b>12</b>	<b>4</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>190</b>	<b>32</b>	<b>2</b>	<b>20</b>	<b>0</b>	<b>6</b>	<b>11</b>	<b>261</b>		
17:00	23	3	1	0	0	0	0	27	71	7	0	3	0	0	0	81		
17:15	20	4	0	1	0	0	0	25	48	4	0	3	0	1	3	59		
17:30	15	3	0	2	0	0	0	20	55	6	0	5	0	0	2	68		
17:45	22	2	0	0	0	0	0	24	47	3	0	3	0	0	0	53		
<b>H/TOT</b>	<b>80</b>	<b>12</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>96</b>	<b>221</b>	<b>20</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>261</b>		
18:00	21	2	0	3	0	0	0	26	61	1	0	4	0	1	1	68		
18:15	10	2	0	0	0	0	0	12	33	6	0	4	0	1	6	50		
18:30	21	3	0	0	0	1	0	25	27	3	2	0	0	0	1	33		
18:45	13	2	1	2	0	0	0	18	37	4	3	4	0	1	1	50		
<b>H/TOT</b>	<b>65</b>	<b>9</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>81</b>	<b>158</b>	<b>14</b>	<b>5</b>	<b>12</b>	<b>0</b>	<b>3</b>	<b>9</b>	<b>201</b>		
<b>P/TOT</b>	<b>226</b>	<b>33</b>	<b>6</b>	<b>22</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>288</b>	<b>569</b>	<b>66</b>	<b>7</b>	<b>46</b>	<b>0</b>	<b>10</b>	<b>25</b>	<b>723</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	316	86	18	11	1	2	1	435	127	47	38	23	3	2	0	240		
07:15	408	87	13	12	5	5	0	530	115	47	16	14	6	0	0	198		
07:30	450	85	10	13	1	2	0	561	161	43	18	18	4	4	0	248		
07:45	373	82	20	15	2	5	0	497	293	61	21	18	3	1	0	397		
<b>H/TOT</b>	<b>1547</b>	<b>340</b>	<b>61</b>	<b>51</b>	<b>9</b>	<b>14</b>	<b>1</b>	<b>2023</b>	<b>696</b>	<b>198</b>	<b>93</b>	<b>73</b>	<b>16</b>	<b>7</b>	<b>0</b>	<b>1083</b>		
08:00	321	100	19	13	5	2	0	460	298	69	20	18	3	3	0	411		
08:15	282	70	21	11	2	1	0	387	300	55	16	10	4	0	0	385		
08:30	251	54	10	13	0	1	0	329	268	42	23	18	1	0	0	352		
08:45	211	50	17	17	2	4	0	301	284	68	19	12	0	0	0	383		
<b>H/TOT</b>	<b>1065</b>	<b>274</b>	<b>67</b>	<b>54</b>	<b>9</b>	<b>8</b>	<b>0</b>	<b>1477</b>	<b>1150</b>	<b>234</b>	<b>78</b>	<b>58</b>	<b>8</b>	<b>3</b>	<b>0</b>	<b>1531</b>		
09:00	208	68	27	18	2	1	0	324	249	47	24	17	1	2	0	340		
09:15	232	76	30	11	4	4	0	357	243	61	26	20	2	2	0	354		
09:30	185	64	21	13	2	1	0	286	231	78	21	18	2	3	0	353		
09:45	195	59	24	21	3	2	0	304	233	60	25	21	2	2	0	343		
<b>H/TOT</b>	<b>820</b>	<b>267</b>	<b>102</b>	<b>63</b>	<b>11</b>	<b>8</b>	<b>0</b>	<b>1271</b>	<b>956</b>	<b>246</b>	<b>96</b>	<b>76</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>1390</b>		
<b>P/TOT</b>	<b>3432</b>	<b>881</b>	<b>230</b>	<b>168</b>	<b>29</b>	<b>30</b>	<b>1</b>	<b>4771</b>	<b>2802</b>	<b>678</b>	<b>267</b>	<b>207</b>	<b>31</b>	<b>19</b>	<b>0</b>	<b>4004</b>		

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	272	49	14	11	2	2	1	351	375	88	11	8	3	4	1	490		
16:15	274	55	10	20	5	2	0	366	373	72	10	10	3	6	0	474		
16:30	289	45	9	10	4	4	0	361	385	66	5	8	2	6	0	472		
16:45	294	28	7	8	4	4	0	345	441	82	11	6	1	4	0	545		
<b>H/TOT</b>	<b>1129</b>	<b>177</b>	<b>40</b>	<b>49</b>	<b>15</b>	<b>12</b>	<b>1</b>	<b>1423</b>	<b>1574</b>	<b>308</b>	<b>37</b>	<b>32</b>	<b>9</b>	<b>20</b>	<b>1</b>	<b>1981</b>		
17:00	340	31	5	5	2	7	1	391	459	69	6	3	1	6	0	544		
17:15	331	25	5	12	1	5	0	379	456	63	7	9	1	6	0	542		
17:30	293	23	2	13	0	3	0	334	424	50	4	10	2	1	0	491		
17:45	251	23	1	7	1	1	0	284	300	45	3	7	0	4	0	359		
<b>H/TOT</b>	<b>1215</b>	<b>102</b>	<b>13</b>	<b>37</b>	<b>4</b>	<b>16</b>	<b>1</b>	<b>1388</b>	<b>1639</b>	<b>227</b>	<b>20</b>	<b>29</b>	<b>4</b>	<b>17</b>	<b>0</b>	<b>1936</b>		
18:00	260	27	5	8	1	2	0	303	366	43	7	6	3	2	1	428		
18:15	209	19	7	6	1	2	0	244	279	40	7	4	0	3	1	334		
18:30	178	20	3	4	0	1	0	206	248	26	2	2	1	1	0	280		
18:45	166	12	2	7	0	1	1	189	198	19	2	6	3	1	0	229		
<b>H/TOT</b>	<b>813</b>	<b>78</b>	<b>17</b>	<b>25</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>942</b>	<b>1091</b>	<b>128</b>	<b>18</b>	<b>18</b>	<b>7</b>	<b>7</b>	<b>2</b>	<b>1271</b>		
<b>P/TOT</b>	<b>3157</b>	<b>357</b>	<b>70</b>	<b>111</b>	<b>21</b>	<b>34</b>	<b>3</b>	<b>3753</b>	<b>4304</b>	<b>663</b>	<b>75</b>	<b>79</b>	<b>20</b>	<b>44</b>	<b>3</b>	<b>5188</b>		



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	27	9	4	0	1	0	0	41	9	4	2	1	0	0	0	16		
07:15	28	13	3	3	0	0	0	47	16	8	2	3	1	0	0	30		
07:30	31	8	1	2	0	0	0	42	18	8	2	1	0	0	0	29		
07:45	35	11	4	2	0	0	0	52	24	9	3	3	0	0	0	39		
<b>H/TOT</b>	<b>121</b>	<b>41</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>182</b>	<b>67</b>	<b>29</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>114</b>		
08:00	33	15	7	3	0	0	1	59	28	22	5	1	0	0	0	56		
08:15	25	17	2	0	0	0	0	44	19	21	3	3	0	0	0	46		
08:30	28	8	1	3	0	0	0	40	31	13	3	4	0	0	0	51		
08:45	29	13	3	3	0	0	0	48	16	12	4	1	0	0	0	33		
<b>H/TOT</b>	<b>115</b>	<b>53</b>	<b>13</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>191</b>	<b>94</b>	<b>68</b>	<b>15</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>186</b>		
09:00	39	15	4	2	0	1	0	61	30	15	4	3	0	1	0	53		
09:15	43	16	5	2	0	1	0	67	35	16	4	2	0	1	0	58		
09:30	28	18	2	2	0	0	0	50	44	19	7	0	0	0	0	70		
09:45	33	10	6	1	1	1	0	52	39	20	1	2	1	1	0	64		
<b>H/TOT</b>	<b>143</b>	<b>59</b>	<b>17</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>230</b>	<b>148</b>	<b>70</b>	<b>16</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>245</b>		
<b>P/TOT</b>	<b>379</b>	<b>153</b>	<b>42</b>	<b>23</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>603</b>	<b>309</b>	<b>167</b>	<b>40</b>	<b>24</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>545</b>		

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	39	11	2	1	0	2	0	55	47	19	1	2	0	0	1	70		
16:15	35	12	4	2	0	0	0	53	43	10	1	1	0	0	0	55		
16:30	35	7	1	0	0	1	0	44	45	13	1	0	0	0	0	59		
16:45	52	10	2	3	0	2	0	69	56	7	3	1	0	1	0	68		
<b>H/TOT</b>	<b>161</b>	<b>40</b>	<b>9</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>221</b>	<b>191</b>	<b>49</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>252</b>		
17:00	37	5	2	0	0	0	0	44	63	4	2	1	0	2	0	72		
17:15	37	5	1	1	0	0	0	44	47	5	0	0	0	0	0	52		
17:30	48	3	1	0	0	0	0	52	55	18	0	0	0	0	0	73		
17:45	41	5	0	1	0	0	0	47	42	4	2	0	0	0	0	48		
<b>H/TOT</b>	<b>163</b>	<b>18</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>187</b>	<b>207</b>	<b>31</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>245</b>		
18:00	44	3	0	0	0	1	0	48	45	7	0	1	0	0	0	53		
18:15	40	3	1	1	0	0	0	45	49	3	1	0	0	0	0	53		
18:30	43	5	1	0	0	0	0	49	41	7	0	1	0	1	0	50		
18:45	47	8	0	1	0	0	0	56	49	6	0	0	0	0	0	55		
<b>H/TOT</b>	<b>174</b>	<b>19</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>198</b>	<b>184</b>	<b>23</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>211</b>		
<b>P/TOT</b>	<b>498</b>	<b>77</b>	<b>15</b>	<b>10</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>606</b>	<b>582</b>	<b>103</b>	<b>11</b>	<b>7</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>708</b>		





SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	TO ARM D							TOT	FROM ARM D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	59	15	19	1	3	0	1	98	93	37	5	1	0	1	0	137
07:15	51	15	3	3	1	0	0	73	101	22	7	0	1	1	0	132
07:30	66	20	9	2	2	0	0	99	129	16	6	1	0	2	0	154
07:45	120	20	10	2	3	1	0	156	150	29	6	1	0	1	0	187
<b>H/TOT</b>	<b>296</b>	<b>70</b>	<b>41</b>	<b>8</b>	<b>9</b>	<b>1</b>	<b>1</b>	<b>426</b>	<b>473</b>	<b>104</b>	<b>24</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>610</b>
08:00	113	35	10	0	2	0	0	160	109	39	11	3	2	0	0	164
08:15	146	32	6	2	1	0	0	187	166	37	10	2	1	0	0	216
08:30	124	27	8	4	0	0	0	163	148	31	12	3	2	0	0	196
08:45	128	27	8	3	0	0	0	166	137	20	9	2	2	2	0	172
<b>H/TOT</b>	<b>511</b>	<b>121</b>	<b>32</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>676</b>	<b>560</b>	<b>127</b>	<b>42</b>	<b>10</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>748</b>
09:00	127	21	10	3	2	1	0	164	148	27	6	3	2	0	0	186
09:15	150	38	13	4	1	0	0	206	128	31	10	1	5	1	0	176
09:30	149	59	11	2	1	1	0	223	130	31	11	3	2	0	0	177
09:45	144	30	8	0	1	0	0	183	129	37	10	3	3	0	1	183
<b>H/TOT</b>	<b>570</b>	<b>148</b>	<b>42</b>	<b>9</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>776</b>	<b>535</b>	<b>126</b>	<b>37</b>	<b>10</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>722</b>
<b>P/TOT</b>	<b>1377</b>	<b>339</b>	<b>115</b>	<b>26</b>	<b>17</b>	<b>3</b>	<b>1</b>	<b>1878</b>	<b>1568</b>	<b>357</b>	<b>103</b>	<b>23</b>	<b>20</b>	<b>8</b>	<b>1</b>	<b>2080</b>

TIME	TO ARM D							TOT	FROM ARM D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	176	34	8	2	2	0	2	224	127	23	7	3	2	2	0	164
16:15	171	31	1	1	1	1	1	207	132	20	4	4	3	0	0	163
16:30	190	33	3	1	1	2	1	231	152	22	6	0	3	1	0	184
16:45	196	31	3	0	1	1	0	232	160	9	2	0	2	4	0	177
<b>H/TOT</b>	<b>733</b>	<b>129</b>	<b>15</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>894</b>	<b>571</b>	<b>74</b>	<b>19</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>688</b>
17:00	192	21	2	0	1	1	0	217	177	5	1	1	0	0	0	184
17:15	174	25	4	0	1	2	1	207	164	7	2	0	1	3	0	177
17:30	185	23	1	1	2	1	0	213	163	9	1	0	0	1	0	174
17:45	156	15	2	1	0	3	0	177	134	15	0	0	1	2	0	152
<b>H/TOT</b>	<b>707</b>	<b>84</b>	<b>9</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>1</b>	<b>814</b>	<b>638</b>	<b>36</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>687</b>
18:00	186	18	1	0	1	1	1	208	124	11	3	1	0	3	0	142
18:15	159	16	2	0	0	1	2	180	118	9	2	0	0	3	0	132
18:30	142	9	1	0	0	3	0	155	131	2	0	1	0	0	0	134
18:45	129	10	3	0	1	0	1	144	105	8	0	1	0	2	0	116
<b>H/TOT</b>	<b>616</b>	<b>53</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>687</b>	<b>478</b>	<b>30</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>524</b>
<b>P/TOT</b>	<b>2056</b>	<b>266</b>	<b>31</b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>9</b>	<b>2395</b>	<b>1687</b>	<b>140</b>	<b>28</b>	<b>11</b>	<b>12</b>	<b>21</b>	<b>0</b>	<b>1899</b>



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday

TIME	TO ARM E							TOT	FROM ARM E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	125	38	19	19	0	2	0	203	309	59	14	11	2	3	1	399
07:15	109	41	18	11	5	0	0	184	391	89	9	12	3	4	1	509
07:30	138	41	17	16	2	4	0	218	436	92	9	9	1	3	0	550
07:45	248	57	25	14	0	0	0	344	364	70	26	11	1	5	0	477
<b>H/TOT</b>	<b>620</b>	<b>177</b>	<b>79</b>	<b>60</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>949</b>	<b>1500</b>	<b>310</b>	<b>58</b>	<b>43</b>	<b>7</b>	<b>15</b>	<b>2</b>	<b>1935</b>
08:00	246	55	18	17	1	3	0	340	310	82	14	9	2	3	1	421
08:15	248	50	17	10	3	0	0	328	264	58	13	5	1	2	0	343
08:30	275	41	28	18	3	1	0	366	272	55	13	9	1	2	0	352
08:45	255	63	27	11	1	1	0	358	192	45	17	16	0	3	0	273
<b>H/TOT</b>	<b>1024</b>	<b>209</b>	<b>90</b>	<b>56</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>1392</b>	<b>1038</b>	<b>240</b>	<b>57</b>	<b>39</b>	<b>4</b>	<b>10</b>	<b>1</b>	<b>1389</b>
09:00	266	54	19	16	2	2	0	359	228	63	25	15	3	2	0	336
09:15	242	57	24	15	4	2	0	344	255	80	33	11	4	3	0	386
09:30	229	54	23	18	1	3	0	328	196	62	17	12	0	2	0	289
09:45	238	69	21	18	2	1	0	349	219	47	22	18	1	1	0	308
<b>H/TOT</b>	<b>975</b>	<b>234</b>	<b>87</b>	<b>67</b>	<b>9</b>	<b>8</b>	<b>0</b>	<b>1380</b>	<b>898</b>	<b>252</b>	<b>97</b>	<b>56</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>1319</b>
<b>P/TOT</b>	<b>2619</b>	<b>620</b>	<b>256</b>	<b>183</b>	<b>24</b>	<b>19</b>	<b>0</b>	<b>3721</b>	<b>3436</b>	<b>802</b>	<b>212</b>	<b>138</b>	<b>19</b>	<b>33</b>	<b>3</b>	<b>4643</b>

TIME	TO ARM E							TOT	FROM ARM E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	369	79	10	4	1	6	1	470	274	40	15	4	0	2	1	336
16:15	368	60	11	4	3	6	0	452	280	51	12	8	3	3	1	358
16:30	387	69	4	3	2	6	7	478	298	43	7	8	2	4	0	362
16:45	433	61	13	4	1	6	2	520	283	30	8	5	3	2	0	331
<b>H/TOT</b>	<b>1557</b>	<b>269</b>	<b>38</b>	<b>15</b>	<b>7</b>	<b>24</b>	<b>10</b>	<b>1920</b>	<b>1135</b>	<b>164</b>	<b>42</b>	<b>25</b>	<b>8</b>	<b>11</b>	<b>2</b>	<b>1387</b>
17:00	468	63	4	4	0	8	0	547	290	38	5	1	2	8	1	345
17:15	432	54	6	8	1	7	3	511	279	34	7	10	1	4	1	336
17:30	418	55	3	7	1	2	2	488	262	24	2	8	1	4	0	301
17:45	311	41	3	6	0	5	0	366	258	19	1	5	0	3	0	286
<b>H/TOT</b>	<b>1629</b>	<b>213</b>	<b>16</b>	<b>25</b>	<b>2</b>	<b>22</b>	<b>5</b>	<b>1912</b>	<b>1089</b>	<b>115</b>	<b>15</b>	<b>24</b>	<b>4</b>	<b>19</b>	<b>2</b>	<b>1268</b>
18:00	363	34	7	5	2	4	1	416	278	22	3	4	1	2	0	310
18:15	290	37	4	4	0	5	5	345	229	19	4	3	1	1	0	257
18:30	256	23	3	3	1	1	1	288	193	22	4	3	0	4	0	226
18:45	216	18	2	4	3	3	0	246	182	13	3	3	1	0	1	203
<b>H/TOT</b>	<b>1125</b>	<b>112</b>	<b>16</b>	<b>16</b>	<b>6</b>	<b>13</b>	<b>7</b>	<b>1295</b>	<b>882</b>	<b>76</b>	<b>14</b>	<b>13</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>996</b>
<b>P/TOT</b>	<b>4311</b>	<b>594</b>	<b>70</b>	<b>56</b>	<b>15</b>	<b>59</b>	<b>22</b>	<b>5127</b>	<b>3106</b>	<b>355</b>	<b>71</b>	<b>62</b>	<b>15</b>	<b>37</b>	<b>5</b>	<b>3651</b>



SITE: 7

DATE: 06/07/2017

LOCATION: A180 / Pyewipe Road / Birchin Way / Moody Lane

DAY: Thursday


TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	576	153	62	39	5	6	2	843
07:15	650	169	38	33	11	5	1	907
07:30	761	162	39	37	5	9	0	1013
07:45	852	179	64	38	5	7	0	1145
<b>H/TOT</b>	<b>2839</b>	<b>663</b>	<b>203</b>	<b>147</b>	<b>26</b>	<b>27</b>	<b>3</b>	<b>3908</b>
08:00	761	217	58	39	8	6	1	1090
08:15	767	178	46	26	6	2	0	1025
08:30	747	145	54	40	4	3	0	993
08:45	657	156	57	36	3	5	0	914
<b>H/TOT</b>	<b>2932</b>	<b>696</b>	<b>215</b>	<b>141</b>	<b>21</b>	<b>16</b>	<b>1</b>	<b>4022</b>
09:00	675	166	64	43	6	5	0	959
09:15	694	197	77	37	11	7	0	1023
09:30	620	206	63	40	4	5	0	938
09:45	642	176	64	47	7	4	1	941
<b>H/TOT</b>	<b>2631</b>	<b>745</b>	<b>268</b>	<b>167</b>	<b>28</b>	<b>21</b>	<b>1</b>	<b>3861</b>
<b>P/TOT</b>	<b>8402</b>	<b>2104</b>	<b>686</b>	<b>455</b>	<b>75</b>	<b>64</b>	<b>5</b>	<b>11791</b>

PEAK HOUR	
CALCULATION	TOT
07:00 to 08:00	3908
07:15 to 08:15	4155
07:30 to 08:30	<b>4273</b>
07:45 to 08:45	4253
08:00 to 09:00	4022
08:15 to 09:15	3891
08:30 to 09:30	3889
08:45 to 09:45	3834
09:00 to 10:00	3861
<b>PEAK VALUE</b>	<b>4273</b>

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	872	176	35	22	5	10	4	1124
16:15	868	163	27	30	9	9	1	1107
16:30	919	157	19	19	7	13	8	1142
16:45	1002	131	25	17	6	13	2	1196
<b>H/TOT</b>	<b>3661</b>	<b>627</b>	<b>106</b>	<b>88</b>	<b>27</b>	<b>45</b>	<b>15</b>	<b>4569</b>
17:00	1060	123	14	9	3	16	1	1226
17:15	994	113	16	22	3	14	4	1166
17:30	959	107	7	23	3	6	2	1107
17:45	781	86	6	15	1	9	0	898
<b>H/TOT</b>	<b>3794</b>	<b>429</b>	<b>43</b>	<b>69</b>	<b>10</b>	<b>45</b>	<b>7</b>	<b>4397</b>
18:00	874	84	13	16	4	8	2	1001
18:15	708	77	14	11	1	8	7	826
18:30	640	60	8	7	1	6	1	723
18:45	571	50	8	14	4	4	2	653
<b>H/TOT</b>	<b>2793</b>	<b>271</b>	<b>43</b>	<b>48</b>	<b>10</b>	<b>26</b>	<b>12</b>	<b>3203</b>
<b>P/TOT</b>	<b>10248</b>	<b>1327</b>	<b>192</b>	<b>205</b>	<b>47</b>	<b>116</b>	<b>34</b>	<b>12169</b>

PEAK HOUR	
CALCULATION	TOT
16:00 to 17:00	4569
16:15 to 17:15	4671
16:30 to 17:30	<b>4730</b>
16:45 to 17:45	4695
17:00 to 18:00	4397
17:15 to 18:15	4172
17:30 to 18:30	3832
17:45 to 18:45	3448
18:00 to 19:00	3203
<b>PEAK VALUE</b>	<b>4730</b>



	<b>Site / Location:</b>	Site 6, A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road	<b>Project No:</b>	7614	<b>Drawing No:</b>	7614-06	<b>Drawn By:</b>	EA
	<b>Survey Date:</b>	Thursday 6th July 2017		<b>Project Name:</b>	Stallingborough			
	<b>Survey Times:</b>	07:00 to 10:00 & 16:00 to 19:00		<b>Drawing Title:</b>	Site Layout and Observed Movements			



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	A to E							TOT	A to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	1	0	0	0	0	2	3	1	1	0	0	0	0	0	2
07:15	0	1	0	0	0	0	1	2	1	0	0	3	0	0	0	4
07:30	2	1	0	0	0	0	0	3	5	1	2	0	0	0	0	8
07:45	2	3	1	0	0	0	0	6	7	2	2	0	0	0	0	11
<b>H/TOT</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25</b>
08:00	1	1	0	0	0	0	0	2	3	4	5	1	0	0	0	13
08:15	3	1	0	0	0	0	0	4	6	2	0	1	0	0	0	9
08:30	4	3	1	1	0	0	0	9	6	2	0	1	0	0	0	9
08:45	2	1	2	0	0	0	0	5	7	5	0	0	0	0	0	12
<b>H/TOT</b>	<b>10</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>22</b>	<b>13</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>
09:00	1	1	0	0	0	0	0	2	15	3	2	0	0	0	0	20
09:15	1	1	0	0	0	0	0	2	12	3	3	0	0	0	0	18
09:30	2	6	1	0	0	0	1	10	10	8	3	0	0	0	0	21
09:45	1	0	0	0	0	0	0	1	13	3	3	1	0	1	0	21
<b>H/TOT</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>15</b>	<b>50</b>	<b>17</b>	<b>11</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>80</b>
<b>P/TOT</b>	<b>19</b>	<b>20</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>49</b>	<b>86</b>	<b>34</b>	<b>20</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>148</b>

TIME	A to E							TOT	A to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	2	2	0	1	0	0	7	12	38	6	1	1	0	0	0	46
16:15	0	0	0	0	0	1	3	4	27	3	0	0	0	2	0	32
16:30	0	1	0	0	0	0	6	7	58	7	0	0	0	4	0	69
16:45	1	0	1	0	0	0	0	2	27	2	1	0	0	0	0	30
<b>H/TOT</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>25</b>	<b>150</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>177</b>
17:00	1	0	0	0	0	0	12	13	31	9	0	0	0	1	0	41
17:15	1	0	0	0	0	0	1	2	15	1	1	0	0	1	0	18
17:30	3	1	0	0	0	0	4	8	12	1	0	1	0	0	0	14
17:45	1	0	0	0	0	0	6	7	9	2	0	0	0	0	0	11
<b>H/TOT</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>30</b>	<b>67</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>84</b>
18:00	1	0	0	0	0	0	33	34	16	2	0	0	0	0	1	19
18:15	1	0	0	0	0	0	1	2	4	1	1	1	0	0	1	8
18:30	1	0	0	0	0	0	4	5	9	0	0	0	0	1	0	10
18:45	1	0	0	0	0	0	1	2	8	0	0	0	0	0	0	8
<b>H/TOT</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>43</b>	<b>37</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>45</b>
<b>P/TOT</b>	<b>13</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>78</b>	<b>98</b>	<b>254</b>	<b>34</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>2</b>	<b>306</b>



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	A to C							TOT	A to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
07:15	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
07:30	0	0	0	0	0	0	0	0	3	1	3	3	0	0	0	10
07:45	1	1	0	0	0	0	0	2	1	1	1	1	0	0	0	4
<b>H/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
08:00	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	2
08:15	1	1	0	0	0	0	0	2	3	2	1	0	0	0	0	6
08:30	1	0	1	0	0	0	0	2	0	6	1	2	0	0	0	9
08:45	0	0	1	0	0	0	0	1	3	3	2	1	0	0	0	9
<b>H/TOT</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>26</b>
09:00	1	1	0	0	0	0	0	2	6	1	0	1	0	0	0	8
09:15	0	1	0	1	0	0	0	2	2	4	3	0	0	2	0	11
09:30	0	1	1	0	0	0	0	2	0	3	2	1	0	0	0	6
09:45	0	0	0	0	0	0	0	0	5	3	1	2	0	0	0	11
<b>H/TOT</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>13</b>	<b>11</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>36</b>
<b>P/TOT</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>27</b>	<b>25</b>	<b>14</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>79</b>

TIME	A to C							TOT	A to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	1	1	1	0	0	0	0	3	16	4	1	0	0	0	0	21
16:15	1	2	0	0	0	0	0	3	7	0	1	2	0	0	0	10
16:30	0	0	0	0	0	0	0	0	9	3	0	1	0	0	0	13
16:45	1	2	0	0	0	0	0	3	10	1	3	1	0	0	0	15
<b>H/TOT</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>42</b>	<b>8</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>
17:00	0	0	0	0	0	0	0	0	8	2	1	1	0	0	0	12
17:15	0	0	0	0	0	0	0	0	8	2	1	0	0	0	0	11
17:30	1	0	0	0	0	0	0	1	4	1	0	1	0	0	0	6
17:45	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>25</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>
18:00	0	0	0	0	0	0	0	0	4	2	0	1	0	0	0	7
18:15	0	0	0	0	0	0	0	0	3	0	0	0	0	2	0	5
18:30	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
18:45	1	0	0	0	0	0	0	1	6	1	0	0	0	0	0	7
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>14</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>21</b>
<b>P/TOT</b>	<b>5</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>81</b>	<b>16</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>114</b>



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	A to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	0	0	0	0	0	0	0

TIME	A to A							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	1	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	1	0	0	0	0	0	1



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	B to A								TOT	B to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
07:00	16	3	1	2	0	1	0		23	5	6	0	1	0	1	0		13
07:15	18	7	1	3	0	0	0		29	6	4	4	1	0	0	0		15
07:30	21	0	0	0	0	0	0		21	9	4	0	2	0	0	0		15
07:45	38	8	3	5	0	0	0		54	15	5	4	2	0	0	0		26
<b>H/TOT</b>	<b>93</b>	<b>18</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>		<b>127</b>	<b>35</b>	<b>19</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>		<b>69</b>
08:00	11	1	4	4	0	0	0		20	13	3	2	3	0	0	0		21
08:15	18	7	0	2	0	0	0		27	16	4	0	1	0	0	0		21
08:30	14	4	0	3	0	0	0		21	20	7	3	5	0	0	0		35
08:45	10	6	5	1	0	0	1		23	18	4	1	3	0	0	0		26
<b>H/TOT</b>	<b>53</b>	<b>18</b>	<b>9</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>1</b>		<b>91</b>	<b>67</b>	<b>18</b>	<b>6</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>103</b>
09:00	9	6	4	0	0	0	0		19	11	6	2	1	0	0	0		20
09:15	3	4	3	2	0	0	0		12	6	6	2	1	0	0	0		15
09:30	4	2	2	1	0	0	0		9	10	2	2	2	0	0	0		16
09:45	2	8	3	3	0	0	0		16	6	3	4	3	0	0	0		16
<b>H/TOT</b>	<b>18</b>	<b>20</b>	<b>12</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>56</b>	<b>33</b>	<b>17</b>	<b>10</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>67</b>
<b>P/TOT</b>	<b>164</b>	<b>56</b>	<b>26</b>	<b>26</b>	<b>0</b>	<b>1</b>	<b>1</b>		<b>274</b>	<b>135</b>	<b>54</b>	<b>24</b>	<b>25</b>	<b>0</b>	<b>1</b>	<b>0</b>		<b>239</b>

TIME	B to A								TOT	B to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL			CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		
16:00	4	1	1	0	0	0	0		6	4	2	5	1	0	0	0		12
16:15	6	4	0	0	0	0	0		10	5	7	1	2	0	0	0		15
16:30	2	2	3	0	0	0	0		7	6	7	0	0	0	0	0		13
16:45	2	2	0	1	0	0	0		5	5	4	1	3	0	0	0		13
<b>H/TOT</b>	<b>14</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>28</b>	<b>20</b>	<b>20</b>	<b>7</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>53</b>
17:00	1	0	1	0	0	0	0		2	6	0	0	0	0	0	0		6
17:15	4	0	0	0	0	0	0		4	16	2	1	1	0	0	0		20
17:30	6	0	0	0	0	0	0		6	4	4	0	0	0	0	0		8
17:45	10	1	1	1	0	0	0		13	3	2	0	0	0	0	0		5
<b>H/TOT</b>	<b>21</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>25</b>	<b>29</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>39</b>
18:00	3	0	0	0	0	0	0		3	5	2	1	1	0	0	0		9
18:15	1	0	3	0	0	3	0		7	5	1	0	0	0	0	0		6
18:30	5	0	0	0	0	0	0		5	4	1	1	0	0	0	0		6
18:45	0	0	0	0	0	0	0		0	3	2	0	1	0	0	0		6
<b>H/TOT</b>	<b>9</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>		<b>15</b>	<b>17</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>27</b>
<b>P/TOT</b>	<b>44</b>	<b>10</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>0</b>		<b>68</b>	<b>66</b>	<b>34</b>	<b>10</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>119</b>





SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	B to D								TOT	B to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	118	47	16	22	0	2	0	205	6	3	0	6	0	1	0	16		
07:15	120	32	14	14	2	0	0	182	11	3	4	1	0	0	0	19		
07:30	150	36	17	17	1	4	0	225	13	6	2	2	0	1	0	24		
07:45	290	52	19	19	0	1	0	381	25	7	2	3	0	0	0	37		
<b>H/TOT</b>	<b>678</b>	<b>167</b>	<b>66</b>	<b>72</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>993</b>	<b>55</b>	<b>19</b>	<b>8</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>96</b>		
08:00	300	43	10	10	3	3	0	369	7	3	1	1	0	0	0	12		
08:15	314	39	16	16	2	1	0	388	22	1	2	3	1	1	0	30		
08:30	259	35	18	18	1	0	0	331	13	8	8	7	0	0	0	36		
08:45	205	47	14	14	0	1	0	281	10	5	2	3	2	0	0	22		
<b>H/TOT</b>	<b>1078</b>	<b>164</b>	<b>58</b>	<b>58</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>1369</b>	<b>52</b>	<b>17</b>	<b>13</b>	<b>14</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>100</b>		
09:00	189	40	13	13	2	1	0	258	7	2	3	3	1	0	0	16		
09:15	182	35	15	15	3	1	0	251	7	3	3	4	0	0	0	17		
09:30	166	38	12	12	1	2	0	231	11	5	1	3	0	0	0	20		
09:45	164	38	16	16	3	1	0	238	15	5	4	5	0	0	0	29		
<b>H/TOT</b>	<b>701</b>	<b>151</b>	<b>56</b>	<b>56</b>	<b>9</b>	<b>5</b>	<b>0</b>	<b>978</b>	<b>40</b>	<b>15</b>	<b>11</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>82</b>		
<b>P/TOT</b>	<b>2457</b>	<b>482</b>	<b>180</b>	<b>186</b>	<b>18</b>	<b>17</b>	<b>0</b>	<b>3340</b>	<b>147</b>	<b>51</b>	<b>32</b>	<b>41</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>278</b>		

TIME	B to D								TOT	B to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	279	75	10	11	3	3	0	381	5	6	6	2	0	0	0	19		
16:15	271	50	9	7	1	4	0	342	2	3	3	2	0	0	0	10		
16:30	335	51	2	7	2	3	0	400	3	3	0	1	3	0	0	10		
16:45	317	53	5	7	0	3	0	385	10	1	4	3	1	0	0	19		
<b>H/TOT</b>	<b>1202</b>	<b>229</b>	<b>26</b>	<b>32</b>	<b>6</b>	<b>13</b>	<b>0</b>	<b>1508</b>	<b>20</b>	<b>13</b>	<b>13</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>58</b>		
17:00	341	52	5	2	2	2	0	404	4	2	0	2	0	0	0	8		
17:15	350	46	7	10	0	4	0	417	6	5	2	2	1	1	0	17		
17:30	311	28	3	9	2	3	0	356	7	3	2	3	0	0	0	15		
17:45	262	38	3	4	0	3	0	310	4	3	1	1	0	0	0	9		
<b>H/TOT</b>	<b>1264</b>	<b>164</b>	<b>18</b>	<b>25</b>	<b>4</b>	<b>12</b>	<b>0</b>	<b>1487</b>	<b>21</b>	<b>13</b>	<b>5</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>49</b>		
18:00	320	32	7	8	3	2	0	372	1	0	0	0	0	0	0	1		
18:15	229	30	5	1	0	2	0	267	6	0	0	0	0	0	0	6		
18:30	216	23	3	5	1	0	0	248	6	1	0	1	0	0	0	8		
18:45	161	10	3	5	3	1	0	183	4	2	0	1	0	0	0	7		
<b>H/TOT</b>	<b>926</b>	<b>95</b>	<b>18</b>	<b>19</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>1070</b>	<b>17</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>		
<b>P/TOT</b>	<b>3392</b>	<b>488</b>	<b>62</b>	<b>76</b>	<b>17</b>	<b>30</b>	<b>0</b>	<b>4065</b>	<b>58</b>	<b>29</b>	<b>18</b>	<b>18</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>129</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	B to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	1	0	0	0	0	0	0	1
08:30	0	0	0	0	0	0	0	0
08:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	2	0	0	0	0	0	0	2
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	1	0	0	0	0	0	1
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	1
<b>P/TOT</b>	2	1	0	0	0	0	0	3

TIME	B to B							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	1	0	0	0	0	0	0	1
16:30	1	0	0	0	0	0	0	1
16:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	3	0	0	0	0	0	0	3
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	1	0	1
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	1	0	1
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	1	0	0	0	0	0	1
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	1
<b>P/TOT</b>	3	1	0	0	0	1	0	5



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	C to B								TOT	C to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	1	5	0	4	1	0	0	11	0	0	0	0	0	0	0	0	0	
07:15	5	2	2	2	1	0	0	12	0	1	0	0	0	0	0	0	1	
07:30	5	5	1	6	1	0	0	18	2	0	0	0	0	0	0	2		
07:45	9	6	3	4	2	0	0	24	0	2	1	0	0	0	0	3		
<b>H/TOT</b>	<b>20</b>	<b>18</b>	<b>6</b>	<b>16</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>		
08:00	7	8	5	4	0	0	0	24	0	0	0	0	0	0	0	0		
08:15	3	10	3	6	1	0	0	23	3	0	0	1	0	0	0	4		
08:30	8	7	2	4	0	0	0	21	0	3	0	0	0	0	0	3		
08:45	5	9	3	6	0	0	0	23	0	2	0	0	0	0	1	3		
<b>H/TOT</b>	<b>23</b>	<b>34</b>	<b>13</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>91</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>10</b>		
09:00	7	4	2	2	0	0	0	15	1	1	0	0	0	0	0	2		
09:15	9	5	3	5	0	0	0	22	0	1	0	0	0	0	0	1		
09:30	7	16	3	4	0	0	0	30	4	0	1	0	0	0	0	5		
09:45	11	4	3	4	0	0	0	22	1	0	0	0	0	0	0	1		
<b>H/TOT</b>	<b>34</b>	<b>29</b>	<b>11</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>89</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>		
<b>P/TOT</b>	<b>77</b>	<b>81</b>	<b>30</b>	<b>51</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>245</b>	<b>11</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>25</b>		

TIME	C to B								TOT	C to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	25	10	0	2	0	1	0	38	0	0	0	0	0	0	0	0		
16:15	19	6	5	3	0	0	0	33	0	1	0	0	0	0	0	1		
16:30	37	5	2	3	0	1	0	48	0	0	1	0	0	0	0	1		
16:45	40	3	1	3	0	0	0	47	0	1	0	0	0	0	0	1		
<b>H/TOT</b>	<b>121</b>	<b>24</b>	<b>8</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>166</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>		
17:00	51	9	4	1	0	0	0	65	0	0	0	0	0	0	0	0		
17:15	27	4	1	1	0	0	0	33	0	0	0	0	0	0	0	0		
17:30	9	1	0	0	0	0	0	10	0	0	0	0	0	0	0	0		
17:45	9	3	0	2	0	0	0	14	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>96</b>	<b>17</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>122</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
18:00	12	0	0	2	0	0	0	14	0	0	0	0	0	0	0	0		
18:15	3	1	0	1	0	0	0	5	0	0	0	0	0	0	0	0		
18:30	3	0	0	2	0	0	0	5	0	0	0	0	0	0	0	0		
18:45	2	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0		
<b>H/TOT</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		
<b>P/TOT</b>	<b>237</b>	<b>42</b>	<b>13</b>	<b>21</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>315</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	C to E								TOT	C to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	0	0	0	0	0	0	0	0	0	10	3	2	1	3	0	0	19	
07:15	0	0	0	0	0	0	0	0	0	8	8	0	2	6	0	0	24	
07:30	1	0	1	0	0	0	0	0	2	12	4	2	3	4	0	0	25	
07:45	2	1	0	0	0	0	0	0	3	21	8	2	0	1	0	0	32	
<b>H/TOT</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>51</b>	<b>23</b>	<b>6</b>	<b>6</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>100</b>	
08:00	0	3	1	0	0	0	0	0	4	26	19	7	6	1	0	0	59	
08:15	0	3	0	1	0	0	0	0	4	33	14	4	1	1	0	0	53	
08:30	0	1	2	0	0	0	0	0	3	22	10	4	1	0	0	0	37	
08:45	0	4	1	0	0	0	0	0	5	30	8	7	1	0	0	0	46	
<b>H/TOT</b>	<b>0</b>	<b>11</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>111</b>	<b>51</b>	<b>22</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>195</b>	
09:00	1	3	2	0	0	0	0	0	6	26	7	4	1	0	0	0	38	
09:15	2	4	0	0	0	0	0	0	6	30	13	5	2	0	1	0	51	
09:30	3	1	0	0	0	0	0	0	4	35	23	7	5	0	1	0	71	
09:45	3	2	0	1	0	0	0	0	6	27	15	2	2	0	0	0	46	
<b>H/TOT</b>	<b>9</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>118</b>	<b>58</b>	<b>18</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>206</b>	
<b>P/TOT</b>	<b>12</b>	<b>22</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>43</b>	<b>280</b>	<b>132</b>	<b>46</b>	<b>25</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>501</b>	

TIME	C to E								TOT	C to D								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	2	0	0	0	0	0	0	0	2	71	13	2	0	0	0	0	86	
16:15	2	2	0	0	0	0	0	0	4	44	10	1	1	1	0	0	57	
16:30	0	2	1	0	0	0	0	0	3	74	12	1	1	0	0	0	88	
16:45	2	1	0	0	0	0	0	0	3	46	12	4	1	0	0	0	63	
<b>H/TOT</b>	<b>6</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>235</b>	<b>47</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>294</b>	
17:00	1	0	0	0	0	0	0	0	1	91	6	0	2	0	5	0	104	
17:15	1	0	0	0	0	0	0	0	1	41	7	0	0	0	0	0	48	
17:30	3	2	0	0	0	0	0	0	5	35	6	1	1	0	0	0	43	
17:45	0	0	0	0	0	0	0	0	0	31	6	1	2	0	0	0	40	
<b>H/TOT</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>198</b>	<b>25</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>235</b>	
18:00	0	0	0	1	0	0	0	0	1	31	7	1	0	0	0	0	39	
18:15	0	0	0	0	0	0	0	0	0	24	2	1	1	0	1	0	29	
18:30	0	0	0	0	0	0	0	0	0	19	3	0	0	0	0	0	22	
18:45	1	0	0	0	0	0	0	0	1	27	4	1	2	0	0	0	34	
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>101</b>	<b>16</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>124</b>	
<b>P/TOT</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>534</b>	<b>88</b>	<b>13</b>	<b>11</b>	<b>1</b>	<b>6</b>	<b>0</b>	<b>653</b>	



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	C to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	1	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	1	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
09:00	1	0	0	0	0	0	0	1
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
<b>P/TOT</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

TIME	C to C							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	D to C								TOT	D to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	34	5	0	2	0	0	0	41	281	72	16	10	1	2	0	382		
07:15	38	11	3	1	0	1	0	54	320	63	6	10	5	4	0	408		
07:30	62	10	4	2	0	0	0	78	345	66	6	11	1	2	0	431		
07:45	70	18	4	4	0	1	0	97	285	56	16	9	2	4	0	372		
<b>H/TOT</b>	<b>204</b>	<b>44</b>	<b>11</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>270</b>	<b>1231</b>	<b>257</b>	<b>44</b>	<b>40</b>	<b>9</b>	<b>12</b>	<b>0</b>	<b>1593</b>		
08:00	40	20	5	2	1	1	0	69	256	65	12	13	4	1	0	351		
08:15	55	19	5	0	1	1	0	81	195	39	12	9	1	0	0	256		
08:30	41	11	1	2	0	0	0	55	183	34	8	14	0	1	0	240		
08:45	31	15	6	1	0	0	0	53	142	33	9	14	2	3	0	203		
<b>H/TOT</b>	<b>167</b>	<b>65</b>	<b>17</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>258</b>	<b>776</b>	<b>171</b>	<b>41</b>	<b>50</b>	<b>7</b>	<b>5</b>	<b>0</b>	<b>1050</b>		
09:00	40	14	10	1	0	0	0	65	146	42	15	16	1	0	0	220		
09:15	33	19	2	2	2	0	0	58	162	48	20	8	3	3	0	244		
09:30	40	20	5	1	1	0	0	67	116	36	14	9	0	2	0	177		
09:45	32	17	5	0	0	1	0	55	149	33	15	13	2	0	0	212		
<b>H/TOT</b>	<b>145</b>	<b>70</b>	<b>22</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>245</b>	<b>573</b>	<b>159</b>	<b>64</b>	<b>46</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>853</b>		
<b>P/TOT</b>	<b>516</b>	<b>179</b>	<b>50</b>	<b>18</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>773</b>	<b>2580</b>	<b>587</b>	<b>149</b>	<b>136</b>	<b>22</b>	<b>22</b>	<b>0</b>	<b>3496</b>		

TIME	D to C								TOT	D to B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	35	8	3	1	3	0	0	50	229	31	12	8	0	2	1	283		
16:15	29	9	3	3	2	1	0	47	231	35	8	16	3	1	0	294		
16:30	30	10	1	0	1	0	0	42	249	31	6	12	2	4	0	304		
16:45	25	2	2	1	3	1	0	34	256	25	4	7	2	3	0	297		
<b>H/TOT</b>	<b>119</b>	<b>29</b>	<b>9</b>	<b>5</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>173</b>	<b>965</b>	<b>122</b>	<b>30</b>	<b>43</b>	<b>7</b>	<b>10</b>	<b>1</b>	<b>1178</b>		
17:00	29	6	1	0	1	0	0	37	292	27	4	5	1	7	0	336		
17:15	28	2	2	1	0	0	0	33	300	24	4	10	1	4	0	343		
17:30	24	1	1	2	0	0	0	28	263	20	2	10	0	5	0	300		
17:45	22	2	0	1	0	0	0	25	210	18	2	6	1	1	0	238		
<b>H/TOT</b>	<b>103</b>	<b>11</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>123</b>	<b>1065</b>	<b>89</b>	<b>12</b>	<b>31</b>	<b>3</b>	<b>17</b>	<b>0</b>	<b>1217</b>		
18:00	29	1	0	0	1	1	0	32	213	21	5	7	1	0	0	247		
18:15	21	3	0	2	0	0	0	26	171	17	5	5	1	0	0	199		
18:30	18	5	2	0	0	0	0	25	148	12	2	4	0	1	0	167		
18:45	16	3	0	1	0	0	1	21	145	9	3	5	0	2	0	164		
<b>H/TOT</b>	<b>84</b>	<b>12</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>104</b>	<b>677</b>	<b>59</b>	<b>15</b>	<b>21</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>777</b>		
<b>P/TOT</b>	<b>306</b>	<b>52</b>	<b>15</b>	<b>12</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>400</b>	<b>2707</b>	<b>270</b>	<b>57</b>	<b>95</b>	<b>12</b>	<b>30</b>	<b>1</b>	<b>3172</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	D to A								TOT	D to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	13	8	1	0	0	0	0	22	7	6	1	0	0	0	0	14		
07:15	20	7	3	1	0	0	0	31	11	7	1	1	0	0	0	20		
07:30	18	3	0	0	0	0	0	21	10	4	0	0	0	0	0	14		
07:45	32	7	1	0	0	1	0	41	20	5	0	0	0	0	0	25		
<b>H/TOT</b>	<b>83</b>	<b>25</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>115</b>	<b>48</b>	<b>22</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>		
08:00	20	4	3	1	0	0	0	28	12	10	0	0	0	0	0	22		
08:15	11	7	1	2	0	0	0	21	29	10	1	0	0	0	0	40		
08:30	12	2	2	0	0	0	0	16	15	6	2	0	0	0	0	23		
08:45	17	2	1	1	0	1	0	22	16	1	0	0	0	0	0	17		
<b>H/TOT</b>	<b>60</b>	<b>15</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>87</b>	<b>72</b>	<b>27</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>		
09:00	11	3	4	0	0	0	0	18	16	7	0	1	0	0	0	24		
09:15	19	5	4	1	0	2	0	31	17	12	0	0	0	0	0	29		
09:30	13	3	2	3	0	0	0	21	13	7	2	0	0	0	0	22		
09:45	11	6	1	4	0	1	0	23	17	5	1	0	0	0	0	23		
<b>H/TOT</b>	<b>54</b>	<b>17</b>	<b>11</b>	<b>8</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>93</b>	<b>63</b>	<b>31</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>98</b>		
<b>P/TOT</b>	<b>197</b>	<b>57</b>	<b>23</b>	<b>13</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>295</b>	<b>183</b>	<b>80</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>273</b>		

TIME	D to A								TOT	D to E								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	5	1	0	0	0	0	0	6	9	7	0	0	0	0	0	16		
16:15	7	2	0	1	0	0	0	10	10	9	0	0	0	0	0	19		
16:30	4	3	1	0	0	0	0	8	11	2	2	0	0	0	0	15		
16:45	2	0	1	0	0	0	0	3	8	1	0	0	0	0	0	9		
<b>H/TOT</b>	<b>18</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>38</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>59</b>		
17:00	5	3	0	0	0	0	0	8	10	2	0	0	0	0	0	12		
17:15	1	1	0	0	0	0	0	2	11	1	1	0	0	0	0	13		
17:30	3	0	0	0	0	0	0	3	8	0	0	0	0	0	0	8		
17:45	8	0	0	0	0	0	0	8	13	2	0	0	0	0	0	15		
<b>H/TOT</b>	<b>17</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>42</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48</b>		
18:00	6	0	0	1	0	0	0	7	8	2	0	0	0	0	0	10		
18:15	8	0	0	0	0	0	0	8	12	0	0	0	0	0	0	12		
18:30	1	0	0	0	0	0	0	1	13	0	0	0	0	0	0	13		
18:45	1	0	0	0	0	0	0	1	7	1	0	1	0	0	0	9		
<b>H/TOT</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>40</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>44</b>		
<b>P/TOT</b>	<b>51</b>	<b>10</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>120</b>	<b>27</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>151</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	2	1	0	0	0	0	0	3
07:30	1	0	0	0	0	0	0	1
07:45	3	1	0	0	0	0	0	4
<b>H/TOT</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
08:00	0	0	0	0	0	0	0	0
08:15	2	0	0	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
09:00	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>P/TOT</b>	<b>8</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>

TIME	D to D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	1	0	0	0	0	0	0	1
16:15	2	0	0	0	0	0	0	2
16:30	1	0	0	0	0	0	0	1
16:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
18:00	1	2	0	0	0	0	0	3
18:15	1	1	0	0	0	0	0	2
18:30	2	0	0	0	0	0	0	2
18:45	1	0	0	0	0	0	0	1
<b>H/TOT</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>P/TOT</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>14</b>





SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	E to D								TOT	E to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	2	3	21	0	0	0	0	26	0	1	0	0	0	0	0	1		
07:15	4	5	2	0	0	0	0	11	0	1	0	0	0	0	0	1		
07:30	0	3	1	0	0	0	0	4	0	1	0	0	0	0	0	1		
07:45	8	8	1	1	0	0	0	18	1	1	0	0	0	0	0	2		
<b>H/TOT</b>	14	19	25	1	0	0	0	59	1	4	0	0	0	0	0	5		
08:00	9	7	1	0	0	0	0	17	3	4	1	0	0	0	0	8		
08:15	5	3	1	0	0	0	0	9	3	2	0	0	0	0	1	6		
08:30	11	6	1	1	0	0	0	19	5	4	0	0	0	0	0	9		
08:45	8	6	1	0	0	0	0	15	2	2	0	0	0	0	0	4		
<b>H/TOT</b>	33	22	4	1	0	0	0	60	13	12	1	0	0	0	1	27		
09:00	13	6	2	0	0	0	0	21	6	4	0	0	0	0	0	10		
09:15	13	7	0	1	0	0	0	21	6	0	0	0	0	0	0	6		
09:30	22	15	4	0	0	0	0	41	5	2	0	0	0	0	0	7		
09:45	28	4	3	0	0	0	0	35	2	3	0	0	0	0	0	5		
<b>H/TOT</b>	76	32	9	1	0	0	0	118	19	9	0	0	0	0	0	28		
<b>P/TOT</b>	123	73	38	3	0	0	0	237	33	25	1	0	0	0	1	60		

TIME	E to D								TOT	E to C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	18	5	0	0	0	0	0	23	4	1	0	0	0	0	0	5		
16:15	14	6	1	0	0	0	0	21	3	2	0	0	0	0	0	5		
16:30	26	13	0	0	0	0	0	39	3	1	0	0	0	0	0	4		
16:45	25	9	3	0	0	0	0	37	2	0	0	0	0	0	0	2		
<b>H/TOT</b>	83	33	4	0	0	0	0	120	12	4	0	0	0	0	0	16		
17:00	38	4	0	0	0	0	0	42	7	0	0	0	0	0	0	7		
17:15	18	3	0	0	0	0	0	21	0	0	0	0	0	0	0	0		
17:30	27	4	0	0	0	0	0	31	1	0	0	0	0	0	0	1		
17:45	13	2	0	0	0	0	0	15	1	0	0	0	0	0	1	2		
<b>H/TOT</b>	96	13	0	0	0	0	0	109	9	0	0	0	0	0	1	10		
18:00	9	2	0	0	0	0	2	13	2	0	0	0	0	0	0	2		
18:15	10	3	0	0	0	0	0	13	0	0	0	0	0	0	0	0		
18:30	10	0	0	0	0	0	0	10	2	0	0	0	0	0	0	2		
18:45	6	1	0	0	0	0	0	7	1	0	0	0	0	0	0	1		
<b>H/TOT</b>	35	6	0	0	0	0	2	43	5	0	0	0	0	0	0	5		
<b>P/TOT</b>	214	52	4	0	0	0	2	272	26	4	0	0	0	0	1	31		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	E to B								TOT	E to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	3	8	2	1	0	0	0	14	0	0	0	0	0	0	0	0	0	
07:15	4	9	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	
07:30	3	4	0	3	0	0	0	10	0	0	0	0	0	0	0	0	0	
07:45	3	3	3	2	0	0	0	11	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>13</b>	<b>24</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
08:00	5	6	0	1	0	0	0	12	2	0	0	0	0	0	0	0	2	
08:15	6	3	1	3	0	0	0	13	1	1	0	1	0	0	0	0	3	
08:30	6	4	1	1	0	0	0	12	0	0	0	0	0	0	0	0	0	
08:45	6	4	9	0	0	0	0	19	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>23</b>	<b>17</b>	<b>11</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	
09:00	7	5	0	3	0	0	0	15	0	0	0	1	0	0	0	0	1	
09:15	7	8	2	3	0	0	0	20	0	1	0	0	0	1	0	0	2	
09:30	5	9	2	5	0	0	0	21	0	2	0	0	0	0	0	0	2	
09:45	7	4	1	5	0	0	0	17	0	0	1	0	0	0	0	0	1	
<b>H/TOT</b>	<b>26</b>	<b>26</b>	<b>5</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	
<b>P/TOT</b>	<b>62</b>	<b>67</b>	<b>21</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>177</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>11</b>	

TIME	E to B								TOT	E to A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	4	2	0	0	0	0	0	6	1	0	0	0	0	0	0	0	1	
16:15	7	6	1	1	0	0	0	15	1	2	0	0	0	0	0	0	3	
16:30	8	3	1	0	0	0	0	12	0	0	0	0	0	0	0	0	0	
16:45	20	4	0	4	0	0	0	28	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>39</b>	<b>15</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>61</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	
17:00	19	2	2	1	0	1	0	25	0	0	0	0	0	0	0	0	0	
17:15	5	0	0	2	0	0	0	7	0	0	0	0	0	0	0	0	0	
17:30	12	3	1	2	0	0	0	18	0	0	0	0	0	0	0	0	0	
17:45	8	0	1	1	0	0	0	10	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>44</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
18:00	4	0	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	
18:15	5	1	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	
18:30	5	0	0	2	0	0	0	7	1	0	0	0	0	0	0	0	1	
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>H/TOT</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	
<b>P/TOT</b>	<b>97</b>	<b>21</b>	<b>6</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>140</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	E to E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0
08:45	0	0	1	0	0	0	0	1
<b>H/TOT</b>	0	0	1	0	0	0	0	1
09:00	0	0	0	0	0	0	0	0
09:15	1	0	0	0	0	0	0	1
09:30	1	0	0	0	0	0	0	1
09:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	2	0	0	0	0	0	0	2
<b>P/TOT</b>	2	0	1	0	0	0	0	3

TIME	E to E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0
16:30	0	1	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	1	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0
<b>H/TOT</b>	0	0	0	0	0	0	0	0
<b>P/TOT</b>	0	1	0	0	0	0	0	1



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	29	11	2	2	0	1	0	45	3	2	0	0	0	0	2	7		
07:15	38	15	4	4	0	0	0	61	3	1	0	3	0	0	1	8		
07:30	41	3	0	0	0	0	0	44	10	3	5	3	0	0	0	21		
07:45	70	17	5	5	0	1	0	98	11	7	4	1	0	0	0	23		
<b>H/TOT</b>	<b>178</b>	<b>46</b>	<b>11</b>	<b>11</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>248</b>	<b>27</b>	<b>13</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>59</b>		
08:00	33	5	7	5	0	0	0	50	6	6	5	1	0	0	0	18		
08:15	33	15	1	6	0	0	0	55	13	6	1	1	0	0	0	21		
08:30	26	9	2	3	0	0	0	40	11	11	3	4	0	0	0	29		
08:45	27	10	6	2	0	1	2	48	12	9	5	1	0	0	0	27		
<b>H/TOT</b>	<b>119</b>	<b>39</b>	<b>16</b>	<b>16</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>193</b>	<b>42</b>	<b>32</b>	<b>14</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>95</b>		
09:00	21	10	8	1	0	0	0	40	23	6	2	1	0	0	0	32		
09:15	22	11	7	3	0	3	0	46	15	9	6	1	0	2	0	33		
09:30	21	7	5	4	0	0	0	37	12	18	7	1	0	0	1	39		
09:45	14	14	5	7	0	1	0	41	19	6	4	3	0	1	0	33		
<b>H/TOT</b>	<b>78</b>	<b>42</b>	<b>25</b>	<b>15</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>164</b>	<b>69</b>	<b>39</b>	<b>19</b>	<b>6</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>137</b>		
<b>P/TOT</b>	<b>375</b>	<b>127</b>	<b>52</b>	<b>42</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>605</b>	<b>138</b>	<b>84</b>	<b>42</b>	<b>20</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>291</b>		

TIME	TO ARM A								TOT	FROM ARM A								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	10	2	1	0	0	0	0	13	57	13	3	2	0	0	7	82		
16:15	14	9	0	1	0	0	0	24	35	5	1	2	0	3	3	49		
16:30	6	6	5	0	0	0	0	17	67	12	0	1	0	4	6	90		
16:45	4	3	1	1	0	0	0	9	39	5	5	1	0	0	0	50		
<b>H/TOT</b>	<b>34</b>	<b>20</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>198</b>	<b>35</b>	<b>9</b>	<b>6</b>	<b>0</b>	<b>7</b>	<b>16</b>	<b>271</b>		
17:00	6	3	1	0	0	0	0	10	40	11	1	1	0	1	12	66		
17:15	5	1	0	0	0	0	0	6	24	3	2	0	0	1	1	31		
17:30	9	0	0	0	0	0	0	9	20	3	0	2	0	0	4	29		
17:45	18	1	1	1	0	0	0	21	15	2	0	0	0	0	6	23		
<b>H/TOT</b>	<b>38</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>99</b>	<b>19</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>23</b>	<b>149</b>		
18:00	9	0	0	1	0	0	0	10	21	4	0	1	0	0	34	60		
18:15	9	0	3	0	0	3	0	15	8	1	1	1	0	2	2	15		
18:30	7	0	0	0	0	0	0	7	11	0	0	1	0	1	4	17		
18:45	1	0	0	0	0	0	0	1	16	1	0	0	0	0	1	18		
<b>H/TOT</b>	<b>26</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>33</b>	<b>56</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>41</b>	<b>110</b>		
<b>P/TOT</b>	<b>98</b>	<b>25</b>	<b>12</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>142</b>	<b>353</b>	<b>60</b>	<b>13</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>80</b>	<b>530</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
07:00	286	85	18	15	2	2	0	408	145	59	17	31	0	5	0	257		
07:15	331	74	8	12	6	4	0	435	155	46	23	19	2	0	0	245		
07:30	356	76	10	23	2	2	0	469	193	46	19	21	1	5	0	285		
07:45	298	66	23	16	4	4	0	411	368	72	28	29	0	1	0	498		
<b>H/TOT</b>	<b>1271</b>	<b>301</b>	<b>59</b>	<b>66</b>	<b>14</b>	<b>12</b>	<b>0</b>	<b>1723</b>	<b>861</b>	<b>223</b>	<b>87</b>	<b>100</b>	<b>3</b>	<b>11</b>	<b>0</b>	<b>1285</b>		
08:00	269	80	17	18	4	1	0	389	331	50	17	18	3	3	0	422		
08:15	208	54	17	18	2	0	0	299	371	51	18	22	3	2	0	467		
08:30	197	51	12	21	0	1	0	282	306	54	29	33	1	0	0	423		
08:45	157	49	23	21	2	3	0	255	244	62	22	21	2	1	1	353		
<b>H/TOT</b>	<b>831</b>	<b>234</b>	<b>69</b>	<b>78</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>1225</b>	<b>1252</b>	<b>217</b>	<b>86</b>	<b>94</b>	<b>9</b>	<b>6</b>	<b>1</b>	<b>1665</b>		
09:00	166	52	17	22	1	0	0	258	216	54	22	17	3	1	0	313		
09:15	180	65	28	16	3	5	0	297	198	48	23	22	3	1	0	295		
09:30	128	65	21	19	0	2	0	235	191	48	17	18	1	2	0	277		
09:45	172	44	20	24	2	0	0	262	187	54	27	27	3	1	0	299		
<b>H/TOT</b>	<b>646</b>	<b>226</b>	<b>86</b>	<b>81</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>1052</b>	<b>792</b>	<b>204</b>	<b>89</b>	<b>84</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>1184</b>		
<b>P/TOT</b>	<b>2748</b>	<b>761</b>	<b>214</b>	<b>225</b>	<b>28</b>	<b>24</b>	<b>0</b>	<b>4000</b>	<b>2905</b>	<b>644</b>	<b>262</b>	<b>278</b>	<b>22</b>	<b>22</b>	<b>1</b>	<b>4134</b>		

TIME	TO ARM B								TOT	FROM ARM B								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	
16:00	274	47	13	10	0	3	1	348	292	84	22	14	3	3	0	418		
16:15	265	47	15	22	3	1	0	353	285	64	13	11	1	4	0	378		
16:30	304	42	9	16	2	5	0	378	347	63	5	8	5	3	0	431		
16:45	327	33	8	15	2	3	0	388	335	60	10	14	1	3	0	423		
<b>H/TOT</b>	<b>1170</b>	<b>169</b>	<b>45</b>	<b>63</b>	<b>7</b>	<b>12</b>	<b>1</b>	<b>1467</b>	<b>1259</b>	<b>271</b>	<b>50</b>	<b>47</b>	<b>10</b>	<b>13</b>	<b>0</b>	<b>1650</b>		
17:00	370	40	11	8	1	8	0	438	352	54	6	4	2	2	0	420		
17:15	340	30	6	13	1	4	0	394	376	53	10	13	1	5	0	458		
17:30	288	25	3	13	0	6	0	335	328	35	5	12	2	4	0	386		
17:45	232	21	3	9	1	1	0	267	279	44	5	6	0	3	0	337		
<b>H/TOT</b>	<b>1230</b>	<b>116</b>	<b>23</b>	<b>43</b>	<b>3</b>	<b>19</b>	<b>0</b>	<b>1434</b>	<b>1335</b>	<b>186</b>	<b>26</b>	<b>35</b>	<b>5</b>	<b>14</b>	<b>0</b>	<b>1601</b>		
18:00	233	23	5	12	1	0	0	274	329	34	8	9	3	2	0	385		
18:15	182	19	5	6	1	2	0	215	241	31	8	1	0	5	0	286		
18:30	157	13	2	9	0	1	0	182	231	26	4	6	1	0	0	268		
18:45	153	10	3	6	0	2	0	174	168	14	3	7	3	1	0	196		
<b>H/TOT</b>	<b>725</b>	<b>65</b>	<b>15</b>	<b>33</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>845</b>	<b>969</b>	<b>105</b>	<b>23</b>	<b>23</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>1135</b>		
<b>P/TOT</b>	<b>3125</b>	<b>350</b>	<b>83</b>	<b>139</b>	<b>12</b>	<b>36</b>	<b>1</b>	<b>3746</b>	<b>3563</b>	<b>562</b>	<b>99</b>	<b>105</b>	<b>22</b>	<b>35</b>	<b>0</b>	<b>4386</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
07:00	41	9	0	8	0	1	0	59	11	8	2	5	4	0	0	30		
07:15	49	15	7	2	0	1	0	74	13	11	2	4	7	0	0	37		
07:30	76	17	6	4	0	1	0	104	21	9	4	9	5	0	0	48		
07:45	97	27	6	7	0	1	0	138	32	17	6	4	3	0	0	62		
<b>H/TOT</b>	<b>263</b>	<b>68</b>	<b>19</b>	<b>21</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>375</b>	<b>77</b>	<b>45</b>	<b>14</b>	<b>22</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>177</b>		
08:00	51	27	7	3	1	1	0	90	33	30	13	10	1	0	0	87		
08:15	81	23	7	3	2	2	1	119	39	27	7	9	2	0	0	84		
08:30	60	24	10	9	0	0	0	103	30	22	8	5	0	0	0	65		
08:45	43	22	9	4	2	0	0	80	35	23	11	7	0	0	1	77		
<b>H/TOT</b>	<b>235</b>	<b>96</b>	<b>33</b>	<b>19</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>392</b>	<b>137</b>	<b>102</b>	<b>39</b>	<b>31</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>313</b>		
09:00	55	21	13	4	1	0	0	94	36	15	8	3	0	0	0	62		
09:15	46	23	5	7	2	0	0	83	41	23	8	7	0	1	0	80		
09:30	56	28	7	4	1	0	0	96	49	40	11	9	0	1	0	110		
09:45	49	25	9	5	0	1	0	89	42	21	5	7	0	0	0	75		
<b>H/TOT</b>	<b>206</b>	<b>97</b>	<b>34</b>	<b>20</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>362</b>	<b>168</b>	<b>99</b>	<b>32</b>	<b>26</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>327</b>		
<b>P/TOT</b>	<b>704</b>	<b>261</b>	<b>86</b>	<b>60</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>1129</b>	<b>382</b>	<b>246</b>	<b>85</b>	<b>79</b>	<b>22</b>	<b>2</b>	<b>1</b>	<b>817</b>		

TIME	TO ARM C								TOT	FROM ARM C								TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	CAR		LGV	OGV1	OGV2	PSV	MCL	PCL			
16:00	45	16	10	3	3	0	0	77	98	23	2	2	0	1	0	126		
16:15	35	16	6	5	2	1	0	65	65	19	6	4	1	0	0	95		
16:30	36	14	1	1	4	0	0	56	111	19	5	4	0	1	0	140		
16:45	38	5	6	4	4	1	0	58	88	17	5	4	0	0	0	114		
<b>H/TOT</b>	<b>154</b>	<b>51</b>	<b>23</b>	<b>13</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>256</b>	<b>362</b>	<b>78</b>	<b>18</b>	<b>14</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>475</b>		
17:00	40	8	1	2	1	0	0	52	143	15	4	3	0	5	0	170		
17:15	34	7	4	3	1	1	0	50	69	11	1	1	0	0	0	82		
17:30	33	4	3	5	0	0	0	45	47	9	1	1	0	0	0	58		
17:45	27	5	1	2	0	0	1	36	40	9	1	4	0	0	0	54		
<b>H/TOT</b>	<b>134</b>	<b>24</b>	<b>9</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>183</b>	<b>299</b>	<b>44</b>	<b>7</b>	<b>9</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>364</b>		
18:00	32	1	0	0	1	1	0	35	43	7	1	3	0	0	0	54		
18:15	27	3	0	2	0	0	0	32	27	3	1	2	0	1	0	34		
18:30	26	6	2	1	0	0	0	35	22	3	0	2	0	0	0	27		
18:45	22	5	0	2	0	0	1	30	30	4	1	3	0	0	0	38		
<b>H/TOT</b>	<b>107</b>	<b>15</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>132</b>	<b>122</b>	<b>17</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>153</b>		
<b>P/TOT</b>	<b>395</b>	<b>90</b>	<b>34</b>	<b>30</b>	<b>16</b>	<b>4</b>	<b>2</b>	<b>571</b>	<b>783</b>	<b>139</b>	<b>28</b>	<b>33</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>992</b>		



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	TO ARM D							TOT	FROM ARM D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	131	54	39	23	3	2	0	252	335	91	18	12	1	2	0	459
07:15	135	46	16	19	8	0	0	224	391	89	13	13	5	5	0	516
07:30	168	44	22	20	5	4	0	263	436	83	10	13	1	2	0	545
07:45	329	71	24	20	1	1	0	446	410	87	21	13	2	6	0	539
<b>H/TOT</b>	<b>763</b>	<b>215</b>	<b>101</b>	<b>82</b>	<b>17</b>	<b>7</b>	<b>0</b>	<b>1185</b>	<b>1572</b>	<b>350</b>	<b>62</b>	<b>51</b>	<b>9</b>	<b>15</b>	<b>0</b>	<b>2059</b>
08:00	338	73	23	17	4	3	0	458	328	99	20	16	5	2	0	470
08:15	360	58	21	18	3	1	0	461	292	75	19	11	2	1	0	400
08:30	298	53	23	21	1	0	0	396	251	53	13	16	0	1	0	334
08:45	250	66	22	15	0	1	0	354	206	51	16	16	2	4	0	295
<b>H/TOT</b>	<b>1246</b>	<b>250</b>	<b>89</b>	<b>71</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>1669</b>	<b>1077</b>	<b>278</b>	<b>68</b>	<b>59</b>	<b>9</b>	<b>8</b>	<b>0</b>	<b>1499</b>
09:00	243	56	21	14	2	1	0	337	213	66	29	18	1	0	0	327
09:15	237	58	23	18	3	2	0	341	231	84	26	11	5	5	0	362
09:30	233	84	26	17	1	3	0	364	182	66	23	13	1	2	0	287
09:45	232	60	24	19	3	2	0	340	209	61	22	17	2	2	0	313
<b>H/TOT</b>	<b>945</b>	<b>258</b>	<b>94</b>	<b>68</b>	<b>9</b>	<b>8</b>	<b>0</b>	<b>1382</b>	<b>835</b>	<b>277</b>	<b>100</b>	<b>59</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>1289</b>
<b>P/TOT</b>	<b>2954</b>	<b>723</b>	<b>284</b>	<b>221</b>	<b>34</b>	<b>20</b>	<b>0</b>	<b>4236</b>	<b>3484</b>	<b>905</b>	<b>230</b>	<b>169</b>	<b>27</b>	<b>32</b>	<b>0</b>	<b>4847</b>

TIME	TO ARM D							TOT	FROM ARM D							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	407	99	13	12	3	3	0	537	279	47	15	9	3	2	1	356
16:15	358	69	11	8	2	6	0	454	279	55	11	20	5	2	0	372
16:30	494	83	3	8	2	7	0	597	295	46	10	12	3	4	0	370
16:45	416	76	13	8	0	3	0	516	292	28	7	8	5	4	0	344
<b>H/TOT</b>	<b>1675</b>	<b>327</b>	<b>40</b>	<b>36</b>	<b>7</b>	<b>19</b>	<b>0</b>	<b>2104</b>	<b>1145</b>	<b>176</b>	<b>43</b>	<b>49</b>	<b>16</b>	<b>12</b>	<b>1</b>	<b>1442</b>
17:00	501	71	5	4	2	8	0	591	336	38	5	5	2	7	0	393
17:15	424	57	8	10	0	5	0	504	340	28	7	11	1	4	0	391
17:30	386	39	4	11	2	3	0	445	299	21	3	12	0	5	0	340
17:45	315	48	4	6	0	3	0	376	253	22	2	7	1	1	0	286
<b>H/TOT</b>	<b>1626</b>	<b>215</b>	<b>21</b>	<b>31</b>	<b>4</b>	<b>19</b>	<b>0</b>	<b>1916</b>	<b>1228</b>	<b>109</b>	<b>17</b>	<b>35</b>	<b>4</b>	<b>17</b>	<b>0</b>	<b>1410</b>
18:00	377	45	8	8	3	2	3	446	257	26	5	8	2	1	0	299
18:15	268	37	7	3	0	3	1	319	213	21	5	7	1	0	0	247
18:30	256	26	3	5	1	1	0	292	182	17	4	4	0	1	0	208
18:45	203	15	4	7	3	1	0	233	170	13	3	7	0	2	1	196
<b>H/TOT</b>	<b>1104</b>	<b>123</b>	<b>22</b>	<b>23</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>1290</b>	<b>822</b>	<b>77</b>	<b>17</b>	<b>26</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>950</b>
<b>P/TOT</b>	<b>4405</b>	<b>665</b>	<b>83</b>	<b>90</b>	<b>18</b>	<b>45</b>	<b>4</b>	<b>5310</b>	<b>3195</b>	<b>362</b>	<b>77</b>	<b>110</b>	<b>23</b>	<b>33</b>	<b>2</b>	<b>3802</b>



SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	TO ARM E							TOT	FROM ARM E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	12	13	1	1	0	1	2	30	5	12	23	1	0	0	0	41
07:15	17	12	5	2	0	0	1	37	8	15	2	0	0	0	0	25
07:30	22	9	1	2	0	0	0	34	3	8	1	3	0	0	0	15
07:45	39	14	5	2	0	0	0	60	12	12	4	3	0	0	0	31
<b>H/TOT</b>	<b>90</b>	<b>48</b>	<b>12</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>161</b>	<b>28</b>	<b>47</b>	<b>30</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>112</b>
08:00	26	17	3	3	0	0	0	49	19	17	2	1	0	0	0	39
08:15	48	18	1	2	0	0	0	69	15	9	2	4	0	0	1	31
08:30	39	17	8	6	0	0	0	70	22	14	2	2	0	0	0	40
08:45	36	10	5	3	0	0	0	54	16	12	11	0	0	0	0	39
<b>H/TOT</b>	<b>149</b>	<b>62</b>	<b>17</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>242</b>	<b>72</b>	<b>52</b>	<b>17</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>149</b>
09:00	29	17	4	2	0	0	0	52	26	15	2	4	0	0	0	47
09:15	27	23	2	1	0	0	0	53	27	16	2	4	0	1	0	50
09:30	29	16	5	2	0	0	1	53	33	28	6	5	0	0	0	72
09:45	27	10	5	4	0	0	0	46	37	11	5	5	0	0	0	58
<b>H/TOT</b>	<b>112</b>	<b>66</b>	<b>16</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>204</b>	<b>123</b>	<b>70</b>	<b>15</b>	<b>18</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>227</b>
<b>P/TOT</b>	<b>351</b>	<b>176</b>	<b>45</b>	<b>30</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>607</b>	<b>223</b>	<b>169</b>	<b>62</b>	<b>32</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>488</b>

TIME	TO ARM E							TOT	FROM ARM E							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL		CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	17	11	5	2	0	0	7	42	27	8	0	0	0	0	0	35
16:15	17	18	1	2	0	1	3	42	25	16	2	1	0	0	0	44
16:30	17	13	3	0	0	0	6	39	37	18	1	0	0	0	0	56
16:45	16	6	2	3	0	0	0	27	47	13	3	4	0	0	0	67
<b>H/TOT</b>	<b>67</b>	<b>48</b>	<b>11</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>150</b>	<b>136</b>	<b>55</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>202</b>
17:00	18	2	0	0	0	0	12	32	64	6	2	1	0	1	0	74
17:15	29	3	2	1	0	0	1	36	23	3	0	2	0	0	0	28
17:30	18	7	0	0	0	0	4	29	40	7	1	2	0	0	0	50
17:45	17	4	0	0	0	0	6	27	22	2	1	1	0	0	1	27
<b>H/TOT</b>	<b>82</b>	<b>16</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>124</b>	<b>149</b>	<b>18</b>	<b>4</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>179</b>
18:00	14	4	1	2	0	0	33	54	15	2	0	2	0	0	2	21
18:15	18	1	0	0	0	0	1	20	15	4	0	0	0	0	0	19
18:30	18	1	1	0	0	0	4	24	18	0	0	2	0	0	0	20
18:45	12	3	0	2	0	0	1	18	7	1	0	0	0	0	0	8
<b>H/TOT</b>	<b>62</b>	<b>9</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>116</b>	<b>55</b>	<b>7</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>68</b>
<b>P/TOT</b>	<b>211</b>	<b>73</b>	<b>15</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>78</b>	<b>390</b>	<b>340</b>	<b>80</b>	<b>10</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>449</b>





SITE: 6

DATE: 06/07/2017

LOCATION: A180 / Estate Road No 2 / Estate Road No 1 / Gillbey Road

DAY: Thursday

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
07:00	499	172	60	49	5	7	2	794
07:15	570	162	40	39	14	5	1	831
07:30	663	149	39	49	7	7	0	914
07:45	833	195	63	50	5	7	0	1153
<b>H/TOT</b>	<b>2565</b>	<b>678</b>	<b>202</b>	<b>187</b>	<b>31</b>	<b>26</b>	<b>3</b>	<b>3692</b>
08:00	717	202	57	46	9	5	0	1036
08:15	730	168	47	47	7	3	1	1003
08:30	620	154	55	60	1	1	0	891
08:45	513	157	65	45	4	5	2	791
<b>H/TOT</b>	<b>2580</b>	<b>681</b>	<b>224</b>	<b>198</b>	<b>21</b>	<b>14</b>	<b>3</b>	<b>3721</b>
09:00	514	156	63	43	4	1	0	781
09:15	512	180	65	45	8	10	0	820
09:30	467	200	64	46	2	5	1	785
09:45	494	153	63	59	5	4	0	778
<b>H/TOT</b>	<b>1987</b>	<b>689</b>	<b>255</b>	<b>193</b>	<b>19</b>	<b>20</b>	<b>1</b>	<b>3164</b>
<b>P/TOT</b>	<b>7132</b>	<b>2048</b>	<b>681</b>	<b>578</b>	<b>71</b>	<b>60</b>	<b>7</b>	<b>10577</b>

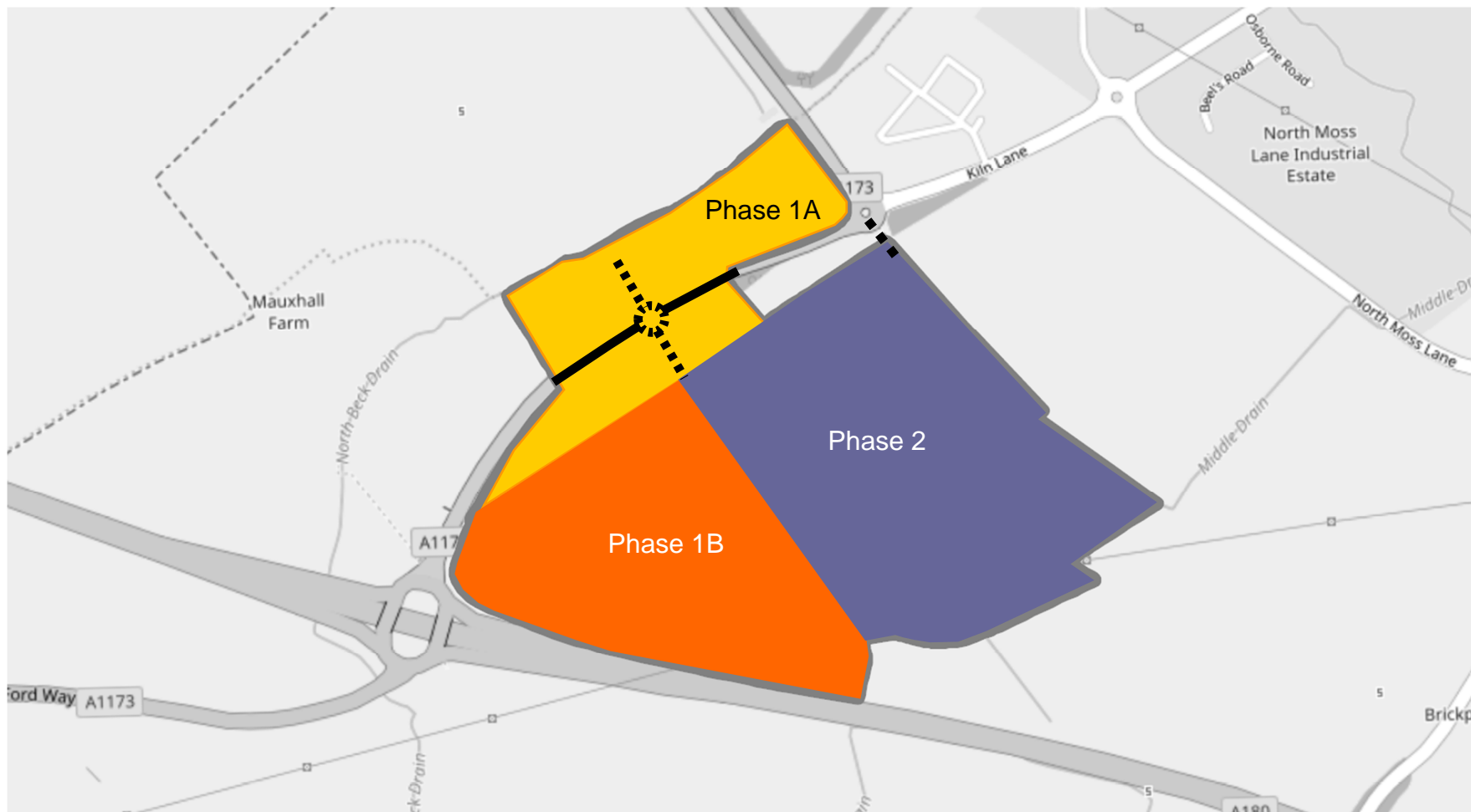
PEAK HOUR	
CALCULATION	TOT
07:00 to 08:00	3692
07:15 to 08:15	3934
07:30 to 08:30	<b>4106</b>
07:45 to 08:45	4083
08:00 to 09:00	3721
08:15 to 09:15	3466
08:30 to 09:30	3283
08:45 to 09:45	3177
09:00 to 10:00	3164
<b>PEAK VALUE</b>	<b>4106</b>

TIME	JUNCTION TOTAL							TOT
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	
16:00	753	175	42	27	6	6	8	1017
16:15	689	159	33	38	7	9	3	938
16:30	857	158	21	25	8	12	6	1087
16:45	801	123	30	31	6	7	0	998
<b>H/TOT</b>	<b>3100</b>	<b>615</b>	<b>126</b>	<b>121</b>	<b>27</b>	<b>34</b>	<b>17</b>	<b>4040</b>
17:00	935	124	18	14	4	16	12	1123
17:15	832	98	20	27	2	10	1	990
17:30	734	75	10	29	2	9	4	863
17:45	609	79	9	18	1	4	7	727
<b>H/TOT</b>	<b>3110</b>	<b>376</b>	<b>57</b>	<b>88</b>	<b>9</b>	<b>39</b>	<b>24</b>	<b>3703</b>
18:00	665	73	14	23	5	3	36	819
18:15	504	60	15	11	1	8	2	601
18:30	464	46	8	15	1	2	4	540
18:45	391	33	7	17	3	3	2	456
<b>H/TOT</b>	<b>2024</b>	<b>212</b>	<b>44</b>	<b>66</b>	<b>10</b>	<b>16</b>	<b>44</b>	<b>2416</b>
<b>P/TOT</b>	<b>8234</b>	<b>1203</b>	<b>227</b>	<b>275</b>	<b>46</b>	<b>89</b>	<b>85</b>	<b>10159</b>

PEAK HOUR	
CALCULATION	TOT
16:00 to 17:00	4040
16:15 to 17:15	4146
16:30 to 17:30	<b>4198</b>
16:45 to 17:45	3974
17:00 to 18:00	3703
17:15 to 18:15	3399
17:30 to 18:30	3010
17:45 to 18:45	2687
18:00 to 19:00	2416
<b>PEAK VALUE</b>	<b>4198</b>

## **Appendix B**

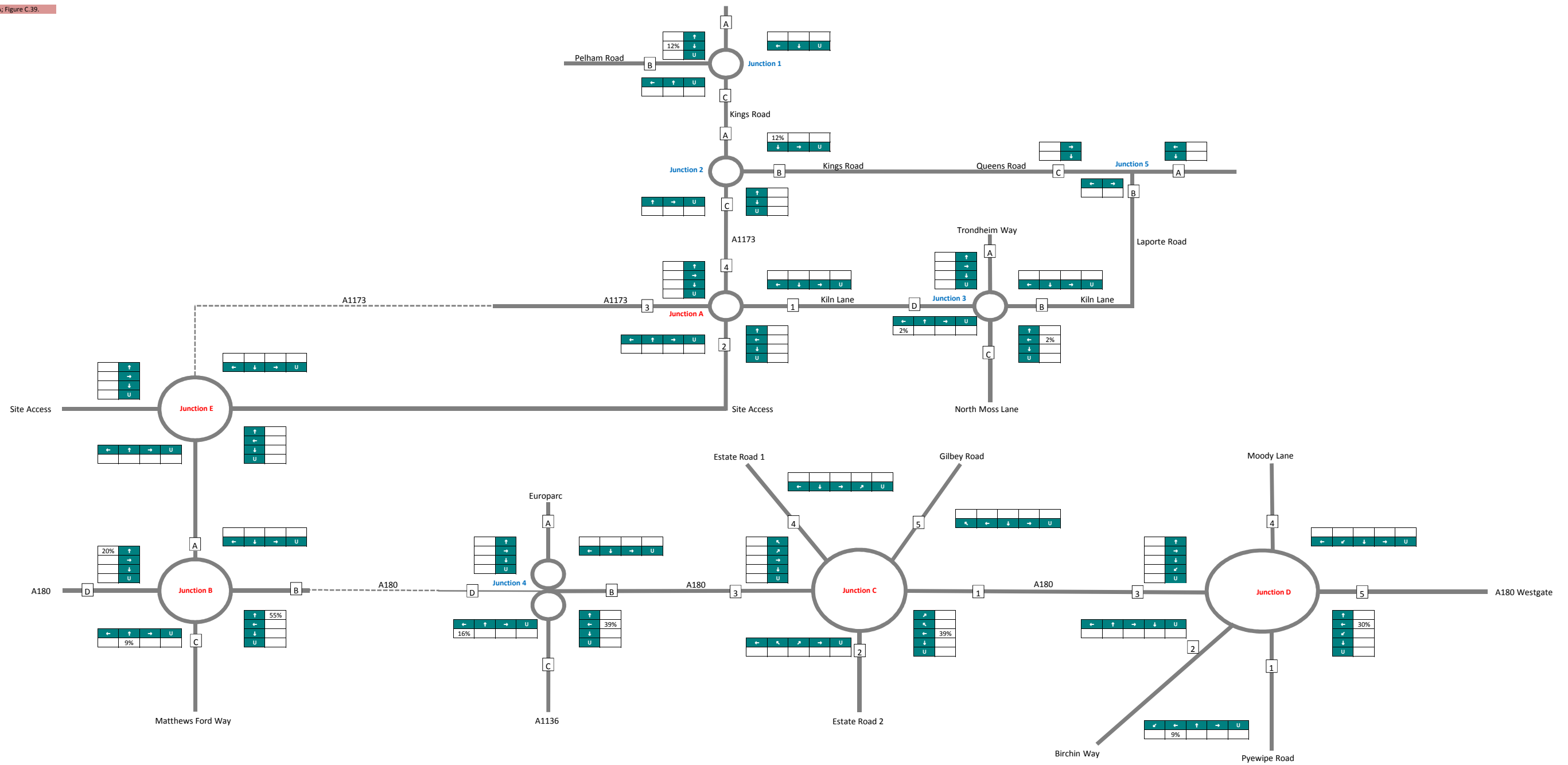
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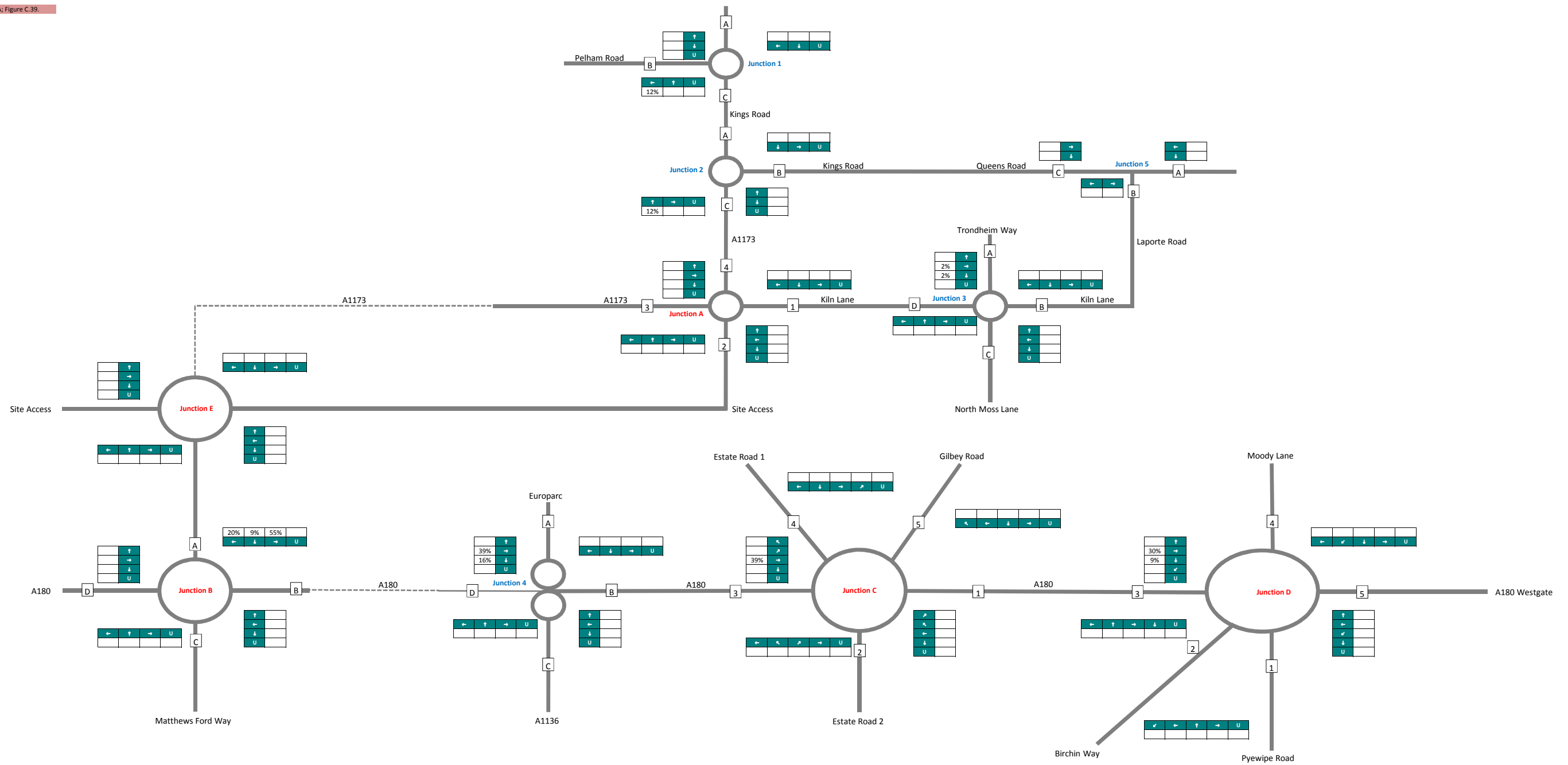


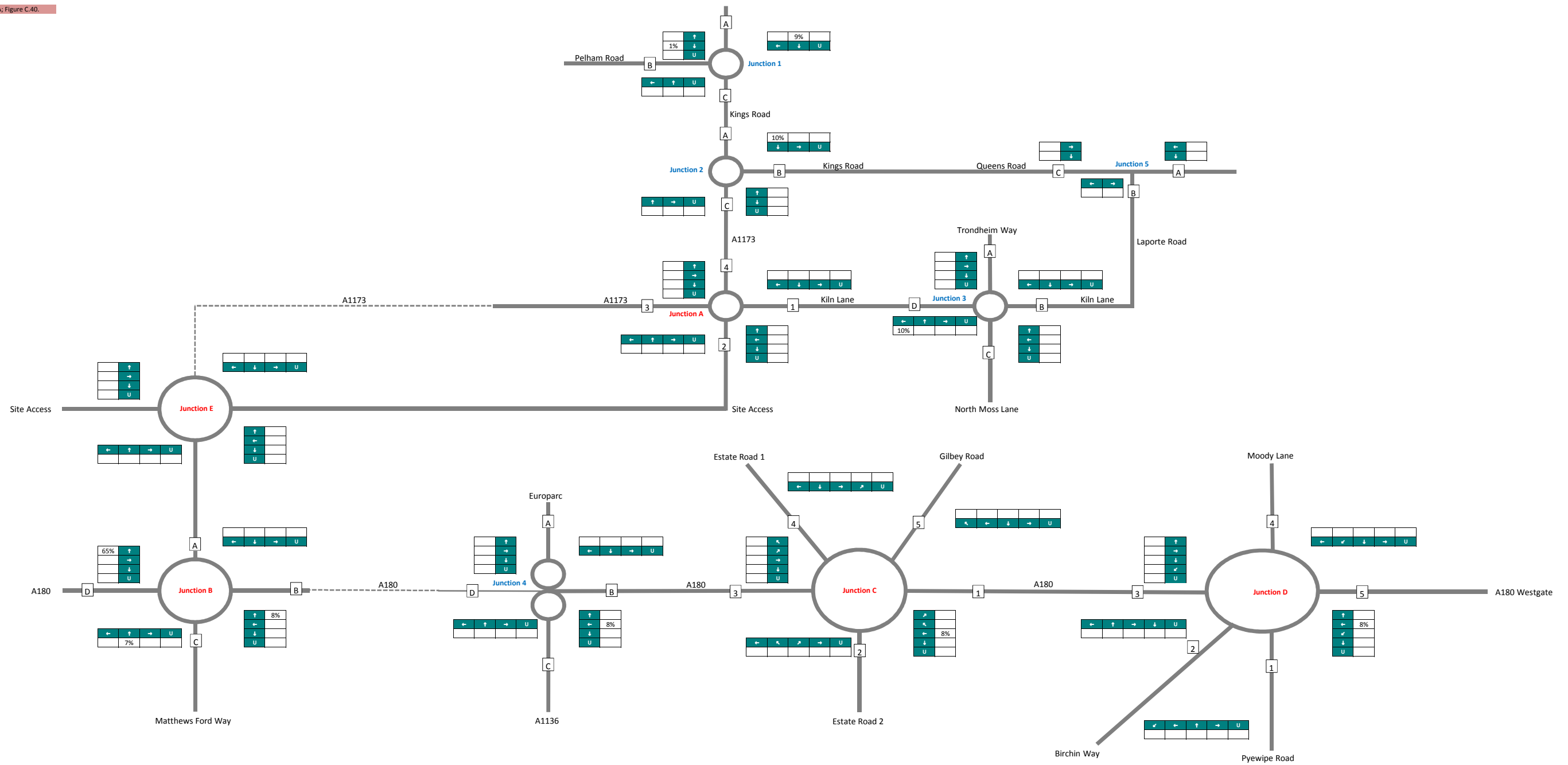
Indicative Phasing Plan

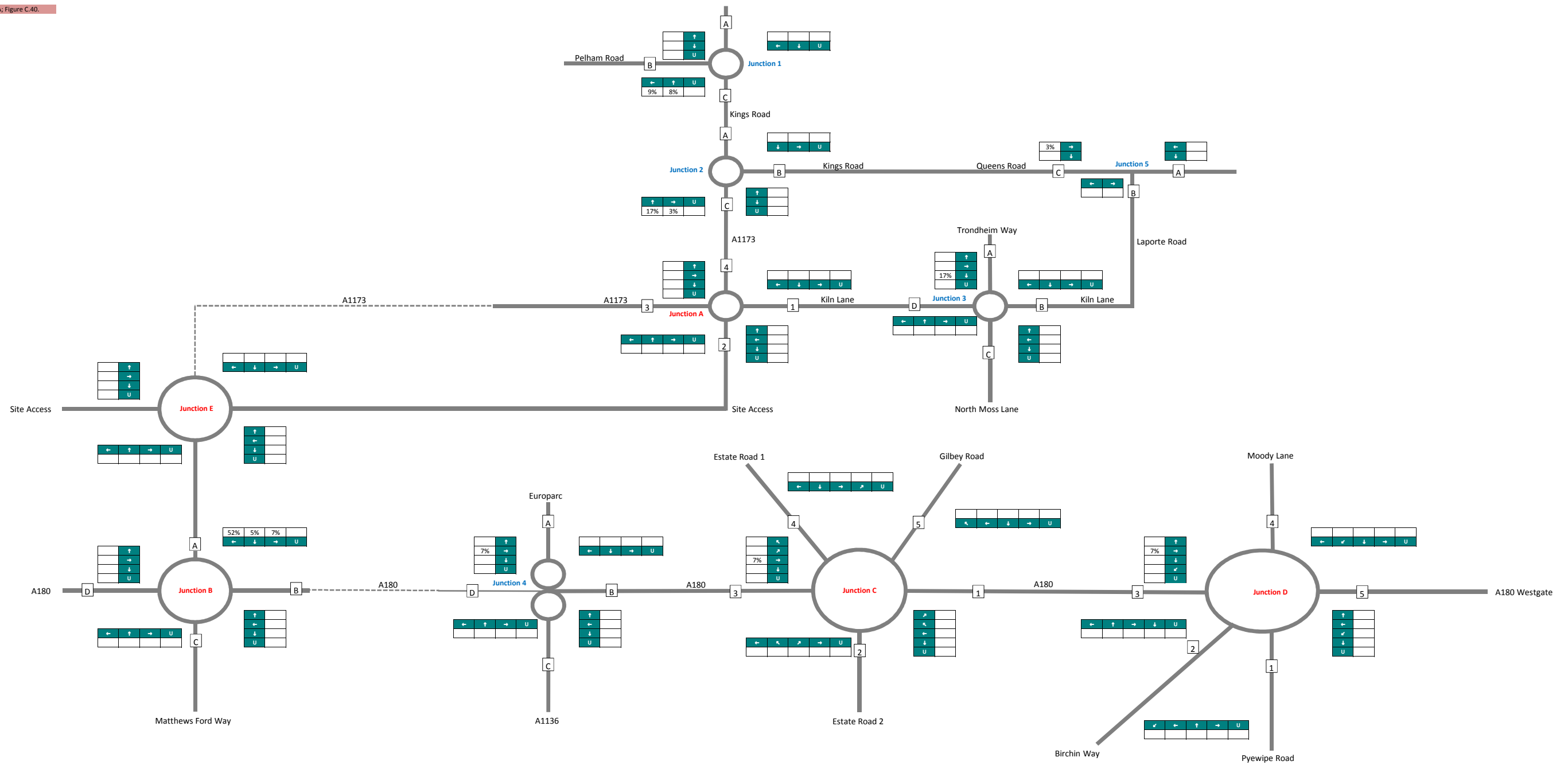
## Appendix C

### Traffic Distribution





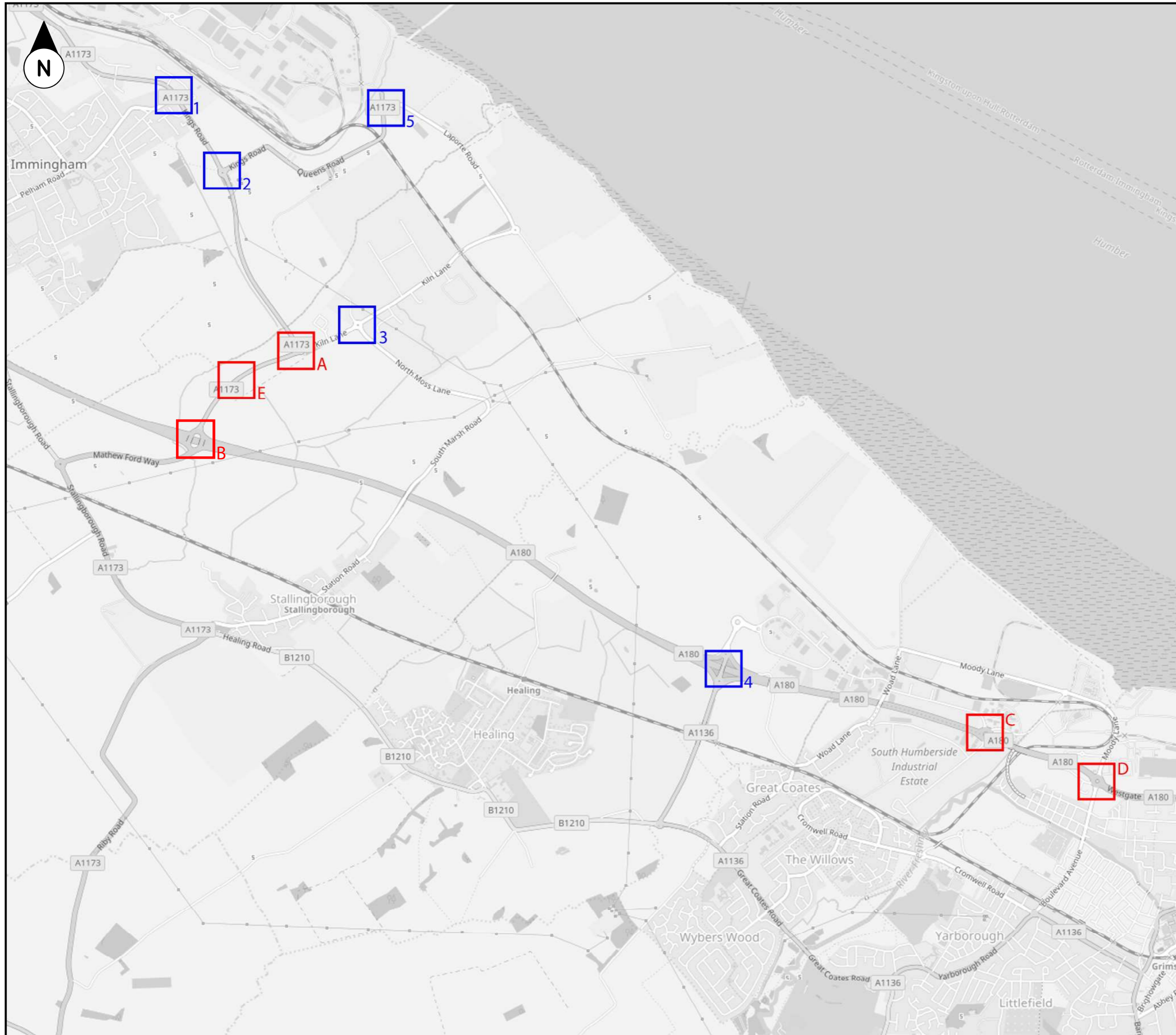






## Appendix D

Figure 1



**Key:**

Junctions Assessed in Fairhurst TA:

- 1 A1173 Kings Road/  
Pelham Road roundabout
- 2 A1173 Kings Road roundabout
- 3 Kiln Lane/North Moss Lane/  
Trondheim Road roundabout
- 4 Great Coates Interchange roundabout
- 5 Queen Road/Laporte Road/  
Immington Dock

Junctions being re-assessed in TA Addendum:

- A A1173 Kiln Lane roundabout
- B A180/A1173 roundabout
- C "Pyewipe" roundabout
- D "Westgate" roundabout
- E New Site access/A1173

Issue:	Date:	Originator:	Checked:	Approved:
D1	08.08.17	SV	JH	AG

ENGIE  
**Stallingborough Employment Site**  
 Junction Location Plan

Scale @ A3:  
 Not to Scale

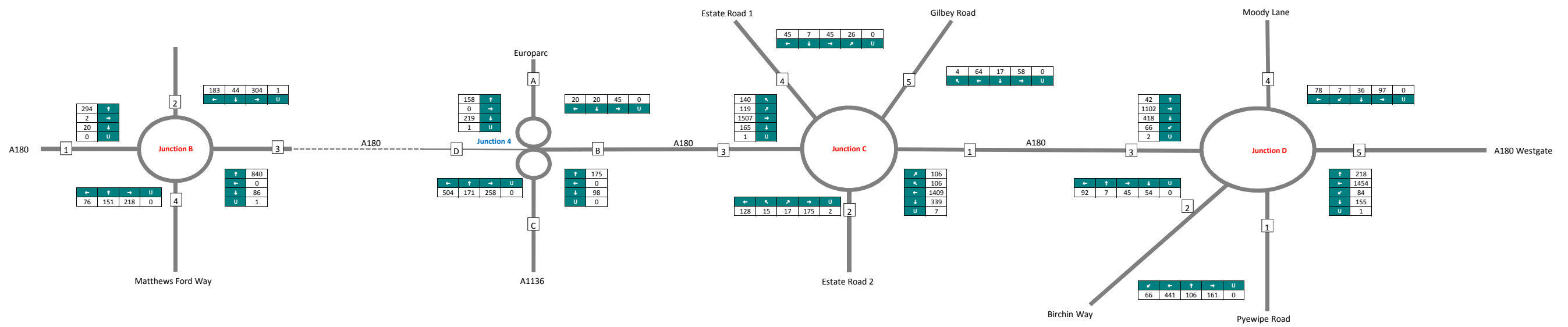
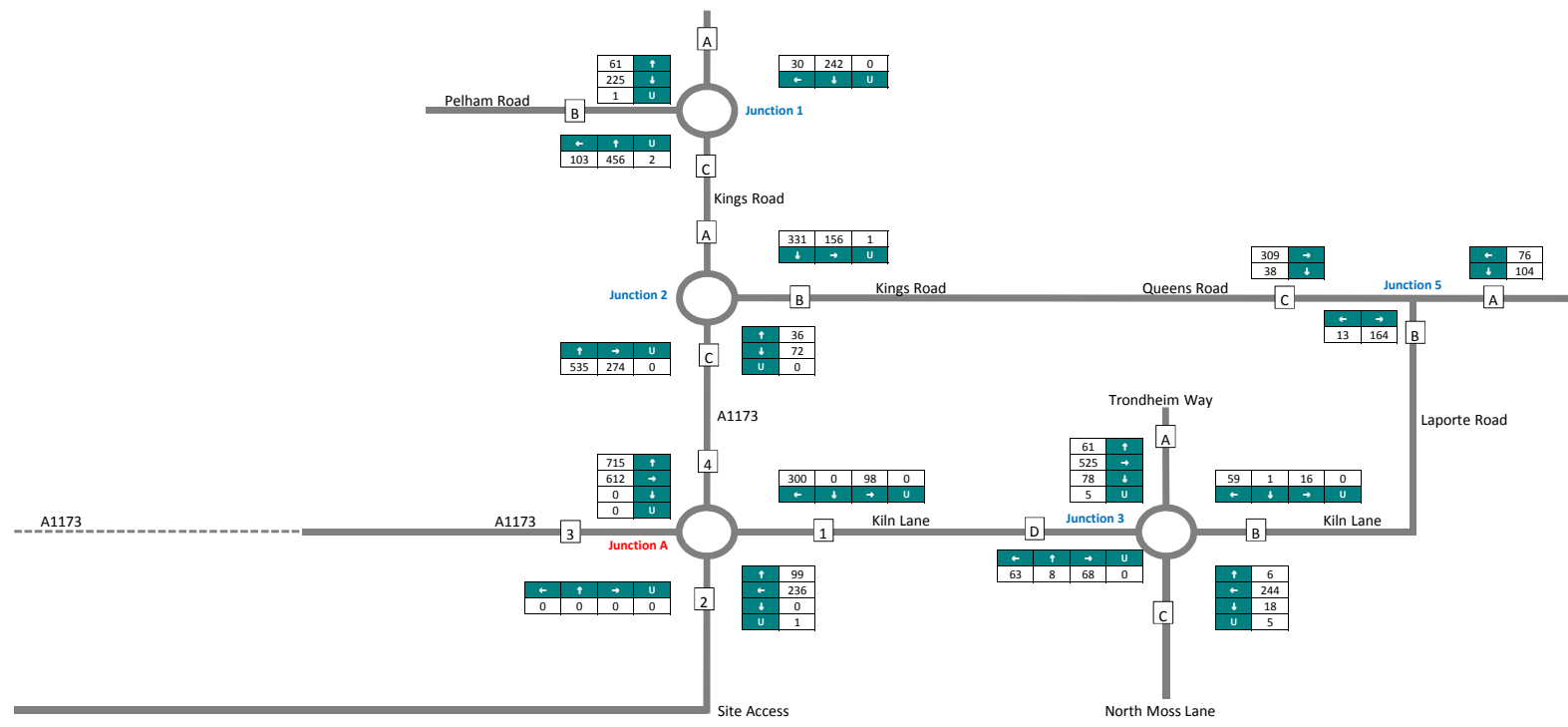
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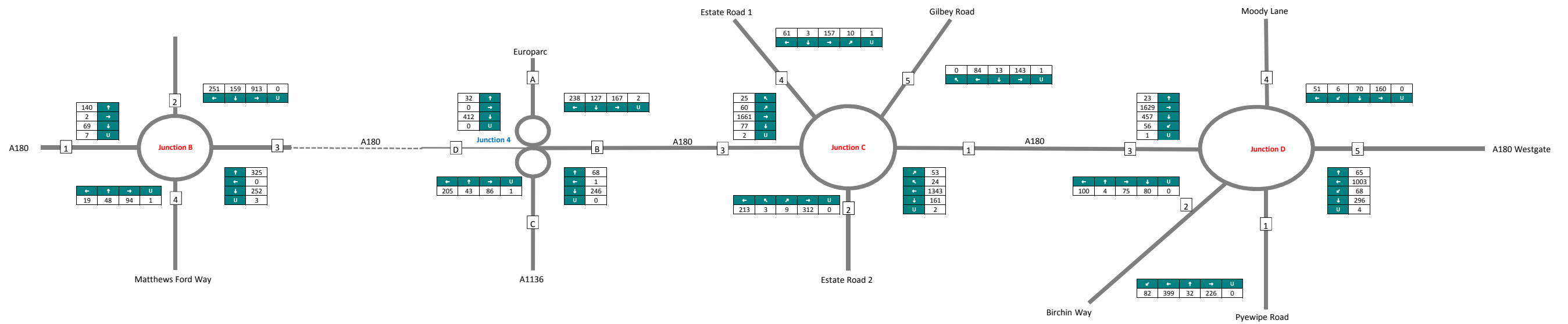
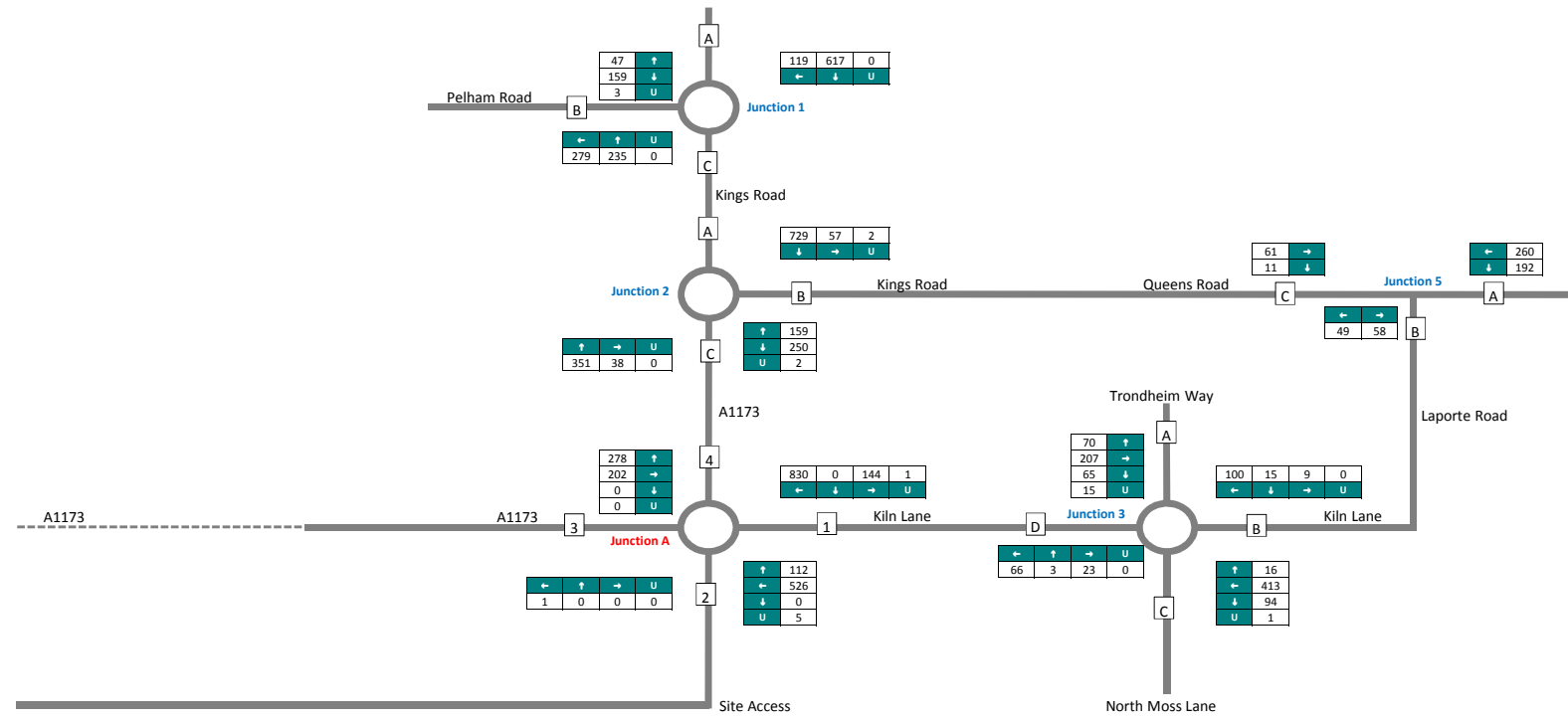
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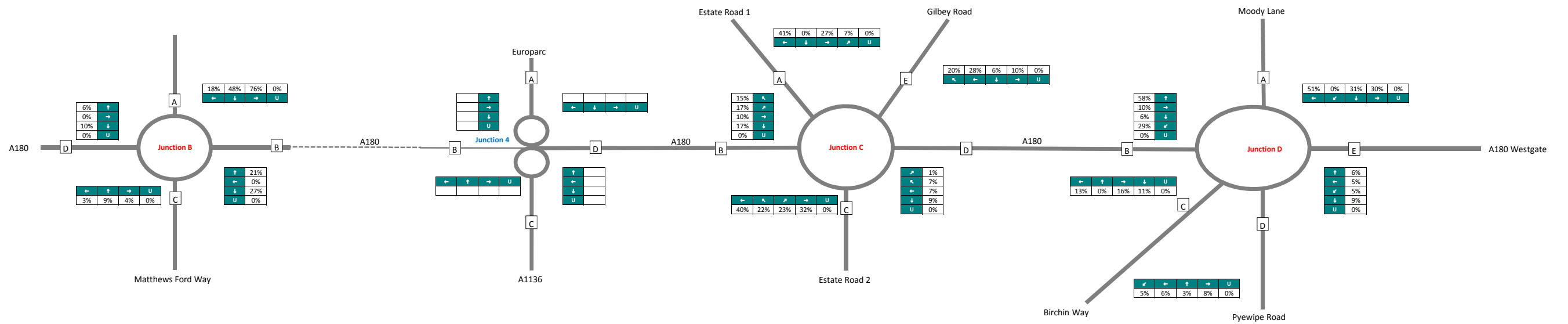
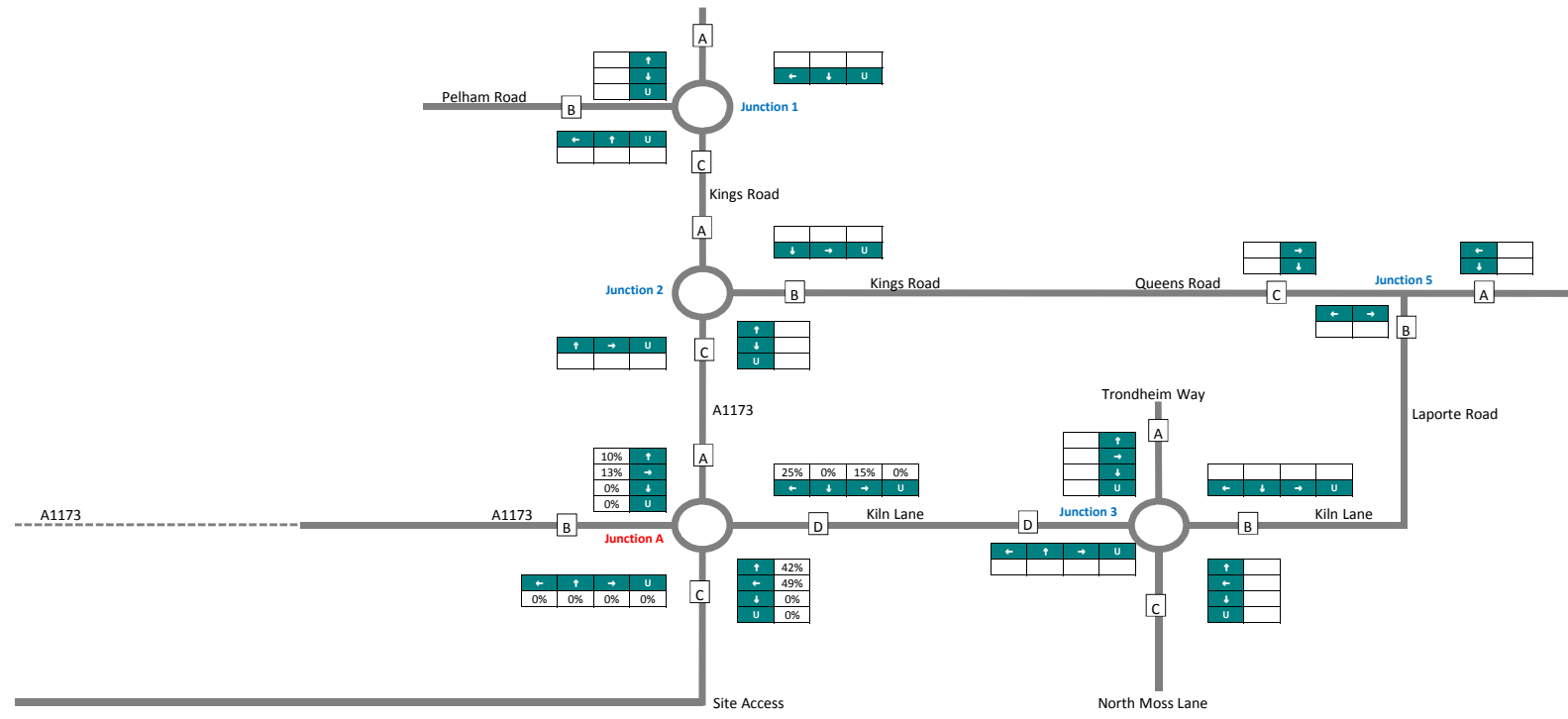
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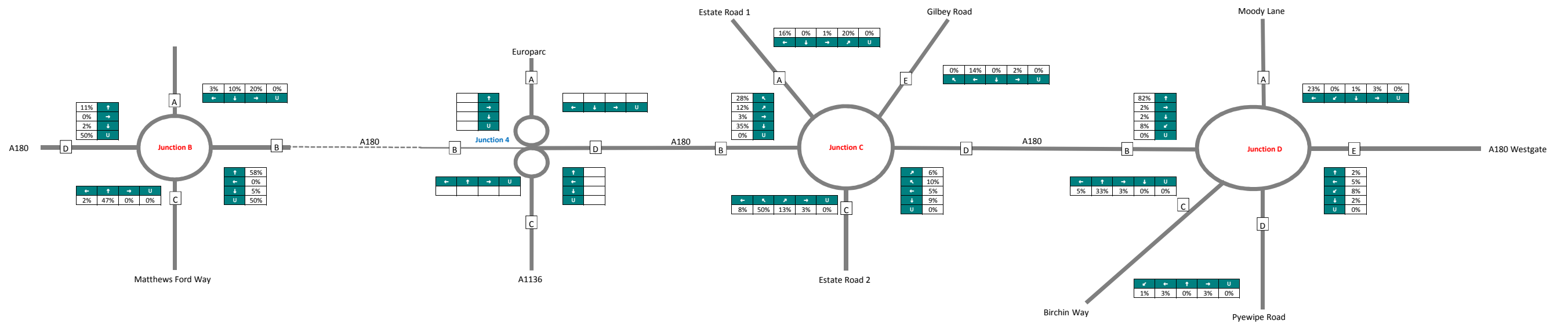
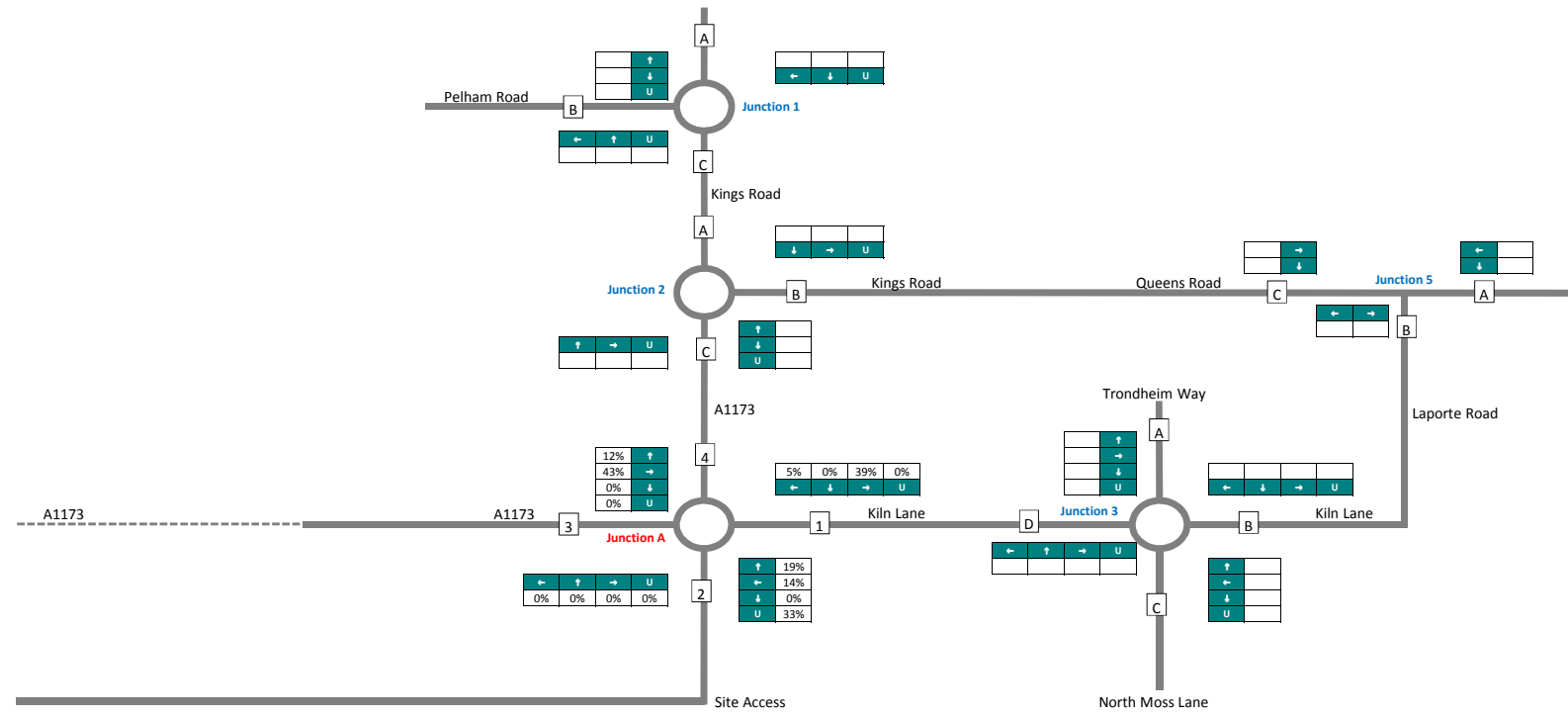
## Appendix E

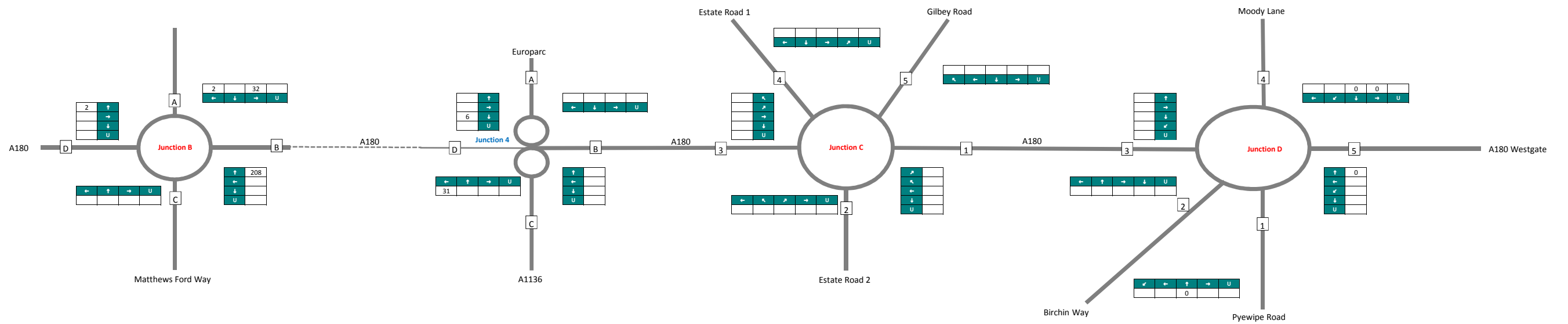
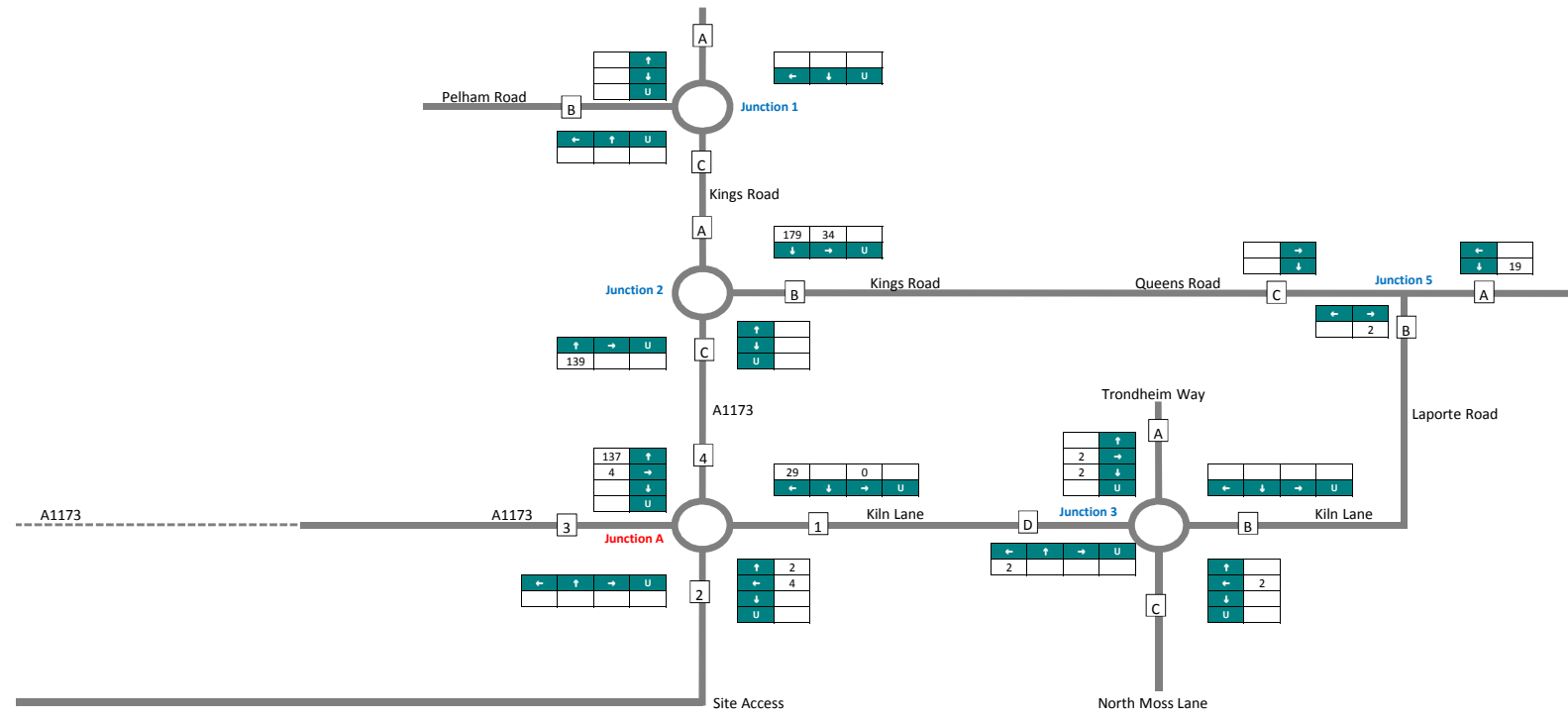
### Traffic Flow Diagrams



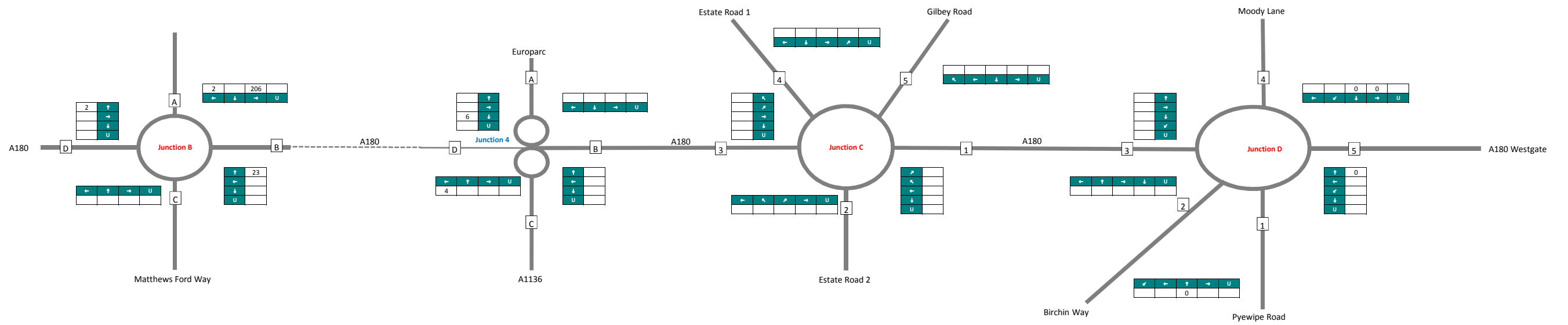
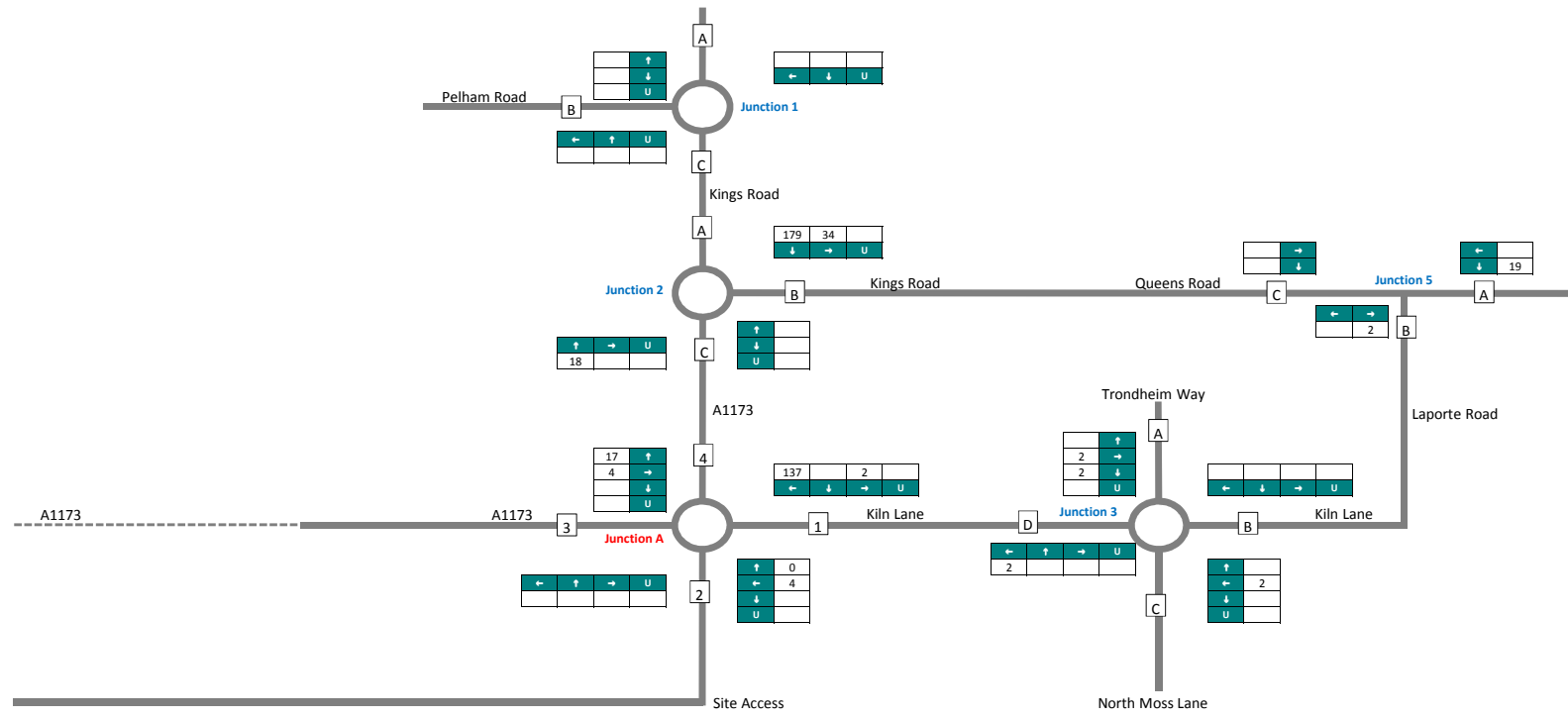


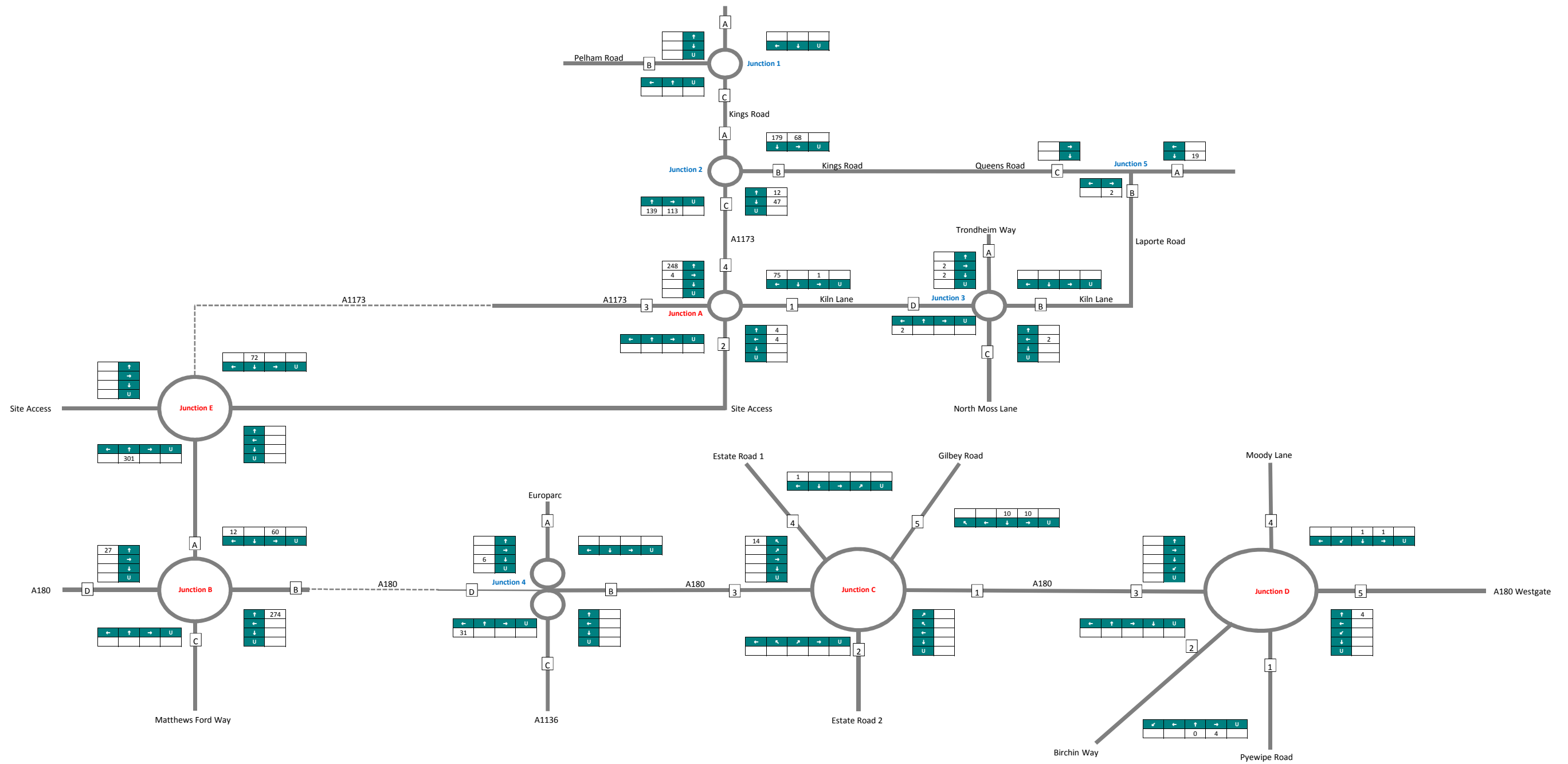


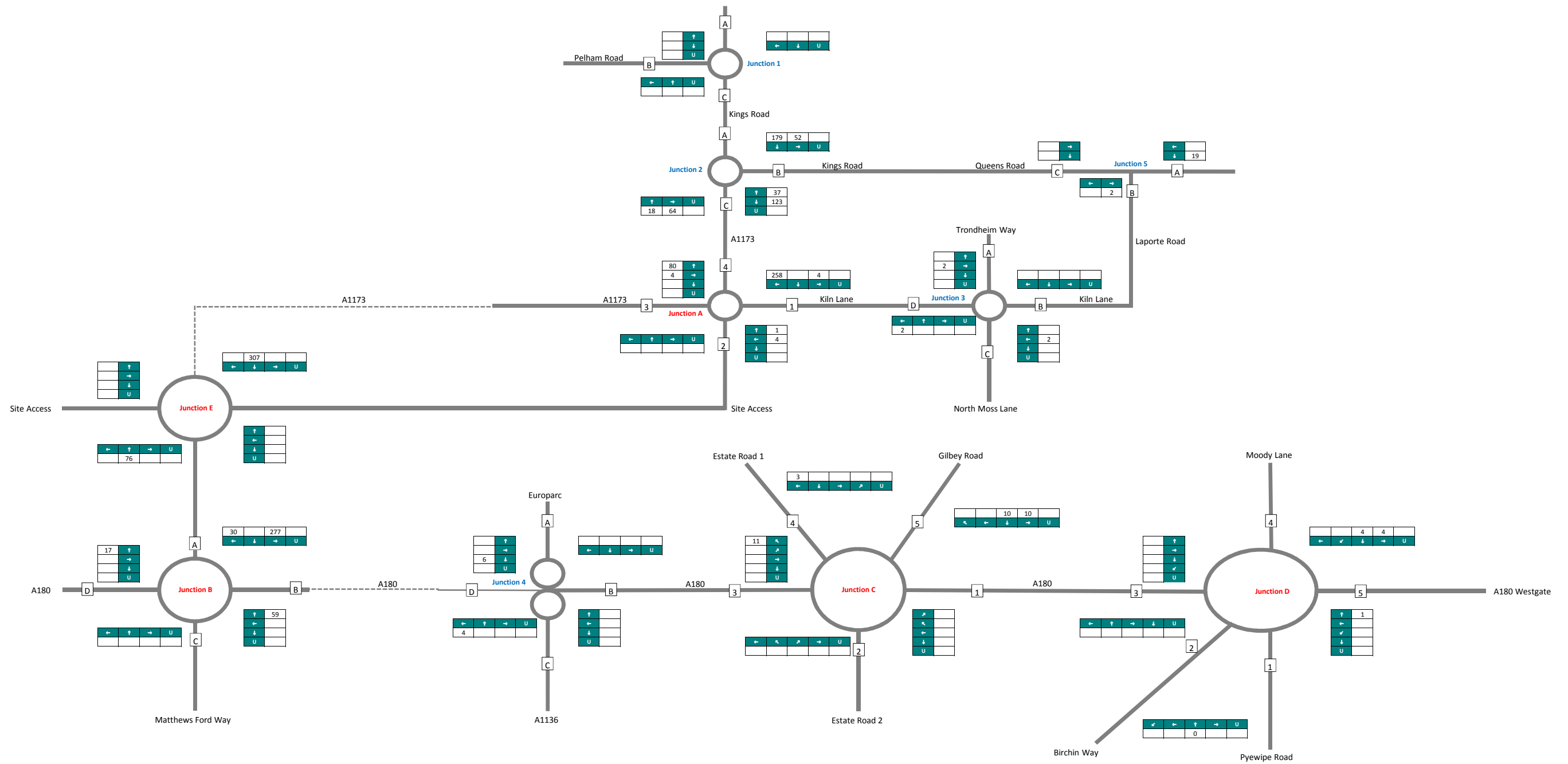


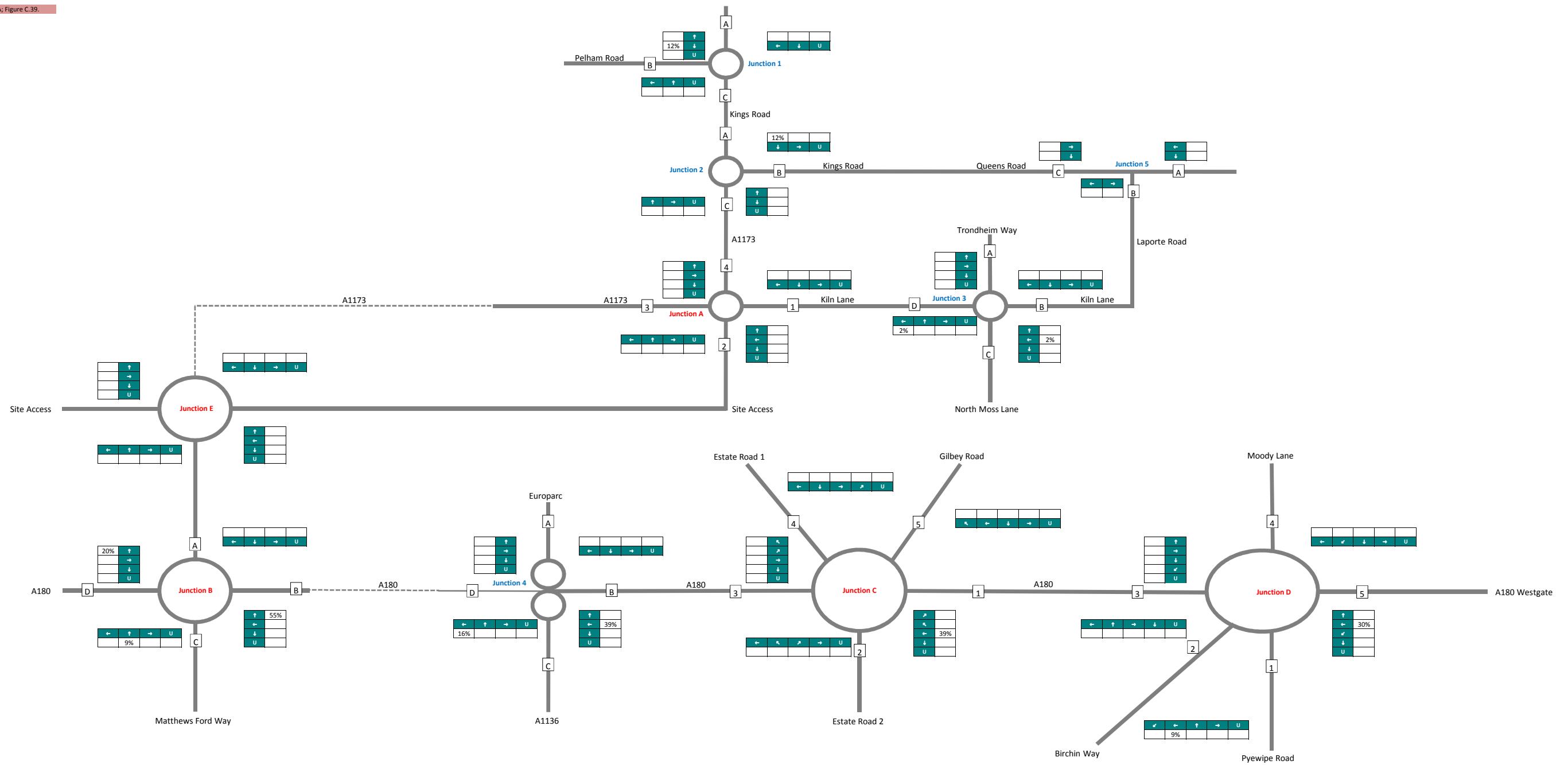


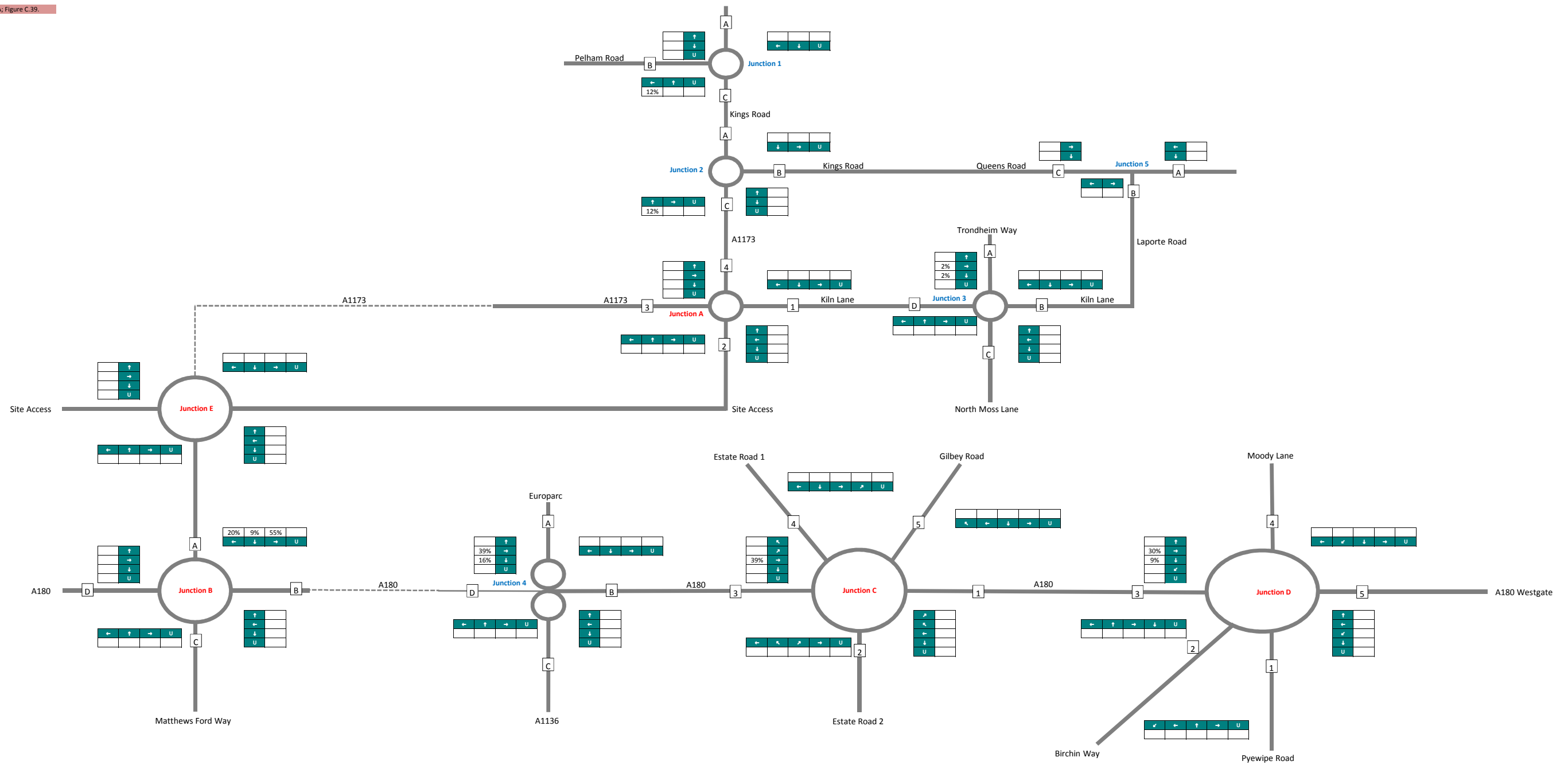


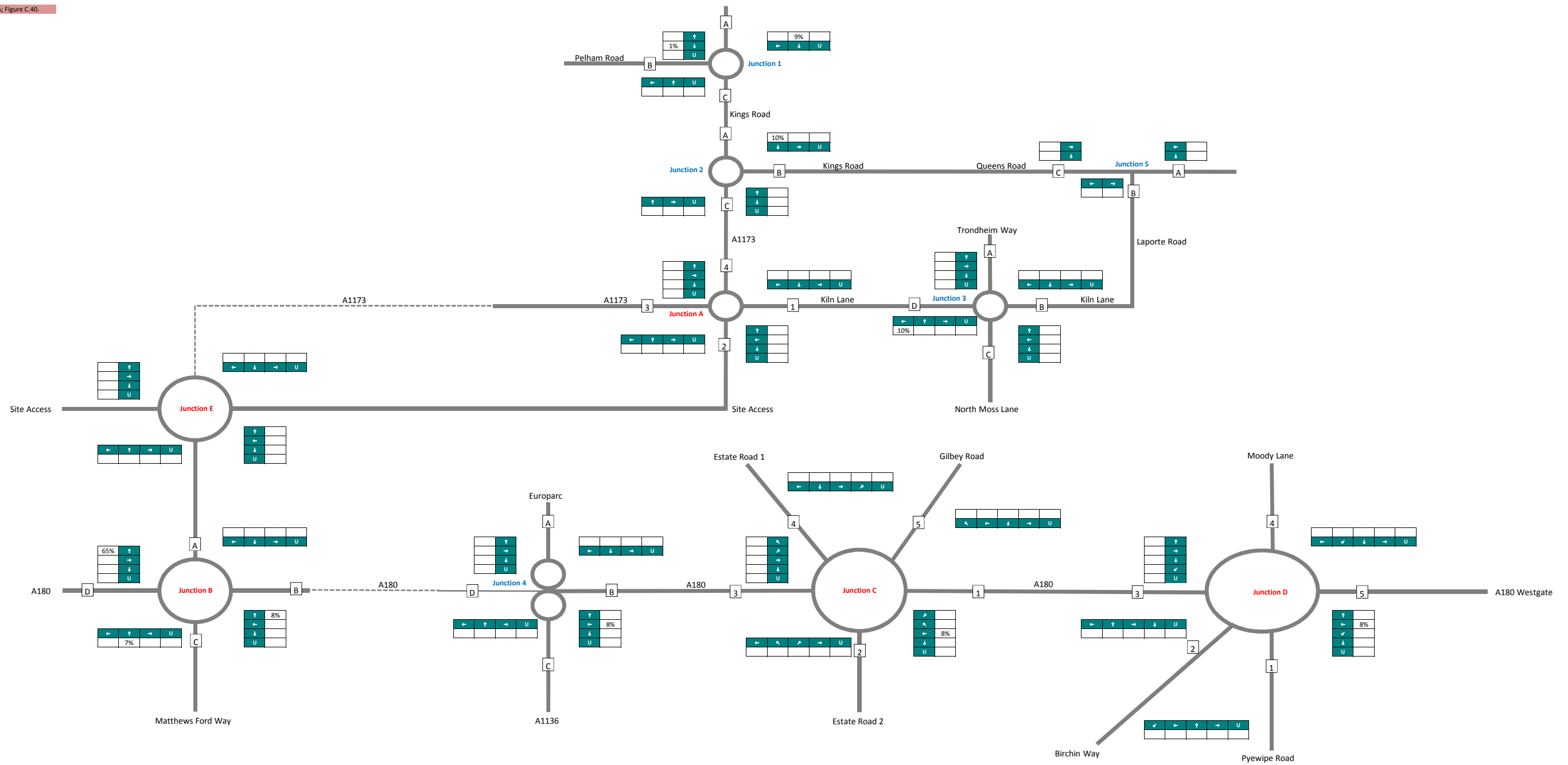


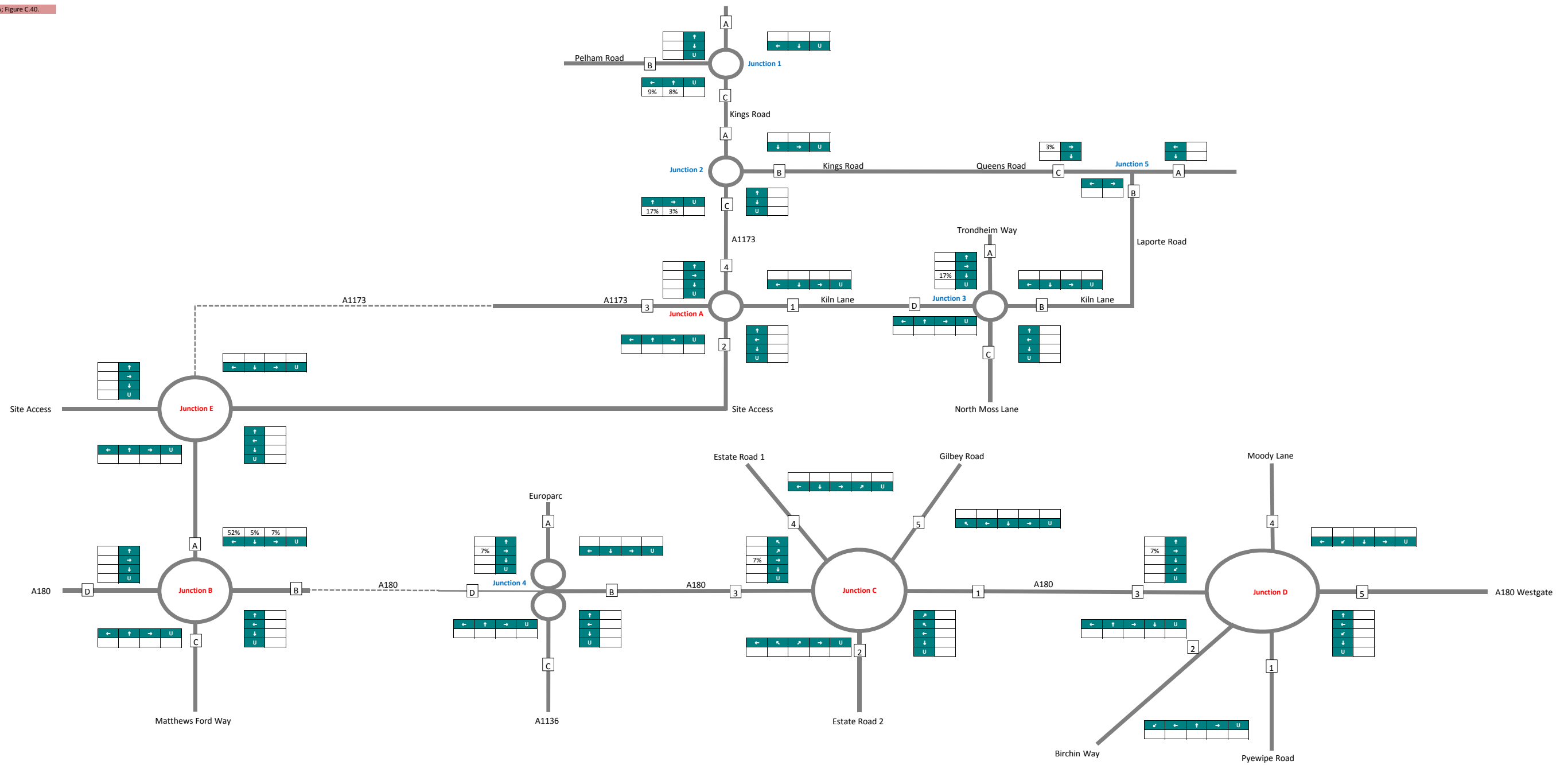




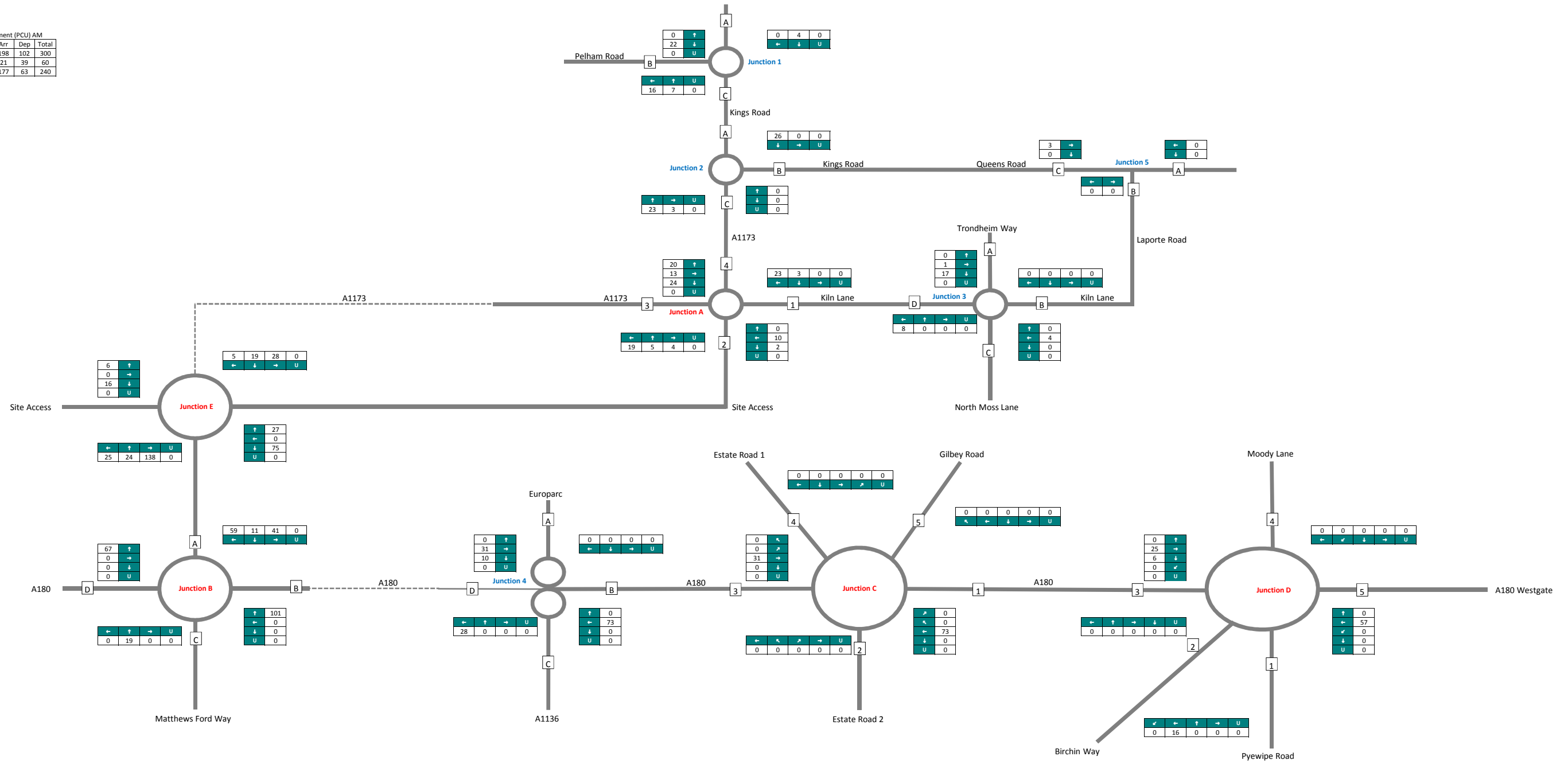






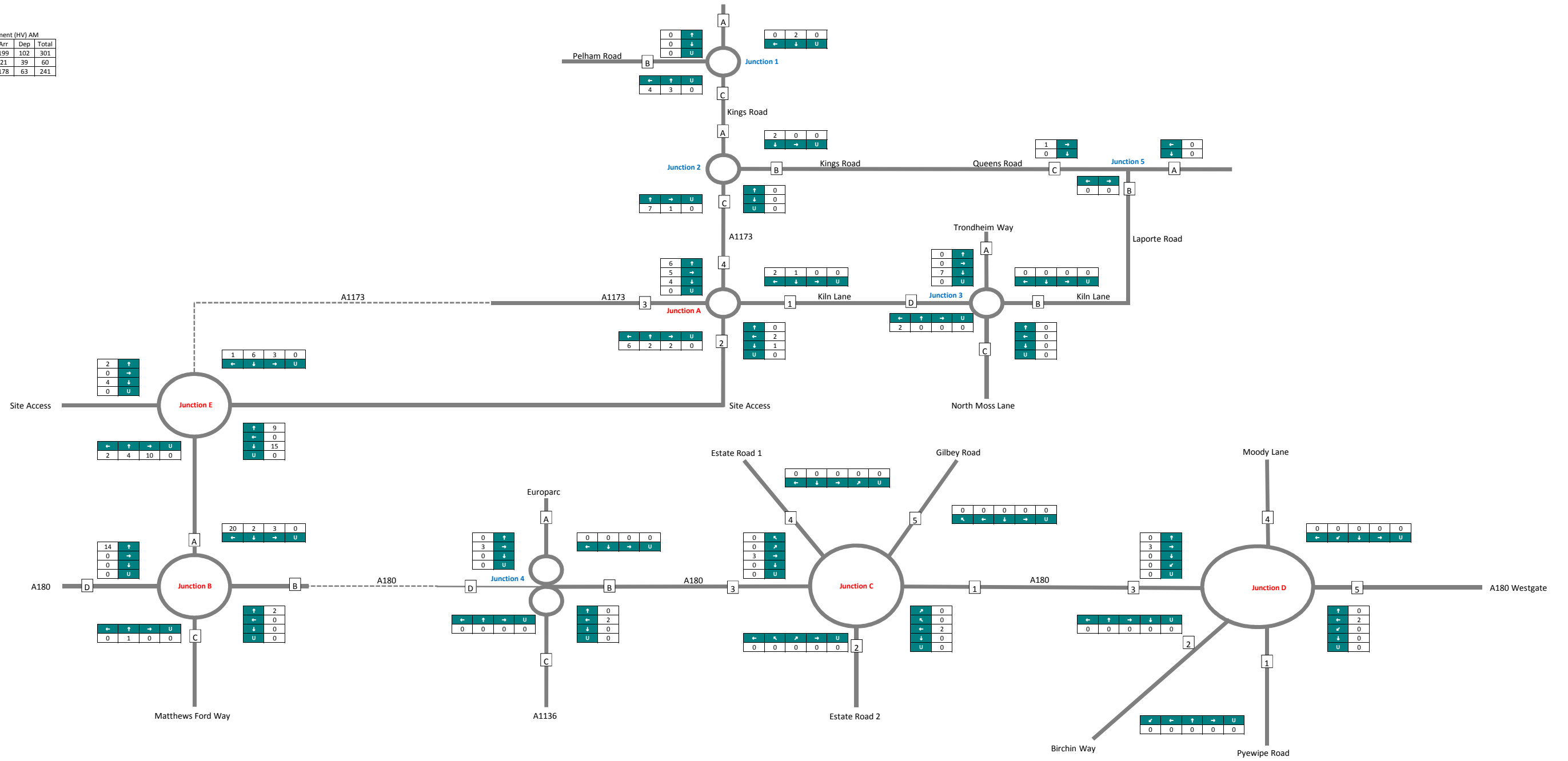


Development (PCU) AM			
Period	Arr	Dep	Total
Veh	198	102	300
HGV	21	39	60
Cars	177	63	240

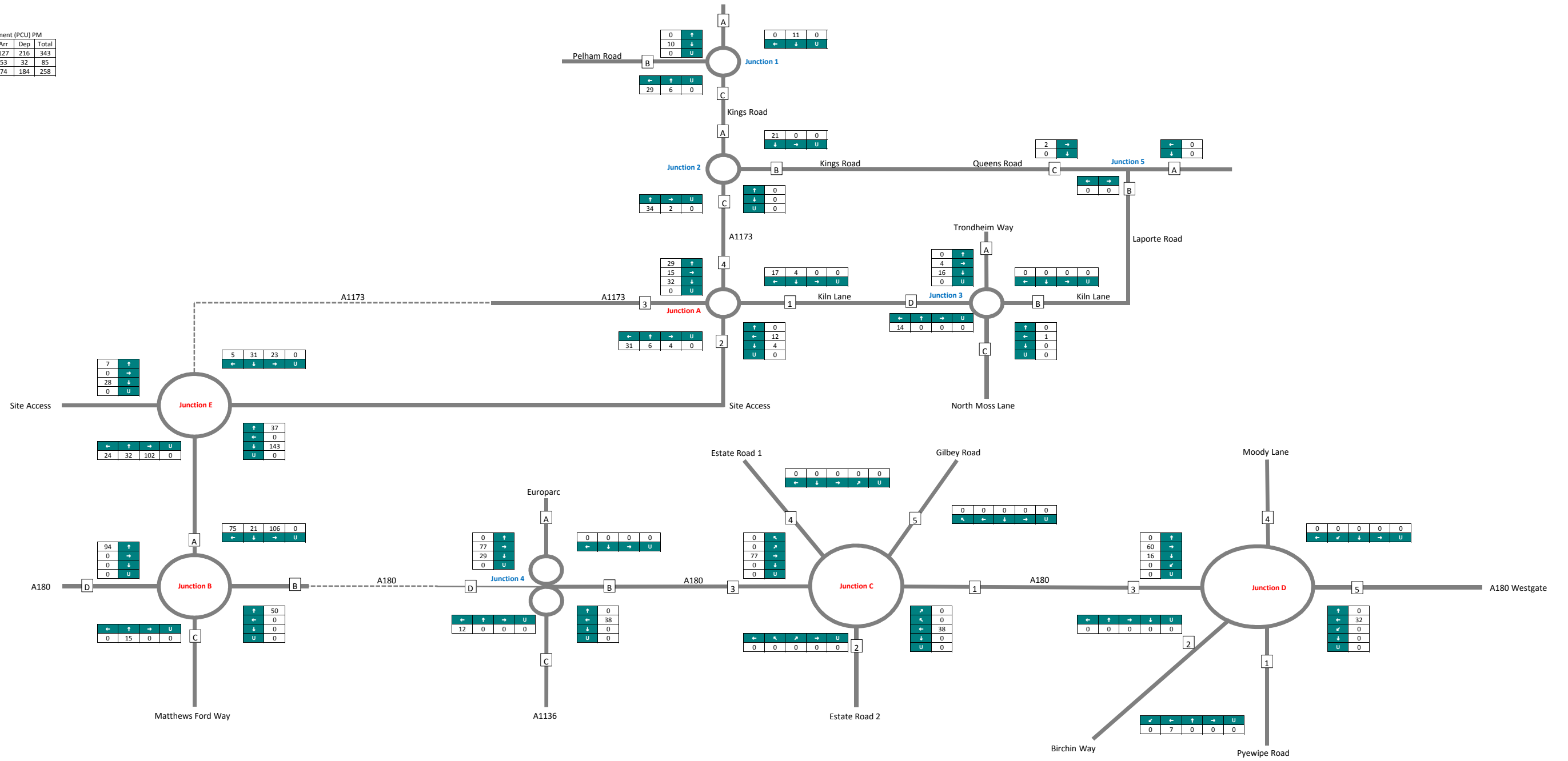




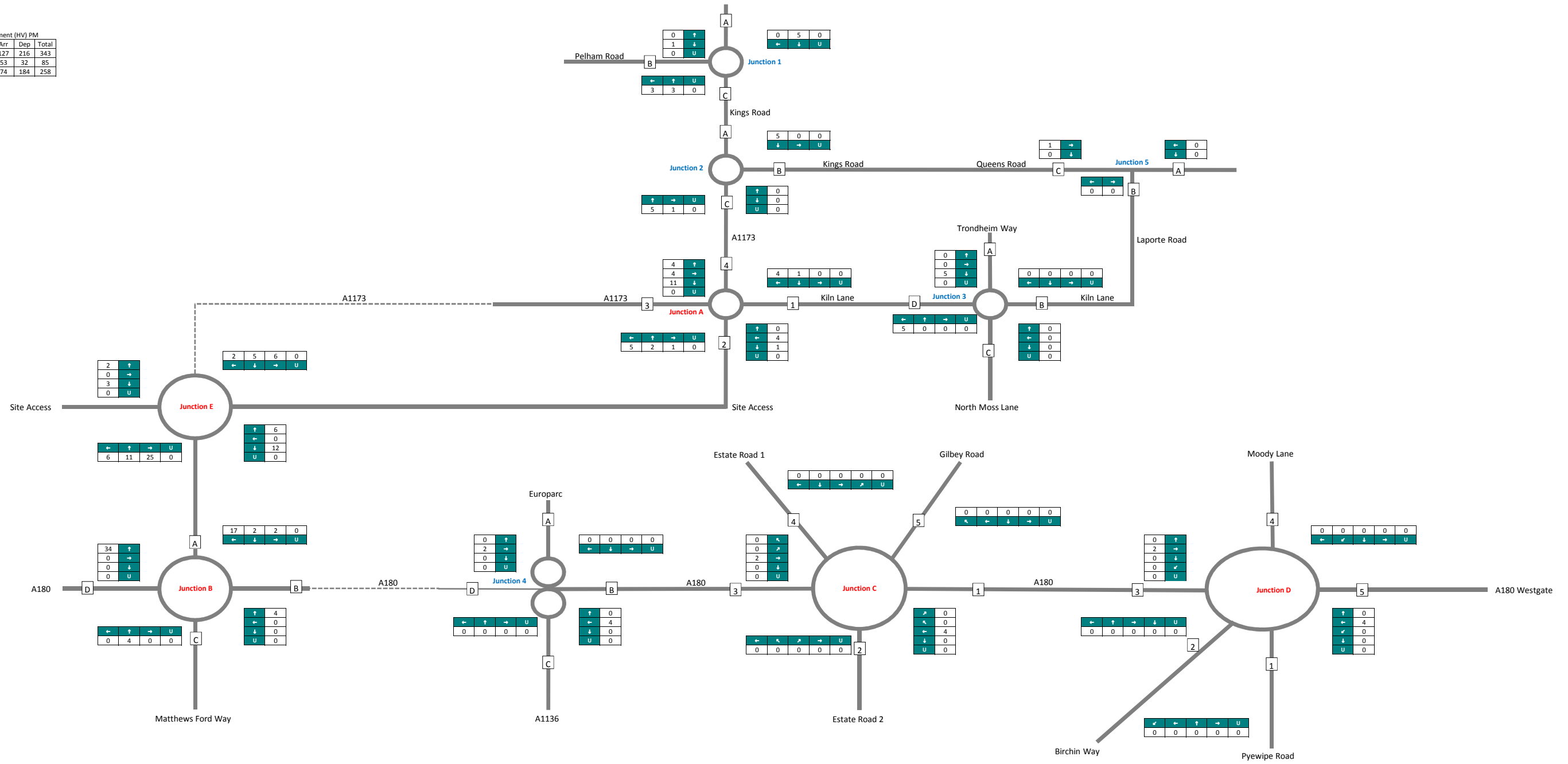
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Period	Arr	Dep	Total
Veh	199	102	301
HGV	21	39	60
Cars	178	63	241



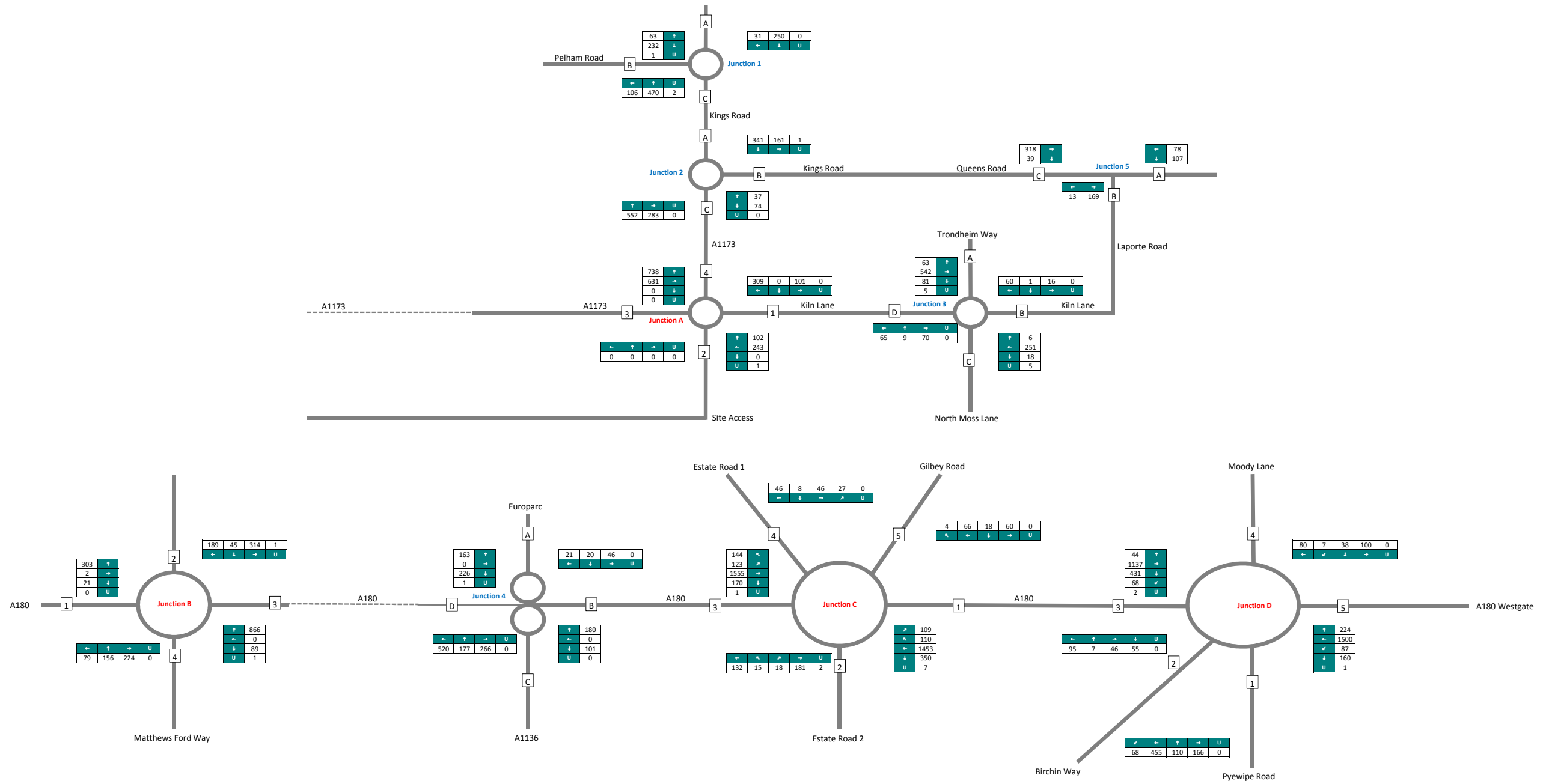
Development (PCU) PM			
Period	Arr	Dep	Total
Veh	127	216	343
HGV	53	32	85
Cars	74	184	258



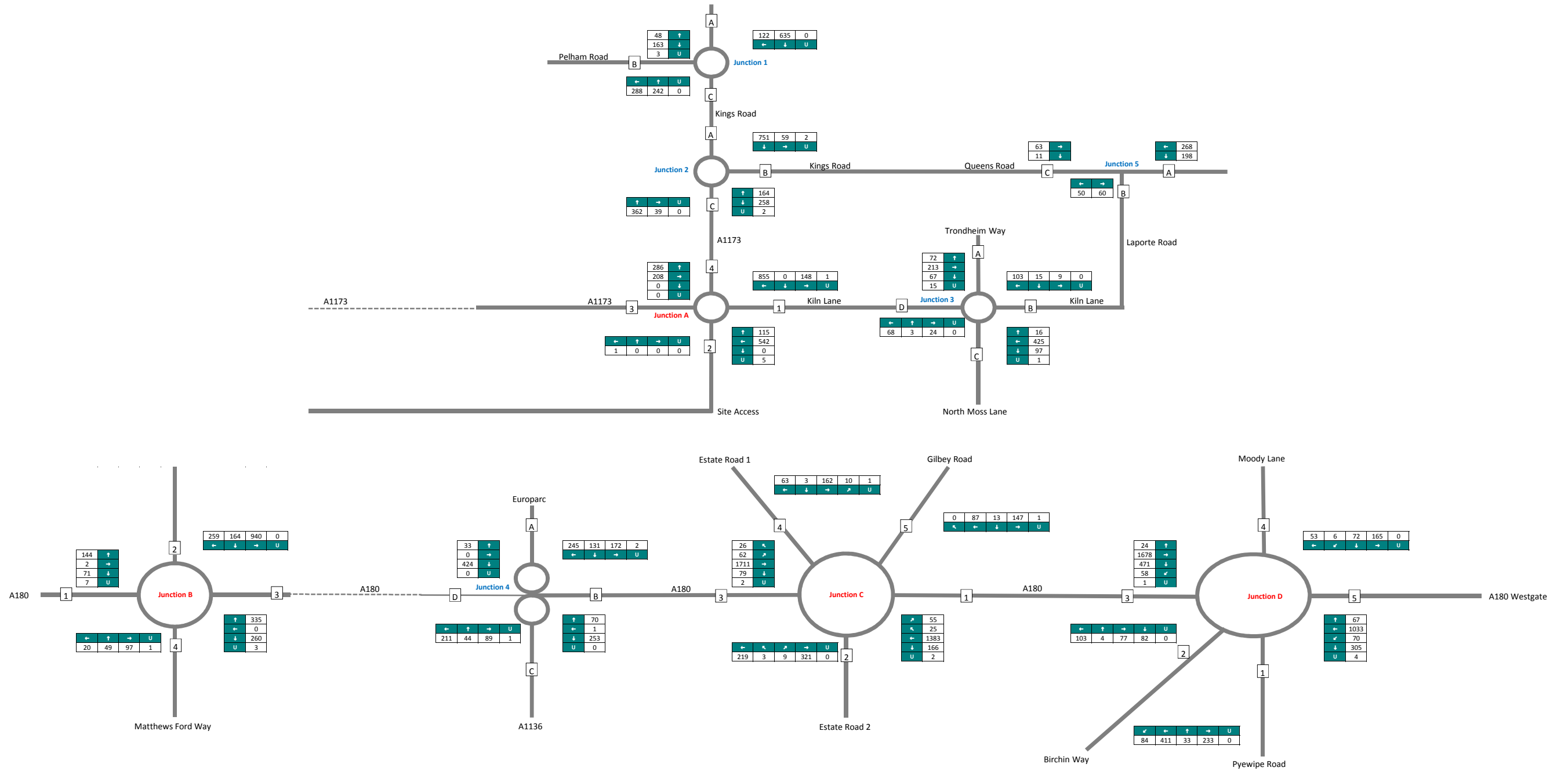
Development (HV) PM			
Period	Arr	Dep	Total
Veh	127	216	343
HGV	53	32	85
Cars	74	184	258



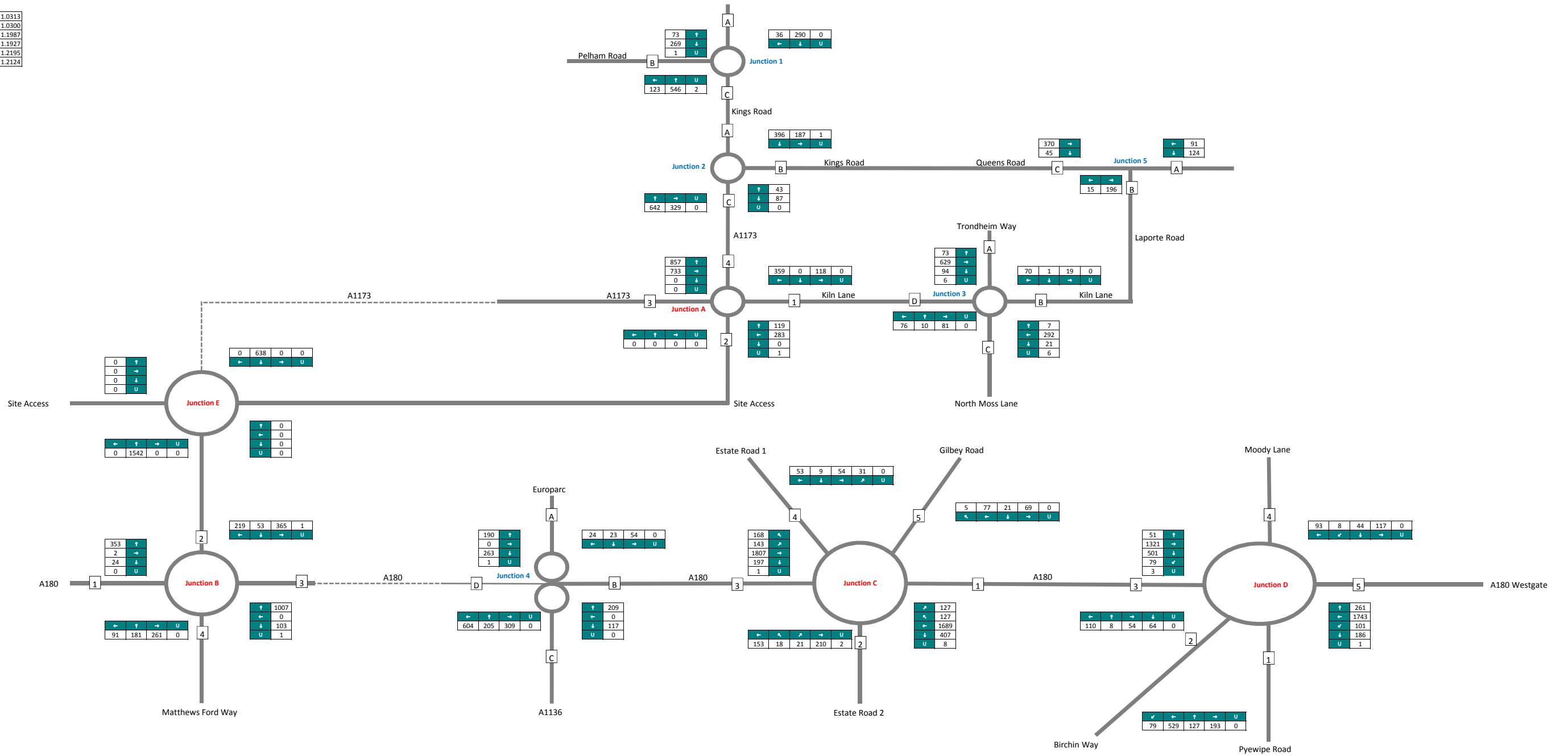
Growth Factors		
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	PM	1.0300
2017-2032	AM	1.1987
	PM	1.1927
2017-2034	AM	1.2195
	PM	1.2124



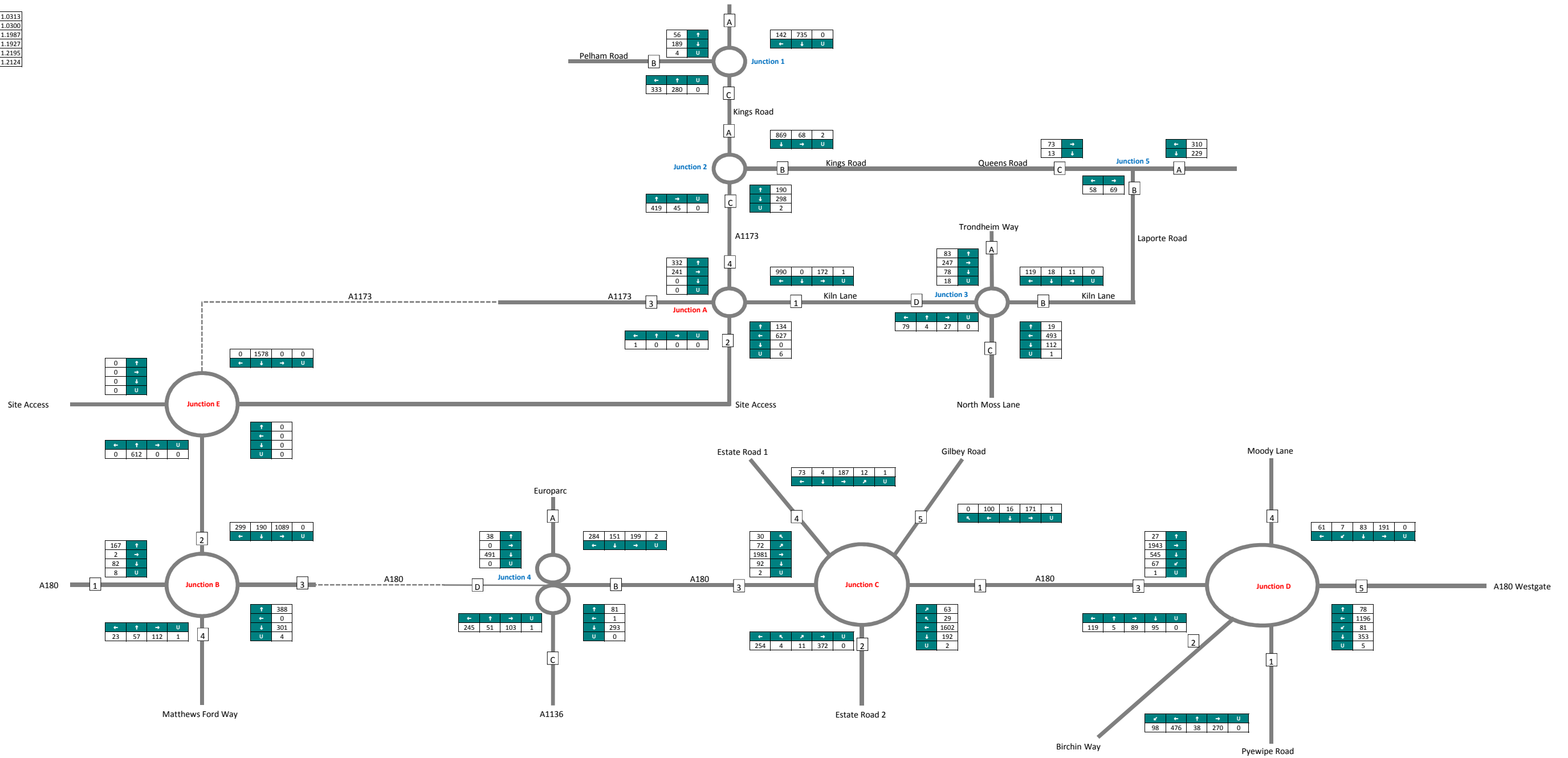
Growth Factors	
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2017-2034	AM 1.2195
	PM 1.2124

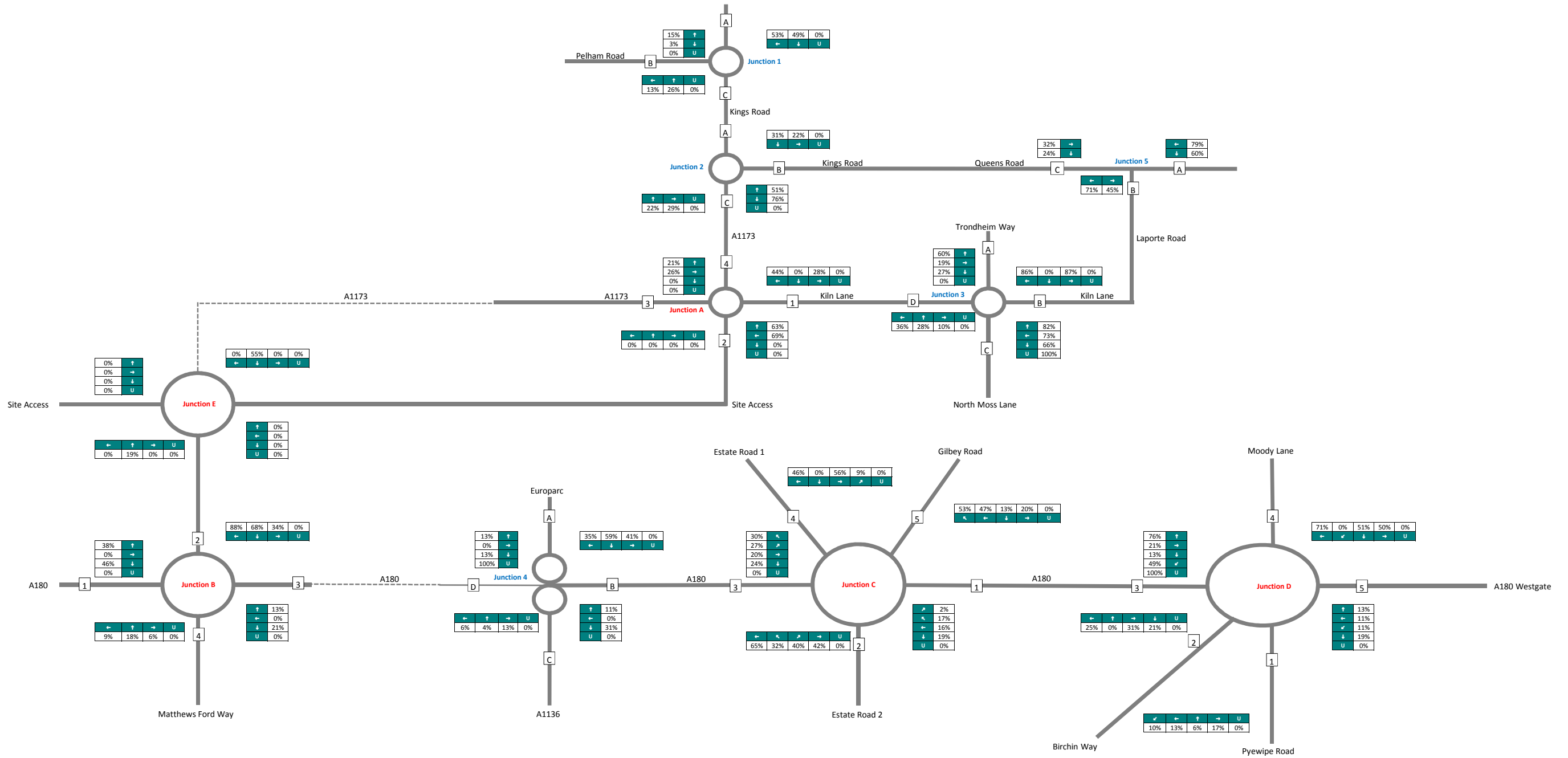


Growth Factors	
2017-2019	AM 1.0313
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2017-2032	AM 1.1987
	PM 1.1927
2017-2034	AM 1.2195
	PM 1.2124

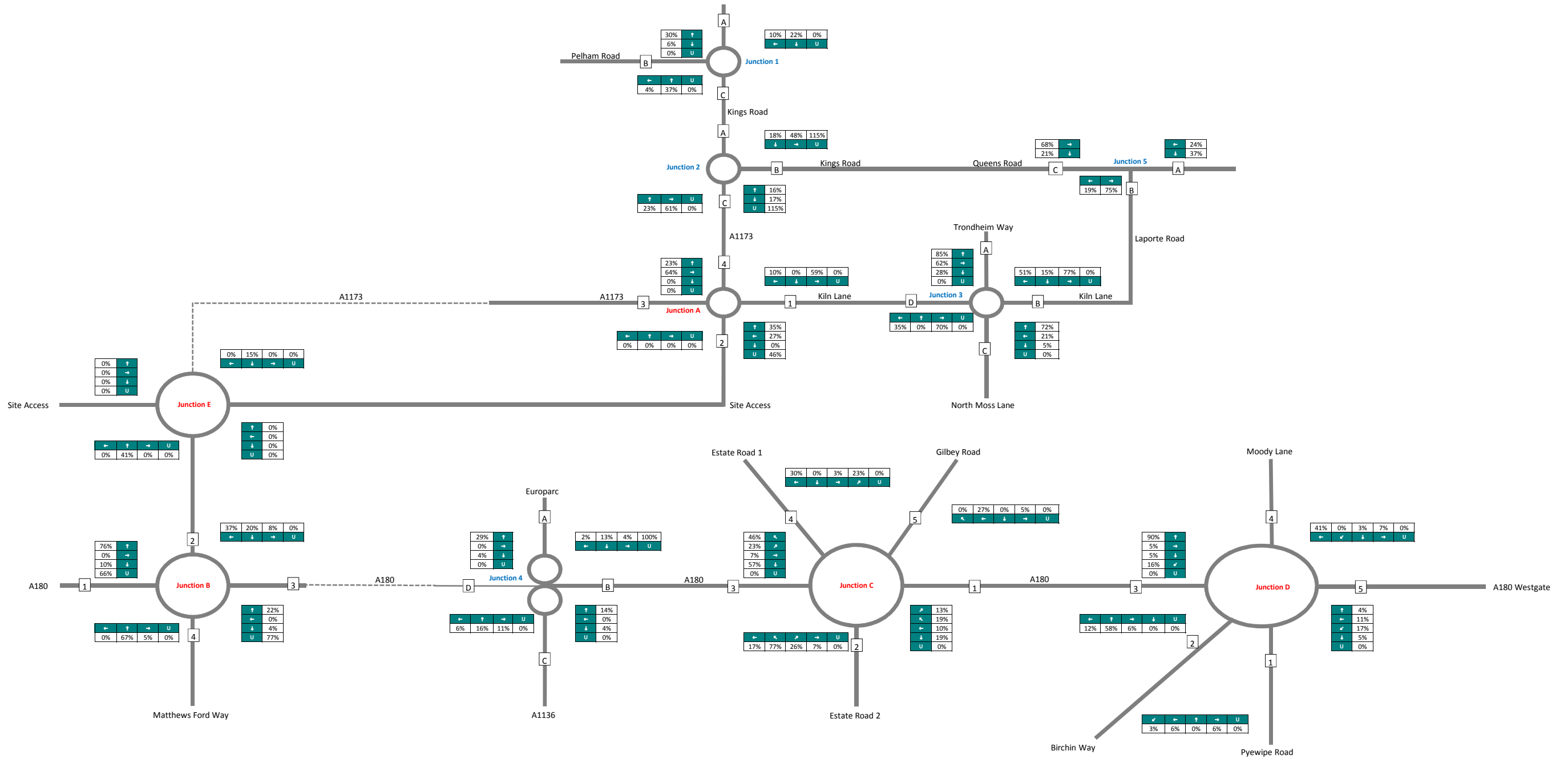


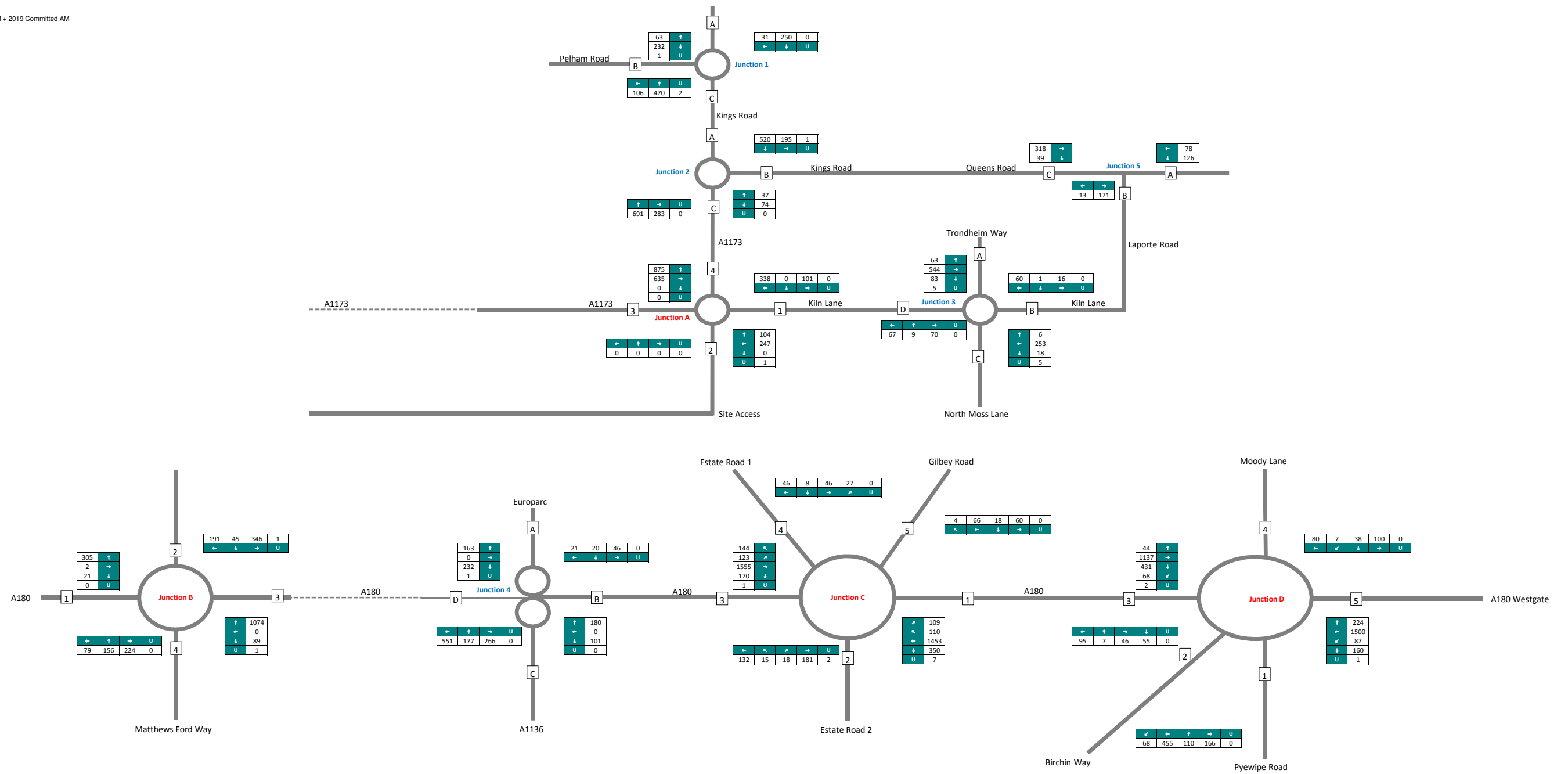
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2017-2032	AM	1.1987
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2017-2034	AM	1.2195
	PM	1.2124

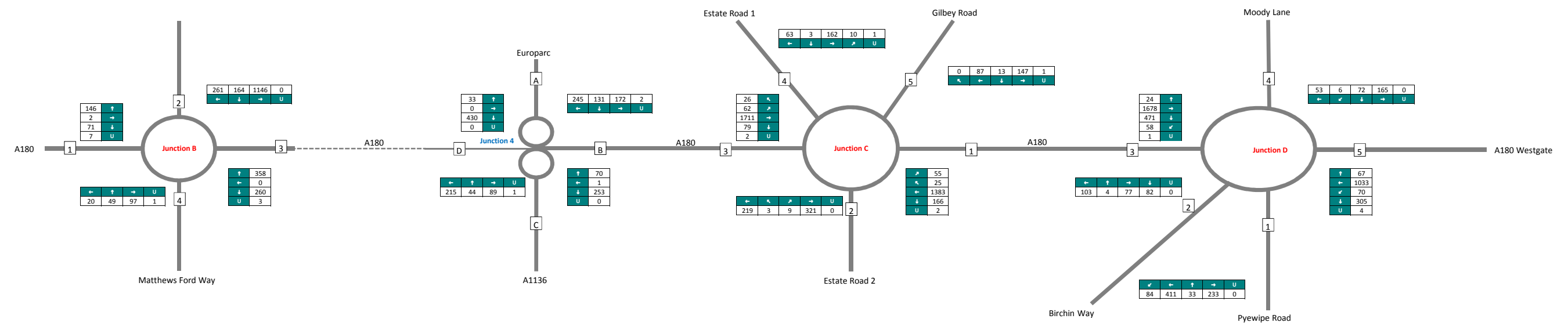
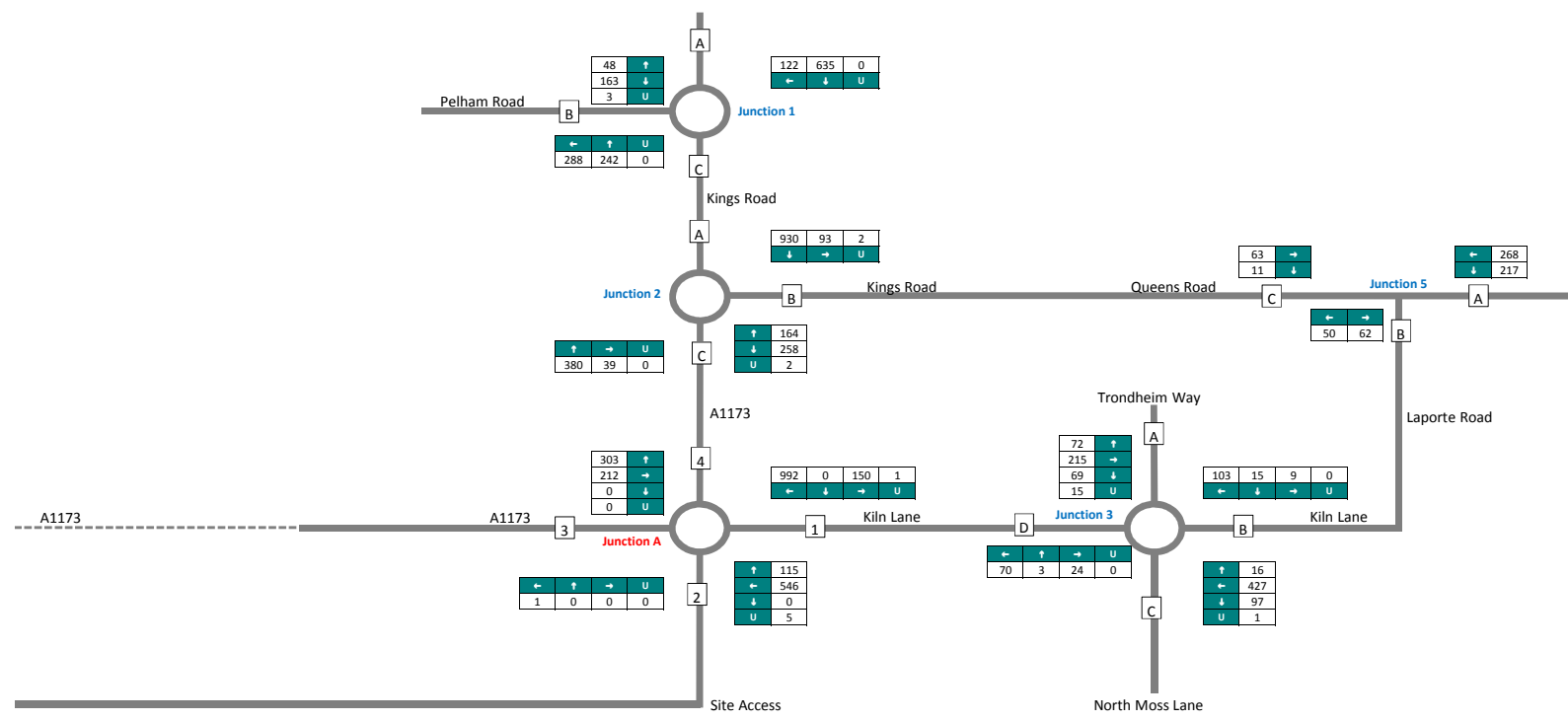


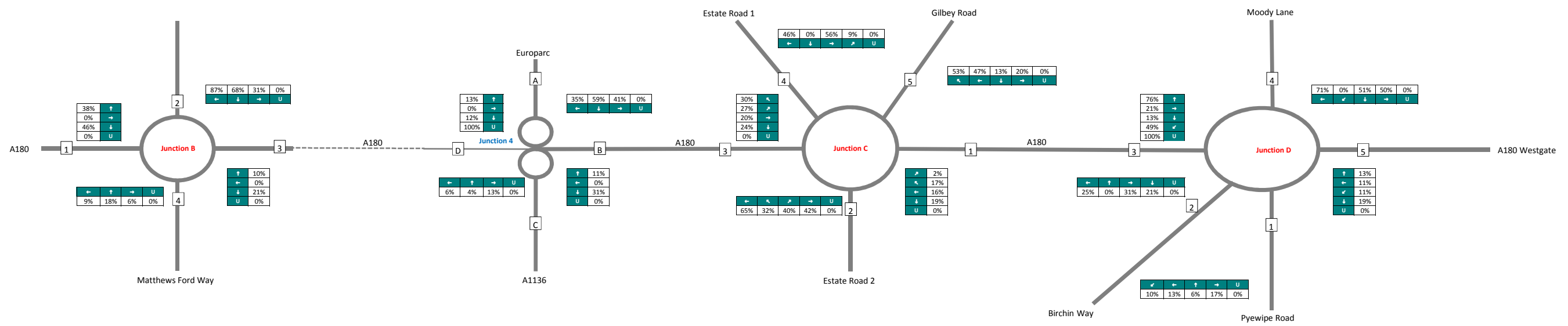
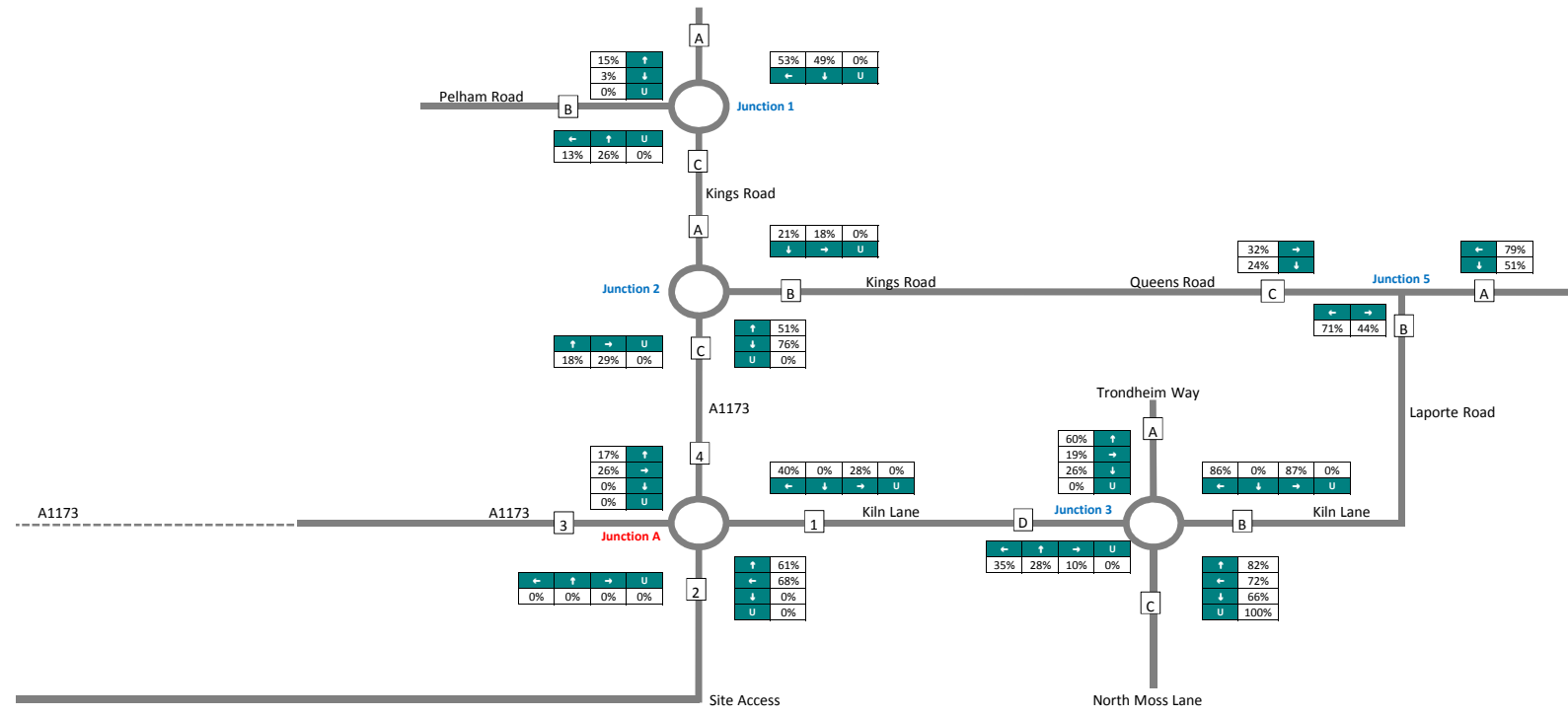


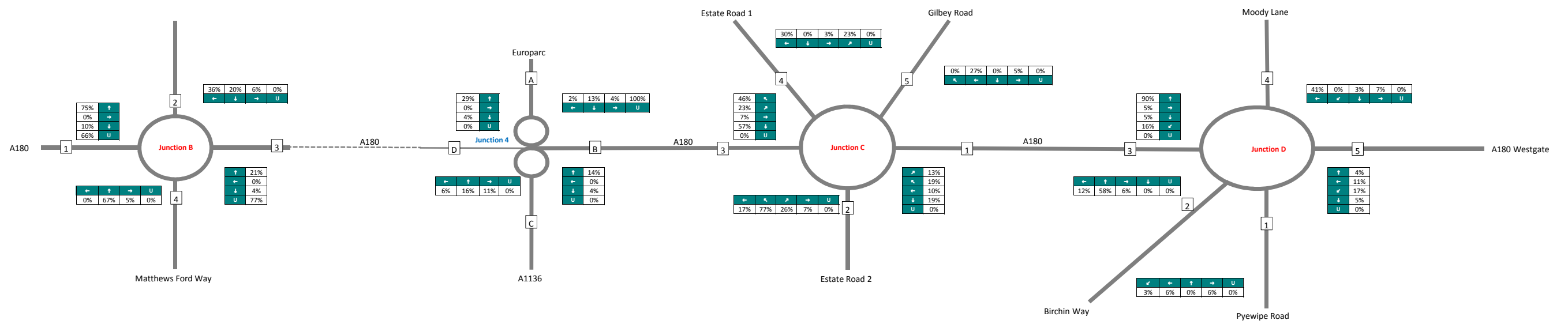
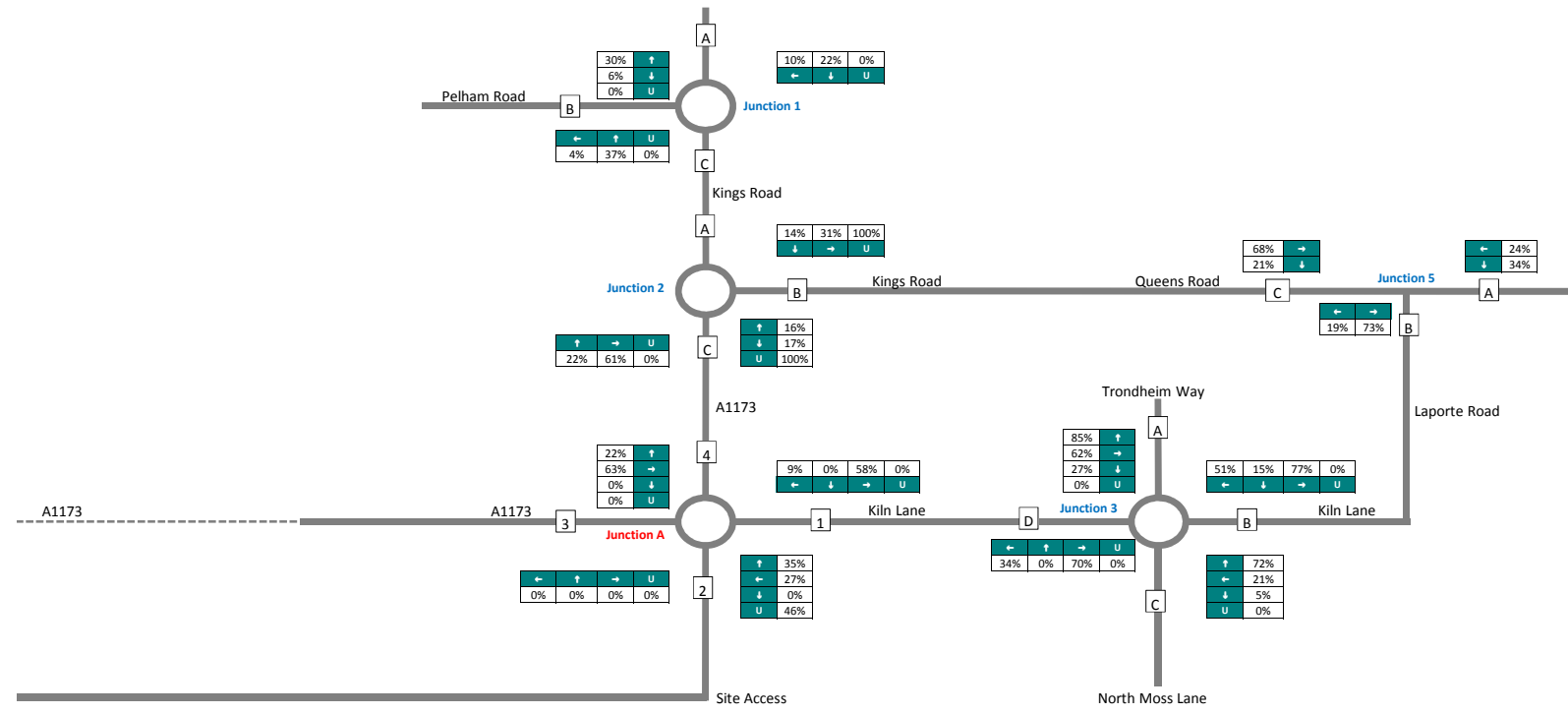


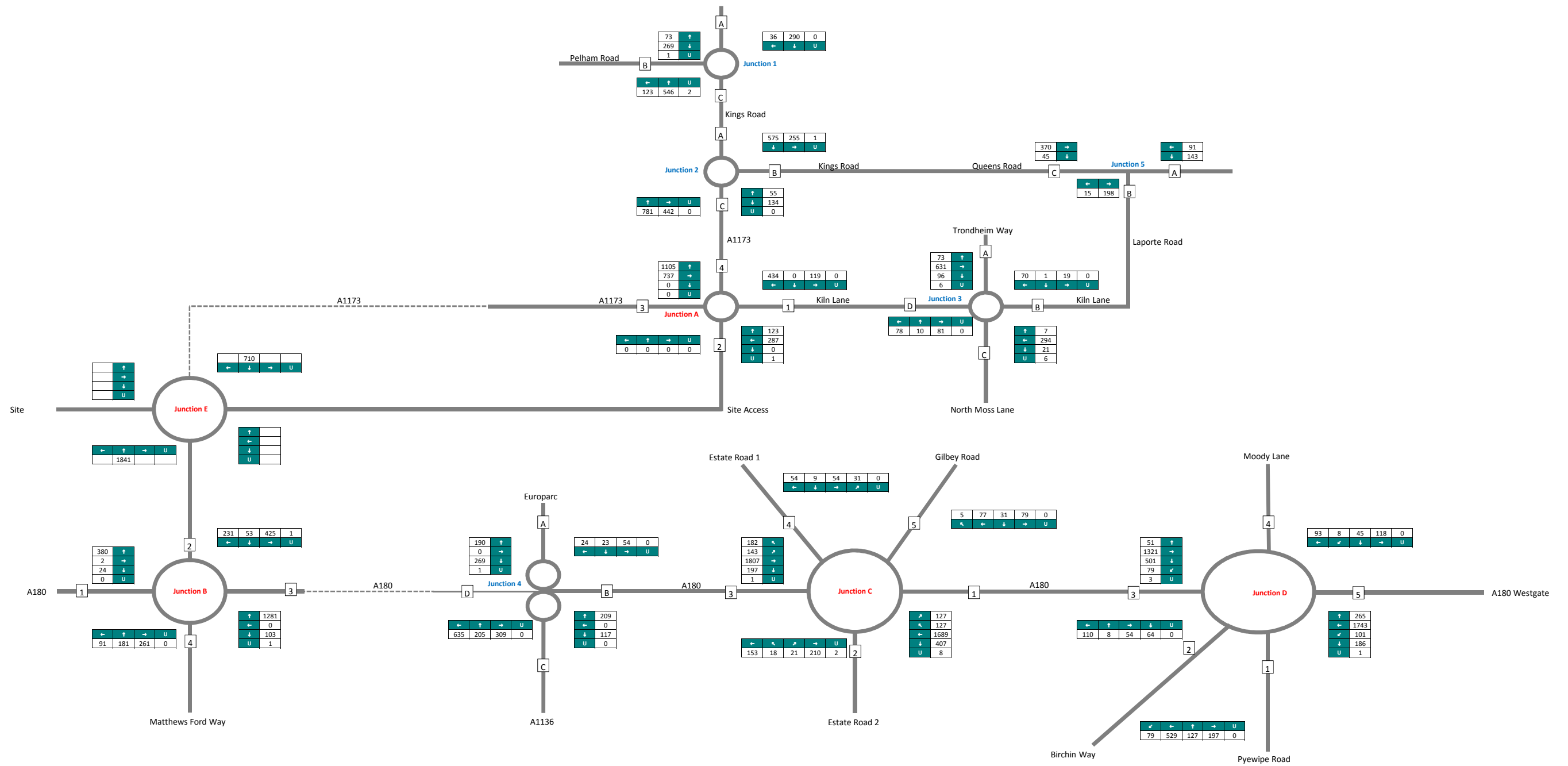


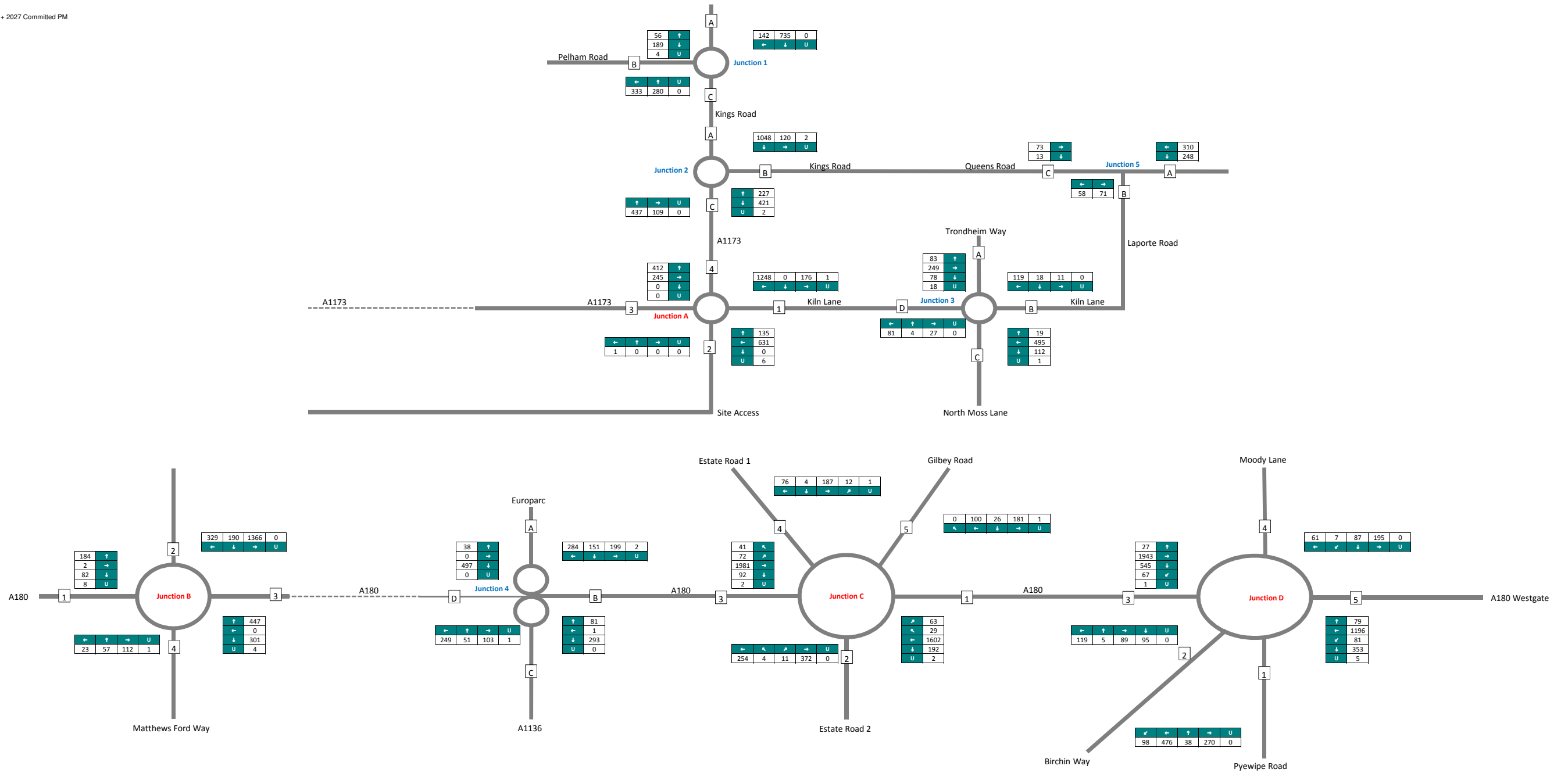






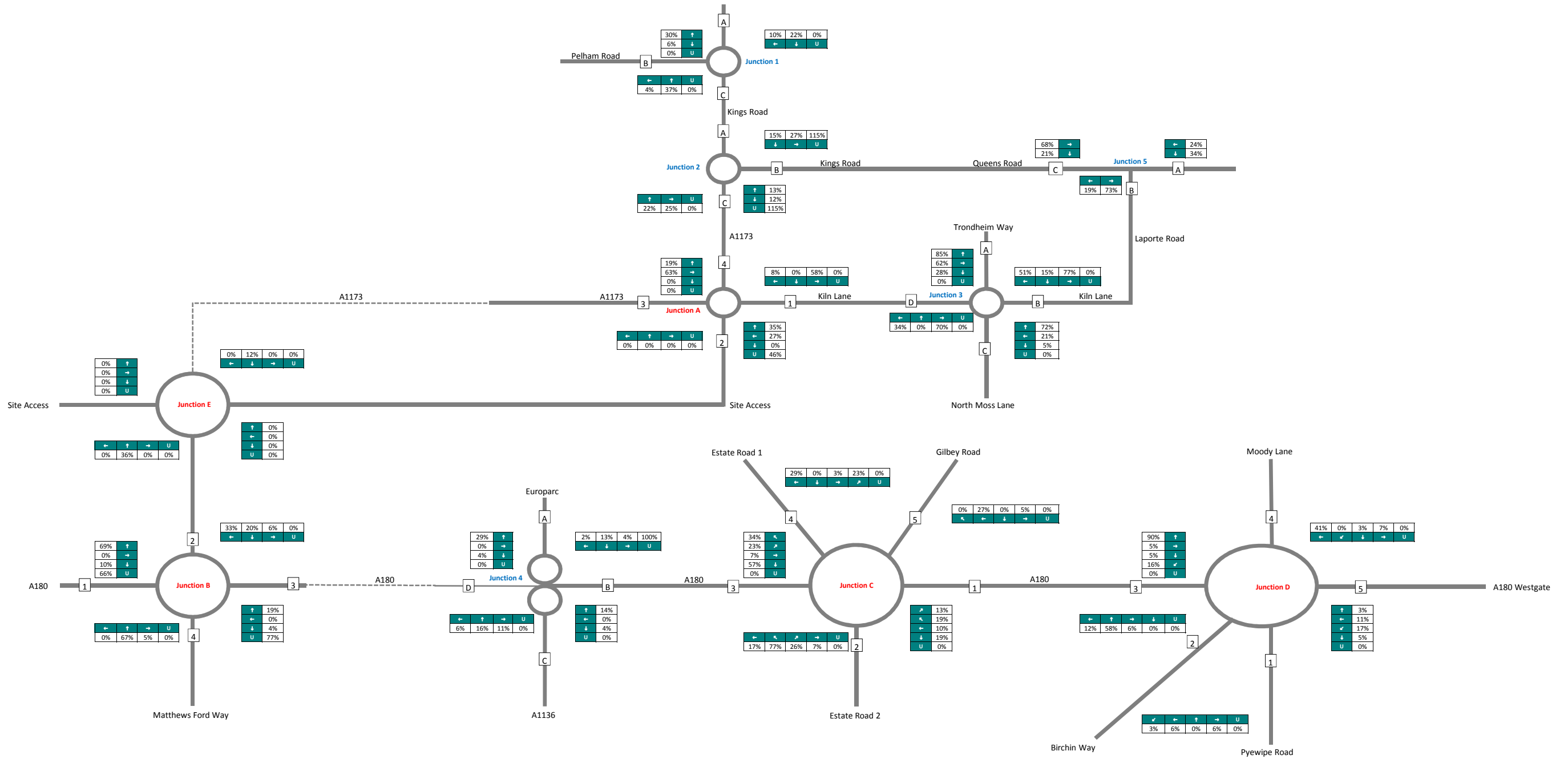


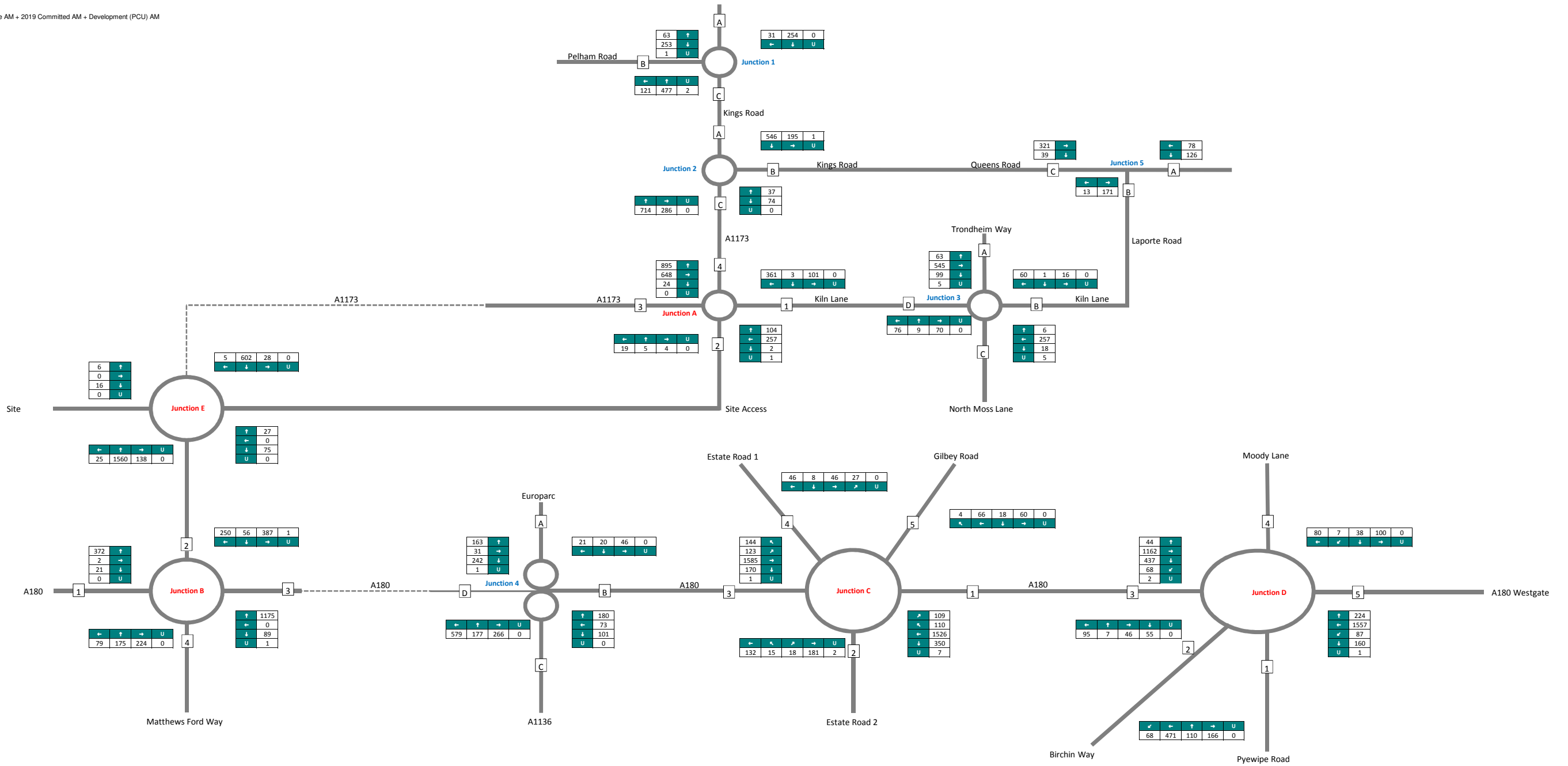


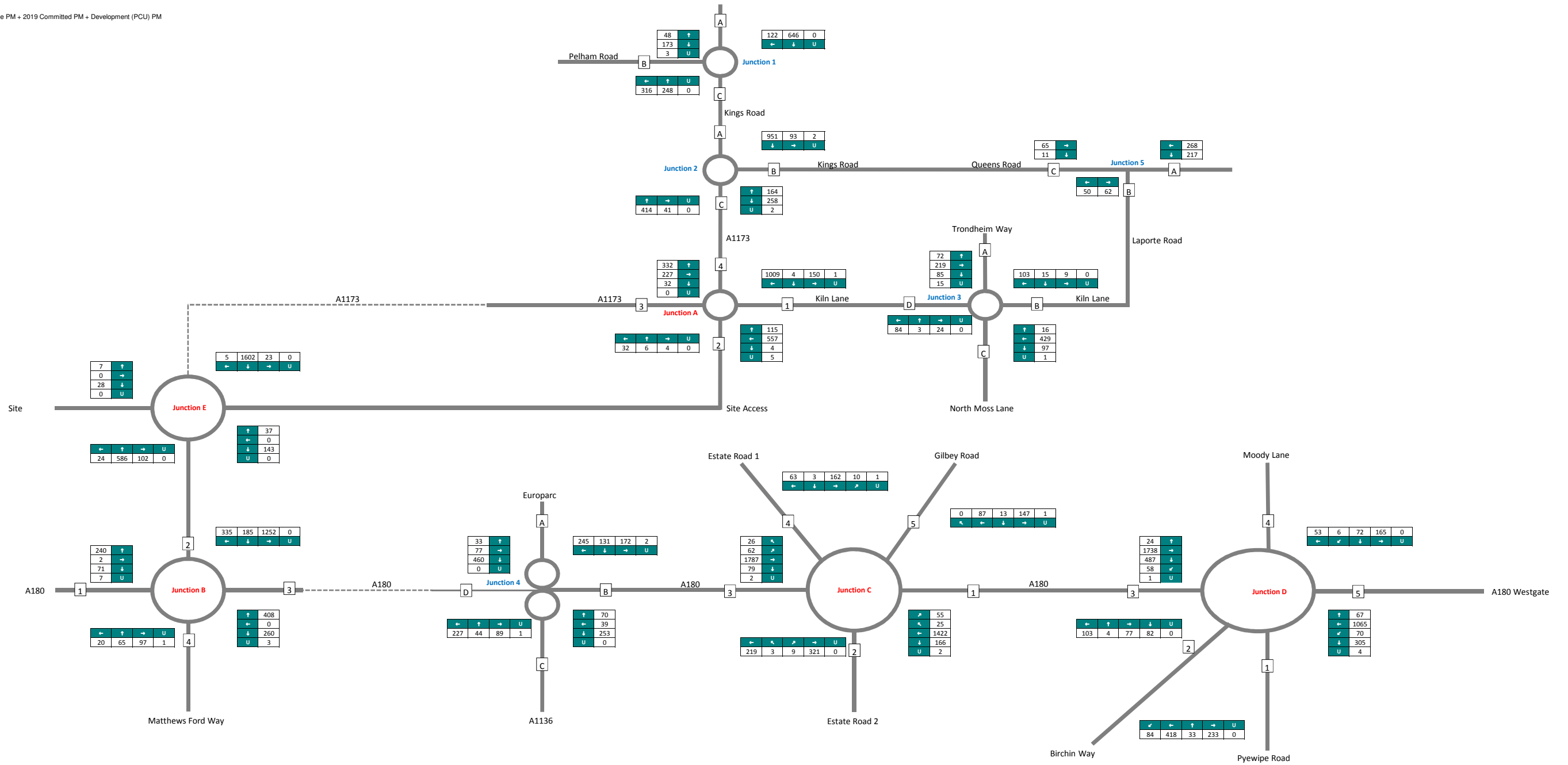


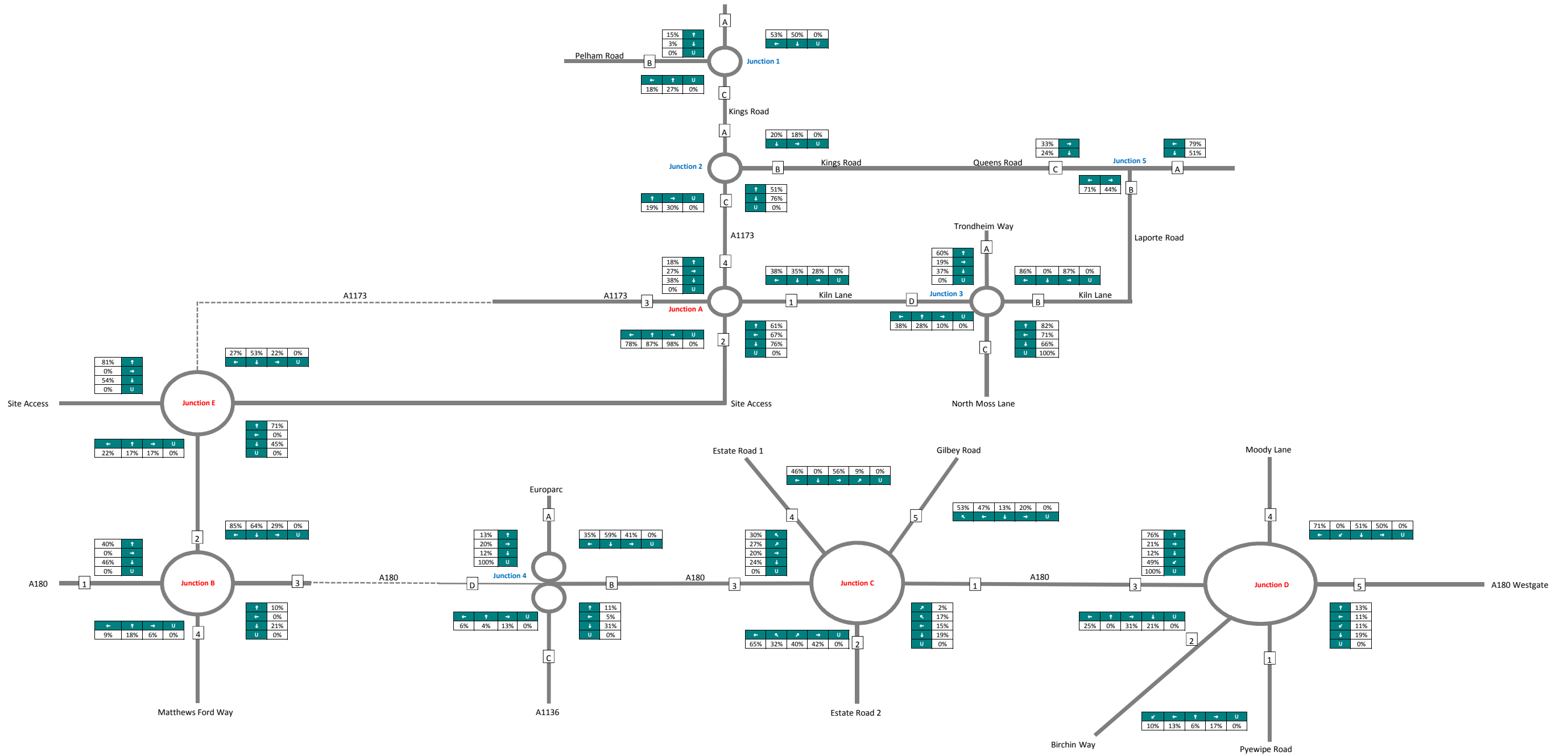


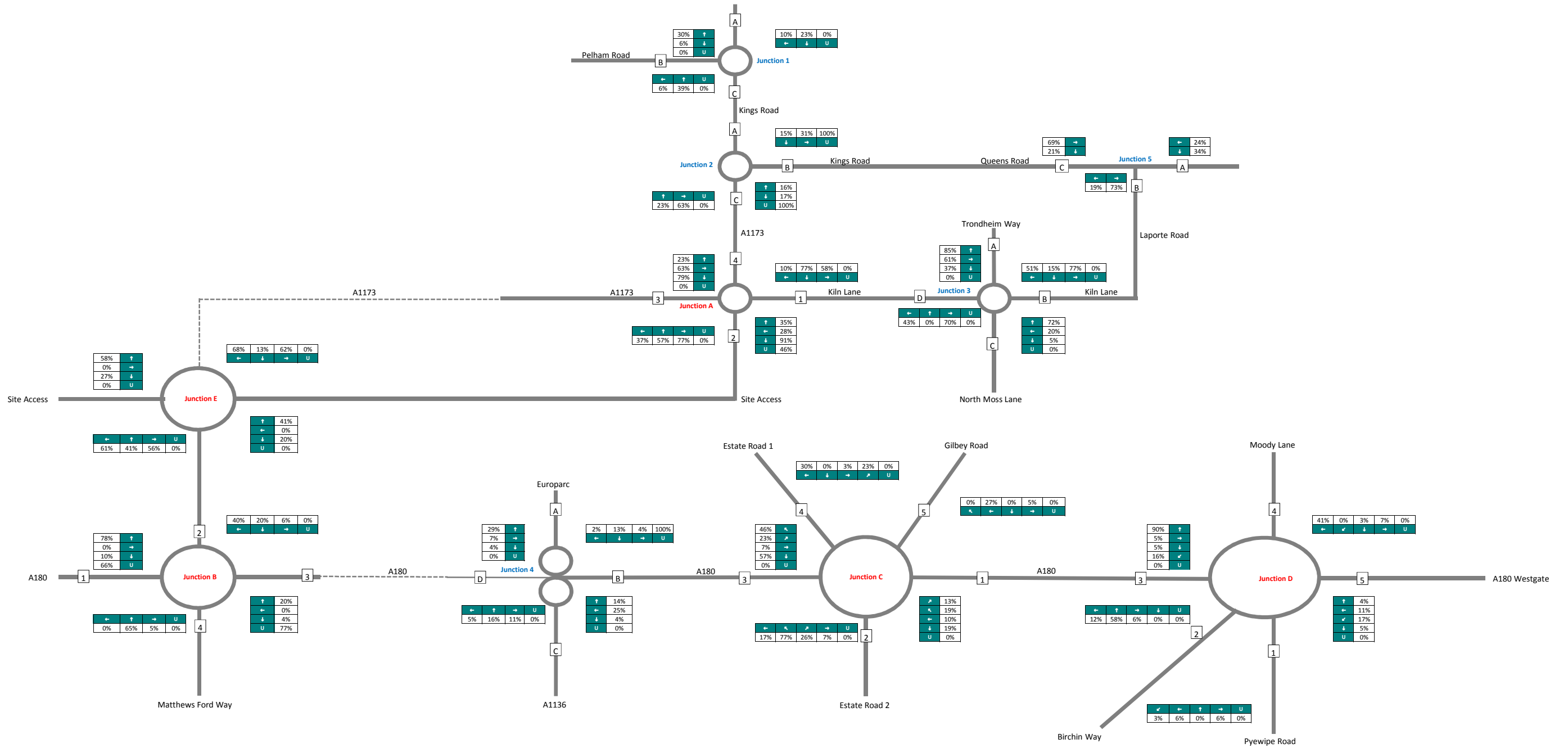


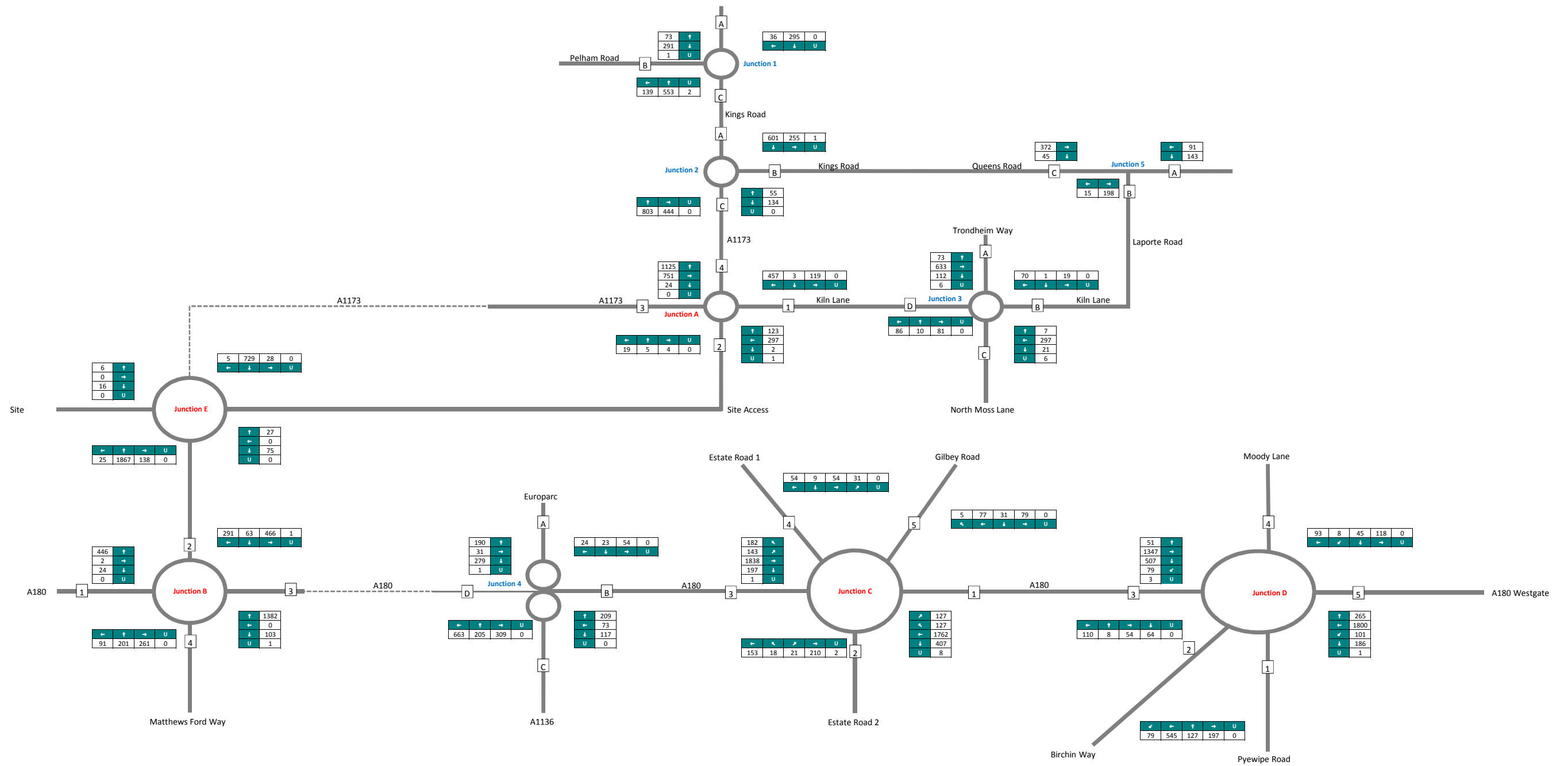


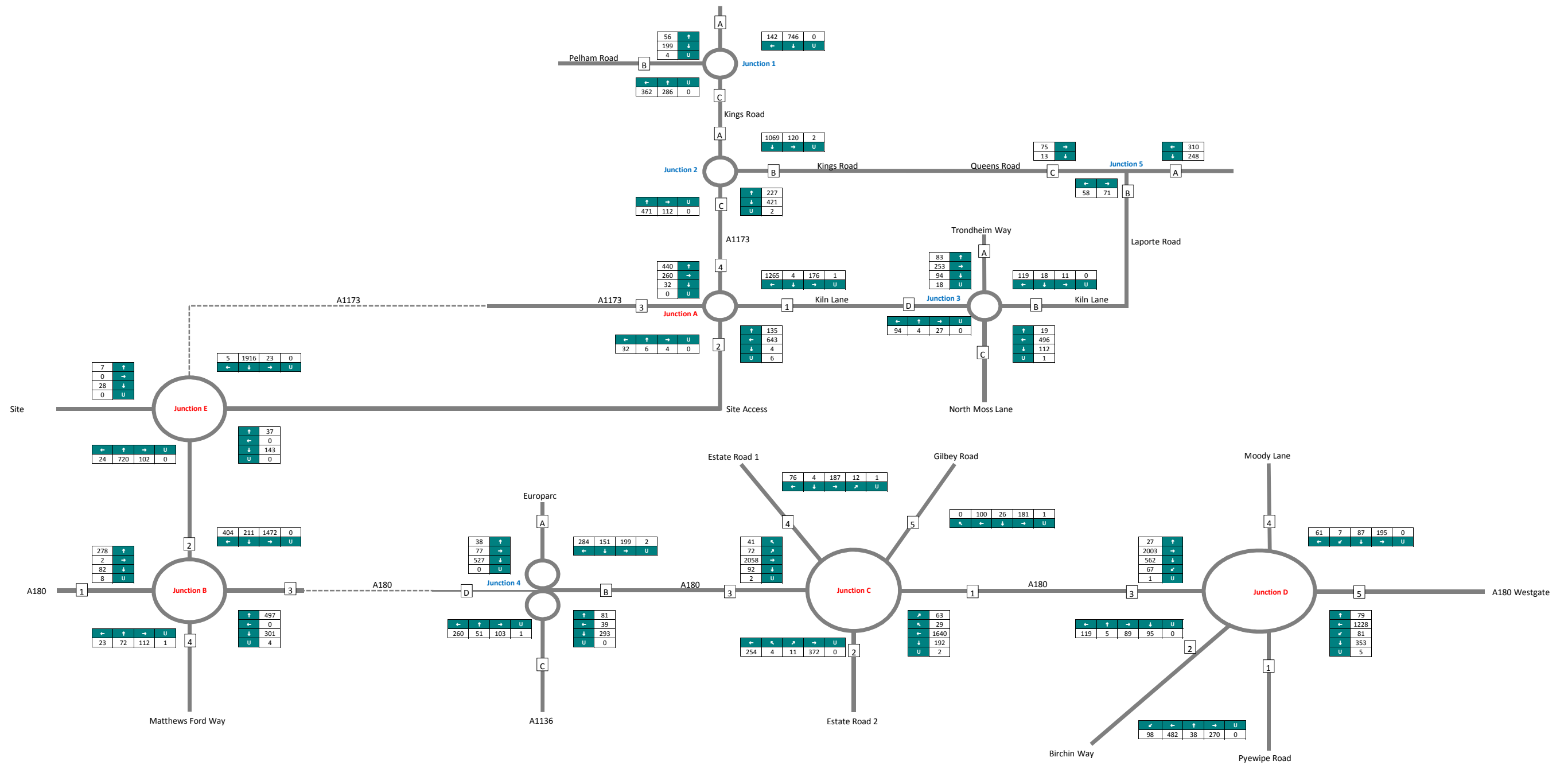


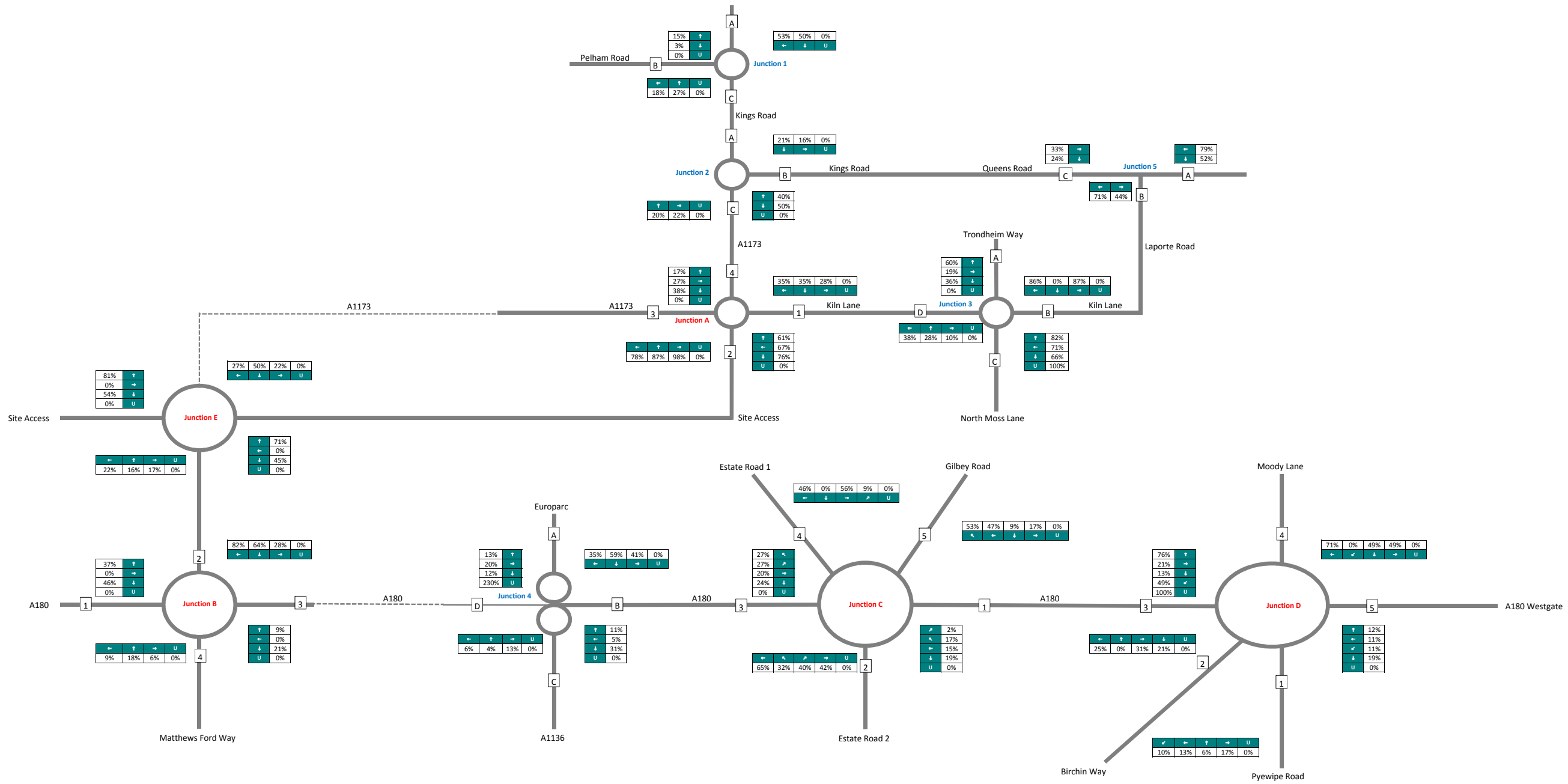




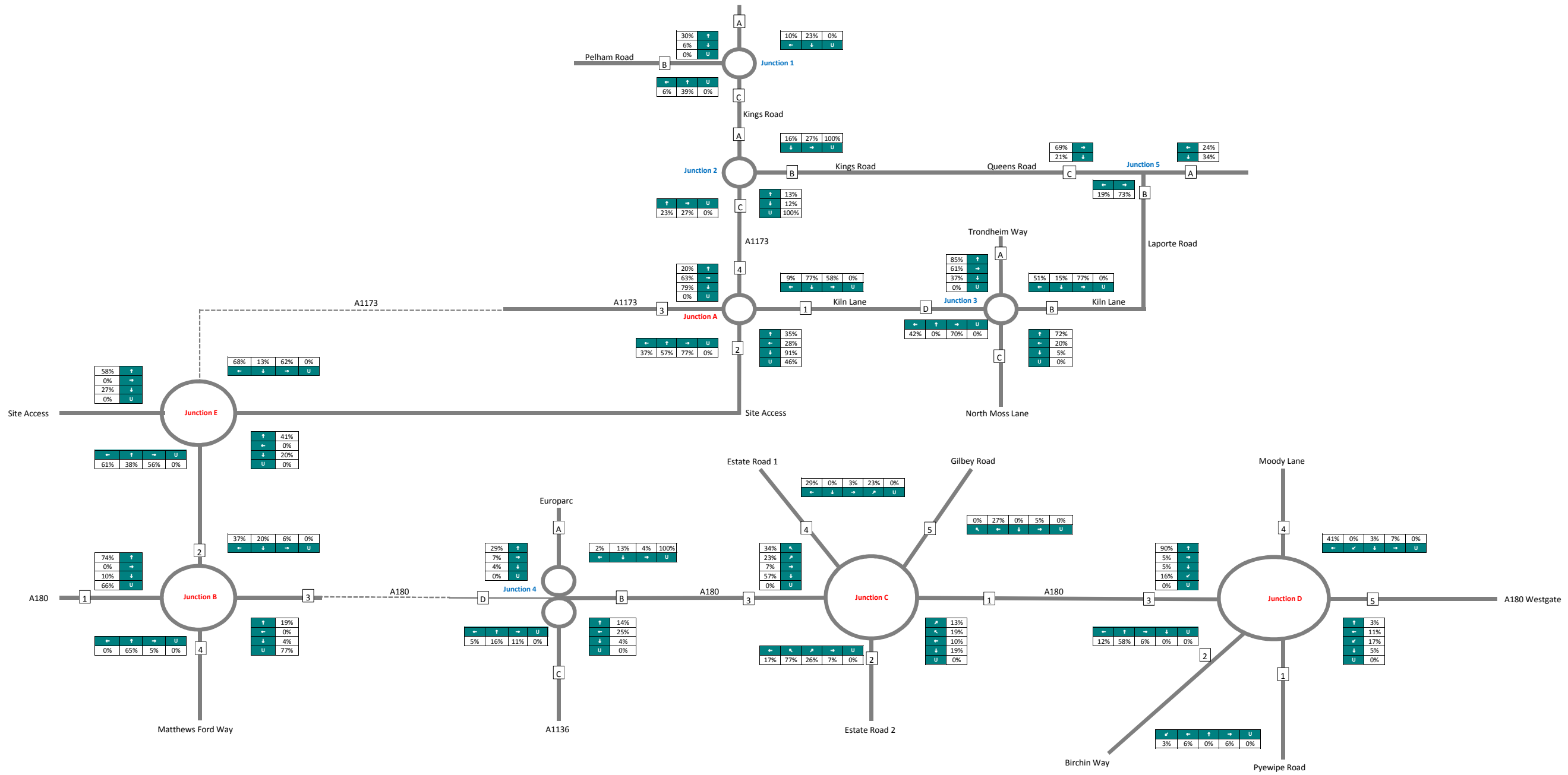






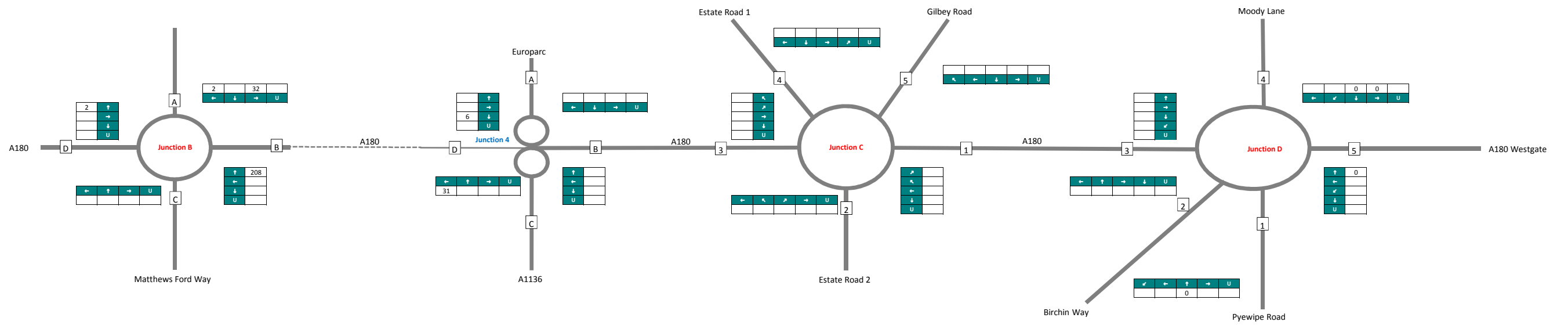
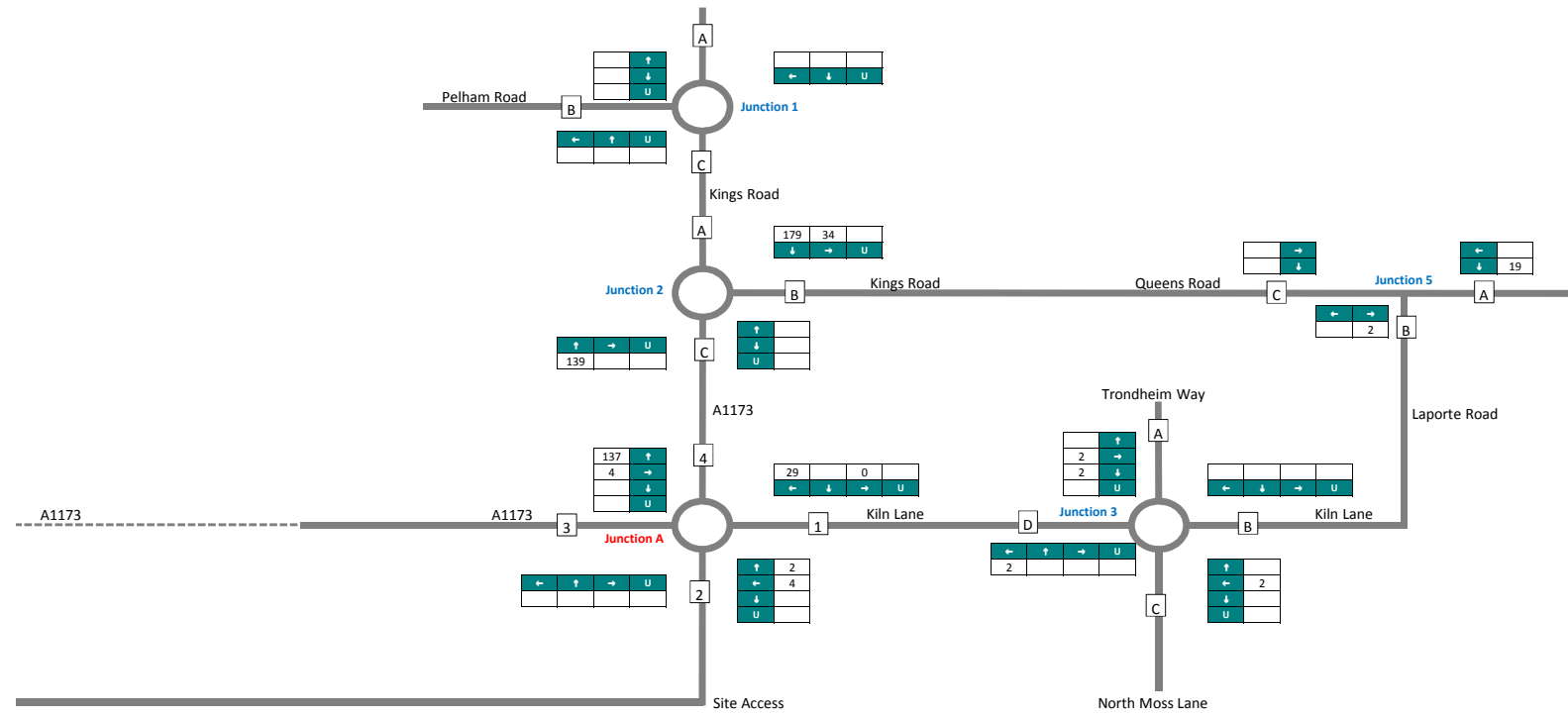


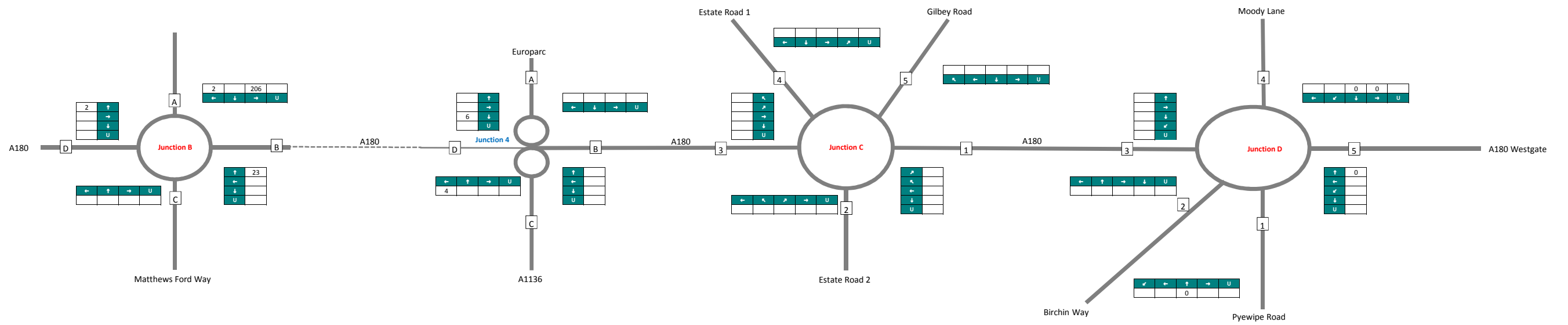
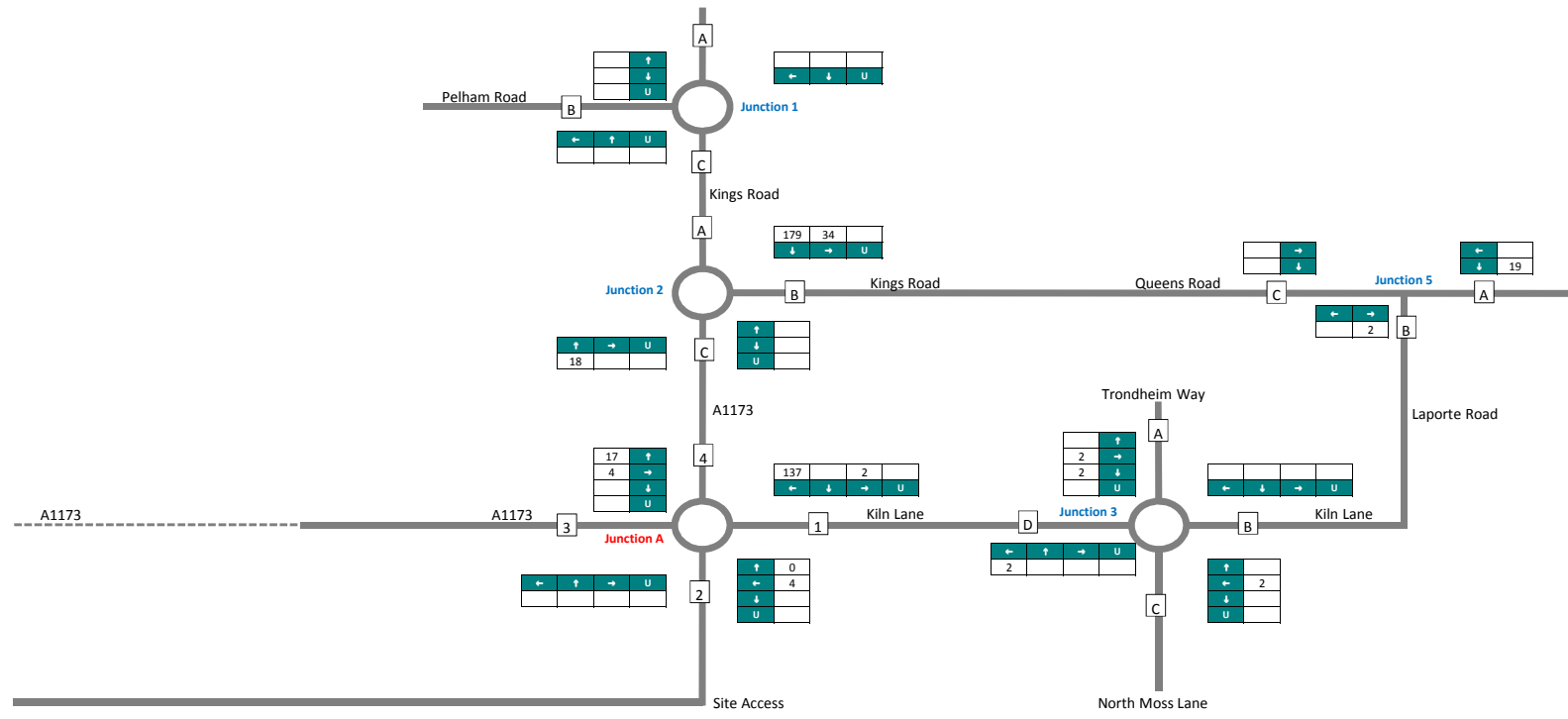


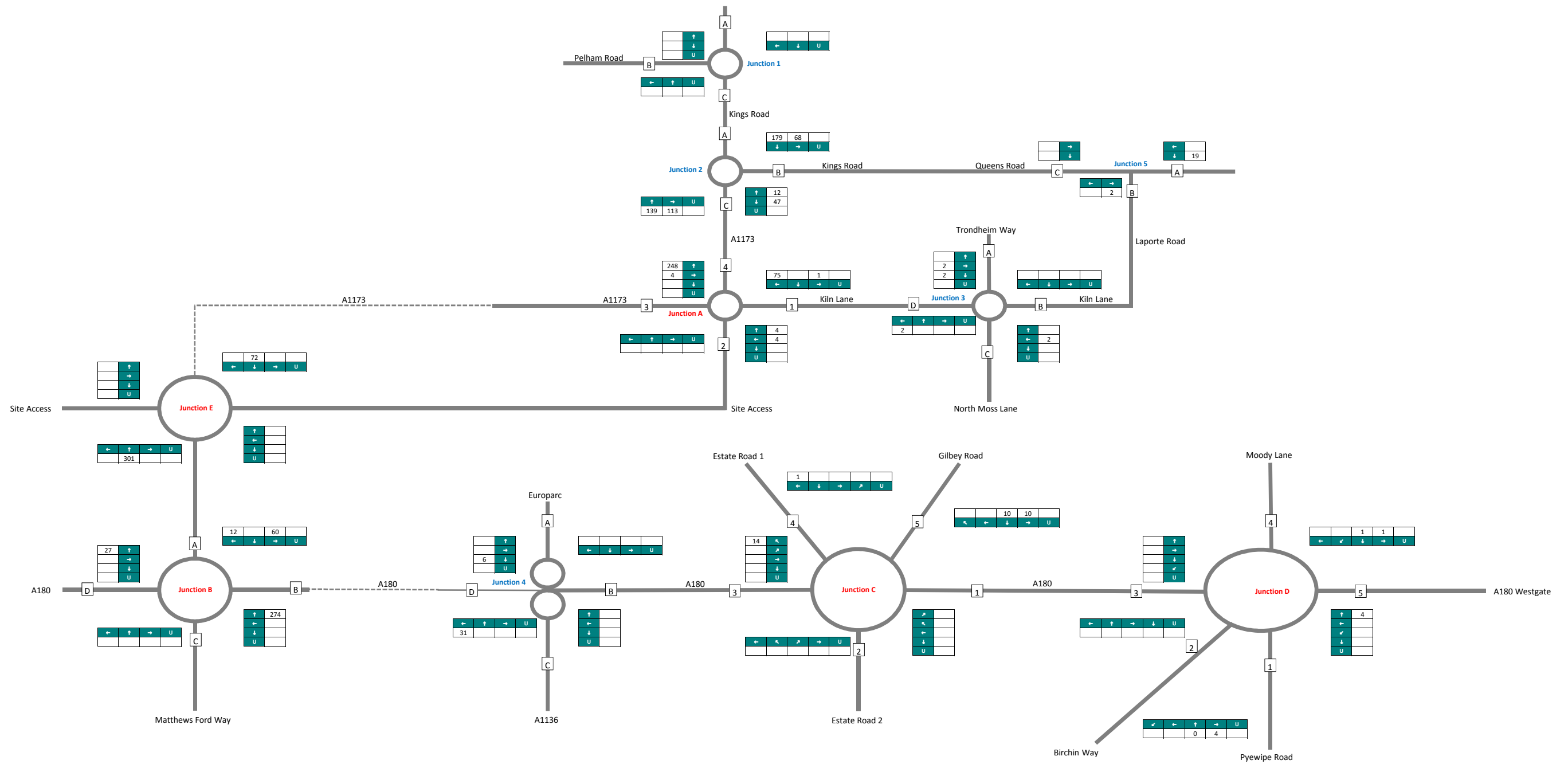


## Appendix F

### Committed Development Flows









## Appendix G

A1173 / Kiln Lane Model  
Outputs

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution**

**Filename:** A - A1173 - Kiln Ln Roundabout\_Existing.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\A1173 - Kiln Lane Roundabout\Arup

**Report generation date:** 30/11/2017 14:05:49

- »Existing - 2017 Base, AM
- »Existing - 2017 Base, PM
- »Existing - 2019 Do Minimum, AM
- »Existing - 2019 Do Minimum, PM
- »Existing - 2019 Do Something, AM
- »Existing - 2019 Do Something, PM
- »Existing - 2032 Do Minimum, AM
- »Existing - 2032 Do Minimum, PM
- »Existing - 2032 Do Something, AM
- »Existing - 2032 Do Something, PM



## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>Existing - 2017 Base</b>								
Arm 1	0.6	5.63	0.28	A	2.5	12.99	0.68	B
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	7.6	19.68	0.88	C	0.6	4.16	0.32	A
Arm 4	0.8	6.54	0.38	A	3.4	11.64	0.76	B
<b>Existing - 2019 Do Minimum</b>								
Arm 1	0.6	6.06	0.28	A	4.5	23.03	0.79	C
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	31.9	69.11	1.00	F	0.7	4.52	0.34	A
Arm 4	1.0	7.49	0.42	A	8.4	25.47	0.89	D
<b>Existing - 2019 Do Something</b>								
Arm 1	0.7	6.34	0.30	A	5.9	30.25	0.84	D
Arm 2	0.1	6.79	0.03	A	0.2	15.20	0.12	C
Arm 3	55.1	107.13	1.04	F	0.9	5.02	0.40	A
Arm 4	1.1	7.94	0.45	A	12.2	36.53	0.93	E
<b>Existing - 2032 Do Minimum</b>								
Arm 1	0.9	6.98	0.35	A	21.6	93.33	1.00	F
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	212.8	462.76	1.23	F	1.0	5.21	0.44	A
Arm 4	1.5	8.81	0.53	A	102.8	226.10	1.13	F
<b>Existing - 2032 Do Something</b>								
Arm 1	0.9	7.33	0.37	A	28.4	117.03	1.02	F
Arm 2	0.1	7.57	0.03	A	0.3	21.01	0.16	C
Arm 3	269.2	573.60	1.27	F	1.3	5.88	0.49	A
Arm 4	1.6	9.41	0.56	A	132.1	319.32	1.18	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

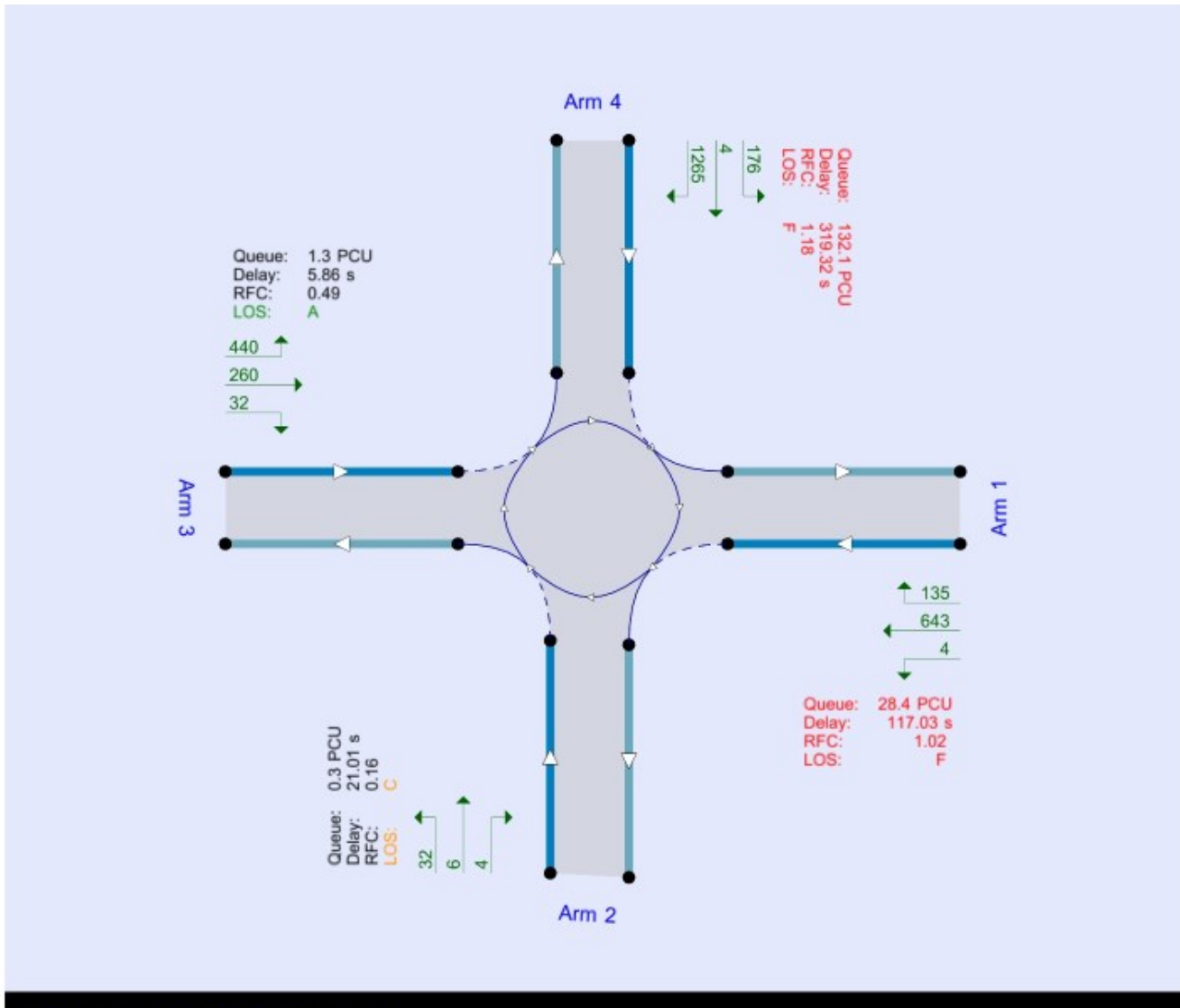
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	24/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

**Analysis Set Details**

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	100.000	100.000

---

# Existing - 2017 Base, 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	Standard Roundabout	1,2,3,4	14.85	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Kiln Lane	
2	Site	
3	A1173 (W)	
4	A1173 (N)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.49	8.20	6.6	28.5	49.2	13.5	
2	3.52	6.09	5.7	16.9	49.2	11.9	
3	3.75	7.04	9.9	26.2	49.2	12.8	
4	3.40	7.95	6.8	20.8	49.2	14.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.614	1599
2	0.582	1460
3	0.639	1735
4	0.601	1553

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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	338	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1327	100.000
4		ONE HOUR	✓	398	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To				
	1	2	3	4	
1	1	0	236	99	
2	0	0	0	0	
3	612	0	0	715	
4	98	0	300	0	

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To				
	1	2	3	4	
1	0	0	49	42	
2	0	0	0	0	
3	13	0	0	10	
4	15	0	25	0	

### 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	0.26	5.63	0.8	A	308	482
2	0.00	0.00	0.0	A	0	0
3	0.88	19.68	7.8	C	1218	1827
4	0.38	6.54	0.8	A	385	548

#### Main Results for each time segment

##### 07:15 - 07:30

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	253	63	225	1481	0.173	252	532	0.0	0.3	4.774	A
2	0	0	476	1183	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1687	0.592	992	401	0.0	1.6	5.895	A
4	300	75	458	1278	0.234	298	609	0.0	0.4	4.732	A

**07:30 - 07:45**

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	302	76	269	1434	0.211	302	637	0.3	0.4	5.105	A
2	0	0	571	1128	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1677	0.711	1189	481	1.6	2.7	8.375	A
4	358	89	549	1224	0.292	357	729	0.4	0.5	5.358	A

**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	370	92	330	1397	0.265	369	774	0.4	0.6	5.624	A
2	0	0	699	1053	0.000	0	0	0.0	0.0	0.000	A
3	1481	385	110	1664	0.878	1444	589	2.7	7.1	17.444	C
4	438	110	667	1153	0.380	437	887	0.5	0.8	6.481	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	370	92	330	1397	0.265	370	782	0.6	0.6	5.630	A
2	0	0	700	1053	0.000	0	0	0.0	0.0	0.000	A
3	1481	385	110	1664	0.878	1459	590	7.1	7.6	19.680	C
4	438	110	674	1149	0.382	438	895	0.8	0.8	6.538	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	302	76	270	1433	0.211	303	648	0.6	0.4	5.115	A
2	0	0	573	1127	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1677	0.711	1212	483	7.6	2.9	9.212	A
4	358	89	560	1217	0.294	359	742	0.8	0.5	5.417	A

**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	253	63	226	1460	0.173	253	538	0.4	0.3	4.792	A
2	0	0	480	1181	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1687	0.592	1004	404	2.9	1.7	6.096	A
4	300	75	464	1275	0.235	300	616	0.5	0.4	4.770	A

# Existing - 2017 Base, 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	Standard Roundabout	1,2,3,4	10.34	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)	Run automatically
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	643	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	480	100.000
4		ONE HOUR	✓	975	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	526	112
	2	0	0	1	0
	3	202	0	0	278
	4	144	0	830	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	33	0	14	19
	2	0	0	0	0
	3	43	0	0	12
	4	39	0	5	0

## 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	0.68	12.99	2.5	B	590	885
2	0.00	0.00	0.0	A	0	0
3	0.32	4.16	0.6	A	440	661
4	0.76	11.64	3.4	B	895	1342

### Main Results for each time segment

#### 16:15 - 16:30

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	484	121	622	1218	0.398	481	263	0.0	0.8	5.812	A
2	0	0	1103	818	0.000	0	0	0.0	0.0	0.000	A
3	361	90	88	1678	0.215	360	1015	0.0	0.4	3.539	A
4	734	184	155	1460	0.503	730	293	0.0	1.1	5.453	A

#### 16:30 - 16:45

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	578	145	745	1142	0.506	576	315	0.8	1.2	7.576	A
2	0	0	1321	691	0.000	0	0	0.0	0.0	0.000	A
3	432	108	106	1667	0.259	431	1216	0.4	0.5	3.778	A
4	877	219	186	1442	0.608	874	351	1.1	1.7	7.030	A

#### 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	708	177	909	1041	0.680	703	385	1.2	2.4	12.529	B
2	0	0	1612	522	0.000	0	0	0.0	0.0	0.000	A
3	528	132	129	1652	0.320	528	1483	0.5	0.6	4.151	A
4	1073	268	228	1417	0.758	1067	429	1.7	3.3	11.250	B

#### 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	708	177	915	1038	0.682	708	386	2.4	2.5	12.988	B
2	0	0	1622	516	0.000	0	0	0.0	0.0	0.000	A
3	528	132	130	1652	0.320	528	1492	0.6	0.6	4.156	A
4	1073	268	228	1417	0.758	1073	430	3.3	3.4	11.640	B

#### 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	578	145	753	1138	0.508	583	317	2.5	1.3	7.823	A
2	0	0	1336	693	0.000	0	0	0.0	0.0	0.000	A
3	432	108	107	1666	0.259	432	1229	0.6	0.5	3.784	A
4	877	219	186	1441	0.608	883	353	3.4	1.8	7.256	A



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	484	121	628	1214	0.399	486	265	1.3	0.8	5.920	A
2	0	0	1114	812	0.000	0	0	0.0	0.0	0.000	A
3	361	90	89	1678	0.215	362	1024	0.5	0.4	3.548	A
4	734	184	156	1460	0.503	737	295	1.8	1.1	5.561	A

# Existing - 2019 Do Minimum, 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	Standard Roundabout	1,2,3,4	47.71	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)	Run automatically
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	352	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1510	100.000
4		ONE HOUR	✓	439	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	247	104
	2	0	0	0	0
	3	635	0	0	875
	4	101	0	338	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	17
	4	28	0	40	0

## 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	0.28	6.06	0.6	A	323	485
2	0.00	0.00	0.0	A	0	0
3	1.00	69.11	31.9	F	1386	2078
4	0.42	7.49	1.0	A	403	604

### Main Results for each time segment

#### 07:15 - 07:30

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	265	86	253	1444	0.184	264	550	0.0	0.4	5.042	A
2	0	0	517	1159	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1685	0.675	1127	438	0.0	2.4	7.663	A
4	331	83	475	1268	0.261	329	731	0.0	0.5	5.239	A

#### 07:30 - 07:45

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	316	79	303	1413	0.224	316	658	0.4	0.5	5.432	A
2	0	0	619	1100	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	94	1675	0.811	1348	525	2.4	4.8	12.925	B
4	395	99	568	1212	0.326	394	874	0.5	0.7	6.022	A

#### 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	388	97	371	1372	0.283	387	781	0.5	0.6	6.048	A
2	0	0	758	1019	0.000	0	0	0.0	0.0	0.000	A
3	1663	416	115	1661	1.001	1591	643	4.8	22.6	41.689	E
4	483	121	670	1151	0.420	482	1036	0.7	1.0	7.360	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	388	97	372	1371	0.283	388	796	0.6	0.6	6.059	A
2	0	0	760	1018	0.000	0	0	0.0	0.0	0.000	A
3	1663	416	116	1661	1.001	1625	644	22.6	31.9	69.114	F
4	483	121	685	1142	0.423	483	1056	1.0	1.0	7.486	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	316	79	305	1412	0.224	317	707	0.6	0.5	5.446	A
2	0	0	622	1098	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	95	1674	0.811	1462	527	31.9	5.7	27.915	D
4	395	99	616	1183	0.333	396	941	1.0	0.7	6.272	A

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	265	66	255	1443	0.184	265	560	0.5	0.4	5.065	A
2	0	0	521	1157	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1684	0.675	1149	441	5.7	2.6	8.300	A
4	331	83	484	1263	0.262	331	744	0.7	0.5	5.301	A

# Existing - 2019 Do Minimum, 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	Standard Roundabout	1,2,3,4	20.13	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)	Run automatically
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	666	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	515	100.000
4		ONE HOUR	✓	1143	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	546	115
	2	0	0	1	0
	3	212	0	0	303
	4	150	0	992	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	22
	4	58	0	9	0

## 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	0.79	23.03	4.5	C	811	917
2	0.00	0.00	0.0	A	0	0
3	0.34	4.52	0.7	A	473	709
4	0.89	25.47	8.4	D	1049	1573

### Main Results for each time segment

#### 16:15 - 16:30

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	501	125	742	1144	0.438	497	275	0.0	1.0	7.109	A
2	0	0	1239	739	0.000	0	0	0.0	0.0	0.000	A
3	388	97	90	1677	0.231	388	1149	0.0	0.4	3.790	A
4	861	215	163	1456	0.591	854	314	0.0	1.6	6.728	A

#### 16:30 - 16:45

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	599	150	889	1054	0.568	596	329	1.0	1.6	10.037	B
2	0	0	1485	598	0.000	0	0	0.0	0.0	0.000	A
3	463	116	108	1666	0.278	463	1377	0.4	0.5	4.072	A
4	1028	257	195	1436	0.715	1023	376	1.6	2.8	9.782	A

#### 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	733	183	1076	939	0.781	723	401	1.6	4.2	20.536	C
2	0	0	1799	413	0.000	0	0	0.0	0.0	0.000	A
3	567	142	131	1651	0.343	568	1668	0.5	0.7	4.515	A
4	1258	315	239	1410	0.892	1239	459	2.8	7.7	21.695	C

#### 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	733	183	1091	930	0.788	732	404	4.2	4.5	23.026	C
2	0	0	1823	399	0.000	0	0	0.0	0.0	0.000	A
3	567	142	133	1650	0.344	567	1690	0.7	0.7	4.524	A
4	1258	315	239	1410	0.893	1256	461	7.7	8.4	25.473	D

#### 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	599	150	912	1040	0.576	609	333	4.5	1.8	10.995	B
2	0	0	1521	575	0.000	0	0	0.0	0.0	0.000	A
3	463	116	111	1684	0.278	464	1410	0.7	0.5	4.085	A
4	1028	257	195	1436	0.716	1049	379	8.4	3.0	11.125	B

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	501	125	752	1138	0.441	504	277	1.8	1.0	7.333	A
2	0	0	1257	729	0.000	0	0	0.0	0.0	0.000	A
3	388	97	92	1676	0.231	388	1165	0.5	0.4	3.807	A
4	861	215	164	1455	0.591	866	316	3.0	1.7	7.000	A

# Existing - 2019 Do Something, 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	Standard Roundabout	1,2,3,4	71.81	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)	Run automatically
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	364	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1567	100.000
4		ONE HOUR	✓	465	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	257	104
	2	4	0	19	5
	3	648	24	0	895
	4	101	3	361	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	76	67	61
	2	98	0	78	87
	3	27	38	0	18
	4	28	35	38	0



## 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	0.30	6.34	0.7	A	334	501
2	0.03	6.79	0.1	A	26	39
3	1.04	107.13	55.1	F	1438	2157
4	0.45	7.94	1.1	A	427	640

### Main Results for each time segment

#### 07:15 - 07:30

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	274	69	290	1421	0.193	272	563	0.0	0.4	5.165	A
2	21	5	541	1145	0.018	21	22	0.0	0.0	5.834	A
3	1180	295	85	1680	0.702	1169	477	0.0	2.8	8.398	A
4	350	88	505	1250	0.280	348	749	0.0	0.5	5.402	A

#### 07:30 - 07:45

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	327	82	348	1386	0.236	327	672	0.4	0.5	5.605	A
2	25	6	649	1082	0.023	25	26	0.0	0.0	6.203	A
3	1409	352	102	1689	0.844	1398	572	2.8	6.0	15.359	C
4	418	105	603	1191	0.351	417	895	0.5	0.7	6.304	A

#### 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	401	100	424	1339	0.299	400	783	0.5	0.7	6.320	A
2	31	8	794	998	0.031	31	30	0.0	0.1	6.781	A
3	1725	431	125	1655	1.043	1613	700	6.0	34.1	58.087	F
4	512	128	697	1135	0.451	510	1041	0.7	1.1	7.808	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	401	100	426	1338	0.300	401	795	0.7	0.7	6.336	A
2	31	8	796	997	0.031	31	31	0.1	0.1	6.789	A
3	1725	431	126	1655	1.043	1641	701	34.1	55.1	107.129	F
4	512	128	709	1127	0.454	512	1058	1.1	1.1	7.936	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	327	82	353	1383	0.237	328	755	0.7	0.5	5.635	A
2	25	6	652	1081	0.023	25	29	0.1	0.0	6.216	A
3	1409	352	103	1689	0.844	1598	574	55.1	8.4	68.464	F
4	418	105	689	1140	0.367	419	1010	1.1	0.8	6.793	A

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	274	69	293	1419	0.193	275	577	0.5	0.4	5.191	A
2	21	5	546	1142	0.018	21	22	0.0	0.0	5.850	A
3	1180	295	86	1680	0.702	1201	481	8.4	3.0	9.555	A
4	350	88	519	1242	0.282	351	788	0.8	0.5	5.490	A

# Existing - 2019 Do Something, 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	Standard Roundabout	1,2,3,4	26.93	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)	Run automatically
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	681	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	591	100.000
4		ONE HOUR	✓	1164	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	4	557	115
	2	4	0	32	6
	3	227	32	0	332
	4	150	4	1009	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	23
	4	58	77	10	0

## 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	0.84	30.25	5.9	D	625	937
2	0.12	15.20	0.2	C	39	58
3	0.40	5.02	0.9	A	542	813
4	0.93	36.53	12.2	E	1068	1602

### Main Results for each time segment

#### 16:15 - 16:30

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	513	128	781	1120	0.458	508	289	0.0	1.1	7.570	A
2	32	8	1260	727	0.043	31	30	0.0	0.1	7.381	A
3	445	111	98	1672	0.266	443	1193	0.0	0.5	4.046	A
4	876	219	201	1433	0.612	869	340	0.0	1.8	7.234	A

#### 16:30 - 16:45

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	612	153	935	1025	0.597	609	346	1.1	1.9	11.113	B
2	38	9	1509	582	0.065	38	36	0.1	0.1	9.429	A
3	531	133	117	1660	0.320	531	1429	0.5	0.6	4.410	A
4	1046	262	241	1409	0.743	1041	407	1.8	3.2	11.041	B

#### 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	750	187	1126	908	0.825	736	421	1.9	5.3	25.275	D
2	46	12	1818	402	0.115	46	44	0.1	0.2	14.409	B
3	651	163	142	1644	0.396	650	1722	0.6	0.9	5.004	A
4	1282	320	295	1377	0.931	1252	497	3.2	10.5	28.151	D

#### 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	750	187	1146	896	0.837	747	424	5.3	5.9	30.252	D
2	46	12	1849	384	0.120	46	44	0.2	0.2	15.196	C
3	651	163	144	1643	0.396	651	1752	0.9	0.9	5.020	A
4	1282	320	295	1376	0.931	1275	499	10.5	12.2	36.531	E

#### 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	612	153	971	1004	0.610	628	352	5.9	2.1	12.867	B
2	38	9	1562	551	0.069	38	36	0.2	0.1	10.017	B
3	531	133	121	1658	0.321	532	1480	0.9	0.7	4.432	A
4	1046	262	242	1408	0.743	1081	411	12.2	3.5	13.817	B

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	513	128	793	1113	0.461	517	292	2.1	1.1	7.872	A
2	32	8	1280	715	0.044	32	30	0.1	0.1	7.516	A
3	445	111	99	1671	0.266	446	1212	0.7	0.5	4.066	A
4	876	219	202	1432	0.612	883	343	3.5	1.8	7.599	A

# Existing - 2032 Do Minimum, 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	Standard Roundabout	1,2,3,4	308.54	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)	Run automatically
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	411	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1842	100.000
4		ONE HOUR	✓	553	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	287	123
	2	0	0	0	0
	3	737	0	0	1105
	4	119	0	434	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	18
	4	28	0	36	0

## 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	6.98	0.9	A	377	566
2	0.00	0.00	0.0	A	0	0
3	1.23	462.76	212.8	F	1690	2535
4	0.53	8.81	1.5	A	507	761

### Main Results for each time segment

#### 07:15 - 07:30

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	309	77	325	1400	0.221	308	636	0.0	0.5	5.447	A
2	0	0	632	1092	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	93	1675	0.828	1366	539	0.0	5.3	13.147	B
4	416	104	547	1225	0.340	414	911	0.0	0.7	5.935	A

#### 07:30 - 07:45

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	369	92	389	1360	0.272	369	744	0.5	0.6	6.007	A
2	0	0	758	1019	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	111	1664	0.995	1591	647	5.3	21.5	40.657	E
4	497	124	638	1171	0.425	496	1065	0.7	1.0	7.148	A

#### 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	453	113	476	1307	0.346	451	789	0.6	0.9	6.958	A
2	0	0	928	920	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	136	1648	1.231	1644	792	21.5	117.5	160.746	F
4	609	152	659	1158	0.526	607	1121	1.0	1.5	8.740	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	453	113	476	1306	0.346	452	791	0.9	0.9	6.981	A
2	0	0	930	919	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	137	1647	1.231	1647	794	117.5	212.8	365.568	F
4	609	152	660	1157	0.526	609	1123	1.5	1.5	8.810	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	369	92	392	1359	0.272	370	771	0.9	0.6	6.037	A
2	0	0	762	1017	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	112	1663	0.996	1656	650	212.8	212.8	462.756	F
4	497	124	663	1155	0.430	499	1104	1.5	1.0	7.382	A

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	309	77	328	1398	0.221	310	757	0.6	0.5	5.479	A
2	0	0	638	1089	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	94	1675	0.828	1666	544	212.8	143.1	385.592	F
4	416	104	667	1153	0.361	417	1092	1.0	0.8	6.578	A



# Existing - 2032 Do Minimum, 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	Standard Roundabout	1,2,3,4	139.34	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)	Run automatically
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	772	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	657	100.000
4		ONE HOUR	✓	1425	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	0	631	135
	2	0	0	1	0
	3	245	0	0	412
	4	176	0	1248	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	19
	4	58	0	8	0

## 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	1.00	93.33	21.6	F	708	1063
2	0.00	0.00	0.0	A	0	0
3	0.44	5.21	1.0	A	603	904
4	1.13	226.10	102.8	F	1308	1961

### Main Results for each time segment

#### 16:15 - 16:30

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	581	145	929	1029	0.565	575	319	0.0	1.6	10.039	B
2	0	0	1504	585	0.000	0	0	0.0	0.0	0.000	A
3	495	124	106	1667	0.297	492	1398	0.0	0.6	4.047	A
4	1073	268	188	1440	0.745	1060	410	0.0	3.1	10.329	B

#### 16:30 - 16:45

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	694	174	1105	922	0.753	686	381	1.6	3.6	19.014	C
2	0	0	1791	418	0.000	0	0	0.0	0.0	0.000	A
3	591	148	126	1654	0.357	590	1664	0.6	0.7	4.473	A
4	1281	320	225	1418	0.903	1260	491	3.1	8.3	23.043	C

#### 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	850	212	1205	860	0.988	804	445	3.6	15.2	57.365	F
2	0	0	2008	291	0.000	0	0	0.0	0.0	0.000	A
3	723	181	148	1640	0.441	722	1861	0.7	1.0	5.182	A
4	1569	392	276	1388	1.130	1374	594	8.3	57.0	96.764	F

#### 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	850	212	1214	854	0.995	824	447	15.2	21.6	93.330	F
2	0	0	2039	274	0.000	0	0	0.0	0.0	0.000	A
3	723	181	152	1638	0.442	723	1887	1.0	1.0	5.208	A
4	1569	392	276	1388	1.131	1386	599	57.0	102.8	214.856	F

#### 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	694	174	1229	845	0.821	752	400	21.6	7.1	58.731	F
2	0	0	1981	307	0.000	0	0	0.0	0.0	0.000	A
3	591	148	138	1646	0.359	592	1843	1.0	0.7	4.523	A
4	1281	320	227	1417	0.904	1402	504	102.8	72.6	226.100	F

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	581	145	1181	874	0.665	599	356	7.1	2.7	17.737	C
2	0	0	1780	424	0.000	0	0	0.0	0.0	0.000	A
3	495	124	110	1664	0.297	495	1670	0.7	0.6	4.077	A
4	1073	268	189	1440	0.745	1348	416	72.6	3.8	84.585	F

# Existing - 2032 Do Something, 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	Standard Roundabout	1,2,3,4	374.95	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)	Run automatically
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	423	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1900	100.000
4		ONE HOUR	✓	579	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	297	123
	2	4	0	19	5
	3	751	24	0	1125
	4	119	3	457	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	78	67	61
	2	98	0	78	87
	3	27	38	0	17
	4	28	35	35	0

## 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	7.33	0.9	A	388	582
2	0.03	7.57	0.1	A	26	39
3	1.27	573.60	269.2	F	1743	2615
4	0.56	9.41	1.6	A	531	797

### Main Results for each time segment

#### 07:15 - 07:30

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	318	80	382	1377	0.231	318	648	0.0	0.5	5.588	A
2	21	5	657	1078	0.020	21	21	0.0	0.0	6.205	A
3	1430	358	100	1671	0.856	1405	578	0.0	6.4	15.159	C
4	436	109	577	1207	0.361	433	928	0.0	0.7	6.185	A

#### 07:30 - 07:45

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	380	95	433	1334	0.285	380	748	0.5	0.7	6.221	A
2	25	6	788	1002	0.025	25	25	0.0	0.0	6.715	A
3	1708	427	119	1658	1.030	1612	693	6.4	30.5	52.498	F
4	521	130	662	1156	0.450	519	1069	0.7	1.1	7.533	A

#### 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	466	116	525	1277	0.365	465	784	0.7	0.9	7.301	A
2	31	8	964	899	0.034	31	26	0.0	0.1	7.552	A
3	2082	523	146	1641	1.275	1639	849	30.5	143.7	199.100	F
4	637	159	674	1149	0.555	635	1111	1.1	1.6	9.323	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	466	116	527	1276	0.365	466	785	0.9	0.9	7.330	A
2	31	8	967	898	0.034	31	26	0.1	0.1	7.566	A
3	2082	523	146	1641	1.275	1641	851	143.7	256.4	442.657	F
4	637	159	675	1148	0.555	637	1112	1.6	1.6	9.407	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	380	95	436	1332	0.286	381	767	0.9	0.7	6.256	A
2	25	6	792	999	0.025	25	25	0.1	0.0	6.737	A
3	1708	427	120	1658	1.030	1657	697	256.4	269.2	573.598	F
4	521	130	680	1145	0.455	523	1097	1.6	1.1	7.750	A

## 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	318	80	368	1373	0.232	319	751	0.7	0.5	5.639	A
2	21	5	663	1074	0.020	21	25	0.0	0.0	6.229	A
3	1430	358	100	1671	0.856	1663	583	269.2	211.0	520.150	F
4	436	109	682	1144	0.381	437	1081	1.1	0.8	6.812	A

# Existing - 2032 Do Something, 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	Standard Roundabout	1,2,3,4	185.88	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)	Run automatically
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	788	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	732	100.000
4		ONE HOUR	✓	1448	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	6	4	643	135
	2	4	0	32	6
	3	280	32	0	440
	4	176	4	1265	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	20
	4	58	77	9	0

## 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	1.02	117.03	28.4	F	723	1085
2	0.16	21.01	0.3	C	39	58
3	0.49	5.86	1.3	A	672	1008
4	1.18	319.32	132.1	F	1327	1990

### Main Results for each time segment

#### 16:15 - 16:30

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	593	148	988	1006	0.590	586	333	0.0	1.8	10.932	B
2	32	8	1524	573	0.055	31	30	0.0	0.1	9.467	A
3	551	138	113	1662	0.331	548	1442	0.0	0.7	4.337	A
4	1089	272	226	1418	0.768	1074	435	0.0	3.6	11.467	B

#### 16:30 - 16:45

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	708	177	1145	897	0.790	698	397	1.8	4.4	22.380	C
2	38	9	1807	408	0.092	38	36	0.1	0.1	13.836	B
3	658	165	135	1649	0.399	657	1710	0.7	0.9	4.881	A
4	1300	325	271	1391	0.935	1271	521	3.6	10.8	28.739	D

#### 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	868	217	1218	852	1.018	809	460	4.4	18.9	68.122	F
2	46	12	1984	306	0.151	46	43	0.1	0.2	19.731	C
3	806	201	157	1635	0.493	804	1873	0.9	1.3	5.821	A
4	1592	398	331	1354	1.175	1346	630	10.8	72.3	121.930	F

#### 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	868	217	1223	849	1.022	830	462	18.9	28.4	117.029	F
2	46	12	2010	291	0.159	46	43	0.2	0.3	21.007	C
3	806	201	160	1632	0.494	806	1896	1.3	1.3	5.861	A
4	1592	398	332	1354	1.176	1353	634	72.3	132.1	277.745	F

#### 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	708	177	1239	839	0.844	785	412	28.4	9.3	88.285	F
2	38	9	1987	304	0.124	38	37	0.3	0.2	19.343	C
3	658	165	150	1639	0.402	660	1875	1.3	0.9	4.955	A
4	1300	325	273	1390	0.935	1378	537	132.1	112.6	319.322	F



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	593	148	1256	829	0.716	616	375	9.3	3.5	23.904	C
2	32	8	1841	389	0.081	32	31	0.2	0.1	14.403	B
3	551	138	119	1659	0.332	552	1754	0.9	0.7	4.379	A
4	1089	272	228	1417	0.769	1402	443	112.6	34.2	191.772	F

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** A - A1173 - Kiln Ln Roundabout\_Committed.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\A1173 - Kiln Lane Roundabout\Arup

**Report generation date:** 30/11/2017 14:17:48

- »Committed - 2017 Base, AM
- »Committed - 2017 Base, PM
- »Committed - 2019 Do Minimum, AM
- »Committed - 2019 Do Minimum, PM
- »Committed - 2019 Do Something, AM
- »Committed - 2019 Do Something, PM
- »Committed - 2032 Do Minimum, AM
- »Committed - 2032 Do Minimum, PM
- »Committed - 2032 Do Something, AM
- »Committed - 2032 Do Something, PM

## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>Committed - 2017 Base</b>								
Arm 1	0.3	3.34	0.18	A	0.9	4.50	0.43	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	7.6	19.68	0.88	C	0.6	4.16	0.32	A
Arm 4	0.8	6.54	0.38	A	3.4	11.64	0.76	B
<b>Committed - 2019 Do Minimum</b>								
Arm 1	0.4	3.54	0.19	A	1.2	5.79	0.48	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	31.9	69.13	1.00	F	0.7	4.52	0.34	A
Arm 4	1.0	7.49	0.42	A	8.4	25.48	0.89	D
<b>Committed - 2019 Do Something</b>								
Arm 1	0.4	3.65	0.20	A	1.3	6.29	0.50	A
Arm 2	0.1	6.79	0.03	A	0.2	15.26	0.12	C
Arm 3	55.1	107.15	1.04	F	0.9	5.02	0.40	A
Arm 4	1.1	7.94	0.45	A	12.2	36.54	0.93	E
<b>Committed - 2032 Do Minimum</b>								
Arm 1	0.5	3.88	0.23	A	1.8	7.84	0.59	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	212.9	462.77	1.23	F	1.0	5.22	0.44	A
Arm 4	1.5	8.81	0.53	A	102.9	226.17	1.13	F
<b>Committed - 2032 Do Something</b>								
Arm 1	0.5	3.99	0.24	A	2.0	8.24	0.61	A
Arm 2	0.1	7.57	0.03	A	0.3	23.07	0.17	C
Arm 3	269.2	573.62	1.27	F	1.3	5.89	0.50	A
Arm 4	1.6	9.41	0.56	A	132.2	319.42	1.18	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.

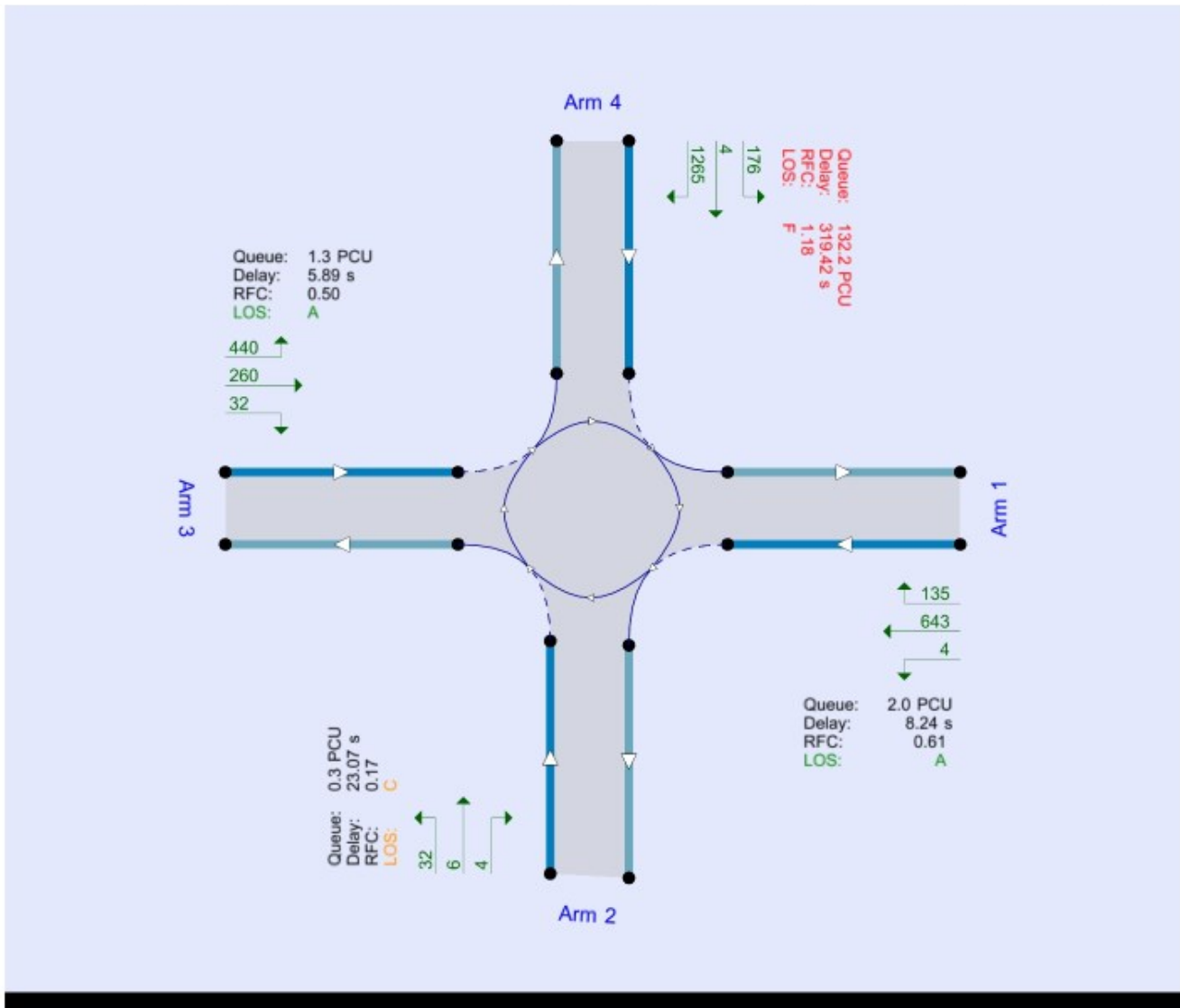
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	24/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

**Analysis Set Details**

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Committed	✓	100.000	100.000

---

# Committed - 2017 Base, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	14.48	B

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Kiln Lane	
2	Site	
3	A1173 (W)	
4	A1173 (N)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.97	8.14	64.8	19.9	49.2	17.5	
2	3.52	6.09	5.7	16.9	49.2	11.9	
3	3.75	7.04	9.9	26.2	49.2	12.8	
4	3.40	7.95	6.8	20.8	49.2	14.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.748	2347
2	0.582	1460
3	0.639	1735
4	0.601	1553

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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	336	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1327	100.000
4		ONE HOUR	✓	308	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1	2	3	4
1	1	0	236	99
2	0	0	0	0
3	612	0	0	715
4	98	0	300	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	0	49	42
2	0	0	0	0
3	13	0	0	10
4	15	0	25	0

## 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	0.18	3.34	0.3	A	308	462
2	0.00	0.00	0.0	A	0	0
3	0.88	19.68	7.6	C	1218	1827
4	0.38	6.54	0.8	A	365	548

### Main Results for each time segment

#### 07:15 - 07:30

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	253	63	225	2179	0.116	252	532	0.0	0.2	2.998	A
2	0	0	477	1183	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1687	0.592	992	402	0.0	1.6	5.896	A
4	300	75	458	1278	0.234	298	609	0.0	0.4	4.732	A

**07:30 - 07:45**

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	302	76	269	2146	0.141	302	637	0.2	0.3	3.134	A
2	0	0	571	1128	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1677	0.711	1189	481	1.6	2.7	8.375	A
4	358	89	549	1224	0.292	357	729	0.4	0.5	5.358	A

**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	370	92	330	2101	0.176	370	774	0.3	0.3	3.339	A
2	0	0	699	1053	0.000	0	0	0.0	0.0	0.000	A
3	1481	365	110	1664	0.878	1444	589	2.7	7.1	17.446	C
4	438	110	667	1153	0.380	437	887	0.5	0.8	6.481	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	370	92	330	2100	0.176	370	782	0.3	0.3	3.340	A
2	0	0	700	1053	0.000	0	0	0.0	0.0	0.000	A
3	1481	365	110	1664	0.878	1459	590	7.1	7.6	19.682	C
4	438	110	674	1149	0.382	438	895	0.8	0.8	6.538	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	302	76	270	2145	0.141	302	648	0.3	0.3	3.139	A
2	0	0	573	1127	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1677	0.711	1212	483	7.6	2.9	9.209	A
4	358	89	560	1217	0.294	359	742	0.8	0.5	5.419	A

**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	253	63	226	2178	0.116	253	538	0.3	0.2	3.005	A
2	0	0	479	1181	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1687	0.592	1004	404	2.9	1.7	6.096	A
4	300	75	464	1275	0.235	300	616	0.5	0.4	4.770	A



# Committed - 2017 Base, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	7.74	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)	Run automatically
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	643	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	480	100.000
4		ONE HOUR	✓	975	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	526	112
	2	0	0	1	0
	3	202	0	0	278
	4	144	0	830	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	33	0	14	19
	2	0	0	0	0
	3	43	0	0	12
	4	39	0	5	0

## 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	4.50	0.9	A	590	885
2	0.00	0.00	0.0	A	0	0
3	0.32	4.16	0.6	A	440	661
4	0.76	11.64	3.4	B	895	1342

### Main Results for each time segment

#### 16:15 - 16:30

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	484	121	622	1883	0.257	482	263	0.0	0.4	3.069	A
2	0	0	1104	817	0.000	0	0	0.0	0.0	0.000	A
3	361	90	89	1678	0.215	360	1016	0.0	0.4	3.539	A
4	734	184	155	1460	0.503	730	293	0.0	1.1	5.453	A

#### 16:30 - 16:45

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	578	145	745	1790	0.323	577	315	0.4	0.6	3.543	A
2	0	0	1322	890	0.000	0	0	0.0	0.0	0.000	A
3	432	108	106	1667	0.259	431	1217	0.4	0.5	3.778	A
4	877	219	186	1442	0.608	874	351	1.1	1.7	7.030	A

#### 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	708	177	909	1667	0.425	707	385	0.6	0.9	4.470	A
2	0	0	1616	520	0.000	0	0	0.0	0.0	0.000	A
3	528	132	130	1652	0.320	528	1486	0.5	0.6	4.153	A
4	1073	268	228	1417	0.758	1067	430	1.7	3.3	11.251	B

#### 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	708	177	915	1664	0.426	708	386	0.9	0.9	4.499	A
2	0	0	1623	516	0.000	0	0	0.0	0.0	0.000	A
3	528	132	130	1652	0.320	528	1493	0.6	0.6	4.156	A
4	1073	268	228	1417	0.758	1073	430	3.3	3.4	11.638	B

**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	578	145	753	1785	0.324	579	317	0.9	0.6	3.569	A
2	0	0	1332	685	0.000	0	0	0.0	0.0	0.000	A
3	432	108	106	1667	0.259	432	1226	0.6	0.5	3.782	A
4	877	219	186	1441	0.608	883	352	3.4	1.8	7.256	A

**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	484	121	628	1878	0.258	485	265	0.6	0.4	3.088	A
2	0	0	1112	813	0.000	0	0	0.0	0.0	0.000	A
3	361	90	89	1678	0.215	362	1024	0.5	0.4	3.548	A
4	734	184	156	1460	0.503	737	295	1.8	1.1	5.559	A

# Committed - 2019 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	47.34	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)	Run automatically
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	352	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1510	100.000
4		ONE HOUR	✓	439	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	247	104
	2	0	0	0	0
	3	635	0	0	875
	4	101	0	338	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	17
	4	28	0	40	0

## 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	0.19	3.54	0.4	A	323	485
2	0.00	0.00	0.0	A	0	0
3	1.00	69.13	31.9	F	1386	2078
4	0.42	7.49	1.0	A	403	604

### Main Results for each time segment

#### 07:15 - 07:30

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	265	66	253	2158	0.123	264	550	0.0	0.2	3.144	A
2	0	0	517	1159	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1684	0.675	1127	438	0.0	2.4	7.661	A
4	331	83	475	1268	0.261	329	731	0.0	0.5	5.239	A

#### 07:30 - 07:45

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	316	79	303	2121	0.149	316	658	0.2	0.3	3.302	A
2	0	0	620	1099	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	94	1674	0.811	1348	525	2.4	4.8	12.926	B
4	395	99	588	1212	0.326	394	875	0.5	0.7	6.022	A

#### 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	388	97	371	2070	0.187	387	781	0.3	0.4	3.541	A
2	0	0	758	1019	0.000	0	0	0.0	0.0	0.000	A
3	1683	416	115	1661	1.001	1591	643	4.8	22.6	41.700	E
4	483	121	670	1151	0.420	482	1036	0.7	1.0	7.359	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	388	97	372	2069	0.187	388	796	0.4	0.4	3.543	A
2	0	0	760	1018	0.000	0	0	0.0	0.0	0.000	A
3	1683	416	116	1661	1.001	1625	644	22.6	31.9	69.129	F
4	483	121	685	1142	0.423	483	1056	1.0	1.0	7.486	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	316	79	305	2120	0.149	317	707	0.4	0.3	3.305	A
2	0	0	622	1098	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	94	1674	0.811	1462	527	31.9	5.7	27.911	D
4	395	99	616	1183	0.333	396	941	1.0	0.7	6.275	A

**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	265	66	255	2157	0.123	265	560	0.3	0.2	3.150	A
2	0	0	520	1157	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1684	0.675	1149	441	5.7	2.6	8.297	A
4	331	83	484	1263	0.282	331	744	0.7	0.5	5.301	A

# Committed - 2019 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	15.19	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)	Run automatically
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	666	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	515	100.000
4		ONE HOUR	✓	1143	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	546	115
	2	0	0	1	0
	3	212	0	0	303
	4	150	0	992	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	22
	4	58	0	9	0

## 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	0.48	5.79	1.2	A	611	917
2	0.00	0.00	0.0	A	0	0
3	0.34	4.52	0.7	A	473	709
4	0.89	25.48	8.4	D	1049	1573

### Main Results for each time segment

#### 16:15 - 16:30

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	501	125	742	1793	0.280	499	275	0.0	0.5	3.571	A
2	0	0	1241	738	0.000	0	0	0.0	0.0	0.000	A
3	388	97	91	1677	0.231	388	1151	0.0	0.4	3.790	A
4	861	215	163	1456	0.591	854	314	0.0	1.6	6.728	A

#### 16:30 - 16:45

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	599	150	889	1683	0.356	598	329	0.5	0.7	4.259	A
2	0	0	1487	595	0.000	0	0	0.0	0.0	0.000	A
3	463	116	109	1665	0.278	463	1378	0.4	0.5	4.073	A
4	1028	257	195	1436	0.715	1023	376	1.6	2.8	9.783	A

#### 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	733	183	1076	1543	0.475	731	401	0.7	1.1	5.686	A
2	0	0	1808	408	0.000	0	0	0.0	0.0	0.000	A
3	567	142	133	1650	0.344	566	1675	0.5	0.7	4.518	A
4	1258	315	239	1410	0.892	1239	461	2.8	7.7	21.697	C

#### 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	733	183	1091	1532	0.479	733	404	1.1	1.2	5.789	A
2	0	0	1824	399	0.000	0	0	0.0	0.0	0.000	A
3	567	142	133	1650	0.344	567	1691	0.7	0.7	4.525	A
4	1258	315	239	1410	0.893	1258	461	7.7	8.4	25.477	D



**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	599	150	912	1666	0.359	600	333	1.2	0.7	4.348	A
2	0	0	1512	580	0.000	0	0	0.0	0.0	0.000	A
3	463	116	109	1665	0.278	464	1403	0.7	0.5	4.080	A
4	1028	257	195	1436	0.716	1049	377	8.4	3.0	11.122	B

**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	501	125	752	1785	0.281	502	277	0.7	0.5	3.605	A
2	0	0	1254	730	0.000	0	0	0.0	0.0	0.000	A
3	388	97	91	1676	0.231	388	1163	0.5	0.4	3.808	A
4	861	215	164	1455	0.591	868	316	3.0	1.7	6.997	A

# Committed - 2019 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	71.42	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)	Run automatically
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	364	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1567	100.000
4		ONE HOUR	✓	465	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	257	104
	2	4	0	19	5
	3	648	24	0	895
	4	101	3	361	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	78	67	61
	2	98	0	78	87
	3	27	38	0	18
	4	28	35	38	0

## 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	0.20	3.65	0.4	A	334	501
2	0.03	6.79	0.1	A	28	39
3	1.04	107.15	55.1	F	1438	2157
4	0.45	7.94	1.1	A	427	640

### Main Results for each time segment

#### 07:15 - 07:30

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	274	69	290	2130	0.129	273	563	0.0	0.2	3.196	A
2	21	5	542	1145	0.018	21	22	0.0	0.0	5.836	A
3	1180	295	86	1680	0.702	1169	477	0.0	2.8	8.402	A
4	350	88	505	1250	0.280	348	749	0.0	0.5	5.402	A

#### 07:30 - 07:45

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	327	82	348	2087	0.157	327	672	0.2	0.3	3.373	A
2	25	6	649	1082	0.023	25	28	0.0	0.0	6.203	A
3	1409	352	102	1689	0.844	1396	572	2.8	6.0	15.359	C
4	418	105	603	1191	0.351	417	895	0.5	0.7	6.304	A

#### 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	401	100	424	2030	0.197	400	783	0.3	0.4	3.644	A
2	31	8	794	998	0.031	31	30	0.0	0.1	6.783	A
3	1725	431	125	1655	1.043	1613	700	6.0	34.1	56.103	F
4	512	128	697	1135	0.451	510	1041	0.7	1.1	7.806	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	401	100	426	2029	0.198	401	795	0.4	0.4	3.646	A
2	31	8	796	997	0.031	31	31	0.1	0.1	6.789	A
3	1725	431	126	1655	1.043	1641	701	34.1	55.1	107.154	F
4	512	128	709	1127	0.454	512	1058	1.1	1.1	7.936	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	327	82	353	2084	0.157	328	755	0.4	0.3	3.384	A
2	25	6	651	1081	0.023	25	29	0.1	0.0	6.214	A
3	1409	352	103	1669	0.844	1596	574	55.1	8.4	68.468	F
4	418	105	689	1140	0.367	419	1009	1.1	0.8	6.794	A

**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	274	69	293	2128	0.129	274	577	0.3	0.2	3.206	A
2	21	5	545	1143	0.018	21	22	0.0	0.0	5.850	A
3	1180	295	86	1680	0.702	1201	481	8.4	3.0	9.552	A
4	350	88	519	1242	0.282	351	768	0.8	0.5	5.490	A

# Committed - 2019 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	20.35	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)	Run automatically
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	681	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	591	100.000
4		ONE HOUR	✓	1164	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	4	557	115
	2	4	0	32	6
	3	227	32	0	332
	4	150	4	1009	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	23
	4	58	77	10	0

## 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	0.50	6.29	1.3	A	625	937
2	0.12	15.26	0.2	C	39	58
3	0.40	5.02	0.9	A	542	813
4	0.93	36.54	12.2	E	1068	1602

### Main Results for each time segment

#### 16:15 - 16:30

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	513	128	781	1783	0.291	511	289	0.0	0.5	3.715	A
2	32	8	1262	728	0.044	31	30	0.0	0.1	7.394	A
3	445	111	98	1672	0.266	443	1195	0.0	0.5	4.047	A
4	876	219	201	1433	0.612	869	340	0.0	1.8	7.235	A

#### 16:30 - 16:45

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	612	153	935	1648	0.371	611	346	0.5	0.8	4.493	A
2	38	9	1511	581	0.065	38	36	0.1	0.1	9.451	A
3	531	133	118	1660	0.320	531	1431	0.5	0.6	4.411	A
4	1046	262	241	1409	0.743	1041	408	1.8	3.2	11.041	B

#### 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	750	187	1126	1506	0.498	748	421	0.8	1.3	6.136	A
2	46	12	1830	395	0.117	46	44	0.1	0.2	14.683	B
3	651	163	144	1643	0.396	650	1732	0.6	0.9	5.011	A
4	1282	320	295	1376	0.931	1252	499	3.2	10.5	28.159	D

#### 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	750	187	1146	1491	0.503	750	424	1.3	1.3	6.289	A
2	46	12	1852	383	0.121	46	44	0.2	0.2	15.263	C
3	651	163	144	1643	0.396	651	1754	0.9	0.9	5.022	A
4	1282	320	295	1376	0.931	1275	500	10.5	12.2	36.536	E

**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	612	153	971	1622	0.378	614	352	1.3	0.8	4.636	A
2	38	9	1549	559	0.068	38	36	0.2	0.1	9.870	A
3	531	133	118	1659	0.320	532	1469	0.9	0.7	4.424	A
4	1046	262	241	1408	0.743	1081	409	12.2	3.5	13.812	B

**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	513	128	793	1754	0.292	514	292	0.8	0.5	3.762	A
2	32	8	1277	717	0.044	32	30	0.1	0.1	7.494	A
3	445	111	99	1672	0.266	446	1210	0.7	0.5	4.066	A
4	876	219	202	1432	0.612	883	342	3.5	1.8	7.602	A

# Committed - 2032 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	306.09	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)	Run automatically
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	411	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1842	100.000
4		ONE HOUR	✓	553	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	287	123
	2	0	0	0	0
	3	737	0	0	1105
	4	119	0	434	0

## Vehicle Mix



### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	16
	4	28	0	36	0

## 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	0.23	3.88	0.5	A	377	566
2	0.00	0.00	0.0	A	0	0
3	1.23	462.77	212.9	F	1690	2535
4	0.53	8.81	1.5	A	507	761

### Main Results for each time segment

#### 07:15 - 07:30

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	309	77	325	2105	0.147	308	636	0.0	0.3	3.316	A
2	0	0	833	1092	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	93	1675	0.828	1366	540	0.0	5.3	13.153	B
4	416	104	547	1225	0.340	414	911	0.0	0.7	5.935	A

#### 07:30 - 07:45

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	369	92	389	2056	0.180	369	744	0.3	0.4	3.532	A
2	0	0	758	1019	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	111	1664	0.995	1591	647	5.3	21.5	40.668	E
4	497	124	638	1171	0.425	496	1065	0.7	1.0	7.148	A

#### 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	453	113	476	1991	0.227	452	789	0.4	0.5	3.871	A
2	0	0	928	920	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	136	1648	1.231	1644	792	21.5	117.5	160.795	F
4	609	152	659	1158	0.526	607	1121	1.0	1.5	8.739	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	453	113	478	1990	0.227	453	791	0.5	0.5	3.876	A
2	0	0	930	919	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	137	1647	1.231	1647	794	117.5	212.8	365.633	F
4	609	152	660	1157	0.526	609	1123	1.5	1.5	8.810	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	369	92	392	2055	0.180	370	771	0.5	0.4	3.538	A
2	0	0	762	1017	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	112	1663	0.996	1656	650	212.8	212.9	462.774	F
4	497	124	663	1155	0.430	499	1104	1.5	1.0	7.382	A

**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	309	77	328	2103	0.147	310	757	0.4	0.3	3.324	A
2	0	0	637	1089	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	93	1675	0.828	1668	544	212.9	143.1	385.617	F
4	416	104	667	1153	0.361	417	1092	1.0	0.8	6.581	A

# Committed - 2032 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	116.25	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)	Run automatically
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	772	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	657	100.000
4		ONE HOUR	✓	1425	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	6	0	631	135
	2	0	0	1	0
	3	245	0	0	412
	4	176	0	1248	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	19
	4	58	0	8	0

## 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	0.59	7.84	1.8	A	708	1063
2	0.00	0.00	0.0	A	0	0
3	0.44	5.22	1.0	A	603	904
4	1.13	226.17	102.9	F	1308	1961

### Main Results for each time segment

#### 16:15 - 16:30

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	581	145	929	1653	0.352	578	319	0.0	0.7	4.294	A
2	0	0	1508	583	0.000	0	0	0.0	0.0	0.000	A
3	495	124	106	1667	0.297	492	1401	0.0	0.6	4.049	A
4	1073	268	188	1440	0.745	1060	411	0.0	3.1	10.330	B

#### 16:30 - 16:45

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	694	174	1105	1522	0.456	693	381	0.7	1.1	5.568	A
2	0	0	1797	414	0.000	0	0	0.0	0.0	0.000	A
3	591	148	127	1653	0.357	590	1670	0.6	0.7	4.476	A
4	1281	320	225	1418	0.903	1260	492	3.1	8.3	23.045	C

#### 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	850	212	1204	1447	0.587	847	446	1.1	1.8	7.673	A
2	0	0	2052	266	0.000	0	0	0.0	0.0	0.000	A
3	723	181	156	1635	0.442	722	1896	0.7	1.0	5.209	A
4	1569	392	276	1388	1.131	1374	602	8.3	57.0	96.835	F

#### 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	850	212	1214	1440	0.590	850	447	1.8	1.8	7.839	A
2	0	0	2064	259	0.000	0	0	0.0	0.0	0.000	A
3	723	181	156	1635	0.442	723	1908	1.0	1.0	5.225	A
4	1569	392	276	1387	1.131	1385	603	57.0	102.9	215.017	F

**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	694	174	1229	1428	0.486	696	399	1.8	1.2	6.337	A
2	0	0	1928	340	0.000	0	0	0.0	0.0	0.000	A
3	591	148	128	1653	0.357	592	1797	1.0	0.7	4.496	A
4	1281	320	226	1418	0.904	1402	494	102.9	72.6	226.173	F

**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	581	145	1182	1464	0.397	583	356	1.2	0.9	5.255	A
2	0	0	1764	433	0.000	0	0	0.0	0.0	0.000	A
3	495	124	107	1666	0.297	495	1657	0.7	0.6	4.070	A
4	1073	268	189	1440	0.745	1348	413	72.6	3.8	84.580	F

# Committed - 2032 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	374.48	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)	Run automatically
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	423	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1900	100.000
4		ONE HOUR	✓	579	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	297	123
	2	4	0	19	5
	3	751	24	0	1125
	4	119	3	457	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	78	67	61
	2	98	0	78	87
	3	27	38	0	17
	4	28	35	35	0

## 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	0.24	3.99	0.5	A	388	582
2	0.03	7.57	0.1	A	28	39
3	1.27	573.62	269.2	F	1743	2615
4	0.56	9.41	1.6	A	531	797

### Main Results for each time segment

#### 07:15 - 07:30

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	318	80	362	2077	0.153	317	648	0.0	0.3	3.374	A
2	21	5	657	1077	0.020	21	21	0.0	0.0	6.208	A
3	1430	358	100	1671	0.856	1405	579	0.0	6.4	15.166	C
4	436	109	577	1207	0.361	433	928	0.0	0.7	6.185	A

#### 07:30 - 07:45

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	380	95	433	2024	0.188	380	748	0.3	0.4	3.613	A
2	25	6	788	1002	0.025	25	25	0.0	0.0	6.717	A
3	1708	427	119	1658	1.030	1612	694	6.4	30.5	52.515	F
4	521	130	662	1156	0.450	519	1069	0.7	1.1	7.533	A

#### 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	466	116	525	1955	0.238	465	784	0.4	0.5	3.987	A
2	31	8	964	899	0.034	31	28	0.0	0.1	7.555	A
3	2092	523	146	1641	1.275	1639	849	30.5	143.7	199.164	F
4	637	159	674	1149	0.555	635	1111	1.1	1.6	9.323	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	466	116	527	1953	0.238	466	785	0.5	0.5	3.992	A
2	31	8	967	898	0.034	31	28	0.1	0.1	7.566	A
3	2092	523	146	1641	1.275	1641	851	143.7	256.5	442.735	F
4	637	159	675	1148	0.555	637	1112	1.6	1.6	9.407	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	380	95	436	2021	0.188	381	767	0.5	0.4	3.620	A
2	25	6	791	999	0.025	25	25	0.1	0.0	6.734	A
3	1708	427	120	1658	1.030	1657	697	256.5	269.2	573.621	F
4	521	130	681	1145	0.455	523	1097	1.6	1.1	7.750	A

**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	318	80	368	2072	0.154	319	751	0.4	0.3	3.390	A
2	21	5	662	1075	0.020	21	25	0.0	0.0	6.228	A
3	1430	356	100	1671	0.856	1663	583	269.2	211.0	520.141	F
4	436	109	682	1144	0.381	437	1081	1.1	0.8	6.815	A



# Committed - 2032 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	157.46	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)	Run automatically
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	788	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	732	100.000
4		ONE HOUR	✓	1448	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	6	4	643	135
	2	4	0	32	6
	3	260	32	0	440
	4	176	4	1265	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	20
	4	58	77	9	0

## 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	0.61	8.24	2.0	A	723	1085
2	0.17	23.07	0.3	C	39	58
3	0.50	5.89	1.3	A	672	1008
4	1.18	319.42	132.2	F	1327	1990

### Main Results for each time segment

#### 16:15 - 16:30

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	593	148	968	1624	0.365	590	333	0.0	0.7	4.497	A
2	32	8	1528	571	0.055	31	30	0.0	0.1	9.511	A
3	551	138	114	1662	0.332	548	1445	0.0	0.7	4.339	A
4	1089	272	226	1418	0.768	1074	436	0.0	3.6	11.467	B

#### 16:30 - 16:45

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	708	177	1145	1491	0.475	707	397	0.7	1.2	5.928	A
2	38	9	1816	404	0.094	38	36	0.1	0.1	14.023	B
3	658	165	136	1648	0.399	657	1717	0.7	0.9	4.886	A
4	1300	325	271	1391	0.935	1271	522	3.6	10.8	28.745	D

#### 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	868	217	1217	1437	0.604	865	460	1.2	1.9	8.094	A
2	46	12	2039	274	0.169	46	43	0.1	0.3	22.454	C
3	806	201	167	1628	0.495	804	1918	0.9	1.3	5.866	A
4	1592	398	332	1354	1.176	1346	639	10.8	72.4	122.027	F

#### 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	868	217	1223	1433	0.606	867	462	1.9	2.0	8.237	A
2	46	12	2047	269	0.172	46	43	0.3	0.3	23.069	C
3	806	201	167	1628	0.495	806	1926	1.3	1.3	5.892	A
4	1592	398	332	1354	1.176	1353	641	72.4	132.2	277.967	F

**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	708	177	1239	1421	0.499	711	411	2.0	1.3	6.590	A
2	38	9	1914	346	0.109	38	36	0.3	0.2	16.690	C
3	658	165	137	1647	0.400	660	1815	1.3	0.9	4.915	A
4	1300	325	272	1390	0.935	1378	525	132.2	112.7	319.418	F

**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	593	146	1256	1408	0.421	595	374	1.3	1.0	5.740	A
2	32	8	1820	401	0.079	32	31	0.2	0.1	13.911	B
3	551	136	115	1661	0.332	552	1736	0.9	0.7	4.369	A
4	1089	272	228	1417	0.768	1403	439	112.7	34.2	191.780	F

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
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**Filename:** A - A1173 - Kiln Ln Roundabout\_Proposed Mitigation.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\A1173 - Kiln Lane Roundabout\Arup

**Report generation date:** 30/11/2017 14:23:48

- 
- »Proposed Mitigation - 2017 Base, AM
  - »Proposed Mitigation - 2017 Base, PM
  - »Proposed Mitigation - 2019 Do Minimum, AM
  - »Proposed Mitigation - 2019 Do Minimum, PM
  - »Proposed Mitigation - 2019 Do Something, AM
  - »Proposed Mitigation - 2019 Do Something, PM
  - »Proposed Mitigation - 2032 Do Minimum, AM
  - »Proposed Mitigation - 2032 Do Minimum, PM
  - »Proposed Mitigation - 2032 Do Something, AM
  - »Proposed Mitigation - 2032 Do Something, PM

## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>Proposed Mitigation - 2017 Base</b>								
Arm 1	0.3	3.34	0.18	A	0.9	4.50	0.43	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	3.3	8.27	0.75	A	0.5	3.29	0.27	A
Arm 4	0.6	5.33	0.33	A	2.3	7.66	0.67	A
<b>Proposed Mitigation - 2019 Do Minimum</b>								
Arm 1	0.4	3.54	0.19	A	1.2	5.80	0.46	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	6.5	14.58	0.85	B	0.6	3.56	0.29	A
Arm 4	0.8	6.08	0.37	A	4.2	12.31	0.79	B
<b>Proposed Mitigation - 2019 Do Something</b>								
Arm 1	0.4	3.65	0.20	A	1.3	6.32	0.50	A
Arm 2	0.1	7.14	0.03	A	0.2	17.57	0.14	C
Arm 3	8.6	18.93	0.89	C	0.7	3.87	0.34	A
Arm 4	0.9	6.46	0.40	A	5.2	15.04	0.83	C
<b>Proposed Mitigation - 2032 Do Minimum</b>								
Arm 1	0.5	3.88	0.23	A	2.2	9.36	0.63	A
Arm 2	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Arm 3	63.1	103.03	1.04	F	0.8	3.95	0.38	A
Arm 4	1.3	7.57	0.49	A	30.5	69.66	1.00	F
<b>Proposed Mitigation - 2032 Do Something</b>								
Arm 1	0.5	4.00	0.24	A	2.4	10.16	0.65	B
Arm 2	0.1	7.99	0.04	A	0.6	50.98	0.32	F
Arm 3	94.0	145.03	1.08	F	1.0	4.35	0.42	A
Arm 4	1.4	8.05	0.52	A	49.8	105.11	1.04	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.

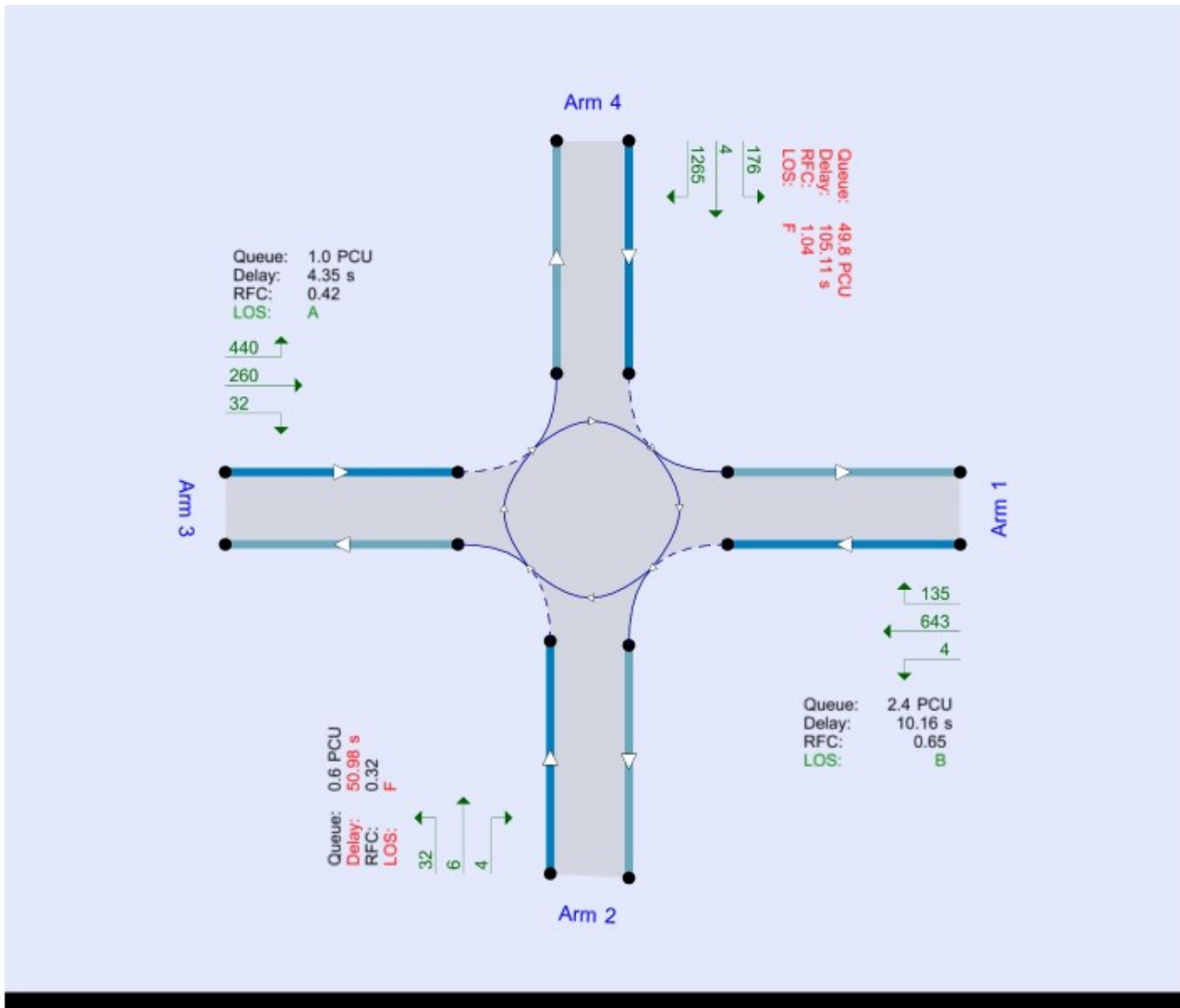
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	24/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

**Analysis Set Details**

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Mitigation	✓	100.000	100.000

---

# Proposed Mitigation - 2017 Base, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	6.89	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Kiln Lane	
2	Site	
3	A1173 (W)	
4	A1173 (N)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.97	8.14	64.8	19.9	49.2	17.5	
2	3.65	4.50	12.6	21.0	49.2	10.8	
3	3.70	8.24	19.0	40.0	49.2	16.4	
4	3.25	7.99	12.3	31.0	49.2	14.8	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.748	2347
2	0.576	1409
3	0.697	2037
4	0.640	1742

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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓



Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	336	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1327	100.000
4		ONE HOUR	✓	308	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1	2	3	4
1	1	0	236	99
2	0	0	0	0
3	612	0	0	715
4	98	0	300	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	0	49	42
2	0	0	0	0
3	13	0	0	10
4	15	0	25	0

## 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	0.18	3.34	0.3	A	308	462
2	0.00	0.00	0.0	A	0	0
3	0.75	8.27	3.3	A	1218	1827
4	0.33	5.33	0.8	A	365	548

### Main Results for each time segment

#### 07:15 - 07:30

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	253	63	225	2179	0.116	252	533	0.0	0.2	2.998	A
2	0	0	477	1134	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1985	0.503	994	402	0.0	1.2	4.154	A
4	300	75	459	1448	0.207	298	610	0.0	0.3	4.037	A

**07:30 - 07:45**

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	302	76	269	2146	0.141	302	638	0.2	0.3	3.134	A
2	0	0	571	1079	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1974	0.604	1191	481	1.2	1.7	5.256	A
4	358	89	550	1390	0.257	357	730	0.3	0.4	4.497	A

**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	370	92	330	2101	0.176	370	780	0.3	0.3	3.339	A
2	0	0	699	1006	0.000	0	0	0.0	0.0	0.000	A
3	1481	365	110	1960	0.745	1455	589	1.7	3.2	8.080	A
4	438	110	672	1312	0.334	437	893	0.4	0.6	5.309	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	370	92	330	2100	0.176	370	783	0.3	0.3	3.340	A
2	0	0	700	1005	0.000	0	0	0.0	0.0	0.000	A
3	1481	365	110	1960	0.745	1461	590	3.2	3.3	8.265	A
4	438	110	675	1310	0.335	438	896	0.6	0.6	5.328	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	302	76	270	2145	0.141	302	642	0.3	0.3	3.137	A
2	0	0	573	1079	0.000	0	0	0.0	0.0	0.000	A
3	1193	298	90	1974	0.604	1199	483	3.3	1.8	5.371	A
4	358	89	554	1387	0.258	359	735	0.6	0.5	4.518	A

**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	253	63	226	2178	0.116	253	537	0.3	0.2	3.003	A
2	0	0	479	1132	0.000	0	0	0.0	0.0	0.000	A
3	999	250	75	1984	0.503	1001	404	1.8	1.2	4.213	A
4	300	75	463	1446	0.207	300	614	0.5	0.3	4.055	A

# Proposed Mitigation - 2017 Base, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	5.69	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)	Run automatically
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	643	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	480	100.000
4		ONE HOUR	✓	975	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	526	112
	2	0	0	1	0
	3	202	0	0	278
	4	144	0	830	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	33	0	14	19
	2	0	0	0	0
	3	43	0	0	12
	4	39	0	5	0

## 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	4.50	0.9	A	590	885
2	0.00	0.00	0.0	A	0	0
3	0.27	3.29	0.5	A	440	661
4	0.67	7.66	2.3	A	895	1342

### Main Results for each time segment

#### 16:15 - 16:30

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	484	121	623	1882	0.257	482	263	0.0	0.4	3.070	A
2	0	0	1105	772	0.000	0	0	0.0	0.0	0.000	A
3	361	90	89	1975	0.183	360	1016	0.0	0.3	2.890	A
4	734	184	155	1643	0.447	730	293	0.0	0.9	4.377	A

#### 16:30 - 16:45

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	578	145	746	1790	0.323	577	315	0.4	0.6	3.544	A
2	0	0	1323	846	0.000	0	0	0.0	0.0	0.000	A
3	432	108	106	1963	0.220	431	1217	0.3	0.4	3.048	A
4	877	219	186	1623	0.540	875	351	0.9	1.3	5.345	A

#### 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	708	177	912	1666	0.425	707	386	0.6	0.9	4.478	A
2	0	0	1618	478	0.000	0	0	0.0	0.0	0.000	A
3	528	132	130	1946	0.272	528	1499	0.4	0.5	3.292	A
4	1073	268	228	1596	0.673	1070	430	1.3	2.2	7.557	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	708	177	915	1663	0.426	708	386	0.9	0.9	4.500	A
2	0	0	1623	473	0.000	0	0	0.0	0.0	0.000	A
3	528	132	130	1946	0.272	528	1493	0.5	0.5	3.292	A
4	1073	268	228	1596	0.673	1073	430	2.2	2.3	7.661	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	578	145	750	1787	0.324	579	316	0.9	0.6	3.567	A
2	0	0	1330	642	0.000	0	0	0.0	0.0	0.000	A
3	432	108	106	1963	0.220	432	1223	0.5	0.4	3.053	A
4	877	219	186	1623	0.540	880	352	2.3	1.3	5.423	A

**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	484	121	627	1879	0.258	485	265	0.6	0.4	3.088	A
2	0	0	1112	788	0.000	0	0	0.0	0.0	0.000	A
3	361	90	89	1975	0.183	362	1023	0.4	0.3	2.898	A
4	734	184	156	1642	0.447	736	295	1.3	0.9	4.428	A

# Proposed Mitigation - 2019 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	11.27	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)	Run automatically
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	352	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1510	100.000
4		ONE HOUR	✓	439	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	247	104
	2	0	0	0	0
	3	635	0	0	875
	4	101	0	338	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	17
	4	28	0	40	0

## 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	0.19	3.54	0.4	A	323	485
2	0.00	0.00	0.0	A	0	0
3	0.85	14.58	6.5	B	1386	2078
4	0.37	6.08	0.8	A	403	604

### Main Results for each time segment

#### 07:15 - 07:30

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	265	66	253	2158	0.123	264	552	0.0	0.2	3.145	A
2	0	0	517	1110	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1982	0.574	1130	439	0.0	1.6	5.063	A
4	331	83	476	1437	0.230	329	733	0.0	0.4	4.445	A

#### 07:30 - 07:45

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	316	79	303	2121	0.149	316	661	0.2	0.3	3.302	A
2	0	0	620	1051	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	94	1971	0.689	1353	525	1.6	2.6	6.984	A
4	395	99	570	1377	0.287	394	878	0.4	0.5	5.017	A

#### 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	388	97	371	2070	0.187	387	805	0.3	0.4	3.542	A
2	0	0	759	971	0.000	0	0	0.0	0.0	0.000	A
3	1663	416	115	1956	0.850	1648	643	2.6	6.2	13.488	B
4	483	121	694	1298	0.373	482	1069	0.5	0.8	6.044	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	388	97	372	2069	0.187	388	811	0.4	0.4	3.543	A
2	0	0	760	971	0.000	0	0	0.0	0.0	0.000	A
3	1663	416	116	1956	0.850	1661	644	6.2	6.5	14.583	B
4	483	121	700	1294	0.374	483	1077	0.8	0.8	6.085	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	316	79	305	2120	0.149	317	669	0.4	0.3	3.308	A
2	0	0	621	1050	0.000	0	0	0.0	0.0	0.000	A
3	1357	339	94	1971	0.689	1372	527	6.5	2.7	7.431	A
4	395	99	578	1372	0.288	396	889	0.8	0.6	5.058	A

**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	265	66	255	2157	0.123	265	557	0.3	0.2	3.152	A
2	0	0	520	1109	0.000	0	0	0.0	0.0	0.000	A
3	1137	284	79	1982	0.574	1141	441	2.7	1.6	5.194	A
4	331	83	481	1434	0.230	331	740	0.6	0.4	4.475	A



# Proposed Mitigation - 2019 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	8.50	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)	Run automatically
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	666	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	515	100.000
4		ONE HOUR	✓	1143	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	0	546	115
	2	0	0	1	0
	3	212	0	0	303
	4	150	0	992	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	22
	4	58	0	9	0

## 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	0.48	5.80	1.2	A	611	917
2	0.00	0.00	0.0	A	0	0
3	0.29	3.56	0.6	A	473	709
4	0.79	12.31	4.2	B	1049	1573

### Main Results for each time segment

#### 16:15 - 16:30

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	501	125	743	1792	0.280	499	275	0.0	0.5	3.574	A
2	0	0	1243	692	0.000	0	0	0.0	0.0	0.000	A
3	388	97	91	1974	0.198	388	1152	0.0	0.3	3.083	A
4	861	215	163	1638	0.525	856	314	0.0	1.2	5.198	A

#### 16:30 - 16:45

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	599	150	890	1682	0.356	598	329	0.5	0.7	4.266	A
2	0	0	1488	551	0.000	0	0	0.0	0.0	0.000	A
3	463	116	109	1961	0.236	463	1380	0.3	0.4	3.269	A
4	1028	257	195	1617	0.635	1025	376	1.2	1.9	6.870	A

#### 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	733	183	1086	1536	0.478	731	403	0.7	1.2	5.738	A
2	0	0	1817	361	0.000	0	0	0.0	0.0	0.000	A
3	567	142	133	1944	0.292	566	1684	0.4	0.6	3.553	A
4	1258	315	239	1589	0.792	1250	461	1.9	4.1	11.765	B

#### 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	733	183	1093	1530	0.479	733	404	1.2	1.2	5.800	A
2	0	0	1826	358	0.000	0	0	0.0	0.0	0.000	A
3	567	142	133	1944	0.292	567	1693	0.6	0.6	3.557	A
4	1258	315	239	1589	0.792	1258	461	4.1	4.2	12.307	B

**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	599	150	900	1674	0.358	601	331	1.2	0.7	4.312	A
2	0	0	1501	544	0.000	0	0	0.0	0.0	0.000	A
3	463	116	109	1981	0.236	464	1392	0.6	0.4	3.272	A
4	1028	257	195	1617	0.635	1036	377	4.2	2.0	7.143	A

**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	501	125	750	1787	0.281	502	277	0.7	0.5	3.604	A
2	0	0	1252	887	0.000	0	0	0.0	0.0	0.000	A
3	388	97	91	1973	0.196	388	1161	0.4	0.3	3.093	A
4	861	215	164	1637	0.526	864	316	2.0	1.3	5.307	A

# Proposed Mitigation - 2019 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	14.11	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)	Run automatically
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	364	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1567	100.000
4		ONE HOUR	✓	465	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	257	104
	2	4	0	19	5
	3	648	24	0	895
	4	101	3	361	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	78	67	61
	2	98	0	78	87
	3	27	38	0	18
	4	28	35	38	0

## 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	0.20	3.65	0.4	A	334	501
2	0.03	7.14	0.1	A	28	39
3	0.89	18.93	8.6	C	1438	2157
4	0.40	6.48	0.9	A	427	640

### Main Results for each time segment

#### 07:15 - 07:30

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	274	69	291	2130	0.129	273	564	0.0	0.2	3.196	A
2	21	5	542	1096	0.019	21	22	0.0	0.0	6.099	A
3	1180	295	85	1977	0.597	1173	477	0.0	1.8	5.404	A
4	350	88	507	1418	0.247	348	752	0.0	0.4	4.560	A

#### 07:30 - 07:45

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	327	82	348	2087	0.157	327	676	0.2	0.3	3.374	A
2	25	6	649	1034	0.024	25	26	0.0	0.0	6.498	A
3	1409	352	102	1965	0.717	1404	572	1.8	3.0	7.740	A
4	418	105	607	1354	0.309	417	900	0.4	0.6	5.213	A

#### 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	401	100	426	2029	0.198	400	821	0.3	0.4	3.646	A
2	31	8	795	951	0.032	31	32	0.0	0.1	7.130	A
3	1725	431	125	1949	0.885	1705	700	3.0	8.1	16.693	C
4	512	128	737	1270	0.403	511	1094	0.6	0.9	6.419	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	401	100	427	2028	0.198	401	829	0.4	0.4	3.646	A
2	31	8	796	950	0.032	31	32	0.1	0.1	7.136	A
3	1725	431	126	1949	0.885	1723	701	8.1	8.6	18.933	C
4	512	128	744	1265	0.405	512	1104	0.9	0.9	6.482	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	327	82	350	2086	0.157	328	687	0.4	0.3	3.380	A
2	25	6	651	1033	0.024	25	26	0.1	0.0	6.506	A
3	1409	352	103	1965	0.717	1431	574	8.6	3.2	8.518	A
4	418	105	618	1346	0.310	419	915	0.9	0.6	5.274	A

**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	274	69	293	2129	0.129	274	570	0.3	0.2	3.205	A
2	21	5	545	1094	0.019	21	22	0.0	0.0	6.112	A
3	1180	295	86	1977	0.597	1185	480	3.2	1.8	5.575	A
4	350	88	512	1414	0.248	351	759	0.6	0.4	4.595	A

# Proposed Mitigation - 2019 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	10.02	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)	Run automatically
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	681	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	591	100.000
4		ONE HOUR	✓	1164	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	5	4	557	115
	2	4	0	32	6
	3	227	32	0	332
	4	150	4	1009	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	23
	4	58	77	10	0

## 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	0.50	6.32	1.3	A	625	937
2	0.14	17.57	0.2	C	39	58
3	0.34	3.87	0.7	A	542	813
4	0.83	15.04	5.2	C	1088	1602

### Main Results for each time segment

#### 16:15 - 16:30

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	513	128	783	1782	0.291	511	289	0.0	0.5	3.718	A
2	32	8	1263	880	0.046	31	30	0.0	0.1	7.909	A
3	445	111	98	1988	0.226	443	1196	0.0	0.4	3.264	A
4	876	219	201	1613	0.543	871	340	0.0	1.3	5.519	A

#### 16:30 - 16:45

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	612	153	937	1647	0.372	611	346	0.5	0.8	4.499	A
2	38	9	1513	537	0.070	38	36	0.1	0.1	10.288	B
3	531	133	118	1955	0.272	531	1433	0.4	0.5	3.498	A
4	1046	262	241	1588	0.659	1043	408	1.3	2.2	7.527	A

#### 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	750	187	1142	1494	0.502	748	423	0.8	1.3	6.231	A
2	46	12	1846	345	0.134	46	44	0.1	0.2	17.151	C
3	651	163	144	1937	0.336	650	1748	0.5	0.7	3.870	A
4	1282	320	295	1553	0.825	1270	499	2.2	5.0	14.048	B

#### 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	750	187	1151	1487	0.504	750	425	1.3	1.3	6.324	A
2	46	12	1857	338	0.137	46	44	0.2	0.2	17.572	C
3	651	163	144	1936	0.336	651	1759	0.7	0.7	3.874	A
4	1282	320	295	1553	0.825	1281	500	5.0	5.2	15.037	C



**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	612	153	950	1637	0.374	614	349	1.3	0.8	4.570	A
2	38	9	1529	527	0.072	38	36	0.2	0.1	10.508	B
3	531	133	118	1954	0.272	532	1449	0.7	0.5	3.503	A
4	1046	262	241	1588	0.659	1058	409	5.2	2.3	7.956	A

**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	513	128	791	1756	0.292	514	291	0.8	0.5	3.756	A
2	32	8	1274	674	0.047	32	30	0.1	0.1	7.997	A
3	445	111	99	1988	0.226	445	1207	0.5	0.4	3.274	A
4	876	219	202	1613	0.543	880	342	2.3	1.4	5.659	A

# Proposed Mitigation - 2032 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	69.69	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)	Run automatically
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	411	100.000
2		ONE HOUR	✓	0	100.000
3		ONE HOUR	✓	1842	100.000
4		ONE HOUR	✓	553	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	0	287	123
	2	0	0	0	0
	3	737	0	0	1105
	4	119	0	434	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	68	61
	2	0	0	0	0
	3	28	0	0	16
	4	28	0	36	0

## 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	0.23	3.88	0.5	A	377	566
2	0.00	0.00	0.0	A	0	0
3	1.04	103.03	63.1	F	1690	2535
4	0.49	7.57	1.3	A	507	761

### Main Results for each time segment

#### 07:15 - 07:30

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	309	77	325	2104	0.147	308	640	0.0	0.3	3.317	A
2	0	0	633	1044	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	93	1972	0.703	1376	540	0.0	2.8	7.109	A
4	416	104	551	1369	0.300	414	918	0.0	0.6	4.944	A

#### 07:30 - 07:45

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	369	92	389	2056	0.180	369	765	0.3	0.4	3.532	A
2	0	0	759	971	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	111	1959	0.845	1643	647	2.8	6.0	13.119	B
4	497	124	658	1321	0.376	496	1096	0.6	0.8	5.854	A

#### 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	453	113	476	1991	0.227	452	891	0.4	0.5	3.872	A
2	0	0	928	873	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	136	1942	1.044	1899	792	6.0	38.4	52.404	F
4	609	152	761	1255	0.485	607	1274	0.8	1.2	7.435	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	453	113	476	1990	0.227	453	904	0.5	0.5	3.876	A
2	0	0	930	872	0.000	0	0	0.0	0.0	0.000	A
3	2028	507	137	1942	1.044	1929	794	38.4	63.1	103.031	F
4	609	152	773	1247	0.488	609	1293	1.2	1.3	7.565	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	369	92	391	2055	0.180	370	859	0.5	0.4	3.540	A
2	0	0	761	970	0.000	0	0	0.0	0.0	0.000	A
3	1656	414	112	1959	0.845	1876	650	63.1	8.1	63.953	F
4	497	124	751	1261	0.394	499	1236	1.3	0.9	6.349	A

**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	309	77	328	2102	0.147	310	654	0.4	0.3	3.327	A
2	0	0	637	1041	0.000	0	0	0.0	0.0	0.000	A
3	1387	347	93	1972	0.703	1408	544	8.1	2.9	7.915	A
4	416	104	564	1381	0.301	418	937	0.9	0.6	5.022	A

# Proposed Mitigation - 2032 Do Minimum, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	38.22	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)	Run automatically
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	772	100.000
2		ONE HOUR	✓	1	100.000
3		ONE HOUR	✓	657	100.000
4		ONE HOUR	✓	1425	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	6	0	631	135
	2	0	0	1	0
	3	245	0	0	412
	4	176	0	1248	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	0	27	35
	2	0	0	0	0
	3	63	0	0	19
	4	58	0	8	0

## 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	0.63	9.36	2.2	A	708	1063
2	0.00	0.00	0.0	A	0	0
3	0.38	3.95	0.8	A	603	904
4	1.00	69.66	30.5	F	1308	1961

### Main Results for each time segment

#### 16:15 - 16:30

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	581	145	933	1650	0.352	578	320	0.0	0.7	4.304	A
2	0	0	1511	538	0.000	0	0	0.0	0.0	0.000	A
3	495	124	106	1983	0.252	493	1405	0.0	0.4	3.236	A
4	1073	288	188	1621	0.682	1064	411	0.0	2.1	7.154	A

#### 16:30 - 16:45

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	694	174	1115	1513	0.459	692	383	0.7	1.1	5.622	A
2	0	0	1808	367	0.000	0	0	0.0	0.0	0.000	A
3	591	148	127	1948	0.303	590	1681	0.4	0.6	3.508	A
4	1281	320	225	1598	0.802	1273	492	2.1	4.3	12.131	B

#### 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	850	212	1315	1364	0.623	846	461	1.1	2.1	8.854	A
2	0	0	2161	163	0.000	0	0	0.0	0.0	0.000	A
3	723	181	156	1928	0.375	723	2005	0.6	0.8	3.948	A
4	1569	392	276	1565	1.002	1500	602	4.3	21.5	41.488	E

#### 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	850	212	1343	1343	0.633	850	466	2.1	2.2	9.380	A
2	0	0	2193	145	0.000	0	0	0.0	0.0	0.000	A
3	723	181	156	1928	0.375	723	2037	0.8	0.8	3.954	A
4	1569	392	276	1565	1.002	1533	603	21.5	30.5	69.660	F

**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	694	174	1212	1441	0.482	698	397	2.2	1.2	6.253	A
2	0	0	1910	308	0.000	0	0	0.0	0.0	0.000	A
3	591	148	128	1947	0.303	591	1782	0.8	0.6	3.517	A
4	1281	320	226	1597	0.802	1383	494	30.5	5.0	25.995	D

**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	581	145	950	1637	0.355	583	323	1.2	0.7	4.398	A
2	0	0	1533	525	0.000	0	0	0.0	0.0	0.000	A
3	495	124	107	1962	0.252	495	1428	0.6	0.4	3.247	A
4	1073	268	189	1621	0.682	1084	413	5.0	2.3	7.679	A

# Proposed Mitigation - 2032 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	98.29	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)	Run automatically
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	423	100.000
2		ONE HOUR	✓	28	100.000
3		ONE HOUR	✓	1900	100.000
4		ONE HOUR	✓	579	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	1	2	297	123
	2	4	0	19	5
	3	751	24	0	1125
	4	119	3	457	0

## Vehicle Mix



### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	78	67	61
	2	98	0	78	87
	3	27	38	0	17
	4	28	35	35	0

## 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	0.24	4.00	0.5	A	388	582
2	0.04	7.99	0.1	A	28	39
3	1.08	145.03	94.0	F	1743	2615
4	0.52	8.05	1.4	A	531	797

### Main Results for each time segment

#### 07:15 - 07:30

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	318	80	362	2077	0.153	317	653	0.0	0.3	3.374	A
2	21	5	658	1029	0.020	21	22	0.0	0.0	6.503	A
3	1430	358	100	1987	0.727	1418	579	0.0	3.1	7.762	A
4	436	109	582	1369	0.318	433	936	0.0	0.6	5.122	A

#### 07:30 - 07:45

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	380	95	434	2023	0.188	380	780	0.3	0.4	3.615	A
2	25	6	788	954	0.026	25	28	0.0	0.0	7.058	A
3	1708	427	119	1954	0.874	1691	694	3.1	7.4	15.628	C
4	521	130	694	1298	0.401	519	1116	0.6	0.9	6.167	A

#### 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	466	116	529	1952	0.239	465	890	0.4	0.5	3.994	A
2	31	8	965	853	0.036	31	30	0.0	0.1	7.980	A
3	2092	523	146	1935	1.081	1908	849	7.4	53.4	67.564	F
4	637	159	784	1240	0.514	635	1270	0.9	1.4	7.919	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	466	116	531	1951	0.239	466	899	0.5	0.5	3.999	A
2	31	8	967	851	0.036	31	30	0.1	0.1	7.992	A
3	2092	523	146	1935	1.081	1930	851	53.4	94.0	145.028	F
4	637	159	793	1235	0.516	637	1284	1.4	1.4	8.045	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	380	95	439	2019	0.188	381	874	0.5	0.4	3.625	A
2	25	6	791	953	0.026	25	29	0.1	0.0	7.072	A
3	1708	427	120	1953	0.874	1929	697	94.0	38.9	128.815	F
4	521	130	791	1235	0.421	522	1257	1.4	1.0	6.755	A

**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	318	80	367	2073	0.154	319	715	0.4	0.3	3.388	A
2	21	5	662	1027	0.021	21	24	0.0	0.0	6.521	A
3	1430	358	100	1967	0.727	1572	583	38.9	3.4	15.380	C
4	438	109	645	1329	0.328	437	1028	1.0	0.7	5.398	A

# Proposed Mitigation - 2032 Do Something, 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	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4	54.96	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)	Run automatically
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	788	100.000
2		ONE HOUR	✓	42	100.000
3		ONE HOUR	✓	732	100.000
4		ONE HOUR	✓	1448	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	6	4	643	135
	2	4	0	32	6
	3	260	32	0	440
	4	176	4	1265	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	46	91	28	35
	2	77	0	37	57
	3	63	79	0	20
	4	58	77	9	0

## 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	0.65	10.16	2.4	B	723	1085
2	0.32	50.98	0.6	F	39	58
3	0.42	4.35	1.0	A	672	1008
4	1.04	105.11	49.8	F	1327	1990

### Main Results for each time segment

#### 16:15 - 16:30

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	593	148	972	1621	0.366	590	334	0.0	0.7	4.511	A
2	32	8	1532	528	0.060	31	30	0.0	0.1	10.384	B
3	551	138	114	1958	0.282	549	1450	0.0	0.5	3.435	A
4	1089	272	228	1597	0.682	1079	436	0.0	2.4	7.748	A

#### 16:30 - 16:45

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	708	177	1161	1479	0.479	707	399	0.7	1.2	6.019	A
2	38	9	1832	353	0.107	37	36	0.1	0.2	16.268	C
3	658	165	136	1942	0.339	657	1733	0.5	0.7	3.768	A
4	1300	325	271	1568	0.829	1289	522	2.4	5.0	14.097	B

#### 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	868	217	1343	1344	0.646	863	478	1.2	2.3	9.613	A
2	46	12	2162	162	0.285	45	44	0.2	0.5	43.168	E
3	806	201	166	1921	0.420	805	2041	0.7	1.0	4.334	A
4	1592	398	332	1530	1.041	1489	639	5.0	30.9	54.847	F

#### 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	868	217	1367	1325	0.655	867	482	2.3	2.4	10.157	B
2	46	12	2190	146	0.316	46	44	0.5	0.6	50.978	F
3	806	201	167	1920	0.420	806	2069	1.0	1.0	4.346	A
4	1592	398	332	1529	1.041	1516	641	30.9	49.8	105.112	F

**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	708	177	1322	1359	0.521	712	423	2.4	1.4	7.255	A
2	38	9	1998	257	0.147	39	37	0.6	0.3	23.744	C
3	658	165	138	1941	0.339	659	1900	1.0	0.7	3.781	A
4	1300	325	272	1568	0.829	1473	525	49.8	6.6	59.739	F

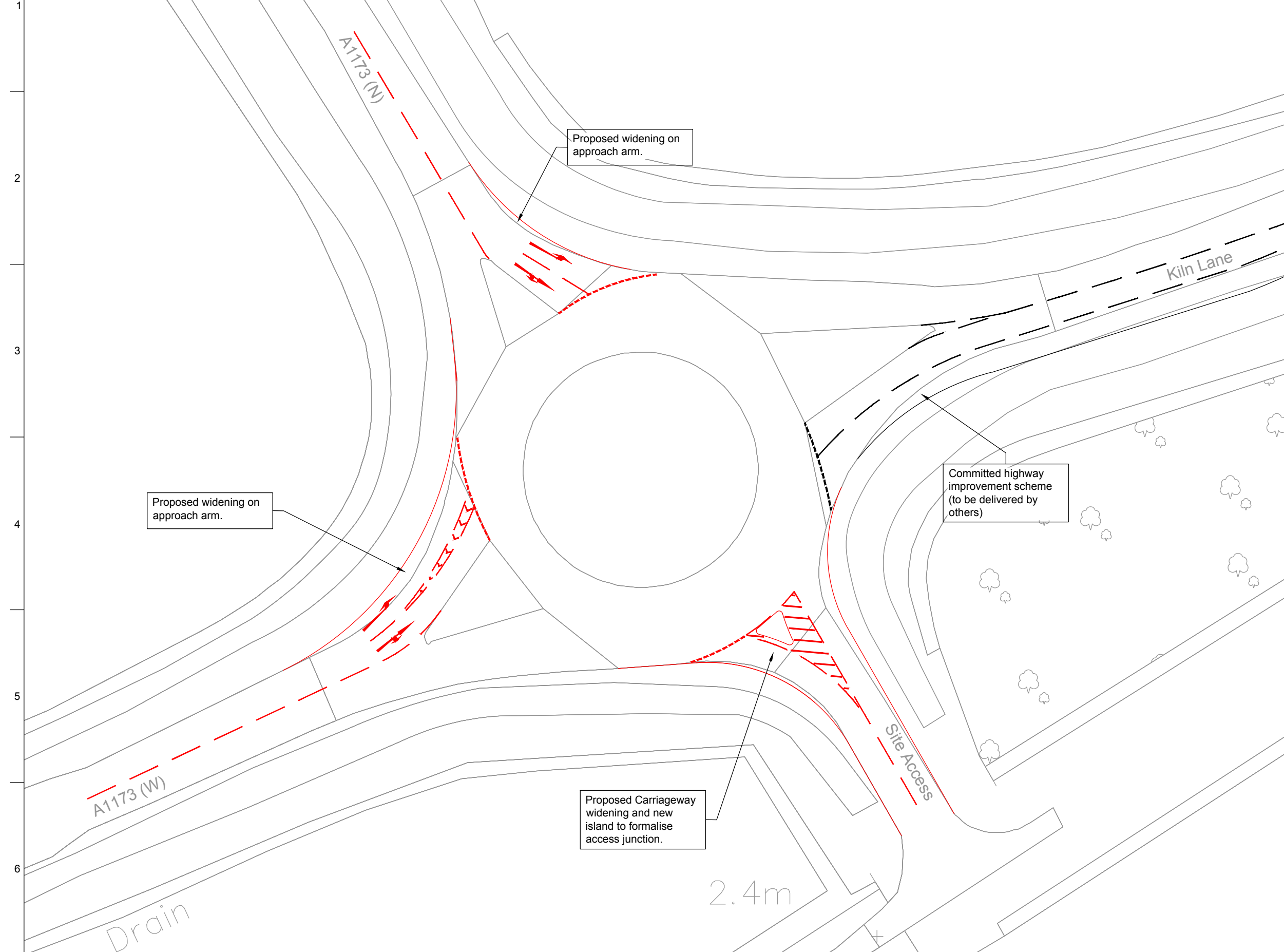
**17:30 - 17:45**

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	593	148	995	1604	0.370	596	338	1.4	0.8	4.636	A
2	32	8	1560	509	0.062	32	30	0.3	0.1	10.782	B
3	551	138	115	1957	0.282	552	1478	0.7	0.5	3.451	A
4	1089	272	228	1596	0.682	1105	439	6.6	2.5	8.572	A

## Appendix H

### A1173 / Kiln Lane Junction Improvement Scheme

A3 A B C D E F G



- Notes:**
1. Preliminary layout subject to detailed design including full CDM compliance, statutory undertakers search/diversion requirements and Local Authority approval.
  2. Red colouring on the drawing denotes the suggested improvements and not the colour of items, i.e. kerblines.
  3. No existing utility information available at this stage to inform the design.

**Background Mapping:**

- OS digital mapping (under license from ENGIE)

**Geometries:**

**Arm: Site Access**  
 Approach road half-width (V) = 3.65 m  
 Entry width (E) = 4.50 m  
 Effective flare length (l') = 12.6 m  
 Entry radius (R) = 21.0 m  
 Inscribed circle diameters (D) = 49.2 m  
 Conflict entry angle (PHI) = 10.8 deg

**Arm: A1173 (W)**  
 Approach road half-width (V) = 3.70 m  
 Entry width (E) = 8.24 m  
 Effective flare length (l') = 19.0 m  
 Entry radius (R) = 40.0 m  
 Inscribed circle diameters (D) = 49.2 m  
 Conflict entry angle (PHI) = 16.4 deg

**Arm: A1173 (N)**  
 Approach road half-width (V) = 3.25 m  
 Entry width (E) = 7.99 m  
 Effective flare length (l') = 12.3 m  
 Entry radius (R) = 31.0 m  
 Inscribed circle diameters (D) = 49.2 m  
 Conflict entry angle (PHI) = 14.8 deg

Rev	Date	By	Chkd	Appd
-	24/11/17	JH	AG	AG

Draft Issue

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Client  
**ENGIE**

Project Title  
**Stallingborough Employment Site**

Drawing Title  
**Proposed Improvement Scheme for  
 A1173 / Kiln Lane Roundabout**

Scale at A3	1:200	<b>ISSUED FOR DISCUSSION PURPOSES</b>
Role	Transport	
Suitability	For Information	
Arup Job No	<b>248164</b>	Rev
Name	<b>248164-SK-01</b>	-

## **Appendix I**

A180 / A1173 Model Outputs



# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution**

**Filename:** B - A180 - A1173\_LargeRoundabout\_LaneSimulation\_Existing.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\A180 - A1173 Roundabout\Arup

**Report generation date:** 06/12/2017 16:30:33

- »Existing - 2017 Base, AM
- »Existing - 2017 Base, PM
- »Existing - 2019 Do Minimum, AM
- »Existing - 2019 Do Minimum, PM
- »Existing - 2019 Do Something, AM
- »Existing - 2019 Do Something, PM
- »Existing - 2032 Do Minimum, AM
- »Existing - 2032 Do Minimum, PM
- »Existing - 2032 Do Something, AM
- »Existing - 2032 Do Something, PM

## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>Existing [Lane Simulation] - 2017 Base</b>								
Arm 1	0.3	2.57		A	0.2	2.36		A
Arm 2	0.5	2.86		A	1.8	3.92		A
Arm 3	1.4	4.77		A	0.8	3.13		A
Arm 4	0.6	2.68		A	0.2	2.37		A
<b>Existing [Lane Simulation] - 2019 Do Minimum</b>								
Arm 1	0.4	3.54		A	0.2	3.26		A
Arm 2	0.7	3.05		A	2.1	5.40		A
Arm 3	2.3	6.35		A	0.6	2.89		A
Arm 4	0.5	2.86		A	0.2	2.59		A
<b>Existing [Lane Simulation] - 2019 Do Something</b>								
Arm 1	0.6	3.76		A	0.4	3.67		A
Arm 2	0.7	3.34		A	4.8	7.44		A
Arm 3	3.1	7.98		A	0.7	2.96		A
Arm 4	0.5	2.87		A	0.2	2.67		A
<b>Existing [Lane Simulation] - 2032 Do Minimum</b>								
Arm 1	0.5	3.66		A	0.3	3.21		A
Arm 2	0.8	3.34		A	6.4	10.72		B
Arm 3	4.3	10.52		B	0.8	3.02		A
Arm 4	0.6	2.96		A	0.2	2.61		A
<b>Existing [Lane Simulation] - 2032 Do Something</b>								
Arm 1	0.7	3.85		A	0.5	3.66		A
Arm 2	1.2	3.68		A	13.8	20.94		C
Arm 3	6.6	14.32		B	0.9	3.15		A
Arm 4	0.5	2.99		A	0.2	2.71		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. Arm and junction delays are averages for all movements, including movements with zero delay.

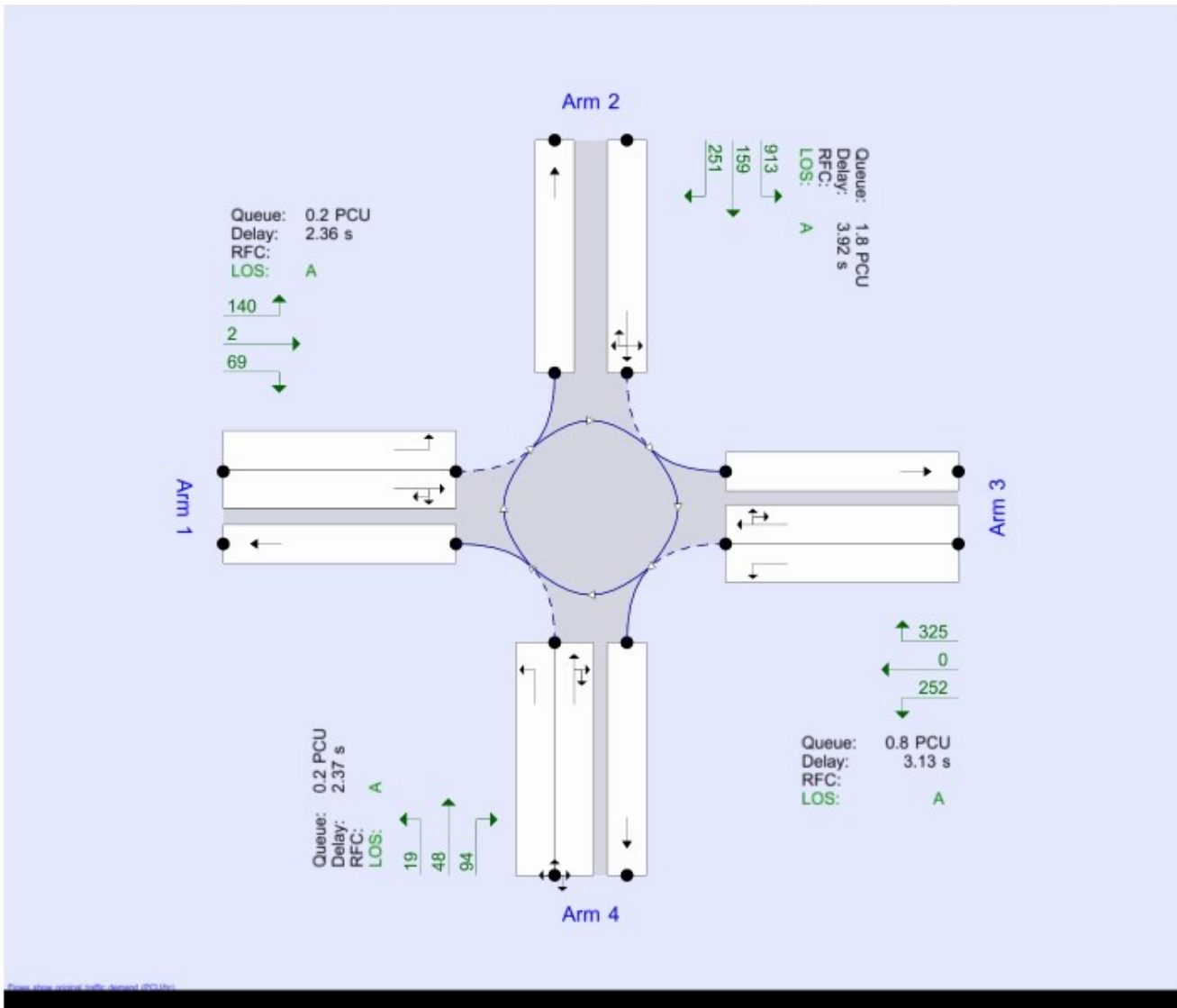
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	31/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	PCU	PCU	perHour	s	-Min	perMin



View this report with desktop JCU User

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

### Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	806233683	101	7.33

### 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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	100.000	100.000

# Existing - 2017 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	3.57	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A180 (W)	
2	A1173	
3	A180 (E)	
4	Matthew Ford Way	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.72	8.46	2.7	24.2	100.0	10.0	
2	4.34	6.42	31.2	33.8	100.0	8.5	
3	6.55	7.41	25.6	44.3	93.0	0.0	
4	4.62	8.54	23.5	17.7	93.0	11.0	

### Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1211	96.18
2	241	38.09
3	248	91.43
4	1025	21.11

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	1.004	3033
2	1.050	2739
3	1.219	3127
4	0.963	2891

The slope and intercept shown above include any corrections and adjustments.

### Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1	Evenly split	10.00
2	Evenly split	10.00
3	Evenly split	10.00
4	Evenly split	10.00

### Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1	1 [Give-way line]	1	2		Infinity	1800	2000
		2	1,3,4		Infinity	1800	2000
2	1 [Give-way line]	1	1,2,3,4		Infinity	1800	2739
		2					
3	1 [Give-way line]	1	4		Infinity	1800	2000
		2	1,2,3		Infinity	1800	2000
4	1 [Give-way line]	1	1	✓	9.00	1800	2000
		2	2,3,4	✓	9.00	1800	2000
	2	1	(1,2,3,4)		Infinity		

### Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1	1 [Give-way line]	1	0.502	1516
		2	0.502	1516
2	1 [Give-way line]	1	1.050	2739
		2		
3	1 [Give-way line]	1	0.609	1563
		2	0.609	1563
4	1 [Give-way line]	1	0.482	1445
		2	0.482	1445

### Lane Movements

Arm	Lane Level	Lane	Destination arm			
			1	2	3	4
1	1 [Give-way line]	1		✓		
		2	✓		✓	✓
2	1 [Give-way line]	1	✓	✓	✓	✓
		2				
3	1 [Give-way line]	1				✓
		2	✓	✓	✓	
4	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

## 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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	316	100.000
2		ONE HOUR	✓	532	100.000
3		ONE HOUR	✓	927	100.000
4		ONE HOUR	✓	445	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	294	2	20
	2	183	1	304	44
	3	0	840	1	86
	4	76	151	218	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	0	10
	2	18	0	76	48
	3	0	21	0	27
	4	3	9	4	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	2.57	0.3	A	286	428
2	2.86	0.5	A	445	668
3	4.77	1.4	A	805	1208
4	2.68	0.6	A	406	610

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	228	57	883	228	192	0.0	0.1	2.476	A
2	387	92	183	368	927	0.0	0.3	2.469	A
3	671	168	174	669	377	0.0	0.8	3.662	A
4	337	84	738	337	105	0.0	0.2	2.418	A

#### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	277	69	1038	278	231	0.1	0.2	2.464	A
2	439	110	216	437	1100	0.3	0.4	2.640	A
3	782	195	215	785	438	0.8	0.8	4.163	A
4	396	99	872	397	128	0.2	0.2	2.505	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	340	85	1278	341	280	0.2	0.3	2.539	A
2	538	134	286	535	1352	0.4	0.4	2.881	A
3	980	240	258	959	544	0.8	1.2	4.673	A
4	494	123	1083	495	155	0.2	0.3	2.677	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	358	90	1268	360	282	0.3	0.2	2.566	A
2	540	135	285	541	1361	0.4	0.5	2.823	A
3	951	238	264	949	542	1.2	1.4	4.772	A
4	491	123	1057	490	155	0.3	0.6	2.655	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	282	70	1055	282	225	0.2	0.2	2.418	A
2	438	109	210	439	1127	0.5	0.2	2.548	A
3	807	202	209	807	440	1.4	1.0	4.112	A
4	392	98	888	393	128	0.6	0.3	2.519	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	228	57	876	228	181	0.2	0.1	2.405	A
2	351	88	181	349	924	0.2	0.3	2.421	A
3	663	168	172	663	358	1.0	0.8	3.638	A
4	330	82	728	329	107	0.3	0.3	2.510	A

## Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

### Lanes: Main Results for each time segment

**07:15 - 07:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	211	1800	0.117	212	0.0	0.1	2.510	A
			2	1,3,4	16	1800	0.009	16	0.0	0.0	1.995	A
	Exit	1	1		192			192	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	367	2546	0.144	368	0.0	0.3	2.469	A
	Exit	1	1		927			927	0.0	0.0	0.000	A
3	Entry	1	1	4	64	1800	0.036	64	0.0	0.0	2.500	A
			2	1,2,3	607	1800	0.337	606	0.0	0.7	3.775	A
	Exit	1	1		377			377	0.0	0.0	0.000	A
4	Entry	1	1	1	61	1800	0.034	61	0.0	0.0	2.127	A
			2	2,3,4	278	1800	0.153	277	0.0	0.1	2.483	A
			1	(1,2,3,4)	337			337	0.0	0.0	0.000	A
	Exit	1	1		105			105	0.0	0.0	0.000	A



**07:30 - 07:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	259	1800	0.144	260	0.1	0.2	2.471	A
			2	1,3,4	18	1800	0.010	18	0.0	0.0	2.366	A
	Exit	1	1		231			231	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	439	2512	0.175	437	0.3	0.4	2.640	A
	Exit	1	1		1100			1100	0.0	0.0	0.000	A
3	Entry	1	1	4	76	1800	0.042	77	0.0	0.0	2.742	A
			2	1,2,3	708	1800	0.392	708	0.7	0.8	4.303	A
	Exit	1	1		438			438	0.0	0.0	0.000	A
4	Entry	1	1	1	67	1800	0.037	67	0.0	0.0	2.121	A
			2	2,3,4	329	1800	0.183	329	0.1	0.2	2.586	A
		2	1	(1,2,3,4)	396			396	0.0	0.0	0.000	A
	Exit	1	1		128			128	0.0	0.0	0.000	A

**07:45 - 08:00**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	317	1800	0.176	317	0.2	0.3	2.559	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.246	A
	Exit	1	1		280			280	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	538	2459	0.218	535	0.4	0.4	2.861	A
	Exit	1	1		1352			1352	0.0	0.0	0.000	A
3	Entry	1	1	4	89	1800	0.050	91	0.0	0.1	2.828	A
			2	1,2,3	870	1800	0.483	868	0.8	1.2	4.854	A
	Exit	1	1		544			544	0.0	0.0	0.000	A
4	Entry	1	1	1	86	1800	0.048	86	0.0	0.0	2.213	A
			2	2,3,4	408	1800	0.227	409	0.2	0.3	2.776	A
		2	1	(1,2,3,4)	494			494	0.0	0.0	0.000	A
	Exit	1	1		155			155	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	332	1800	0.184	333	0.3	0.1	2.586	A
			2	1,3,4	27	1800	0.015	27	0.0	0.0	2.299	A
	Exit	1	1		282			282	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	540	2461	0.220	541	0.4	0.5	2.823	A
	Exit	1	1		1361			1361	0.0	0.0	0.000	A
3	Entry	1	1	4	88	1800	0.049	87	0.1	0.1	2.645	A
			2	1,2,3	863	1800	0.479	862	1.2	1.3	4.980	A
	Exit	1	1		542			542	0.0	0.0	0.000	A
4	Entry	1	1	1	87	1800	0.048	87	0.0	0.1	2.162	A
			2	2,3,4	404	1800	0.224	403	0.3	0.5	2.763	A
		2	1	(1,2,3,4)	491			491	0.0	0.0	0.000	A
	Exit	1	1		155			155	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	263	1800	0.148	263	0.1	0.2	2.438	A
			2	1,3,4	19	1800	0.010	19	0.0	0.0	2.149	A
	Exit	1	1		225			225	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	438	2518	0.174	439	0.5	0.2	2.548	A
	Exit	1	1		1127			1127	0.0	0.0	0.000	A
3	Entry	1	1	4	76	1800	0.042	76	0.1	0.1	2.598	A
			2	1,2,3	731	1800	0.408	731	1.3	0.9	4.258	A
	Exit	1	1		440			440	0.0	0.0	0.000	A
4	Entry	1	1	1	70	1800	0.039	70	0.1	0.0	2.107	A
			2	2,3,4	322	1800	0.179	323	0.5	0.2	2.608	A
		2	1	(1,2,3,4)	392			392	0.0	0.0	0.000	A
	Exit	1	1		128			128	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	210	1800	0.117	211	0.2	0.1	2.431	A
			2	1,3,4	18	1800	0.010	18	0.0	0.0	2.080	A
	Exit	1	1		181			181	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	351	2549	0.138	349	0.2	0.3	2.421	A
	Exit	1	1		924			924	0.0	0.0	0.000	A
3	Entry	1	1	4	60	1800	0.033	60	0.1	0.0	2.673	A
			2	1,2,3	603	1800	0.335	603	0.9	0.7	3.733	A
	Exit	1	1		358			358	0.0	0.0	0.000	A
4	Entry	1	1	1	57	1800	0.032	57	0.0	0.0	2.178	A
			2	2,3,4	273	1800	0.151	272	0.2	0.2	2.580	A
		2	1	(1,2,3,4)	330			330	0.0	0.0	0.000	A
	Exit	1	1		107			107	0.0	0.0	0.000	A

# Existing - 2017 Base, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	3.46	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	471	96.18
2	176	38.09
3	487	91.43
4	586	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	218	100.000
2		ONE HOUR	✓	1323	100.000
3		ONE HOUR	✓	580	100.000
4		ONE HOUR	✓	162	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	7	140	2	69
	2	251	0	913	159
	3	0	325	3	252
	4	19	48	94	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	50	11	0	2
	2	3	0	20	10
	3	0	58	50	5
	4	2	47	0	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	2.36	0.2	A	194	291
2	3.92	1.8	A	1175	1763
3	3.13	0.8	A	500	750
4	2.37	0.2	A	146	219

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	166	42	325	167	205	0.0	0.1	2.284	A
2	952	238	130	954	362	0.0	0.7	2.579	A
3	400	100	364	402	720	0.0	0.3	2.773	A
4	118	30	411	119	354	0.0	0.0	2.345	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	192	48	396	192	242	0.1	0.1	2.310	A
2	1146	288	158	1142	419	0.7	1.2	3.001	A
3	478	120	428	479	872	0.3	0.3	2.955	A
4	139	35	490	138	418	0.0	0.1	2.322	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	237	59	483	238	291	0.1	0.1	2.365	A
2	1414	354	196	1406	525	1.2	1.8	3.784	A
3	604	151	522	603	1080	0.3	0.6	3.134	A
4	180	45	594	180	531	0.1	0.1	2.373	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	226	57	475	227	308	0.1	0.1	2.316	A
2	1420	355	185	1430	517	1.8	1.1	3.916	A
3	595	149	529	591	1086	0.6	0.8	3.104	A
4	176	44	608	175	511	0.1	0.2	2.348	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	185	46	399	184	245	0.1	0.2	2.321	A
2	1134	284	146	1134	437	1.1	1.2	3.083	A
3	500	125	431	501	850	0.8	0.5	3.010	A
4	139	35	505	140	427	0.2	0.1	2.382	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	156	39	333	156	211	0.2	0.2	2.267	A
2	984	246	132	985	357	1.2	0.8	2.564	A
3	423	106	367	422	750	0.5	0.3	2.960	A
4	122	31	422	122	367	0.1	0.0	2.348	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	105	1800	0.058	105	0.0	0.1	2.337	A
			2	1,3,4	61	1800	0.034	61	0.0	0.0	2.193	A
	Exit	1	1		205			205	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	952	2616	0.364	954	0.0	0.7	2.579	A
	Exit	1	1		362			362	0.0	0.0	0.000	A
3	Entry	1	1	4	182	1800	0.101	182	0.0	0.1	2.269	A
			2	1,2,3	218	1800	0.121	220	0.0	0.1	3.412	A
	Exit	1	1		720			720	0.0	0.0	0.000	A
4	Entry	1	1	1	14	1800	0.008	14	0.0	0.0	1.993	A
			2	2,3,4	104	1800	0.058	105	0.0	0.0	2.400	A
		2	1	(1,2,3,4)	118			118	0.0	0.0	0.000	A
	Exit	1	1		354			354	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	122	1800	0.068	122	0.1	0.1	2.387	A
			2	1,3,4	70	1800	0.039	70	0.0	0.0	2.185	A
	Exit	1	1		242			242	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1146	2586	0.443	1142	0.7	1.2	3.001	A
	Exit	1	1		419			419	0.0	0.0	0.000	A
3	Entry	1	1	4	216	1800	0.120	216	0.1	0.1	2.470	A
			2	1,2,3	263	1800	0.146	263	0.1	0.2	3.575	A
	Exit	1	1		872			872	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	16	0.0	0.0	1.866	A
			2	2,3,4	124	1800	0.069	123	0.0	0.1	2.389	A
		2	1	(1,2,3,4)	139			139	0.0	0.0	0.000	A
	Exit	1	1		418			418	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	150	1800	0.083	150	0.1	0.1	2.414	A
			2	1,3,4	87	1800	0.048	88	0.0	0.0	2.285	A
	Exit	1	1		291			291	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1414	2546	0.556	1406	1.2	1.8	3.764	A
	Exit	1	1		525			525	0.0	0.0	0.000	A
3	Entry	1	1	4	279	1800	0.155	279	0.1	0.2	2.591	A
			2	1,2,3	325	1800	0.180	324	0.2	0.4	3.854	A
	Exit	1	1		1080			1080	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	21	0.0	0.0	1.903	A
			2	2,3,4	158	1800	0.088	159	0.1	0.0	2.446	A
		2	1	(1,2,3,4)	180			180	0.0	0.0	0.000	A
	Exit	1	1		531			531	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	145	1800	0.081	145	0.1	0.0	2.381	A
			2	1,3,4	81	1800	0.045	82	0.0	0.0	2.209	A
	Exit	1	1		308			308	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1420	2557	0.558	1430	1.8	1.1	3.918	A
	Exit	1	1		517			517	0.0	0.0	0.000	A
3	Entry	1	1	4	289	1800	0.149	287	0.2	0.3	2.533	A
			2	1,2,3	328	1800	0.181	323	0.4	0.8	3.834	A
	Exit	1	1		1086			1086	0.0	0.0	0.000	A
4	Entry	1	1	1	24	1800	0.013	24	0.0	0.0	1.992	A
			2	2,3,4	152	1800	0.085	152	0.0	0.2	2.402	A
		2	1	(1,2,3,4)	178			178	0.0	0.0	0.000	A
	Exit	1	1		511			511	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	120	1800	0.067	120	0.0	0.1	2.415	A
			2	1,3,4	65	1800	0.038	64	0.0	0.1	2.162	A
	Exit	1	1		245			245	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1134	2598	0.438	1134	1.1	1.2	3.083	A
	Exit	1	1		437			437	0.0	0.0	0.000	A
3	Entry	1	1	4	225	1800	0.125	225	0.3	0.2	2.414	A
			2	1,2,3	275	1800	0.153	278	0.6	0.3	3.772	A
	Exit	1	1		850			850	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	16	0.0	0.0	2.111	A
			2	2,3,4	123	1800	0.088	123	0.2	0.1	2.400	A
		2	1	(1,2,3,4)	139			139	0.0	0.0	0.000	A
	Exit	1	1		427			427	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	98	1800	0.055	99	0.1	0.1	2.375	A
			2	1,3,4	57	1800	0.032	57	0.1	0.1	2.084	A
	Exit	1	1		211			211	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	984	2614	0.378	985	1.2	0.8	2.564	A
	Exit	1	1		357			357	0.0	0.0	0.000	A
3	Entry	1	1	4	198	1800	0.110	197	0.2	0.1	2.387	A
			2	1,2,3	228	1800	0.125	228	0.3	0.2	3.701	A
	Exit	1	1		750			750	0.0	0.0	0.000	A
4	Entry	1	1	1	15	1800	0.008	15	0.0	0.0	1.945	A
			2	2,3,4	108	1800	0.060	107	0.1	0.0	2.408	A
		2	1	(1,2,3,4)	122			122	0.0	0.0	0.000	A
	Exit	1	1		367			367	0.0	0.0	0.000	A

# Existing - 2019 Do Minimum, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	4.80	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	1458	98.18
2	248	38.09
3	258	91.43
4	1287	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓



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	✓	328	100.000
2		ONE HOUR	✓	583	100.000
3		ONE HOUR	✓	1164	100.000
4		ONE HOUR	✓	459	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	305	2	21
	2	191	1	346	45
	3	0	1074	1	89
	4	79	156	224	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	38	0	48
	2	87	0	31	68
	3	0	10	0	21
	4	9	18	6	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.54	0.4	A	302	453
2	3.05	0.7	A	536	804
3	6.35	2.3	A	1072	1608
4	2.86	0.5	A	423	634

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	239	60	1111	242	203	0.0	0.1	3.216	A
2	447	112	185	447	1168	0.0	0.4	2.542	A
3	890	222	198	889	434	0.0	1.3	4.103	A
4	348	87	967	347	121	0.0	0.3	2.577	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	293	73	1312	295	251	0.1	0.2	3.307	A
2	538	134	219	538	1387	0.4	0.5	2.870	A
3	1062	268	242	1061	514	1.3	1.5	4.887	A
4	408	102	1154	408	149	0.3	0.3	2.667	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	352	88	1580	351	308	0.2	0.4	3.540	A
2	655	164	268	654	1663	0.5	0.5	3.053	A
3	1266	317	291	1265	632	1.5	2.3	6.269	A
4	510	128	1377	510	179	0.3	0.5	2.737	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	372	93	1620	373	290	0.4	0.3	3.296	A
2	628	157	276	626	1717	0.5	0.7	3.008	A
3	1288	322	275	1294	627	2.3	1.9	6.353	A
4	508	127	1399	512	170	0.5	0.4	2.857	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	300	75	1307	298	230	0.3	0.4	3.292	A
2	518	129	217	518	1388	0.7	0.5	2.865	A
3	1044	261	227	1044	508	1.9	1.4	4.836	A
4	405	101	1133	405	139	0.4	0.3	2.788	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	257	64	1112	257	194	0.4	0.3	3.177	A
2	431	108	205	431	1163	0.5	0.3	2.611	A
3	884	221	192	883	444	1.4	0.9	3.990	A
4	355	89	951	354	123	0.3	0.4	2.565	A

# Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

## Lanes: Main Results for each time segment

### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1	Entry	1	1	2	224	1800	0.124	226	0.0	0.1	3.255	A	
			2	1,3,4	16	1800	0.009	16	0.0	0.0	2.710	A	
	Exit	1	1		203			203	0.0	0.0	0.000	A	
2	Entry	1	1	1,2,3,4	447	2543	0.176	447	0.0	0.4	2.542	A	
	Exit	1	1		1168			1168	0.0	0.0	0.000	A	
3	Entry	1	1	4	64	1800	0.035	64	0.0	0.0	2.557	A	
			2	1,2,3	825	1800	0.459	826	0.0	1.2	4.219	A	
	Exit	1	1		434			434	0.0	0.0	0.000	A	
4	Entry	1	1	1	63	1800	0.035	63	0.0	0.0	2.125	A	
			2	2,3,4	285	1800	0.159	285	0.0	0.2	2.675	A	
	Exit	1	2	1	(1,2,3,4)	348			348	0.0	0.0	0.000	A
			1	1		121			121	0.0	0.0	0.000	A

### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1	Entry	1	1	2	272	1800	0.151	273	0.1	0.2	3.361	A	
			2	1,3,4	21	1800	0.012	21	0.0	0.0	2.608	A	
	Exit	1	1		251			251	0.0	0.0	0.000	A	
2	Entry	1	1	1,2,3,4	536	2507	0.214	536	0.4	0.5	2.870	A	
	Exit	1	1		1387			1387	0.0	0.0	0.000	A	
3	Entry	1	1	4	86	1800	0.048	85	0.0	0.1	2.514	A	
			2	1,2,3	977	1800	0.543	976	1.2	1.4	5.071	A	
	Exit	1	1		514			514	0.0	0.0	0.000	A	
4	Entry	1	1	1	73	1800	0.041	74	0.0	0.0	2.323	A	
			2	2,3,4	335	1800	0.186	335	0.2	0.3	2.739	A	
	Exit	1	2	1	(1,2,3,4)	408			408	0.0	0.0	0.000	A
			1	1		149			149	0.0	0.0	0.000	A

### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS	
1	Entry	1	1	2	326	1800	0.181	325	0.2	0.3	3.588	A	
			2	1,3,4	26	1800	0.015	26	0.0	0.0	2.882	A	
	Exit	1	1		306			306	0.0	0.0	0.000	A	
2	Entry	1	1	1,2,3,4	655	2455	0.267	654	0.5	0.5	3.053	A	
	Exit	1	1		1663			1663	0.0	0.0	0.000	A	
3	Entry	1	1	4	104	1800	0.058	103	0.1	0.1	2.486	A	
			2	1,2,3	1163	1800	0.646	1162	1.4	2.1	6.568	A	
	Exit	1	1		632			632	0.0	0.0	0.000	A	
4	Entry	1	1	1	93	1800	0.052	93	0.0	0.0	2.186	A	
			2	2,3,4	417	1800	0.232	416	0.3	0.4	2.860	A	
	Exit	1	2	1	(1,2,3,4)	510			510	0.0	0.0	0.000	A
			1	1		179			179	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	349	1800	0.194	349	0.3	0.3	3.324	A
			2	1,3,4	23	1800	0.013	24	0.0	0.0	2.931	A
	Exit	1	1		290			290	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	628	2448	0.258	628	0.5	0.7	3.008	A
	Exit	1	1		1717			1717	0.0	0.0	0.000	A
3	Entry	1	1	4	100	1800	0.058	100	0.1	0.1	2.687	A
			2	1,2,3	1188	1800	0.680	1194	2.1	1.9	6.627	A
	Exit	1	1		627			627	0.0	0.0	0.000	A
4	Entry	1	1	1	85	1800	0.047	86	0.0	0.1	2.121	A
			2	2,3,4	423	1800	0.235	426	0.4	0.4	3.013	A
		2	1	(1,2,3,4)	508			508	0.0	0.0	0.000	A
	Exit	1	1		170			170	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	280	1800	0.158	280	0.3	0.3	3.328	A
			2	1,3,4	19	1800	0.011	19	0.0	0.1	2.799	A
	Exit	1	1		230			230	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	518	2509	0.208	518	0.7	0.5	2.885	A
	Exit	1	1		1388			1388	0.0	0.0	0.000	A
3	Entry	1	1	4	75	1800	0.042	76	0.1	0.0	2.381	A
			2	1,2,3	968	1800	0.538	968	1.9	1.4	5.012	A
	Exit	1	1		508			508	0.0	0.0	0.000	A
4	Entry	1	1	1	67	1800	0.037	67	0.1	0.0	2.313	A
			2	2,3,4	338	1800	0.188	338	0.4	0.3	2.886	A
		2	1	(1,2,3,4)	405			405	0.0	0.0	0.000	A
	Exit	1	1		139			139	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	235	1800	0.131	235	0.3	0.3	3.190	A
			2	1,3,4	22	1800	0.012	22	0.1	0.0	2.999	A
	Exit	1	1		194			194	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	431	2522	0.171	431	0.5	0.3	2.611	A
	Exit	1	1		1163			1163	0.0	0.0	0.000	A
3	Entry	1	1	4	68	1800	0.038	69	0.0	0.0	2.480	A
			2	1,2,3	815	1800	0.453	814	1.4	0.9	4.104	A
	Exit	1	1		444			444	0.0	0.0	0.000	A
4	Entry	1	1	1	58	1800	0.032	58	0.0	0.0	2.190	A
			2	2,3,4	298	1800	0.165	297	0.3	0.3	2.646	A
		2	1	(1,2,3,4)	355			355	0.0	0.0	0.000	A
	Exit	1	1		123			123	0.0	0.0	0.000	A

# Existing - 2019 Do Minimum, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	4.43	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	508	96.18
2	181	38.09
3	504	91.43
4	629	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	226	100.000
2		ONE HOUR	✓	1571	100.000
3		ONE HOUR	✓	621	100.000
4		ONE HOUR	✓	187	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	7	146	2	71
	2	261	0	1146	164
	3	0	358	3	260
	4	20	49	97	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	66	75	0	10
	2	36	0	6	20
	3	0	21	77	4
	4	0	67	5	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.26	0.2	A	208	312
2	5.40	2.1	A	1448	2172
3	2.89	0.6	A	571	857
4	2.59	0.2	A	150	225

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	173	43	374	173	225	0.0	0.2	3.249	A
2	1190	298	131	1190	417	0.0	1.0	2.877	A
3	472	118	384	470	936	0.0	0.5	2.862	A
4	122	30	477	122	377	0.0	0.1	2.507	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	200	50	461	201	265	0.2	0.2	3.051	A
2	1433	358	161	1426	501	1.0	1.9	3.625	A
3	564	141	464	565	1123	0.5	0.5	2.703	A
4	149	37	577	149	452	0.1	0.2	2.540	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	249	62	546	249	313	0.2	0.2	3.258	A
2	1711	428	192	1715	603	1.9	2.1	5.130	A
3	677	169	549	677	1357	0.5	0.6	2.885	A
4	174	44	685	174	541	0.2	0.1	2.494	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	255	64	561	256	320	0.2	0.2	3.080	A
2	1723	431	208	1723	610	2.1	2.1	5.400	A
3	693	173	558	693	1373	0.6	0.6	2.888	A
4	186	47	695	186	557	0.1	0.2	2.515	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	201	50	453	202	269	0.2	0.1	3.077	A
2	1430	358	162	1426	494	2.1	1.6	3.709	A
3	560	140	464	559	1124	0.6	0.5	2.772	A
4	150	38	572	150	451	0.2	0.1	2.589	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	171	43	376	172	230	0.1	0.0	3.116	A
2	1200	300	135	1200	413	1.6	0.9	2.877	A
3	462	116	395	463	941	0.5	0.3	2.658	A
4	119	30	486	120	372	0.1	0.1	2.434	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	118	1800	0.084	117	0.0	0.2	3.809	A
			2	1,3,4	57	1800	0.032	57	0.0	0.1	2.579	A
	Exit	1	1		225			225	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1190	2614	0.455	1190	0.0	1.0	2.877	A
	Exit	1	1		417			417	0.0	0.0	0.000	A
3	Entry	1	1	4	202	1800	0.112	202	0.0	0.2	2.396	A
			2	1,2,3	270	1800	0.150	268	0.0	0.3	2.889	A
	Exit	1	1		938			938	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	16	0.0	0.0	1.992	A
			2	2,3,4	105	1800	0.058	106	0.0	0.1	2.600	A
	Exit	1	1	(1,2,3,4)	122			122	0.0	0.0	0.000	A
					377			377	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	129	1800	0.072	130	0.2	0.1	3.737	A
			2	1,3,4	72	1800	0.040	72	0.1	0.0	2.229	A
	Exit	1	1		265			265	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1433	2581	0.555	1426	1.0	1.9	3.625	A
	Exit	1	1		501			501	0.0	0.0	0.000	A
3	Entry	1	1	4	233	1800	0.130	234	0.2	0.2	2.394	A
			2	1,2,3	331	1800	0.184	331	0.3	0.3	2.957	A
	Exit	1	1		1123			1123	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	1.791	A
			2	2,3,4	131	1800	0.073	130	0.1	0.2	2.646	A
	Exit	1	1	(1,2,3,4)	149			149	0.0	0.0	0.000	A
					452			452	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	180	1800	0.089	181	0.1	0.2	3.947	A
			2	1,3,4	89	1800	0.049	88	0.0	0.1	2.445	A
	Exit	1	1		313			313	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1711	2549	0.671	1715	1.9	2.1	5.130	A
	Exit	1	1		603			603	0.0	0.0	0.000	A
3	Entry	1	1	4	284	1800	0.158	285	0.2	0.1	2.477	A
			2	1,2,3	392	1800	0.218	391	0.3	0.4	3.193	A
	Exit	1	1		1357			1357	0.0	0.0	0.000	A
4	Entry	1	1	1	20	1800	0.011	20	0.0	0.0	2.286	A
			2	2,3,4	154	1800	0.086	154	0.2	0.1	2.527	A
	Exit	1	1	(1,2,3,4)	174			174	0.0	0.0	0.000	A
					541			541	0.0	0.0	0.000	A



**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	181	1800	0.090	162	0.2	0.2	3.785	A
			2	1,3,4	94	1800	0.052	94	0.1	0.1	2.293	A
	Exit	1	1		320			320	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1723	2532	0.681	1723	2.1	2.1	5.400	A
	Exit	1	1		610			610	0.0	0.0	0.000	A
3	Entry	1	1	4	293	1800	0.163	294	0.1	0.2	2.436	A
			2	1,2,3	400	1800	0.222	399	0.4	0.4	3.272	A
	Exit	1	1		1373			1373	0.0	0.0	0.000	A
4	Entry	1	1	1	24	1800	0.013	24	0.0	0.0	1.881	A
			2	2,3,4	162	1800	0.090	162	0.1	0.2	2.623	A
		2	1	(1,2,3,4)	186			186	0.0	0.0	0.000	A
	Exit	1	1		557			557	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	129	1800	0.072	129	0.2	0.1	3.650	A
			2	1,3,4	72	1800	0.040	73	0.1	0.0	2.428	A
	Exit	1	1		269			269	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1430	2581	0.554	1426	2.1	1.6	3.709	A
	Exit	1	1		494			494	0.0	0.0	0.000	A
3	Entry	1	1	4	238	1800	0.131	237	0.2	0.1	2.472	A
			2	1,2,3	324	1800	0.180	323	0.4	0.4	3.024	A
	Exit	1	1		1124			1124	0.0	0.0	0.000	A
4	Entry	1	1	1	19	1800	0.011	20	0.0	0.0	1.994	A
			2	2,3,4	131	1800	0.073	130	0.2	0.1	2.685	A
		2	1	(1,2,3,4)	150			150	0.0	0.0	0.000	A
	Exit	1	1		451			451	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	109	1800	0.061	110	0.1	0.0	3.716	A
			2	1,3,4	62	1800	0.034	62	0.0	0.0	2.409	A
	Exit	1	1		230			230	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1200	2609	0.460	1200	1.6	0.9	2.877	A
	Exit	1	1		413			413	0.0	0.0	0.000	A
3	Entry	1	1	4	190	1800	0.106	191	0.1	0.1	2.372	A
			2	1,2,3	273	1800	0.151	272	0.4	0.2	2.899	A
	Exit	1	1		941			941	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	16	0.0	0.0	2.103	A
			2	2,3,4	103	1800	0.057	105	0.1	0.1	2.489	A
		2	1	(1,2,3,4)	119			119	0.0	0.0	0.000	A
	Exit	1	1		372			372	0.0	0.0	0.000	A

# Existing - 2019 Do Something, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	5.39	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	1577	96.18
2	248	38.09
3	328	91.43
4	1427	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	395	100.000
2		ONE HOUR	✓	694	100.000
3		ONE HOUR	✓	1265	100.000
4		ONE HOUR	✓	478	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	372	2	21
	2	250	1	387	56
	3	0	1175	1	89
	4	79	175	224	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	40	0	48
	2	85	0	29	64
	3	0	10	0	21
	4	9	18	6	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.76	0.6	A	364	546
2	3.34	0.7	A	638	958
3	7.98	3.1	A	1156	1734
4	2.87	0.5	A	440	659

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	296	74	1189	297	250	0.0	0.3	3.384	A
2	521	130	186	523	1300	0.0	0.4	2.680	A
3	950	237	254	947	455	0.0	1.2	4.370	A
4	366	92	1074	366	127	0.0	0.3	2.619	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	367	92	1415	367	307	0.3	0.5	3.549	A
2	644	161	224	642	1557	0.4	0.5	2.843	A
3	1123	281	307	1126	560	1.2	1.6	5.410	A
4	434	109	1287	435	146	0.3	0.3	2.709	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	447	112	1744	446	353	0.5	0.6	3.659	A
2	756	189	274	756	1916	0.5	0.7	3.262	A
3	1393	348	356	1397	675	1.6	2.9	7.865	A
4	526	131	1573	525	180	0.3	0.5	2.862	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	433	108	1728	435	366	0.6	0.4	3.761	A
2	773	193	272	775	1891	0.7	0.7	3.345	A
3	1390	348	362	1387	685	2.9	3.1	7.981	A
4	529	132	1565	529	184	0.5	0.4	2.873	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	346	86	1407	346	291	0.4	0.3	3.478	A
2	613	153	220	616	1533	0.7	0.4	2.934	A
3	1130	283	290	1134	546	3.1	1.7	5.430	A
4	424	106	1273	425	150	0.4	0.3	2.736	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	294	73	1183	295	244	0.3	0.3	3.277	A
2	524	131	189	523	1289	0.4	0.4	2.727	A
3	948	237	242	948	469	1.7	1.2	4.187	A
4	358	90	1089	358	121	0.3	0.3	2.610	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	280	1800	0.156	281	0.0	0.3	3.410	A
			2	1,3,4	16	1800	0.009	16	0.0	0.0	2.944	A
	Exit	1	1		250			250	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	521	2542	0.205	523	0.0	0.4	2.680	A
	Exit	1	1		1300			1300	0.0	0.0	0.000	A
3	Entry	1	1	4	66	1800	0.037	66	0.0	0.0	2.525	A
			2	1,2,3	884	1800	0.491	881	0.0	1.2	4.497	A
	Exit	1	1		455			455	0.0	0.0	0.000	A
4	Entry	1	1	1	58	1800	0.032	58	0.0	0.0	2.319	A
			2	2,3,4	308	1800	0.171	308	0.0	0.2	2.678	A
	Exit	1	1	(1,2,3,4)	366			366	0.0	0.0	0.000	A
					127			127	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	347	1800	0.193	347	0.3	0.4	3.592	A
			2	1,3,4	20	1800	0.011	19	0.0	0.1	2.862	A
	Exit	1	1		307			307	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	644	2502	0.257	642	0.4	0.5	2.843	A
	Exit	1	1		1557			1557	0.0	0.0	0.000	A
3	Entry	1	1	4	74	1800	0.041	73	0.0	0.1	2.515	A
			2	1,2,3	1050	1800	0.583	1052	1.2	1.6	5.604	A
	Exit	1	1		560			560	0.0	0.0	0.000	A
4	Entry	1	1	1	73	1800	0.041	73	0.0	0.0	2.220	A
			2	2,3,4	361	1800	0.200	362	0.2	0.2	2.807	A
	Exit	1	1	(1,2,3,4)	434			434	0.0	0.0	0.000	A
					146			146	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	422	1800	0.234	421	0.4	0.6	3.706	A
			2	1,3,4	25	1800	0.014	25	0.1	0.0	2.908	A
	Exit	1	1		353			353	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	756	2450	0.309	756	0.5	0.7	3.262	A
	Exit	1	1		1916			1916	0.0	0.0	0.000	A
3	Entry	1	1	4	94	1800	0.052	94	0.1	0.1	2.598	A
			2	1,2,3	1299	1800	0.721	1303	1.6	2.9	8.217	A
	Exit	1	1		675			675	0.0	0.0	0.000	A
4	Entry	1	1	1	85	1800	0.047	85	0.0	0.0	2.289	A
			2	2,3,4	441	1800	0.245	440	0.2	0.4	2.977	A
	Exit	1	1	(1,2,3,4)	526			526	0.0	0.0	0.000	A
					180			180	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	409	1800	0.227	411	0.6	0.4	3.815	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.852	A
	Exit	1	1		368			368	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	773	2452	0.315	775	0.7	0.7	3.345	A
	Exit	1	1		1891			1891	0.0	0.0	0.000	A
3	Entry	1	1	4	99	1800	0.055	98	0.1	0.1	2.543	A
			2	1,2,3	1291	1800	0.717	1289	2.9	3.0	8.352	A
	Exit	1	1		685			685	0.0	0.0	0.000	A
4	Entry	1	1	1	91	1800	0.050	91	0.0	0.0	2.244	A
			2	2,3,4	438	1800	0.244	439	0.4	0.4	3.000	A
			2	1	(1,2,3,4)	529			529	0.0	0.0	0.000
	Exit	1	1		184			184	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	328	1800	0.181	328	0.4	0.3	3.517	A
			2	1,3,4	20	1800	0.011	20	0.0	0.0	2.865	A
	Exit	1	1		291			291	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	613	2506	0.245	616	0.7	0.4	2.934	A
	Exit	1	1		1533			1533	0.0	0.0	0.000	A
3	Entry	1	1	4	81	1800	0.045	82	0.1	0.0	2.521	A
			2	1,2,3	1049	1800	0.583	1052	3.0	1.7	5.633	A
	Exit	1	1		546			546	0.0	0.0	0.000	A
4	Entry	1	1	1	71	1800	0.039	71	0.0	0.1	2.328	A
			2	2,3,4	353	1800	0.196	354	0.4	0.3	2.819	A
			2	1	(1,2,3,4)	424			424	0.0	0.0	0.000
	Exit	1	1		150			150	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	277	1800	0.154	277	0.3	0.2	3.312	A
			2	1,3,4	17	1800	0.010	18	0.0	0.0	2.718	A
	Exit	1	1		244			244	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	524	2539	0.206	523	0.4	0.4	2.727	A
	Exit	1	1		1289			1289	0.0	0.0	0.000	A
3	Entry	1	1	4	67	1800	0.037	66	0.0	0.1	2.481	A
			2	1,2,3	881	1800	0.489	881	1.7	1.1	4.307	A
	Exit	1	1		469			469	0.0	0.0	0.000	A
4	Entry	1	1	1	57	1800	0.032	57	0.1	0.0	2.343	A
			2	2,3,4	301	1800	0.167	301	0.3	0.2	2.663	A
			2	1	(1,2,3,4)	358			358	0.0	0.0	0.000
	Exit	1	1		121			121	0.0	0.0	0.000	A

# Existing - 2019 Do Something, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	5.71	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	573	96.18
2	181	38.09
3	600	91.43
4	753	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	320	100.000
2		ONE HOUR	✓	1772	100.000
3		ONE HOUR	✓	671	100.000
4		ONE HOUR	✓	183	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1	2	3	4
1	7	240	2	71
2	335	0	1252	185
3	0	408	3	260
4	20	65	97	1

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	66	78	0	10
2	40	0	6	20
3	0	20	77	4
4	0	65	5	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.67	0.4	A	293	440
2	7.44	4.8	A	1624	2436
3	2.96	0.7	A	618	928
4	2.67	0.2	A	166	250

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	241	60	434	242	270	0.0	0.2	3.421	A
2	1337	334	136	1338	540	0.0	1.3	3.251	A
3	508	127	449	507	1025	0.0	0.4	2.708	A
4	138	34	566	138	390	0.0	0.1	2.570	A



**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	289	72	508	289	320	0.2	0.3	3.486	A
2	1587	397	160	1585	637	1.3	2.0	4.367	A
3	605	151	537	605	1208	0.4	0.4	2.746	A
4	157	39	670	157	472	0.1	0.1	2.609	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	352	88	636	352	403	0.3	0.4	3.593	A
2	1959	490	203	1952	784	2.0	4.8	7.436	A
3	745	188	667	744	1488	0.4	0.7	2.957	A
4	202	50	839	201	573	0.1	0.2	2.674	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	345	86	628	347	392	0.4	0.3	3.673	A
2	1929	482	200	1926	774	4.8	4.0	7.130	A
3	736	184	645	733	1481	0.7	0.7	2.941	A
4	201	50	818	201	560	0.2	0.2	2.610	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	293	73	514	293	321	0.3	0.3	3.471	A
2	1602	401	162	1604	645	4.0	2.0	4.488	A
3	603	151	543	606	1223	0.7	0.4	2.784	A
4	162	41	673	162	476	0.2	0.1	2.580	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	239	60	435	239	275	0.3	0.2	3.431	A
2	1327	332	136	1326	539	2.0	1.4	3.357	A
3	509	127	454	510	1008	0.4	0.4	2.724	A
4	138	34	572	138	392	0.1	0.1	2.530	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	182	1800	0.101	182	0.0	0.1	4.057	A
			2	1,3,4	60	1800	0.033	60	0.0	0.0	2.242	A
	Exit	1	1		270			270	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1337	2609	0.513	1338	0.0	1.3	3.251	A
	Exit	1	1		540			540	0.0	0.0	0.000	A
3	Entry	1	1	4	195	1800	0.109	195	0.0	0.1	2.347	A
			2	1,2,3	312	1800	0.174	312	0.0	0.3	2.972	A
	Exit	1	1		1025			1025	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	16	0.0	0.0	1.873	A
			2	2,3,4	122	1800	0.068	122	0.0	0.1	2.676	A
		2	1	(1,2,3,4)	138			138	0.0	0.0	0.000	A
	Exit	1	1		390			390	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	216	1800	0.120	216	0.1	0.2	4.089	A
			2	1,3,4	73	1800	0.040	72	0.0	0.1	2.332	A
	Exit	1	1		320			320	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1587	2583	0.614	1585	1.3	2.0	4.367	A
	Exit	1	1		637			637	0.0	0.0	0.000	A
3	Entry	1	1	4	237	1800	0.132	237	0.1	0.2	2.382	A
			2	1,2,3	368	1800	0.204	369	0.3	0.3	3.016	A
	Exit	1	1		1208			1208	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	2.027	A
			2	2,3,4	139	1800	0.077	139	0.1	0.1	2.699	A
		2	1	(1,2,3,4)	157			157	0.0	0.0	0.000	A
	Exit	1	1		472			472	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	262	1800	0.145	261	0.2	0.4	4.234	A
			2	1,3,4	90	1800	0.050	90	0.1	0.1	2.398	A
	Exit	1	1		403			403	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1959	2537	0.772	1952	2.0	4.8	7.436	A
	Exit	1	1		784			784	0.0	0.0	0.000	A
3	Entry	1	1	4	289	1800	0.160	289	0.2	0.2	2.516	A
			2	1,2,3	456	1800	0.253	456	0.3	0.5	3.278	A
	Exit	1	1		1488			1488	0.0	0.0	0.000	A
4	Entry	1	1	1	20	1800	0.011	21	0.0	0.0	2.005	A
			2	2,3,4	182	1800	0.101	180	0.1	0.2	2.770	A
		2	1	(1,2,3,4)	202			202	0.0	0.0	0.000	A
	Exit	1	1		573			573	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	257	1800	0.143	259	0.4	0.2	4.383	A
			2	1,3,4	87	1800	0.048	88	0.1	0.0	2.375	A
	Exit	1	1		392			392	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1929	2540	0.760	1928	4.8	4.0	7.130	A
	Exit	1	1		774			774	0.0	0.0	0.000	A
3	Entry	1	1	4	288	1800	0.159	285	0.2	0.2	2.472	A
			2	1,2,3	450	1800	0.250	448	0.5	0.5	3.287	A
	Exit	1	1		1481			1481	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	2.034	A
			2	2,3,4	179	1800	0.100	179	0.2	0.2	2.697	A
		2	1	(1,2,3,4)	201			201	0.0	0.0	0.000	A
	Exit	1	1		560			560	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	219	1800	0.122	219	0.2	0.3	4.052	A
			2	1,3,4	74	1800	0.041	74	0.0	0.1	2.353	A
	Exit	1	1		321			321	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1802	2580	0.621	1804	4.0	2.0	4.498	A
	Exit	1	1		645			645	0.0	0.0	0.000	A
3	Entry	1	1	4	234	1800	0.130	235	0.2	0.1	2.399	A
			2	1,2,3	389	1800	0.205	371	0.5	0.3	3.089	A
	Exit	1	1		1223			1223	0.0	0.0	0.000	A
4	Entry	1	1	1	19	1800	0.010	19	0.0	0.0	1.888	A
			2	2,3,4	144	1800	0.080	143	0.2	0.1	2.687	A
		2	1	(1,2,3,4)	182			182	0.0	0.0	0.000	A
	Exit	1	1		478			478	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	177	1800	0.098	177	0.3	0.2	3.979	A
			2	1,3,4	62	1800	0.034	62	0.1	0.0	2.404	A
	Exit	1	1		275			275	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1327	2609	0.509	1328	2.0	1.4	3.357	A
	Exit	1	1		539			539	0.0	0.0	0.000	A
3	Entry	1	1	4	197	1800	0.109	197	0.1	0.1	2.361	A
			2	1,2,3	313	1800	0.174	313	0.3	0.3	2.985	A
	Exit	1	1		1008			1008	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	15	0.0	0.0	1.988	A
			2	2,3,4	122	1800	0.068	122	0.1	0.1	2.615	A
		2	1	(1,2,3,4)	138			138	0.0	0.0	0.000	A
	Exit	1	1		392			392	0.0	0.0	0.000	A

# Existing - 2032 Do Minimum, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	6.50	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	1725	96.18
2	280	38.00
3	300	91.43
4	1514	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	408	100.000
2		ONE HOUR	✓	710	100.000
3		ONE HOUR	✓	1385	100.000
4		ONE HOUR	✓	533	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	380	2	24
2	231	1	425	53
3	0	1281	1	103
4	91	181	261	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	38	0	48
2	83	0	29	68
3	0	10	0	21
4	9	18	6	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.66	0.5	A	372	558
2	3.34	0.8	A	651	976
3	10.52	4.3	B	1268	1901
4	2.96	0.6	A	490	734

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	305	76	1299	305	240	0.0	0.3	3.320	A
2	538	134	215	538	1390	0.0	0.5	2.700	A
3	1045	261	232	1043	520	0.0	1.7	4.808	A
4	400	100	1139	400	135	0.0	0.3	2.662	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	372	93	1548	372	287	0.3	0.4	3.456	A
2	637	159	257	638	1661	0.5	0.6	2.942	A
3	1236	309	277	1236	618	1.7	2.2	6.012	A
4	478	119	1355	478	158	0.3	0.4	2.804	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	445	111	1808	445	354	0.4	0.5	3.658	A
2	770	193	324	770	2027	0.6	0.8	3.303	A
3	1518	379	341	1523	753	2.2	4.1	9.966	A
4	593	148	1668	592	196	0.4	0.5	2.964	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	439	110	1897	438	362	0.5	0.5	3.536	A
2	794	199	318	795	2017	0.8	0.8	3.339	A
3	1521	380	349	1526	764	4.1	4.3	10.516	B
4	587	147	1674	585	201	0.5	0.6	2.958	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	369	92	1549	369	291	0.5	0.4	3.444	A
2	640	160	259	639	1658	0.8	0.6	2.946	A
3	1242	310	279	1242	619	4.3	2.0	6.355	A
4	479	120	1360	480	161	0.6	0.4	2.833	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	303	76	1298	303	239	0.4	0.3	3.222	A
2	526	132	219	527	1381	0.6	0.4	2.694	A
3	1044	261	228	1041	518	2.0	1.6	4.740	A
4	402	100	1135	402	134	0.4	0.3	2.676	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	287	1800	0.159	286	0.0	0.3	3.347	A
			2	1,3,4	19	1800	0.010	18	0.0	0.0	2.909	A
	Exit	1	1		240			240	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	538	2504	0.214	538	0.0	0.5	2.700	A
	Exit	1	1		1390			1390	0.0	0.0	0.000	A
3	Entry	1	1	4	77	1800	0.043	77	0.0	0.1	2.568	A
			2	1,2,3	968	1800	0.538	966	0.0	1.6	4.971	A
	Exit	1	1		520			520	0.0	0.0	0.000	A
4	Entry	1	1	1	67	1800	0.037	67	0.0	0.0	2.261	A
			2	2,3,4	333	1800	0.185	333	0.0	0.3	2.746	A
		2	1	(1,2,3,4)	400			400	0.0	0.0	0.000	A
	Exit	1	1		135			135	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	348	1800	0.193	348	0.3	0.4	3.493	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.884	A
	Exit	1	1		287			287	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	637	2460	0.259	638	0.5	0.6	2.942	A
	Exit	1	1		1661			1661	0.0	0.0	0.000	A
3	Entry	1	1	4	90	1800	0.050	90	0.1	0.1	2.607	A
			2	1,2,3	1147	1800	0.637	1146	1.6	2.1	6.259	A
	Exit	1	1		618			618	0.0	0.0	0.000	A
4	Entry	1	1	1	80	1800	0.044	80	0.0	0.1	2.301	A
			2	2,3,4	398	1800	0.221	399	0.3	0.3	2.905	A
		2	1	(1,2,3,4)	478			478	0.0	0.0	0.001	A
	Exit	1	1		158			158	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	414	1800	0.230	414	0.4	0.5	3.705	A
			2	1,3,4	31	1800	0.017	31	0.0	0.0	2.973	A
	Exit	1	1		354			354	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	770	2391	0.322	770	0.6	0.8	3.303	A
	Exit	1	1		2027			2027	0.0	0.0	0.000	A
3	Entry	1	1	4	110	1800	0.061	110	0.1	0.1	2.559	A
			2	1,2,3	1408	1800	0.782	1413	2.1	4.1	10.500	B
	Exit	1	1		753			753	0.0	0.0	0.000	A
4	Entry	1	1	1	100	1800	0.056	100	0.1	0.1	2.354	A
			2	2,3,4	493	1800	0.274	492	0.3	0.5	3.088	A
		2	1	(1,2,3,4)	593			593	0.0	0.0	0.001	A
	Exit	1	1		196			196	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	410	1800	0.228	410	0.5	0.5	3.576	A
			2	1,3,4	28	1800	0.018	28	0.0	0.0	2.931	A
	Exit	1	1		362			362	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	794	2397	0.331	795	0.8	0.8	3.339	A
	Exit	1	1		2017			2017	0.0	0.0	0.000	A
3	Entry	1	1	4	115	1800	0.064	115	0.1	0.1	2.573	A
			2	1,2,3	1405	1800	0.781	1410	4.1	4.2	11.099	B
	Exit	1	1		784			784	0.0	0.0	0.000	A
4	Entry	1	1	1	99	1800	0.055	99	0.1	0.1	2.330	A
			2	2,3,4	488	1800	0.271	486	0.5	0.5	3.089	A
		2	1	(1,2,3,4)	587			587	0.0	0.0	0.000	A
	Exit	1	1		201			201	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	346	1800	0.192	346	0.5	0.4	3.488	A
			2	1,3,4	23	1800	0.013	23	0.0	0.0	2.772	A
	Exit	1	1		291			291	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	640	2458	0.260	639	0.8	0.8	2.946	A
	Exit	1	1		1658			1658	0.0	0.0	0.000	A
3	Entry	1	1	4	92	1800	0.051	92	0.1	0.1	2.585	A
			2	1,2,3	1150	1800	0.639	1150	4.2	1.9	6.633	A
	Exit	1	1		619			619	0.0	0.0	0.000	A
4	Entry	1	1	1	82	1800	0.045	82	0.1	0.0	2.322	A
			2	2,3,4	397	1800	0.221	398	0.5	0.3	2.938	A
		2	1	(1,2,3,4)	479			479	0.0	0.0	0.000	A
	Exit	1	1		161			161	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	283	1800	0.157	283	0.4	0.3	3.257	A
			2	1,3,4	20	1800	0.011	19	0.0	0.0	2.704	A
	Exit	1	1		239			239	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	528	2499	0.211	527	0.6	0.4	2.694	A
	Exit	1	1		1381			1381	0.0	0.0	0.000	A
3	Entry	1	1	4	78	1800	0.043	77	0.1	0.1	2.486	A
			2	1,2,3	968	1800	0.537	964	1.9	1.8	4.907	A
	Exit	1	1		518			518	0.0	0.0	0.000	A
4	Entry	1	1	1	69	1800	0.038	68	0.0	0.1	2.250	A
			2	2,3,4	333	1800	0.185	334	0.3	0.2	2.764	A
		2	1	(1,2,3,4)	402			402	0.0	0.0	0.000	A
	Exit	1	1		134			134	0.0	0.0	0.000	A



# Existing - 2032 Do Minimum, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	7.70	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	621	96.18
2	210	38.09
3	611	91.43
4	788	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	276	100.000
2		ONE HOUR	✓	1885	100.000
3		ONE HOUR	✓	752	100.000
4		ONE HOUR	✓	193	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	8	184	2	82
	2	329	0	1366	190
	3	0	447	4	301
	4	23	57	112	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	66	69	0	10
	2	33	0	6	20
	3	0	19	77	4
	4	0	67	5	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.21	0.3	A	251	378
2	10.72	6.4	B	1736	2604
3	3.02	0.8	A	686	1029
4	2.61	0.2	A	178	267

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	205	51	464	205	268	0.0	0.2	3.102	A
2	1427	357	155	1426	514	0.0	1.4	3.532	A
3	566	141	455	566	1126	0.0	0.5	2.698	A
4	145	36	587	145	434	0.0	0.1	2.496	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	241	60	545	242	317	0.2	0.2	3.162	A
2	1685	421	180	1687	607	1.4	2.5	4.880	A
3	665	166	539	664	1328	0.5	0.6	2.804	A
4	170	43	692	170	510	0.1	0.1	2.608	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	298	75	699	299	408	0.2	0.2	3.210	A
2	2092	523	230	2086	758	2.5	6.2	9.586	A
3	828	207	679	829	1637	0.6	0.7	3.023	A
4	219	55	880	218	628	0.1	0.2	2.547	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	302	76	690	302	401	0.2	0.3	3.165	A
2	2078	519	227	2076	765	6.2	6.4	10.718	B
3	832	208	672	831	1631	0.7	0.8	3.013	A
4	215	54	878	215	626	0.2	0.2	2.551	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	248	62	558	247	319	0.3	0.3	3.164	A
2	1701	425	184	1704	622	6.4	2.1	5.416	A
3	667	167	547	669	1341	0.8	0.6	2.908	A
4	173	43	704	173	511	0.2	0.1	2.561	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	210	52	471	209	270	0.3	0.3	3.121	A
2	1433	358	160	1433	520	2.1	1.5	3.653	A
3	558	140	457	558	1136	0.6	0.5	2.720	A
4	148	37	594	147	421	0.1	0.1	2.491	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	137	1800	0.076	137	0.0	0.2	3.633	A
			2	1,3,4	68	1800	0.038	68	0.0	0.0	2.406	A
	Exit	1	1		268			268	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1427	2583	0.553	1426	0.0	1.4	3.532	A
	Exit	1	1		514			514	0.0	0.0	0.000	A
3	Entry	1	1	4	231	1800	0.128	230	0.0	0.2	2.357	A
			2	1,2,3	335	1800	0.186	336	0.0	0.3	2.959	A
	Exit	1	1		1126			1126	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.009	17	0.0	0.0	2.053	A
			2	2,3,4	128	1800	0.071	128	0.0	0.1	2.567	A
		2	1	(1,2,3,4)	145			145	0.0	0.0	0.000	A
	Exit	1	1		434			434	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	162	1800	0.090	163	0.2	0.1	3.727	A
			2	1,3,4	79	1800	0.044	79	0.0	0.0	2.386	A
	Exit	1	1		317			317	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1685	2556	0.659	1687	1.4	2.5	4.880	A
	Exit	1	1		607			607	0.0	0.0	0.000	A
3	Entry	1	1	4	269	1800	0.150	268	0.2	0.2	2.414	A
			2	1,2,3	395	1800	0.220	395	0.3	0.4	3.104	A
	Exit	1	1		1328			1328	0.0	0.0	0.000	A
4	Entry	1	1	1	21	1800	0.012	21	0.0	0.0	1.984	A
			2	2,3,4	149	1800	0.083	150	0.1	0.1	2.709	A
		2	1	(1,2,3,4)	170			170	0.0	0.0	0.000	A
	Exit	1	1		510			510	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	199	1800	0.111	199	0.1	0.2	3.814	A
			2	1,3,4	99	1800	0.055	100	0.0	0.1	2.375	A
	Exit	1	1		408			408	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2082	2503	0.836	2086	2.5	6.2	9.586	A
	Exit	1	1		758			758	0.0	0.0	0.000	A
3	Entry	1	1	4	331	1800	0.184	332	0.2	0.2	2.527	A
			2	1,2,3	496	1800	0.276	498	0.4	0.5	3.406	A
	Exit	1	1		1637			1637	0.0	0.0	0.000	A
4	Entry	1	1	1	26	1800	0.015	26	0.0	0.0	1.980	A
			2	2,3,4	192	1800	0.107	191	0.1	0.2	2.641	A
		2	1	(1,2,3,4)	219			219	0.0	0.0	0.000	A
	Exit	1	1		628			628	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	201	1800	0.112	201	0.2	0.2	3.755	A
			2	1,3,4	101	1800	0.058	101	0.1	0.1	2.388	A
	Exit	1	1		401			401	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2078	2508	0.829	2078	8.2	8.4	10.718	B
	Exit	1	1		785			785	0.0	0.0	0.000	A
3	Entry	1	1	4	331	1800	0.184	330	0.2	0.3	2.582	A
			2	1,2,3	501	1800	0.278	500	0.5	0.5	3.359	A
	Exit	1	1		1631			1631	0.0	0.0	0.000	A
4	Entry	1	1	1	25	1800	0.014	25	0.0	0.0	1.982	A
			2	2,3,4	190	1800	0.105	190	0.2	0.2	2.846	A
			2	1	(1,2,3,4)	215			215	0.0	0.0	0.000
	Exit	1	1		628			628	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	168	1800	0.092	168	0.2	0.2	3.720	A
			2	1,3,4	82	1800	0.048	82	0.1	0.0	2.428	A
	Exit	1	1		319			319	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1701	2552	0.668	1704	8.4	2.1	5.418	A
	Exit	1	1		622			622	0.0	0.0	0.000	A
3	Entry	1	1	4	283	1800	0.148	283	0.3	0.2	2.425	A
			2	1,2,3	404	1800	0.225	405	0.5	0.4	3.273	A
	Exit	1	1		1341			1341	0.0	0.0	0.000	A
4	Entry	1	1	1	20	1800	0.011	20	0.0	0.0	1.987	A
			2	2,3,4	153	1800	0.085	153	0.2	0.1	2.658	A
			2	1	(1,2,3,4)	173			173	0.0	0.0	0.000
	Exit	1	1		511			511	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	142	1800	0.079	141	0.2	0.3	3.645	A
			2	1,3,4	68	1800	0.038	68	0.0	0.1	2.418	A
	Exit	1	1		270			270	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1433	2577	0.558	1433	2.1	1.5	3.653	A
	Exit	1	1		520			520	0.0	0.0	0.000	A
3	Entry	1	1	4	217	1800	0.120	217	0.2	0.2	2.382	A
			2	1,2,3	341	1800	0.190	341	0.4	0.3	2.978	A
	Exit	1	1		1138			1138	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	1.974	A
			2	2,3,4	130	1800	0.072	130	0.1	0.1	2.577	A
			2	1	(1,2,3,4)	148			148	0.0	0.0	0.000
	Exit	1	1		421			421	0.0	0.0	0.000	A

# Existing - 2032 Do Something, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	8.34	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	1846	96.18
2	289	38.09
3	379	91.43
4	1675	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	472	100.000
2		ONE HOUR	✓	821	100.000
3		ONE HOUR	✓	1488	100.000
4		ONE HOUR	✓	553	100.000

## Origin-Destination Data

### Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	446	2	24
2	291	1	466	63
3	0	1382	1	103
4	91	201	261	0

## Vehicle Mix

### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	37	0	46
2	82	0	28	64
3	0	9	0	21
4	9	18	6	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.85	0.7	A	436	653
2	3.68	1.2	A	752	1128
3	14.32	6.6	B	1365	2048
4	2.99	0.5	A	504	756

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	362	91	1397	361	292	0.0	0.4	3.368	A
2	616	154	216	614	1542	0.0	0.6	2.775	A
3	1130	282	286	1127	544	0.0	1.8	5.175	A
4	419	105	1271	419	142	0.0	0.4	2.727	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	438	109	1649	434	343	0.4	0.5	3.582	A
2	737	184	254	739	1829	0.6	0.6	3.106	A
3	1332	333	340	1332	653	1.8	2.6	7.083	A
4	493	123	1500	492	173	0.4	0.5	2.840	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	519	130	2024	518	429	0.5	0.6	3.799	A
2	903	226	312	903	2230	0.6	1.0	3.596	A
3	1631	408	424	1634	791	2.6	6.6	13.801	B
4	601	150	1850	603	207	0.5	0.4	2.985	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	529	132	2034	529	418	0.6	0.7	3.847	A
2	904	226	315	903	2247	1.0	1.2	3.683	A
3	1644	411	419	1647	799	6.6	6.2	14.317	B
4	603	151	1848	603	218	0.4	0.5	2.984	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	420	105	1656	421	348	0.7	0.5	3.596	A
2	736	184	257	735	1820	1.2	0.7	3.093	A
3	1337	334	344	1339	649	6.2	2.7	7.554	A
4	497	124	1508	497	175	0.5	0.5	2.801	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	348	87	1388	348	288	0.5	0.5	3.403	A
2	618	154	215	619	1521	0.7	0.5	2.915	A
3	1117	279	288	1115	546	2.7	1.7	5.235	A
4	409	102	1265	410	137	0.5	0.3	2.680	A



## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	341	1800	0.189	340	0.0	0.4	3.395	A
			2	1,3,4	21	1800	0.012	21	0.0	0.0	2.929	A
	Exit	1	1		292			292	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	616	2503	0.246	614	0.0	0.6	2.775	A
	Exit	1	1		1542			1542	0.0	0.0	0.000	A
3	Entry	1	1	4	80	1800	0.044	80	0.0	0.1	2.473	A
			2	1,2,3	1050	1800	0.583	1047	0.0	1.7	5.358	A
	Exit	1	1		544			544	0.0	0.0	0.000	A
4	Entry	1	1	1	70	1800	0.039	70	0.0	0.1	2.320	A
			2	2,3,4	349	1800	0.194	349	0.0	0.3	2.807	A
	Exit	1	1	(1,2,3,4)	419			419	0.0	0.0	0.001	A
					142			142	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	412	1800	0.229	411	0.4	0.5	3.633	A
			2	1,3,4	23	1800	0.013	23	0.0	0.0	2.662	A
	Exit	1	1		343			343	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	737	2463	0.299	739	0.6	0.6	3.106	A
	Exit	1	1		1829			1829	0.0	0.0	0.000	A
3	Entry	1	1	4	97	1800	0.054	97	0.1	0.1	2.553	A
			2	1,2,3	1234	1800	0.686	1235	1.7	2.5	7.393	A
	Exit	1	1		653			653	0.0	0.0	0.000	A
4	Entry	1	1	1	80	1800	0.044	79	0.1	0.1	2.247	A
			2	2,3,4	414	1800	0.230	413	0.3	0.4	2.958	A
	Exit	1	1	(1,2,3,4)	493			493	0.0	0.0	0.000	A
					173			173	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	492	1800	0.273	490	0.5	0.6	3.849	A
			2	1,3,4	28	1800	0.015	28	0.0	0.0	2.927	A
	Exit	1	1		429			429	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	903	2403	0.376	903	0.6	1.0	3.596	A
	Exit	1	1		2230			2230	0.0	0.0	0.000	A
3	Entry	1	1	4	113	1800	0.063	113	0.1	0.1	2.623	A
			2	1,2,3	1518	1800	0.843	1521	2.5	6.6	14.556	B
	Exit	1	1		791			791	0.0	0.0	0.000	A
4	Entry	1	1	1	101	1800	0.056	101	0.1	0.1	2.300	A
			2	2,3,4	500	1800	0.278	502	0.4	0.4	3.123	A
	Exit	1	1	(1,2,3,4)	601			601	0.0	0.0	0.002	A
					207			207	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	498	1800	0.277	498	0.6	0.7	3.896	A
			2	1,3,4	31	1800	0.017	31	0.0	0.0	3.008	A
	Exit	1	1		418			418	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	904	2400	0.377	903	1.0	1.2	3.683	A
	Exit	1	1		2247			2247	0.0	0.0	0.000	A
3	Entry	1	1	4	115	1800	0.064	115	0.1	0.1	2.623	A
			2	1,2,3	1528	1800	0.849	1532	6.6	6.1	15.101	C
	Exit	1	1		799			799	0.0	0.0	0.000	A
4	Entry	1	1	1	103	1800	0.057	103	0.1	0.1	2.328	A
			2	2,3,4	501	1800	0.278	501	0.4	0.4	3.118	A
		2	1	(1,2,3,4)	603			603	0.0	0.0	0.000	A
	Exit	1	1		218			218	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	396	1800	0.220	396	0.7	0.5	3.634	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.905	A
	Exit	1	1		348			348	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	736	2460	0.299	735	1.2	0.7	3.093	A
	Exit	1	1		1820			1820	0.0	0.0	0.000	A
3	Entry	1	1	4	98	1800	0.054	97	0.1	0.1	2.521	A
			2	1,2,3	1239	1800	0.688	1242	6.1	2.6	7.900	A
	Exit	1	1		649			649	0.0	0.0	0.000	A
4	Entry	1	1	1	83	1800	0.046	83	0.1	0.1	2.359	A
			2	2,3,4	414	1800	0.230	414	0.4	0.4	2.891	A
		2	1	(1,2,3,4)	497			497	0.0	0.0	0.000	A
	Exit	1	1		175			175	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	329	1800	0.183	329	0.5	0.4	3.437	A
			2	1,3,4	19	1800	0.010	19	0.0	0.0	2.822	A
	Exit	1	1		288			288	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	618	2504	0.247	619	0.7	0.5	2.915	A
	Exit	1	1		1521			1521	0.0	0.0	0.000	A
3	Entry	1	1	4	72	1800	0.040	72	0.1	0.1	2.524	A
			2	1,2,3	1045	1800	0.581	1042	2.6	1.7	5.417	A
	Exit	1	1		546			546	0.0	0.0	0.000	A
4	Entry	1	1	1	65	1800	0.038	66	0.1	0.1	2.261	A
			2	2,3,4	344	1800	0.191	345	0.4	0.3	2.762	A
		2	1	(1,2,3,4)	409			409	0.0	0.0	0.000	A
	Exit	1	1		137			137	0.0	0.0	0.000	A

# Existing - 2032 Do Something, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Geometry	Arm 2 - 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	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	13.89	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	686	96.18
2	210	38.09
3	707	91.43
4	913	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	370	100.000
2		ONE HOUR	✓	2087	100.000
3		ONE HOUR	✓	802	100.000
4		ONE HOUR	✓	208	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	8	278	2	82
	2	404	0	1472	211
	3	0	497	4	301
	4	23	72	112	1

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	68	74	0	10
	2	37	0	6	20
	3	0	19	77	4
	4	0	65	5	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.66	0.5	A	340	510
2	20.94	13.8	C	1916	2874
3	3.15	0.9	A	732	1098
4	2.71	0.2	A	183	290

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	277	69	515	278	328	0.0	0.3	3.402	A
2	1568	392	162	1565	629	0.0	2.0	4.074	A
3	595	149	531	595	1197	0.0	0.5	2.802	A
4	162	41	678	163	447	0.0	0.1	2.628	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	332	83	612	334	395	0.3	0.3	3.504	A
2	1869	467	186	1872	760	2.0	2.8	6.272	A
3	707	177	633	706	1424	0.5	0.7	2.980	A
4	188	47	819	188	520	0.1	0.2	2.612	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	411	103	763	412	470	0.3	0.4	3.659	A
2	2290	573	230	2291	946	2.8	12.3	16.781	C
3	885	221	766	884	1755	0.7	0.9	3.153	A
4	230	58	1003	231	647	0.2	0.2	2.688	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	410	103	755	411	482	0.4	0.4	3.580	A
2	2295	574	230	2289	936	12.3	13.8	20.939	C
3	879	220	775	880	1744	0.9	0.7	3.130	A
4	232	58	1005	231	650	0.2	0.2	2.711	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	338	84	620	337	391	0.4	0.5	3.499	A
2	1893	473	188	1892	769	13.8	3.6	8.321	A
3	721	180	636	721	1445	0.7	0.7	2.931	A
4	192	48	819	191	538	0.2	0.1	2.542	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	273	68	519	273	330	0.5	0.3	3.428	A
2	1582	396	157	1583	635	3.6	1.7	4.374	A
3	605	151	533	605	1208	0.7	0.4	2.779	A
4	157	39	693	157	445	0.1	0.1	2.558	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	208	1800	0.114	205	0.0	0.3	3.947	A
			2	1,3,4	71	1800	0.039	71	0.0	0.0	2.353	A
	Exit	1	1		328			328	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1568	2575	0.609	1565	0.0	2.0	4.074	A
	Exit	1	1		629			629	0.0	0.0	0.000	A
3	Entry	1	1	4	223	1800	0.124	223	0.0	0.2	2.395	A
			2	1,2,3	372	1800	0.207	371	0.0	0.3	3.077	A
	Exit	1	1		1197			1197	0.0	0.0	0.000	A
4	Entry	1	1	1	19	1800	0.011	19	0.0	0.0	2.133	A
			2	2,3,4	143	1800	0.079	144	0.0	0.1	2.708	A
		2	1	(1,2,3,4)	162			162	0.0	0.0	0.000	A
	Exit	1	1		447			447	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	253	1800	0.141	254	0.3	0.2	4.068	A
			2	1,3,4	79	1800	0.044	79	0.0	0.1	2.354	A
	Exit	1	1		395			395	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1869	2550	0.733	1872	2.0	2.8	6.272	A
	Exit	1	1		780			780	0.0	0.0	0.000	A
3	Entry	1	1	4	261	1800	0.145	261	0.2	0.2	2.488	A
			2	1,2,3	446	1800	0.248	445	0.3	0.5	3.319	A
	Exit	1	1		1424			1424	0.0	0.0	0.000	A
4	Entry	1	1	1	21	1800	0.011	20	0.0	0.0	2.001	A
			2	2,3,4	167	1800	0.093	168	0.1	0.2	2.707	A
		2	1	(1,2,3,4)	188			188	0.0	0.0	0.000	A
	Exit	1	1		520			520	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	309	1800	0.172	310	0.2	0.3	4.278	A
			2	1,3,4	102	1800	0.056	102	0.1	0.1	2.442	A
	Exit	1	1		470			470	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2290	2503	0.915	2291	2.8	12.3	16.761	C
	Exit	1	1		946			946	0.0	0.0	0.000	A
3	Entry	1	1	4	326	1800	0.181	327	0.2	0.2	2.567	A
			2	1,2,3	559	1800	0.310	558	0.5	0.7	3.553	A
	Exit	1	1		1755			1755	0.0	0.0	0.000	A
4	Entry	1	1	1	25	1800	0.014	25	0.0	0.0	1.988	A
			2	2,3,4	206	1800	0.114	206	0.2	0.2	2.796	A
		2	1	(1,2,3,4)	230			230	0.0	0.0	0.000	A
	Exit	1	1		647			647	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	310	1800	0.172	311	0.3	0.3	4.153	A
			2	1,3,4	100	1800	0.058	100	0.1	0.0	2.419	A
	Exit	1	1		482			482	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2295	2503	0.917	2289	12.3	13.8	20.939	C
	Exit	1	1		938			938	0.0	0.0	0.000	A
3	Entry	1	1	4	332	1800	0.184	332	0.2	0.2	2.556	A
			2	1,2,3	547	1800	0.304	548	0.7	0.5	3.527	A
	Exit	1	1		1744			1744	0.0	0.0	0.000	A
4	Entry	1	1	1	25	1800	0.014	25	0.0	0.0	2.111	A
			2	2,3,4	207	1800	0.115	207	0.2	0.2	2.804	A
		2	1	(1,2,3,4)	232			232	0.0	0.0	0.000	A
	Exit	1	1		650			650	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	257	1800	0.143	257	0.3	0.4	4.042	A
			2	1,3,4	81	1800	0.046	81	0.0	0.1	2.430	A
	Exit	1	1		391			391	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1893	2547	0.743	1892	13.8	3.6	8.321	A
	Exit	1	1		789			789	0.0	0.0	0.000	A
3	Entry	1	1	4	273	1800	0.152	273	0.2	0.2	2.489	A
			2	1,2,3	448	1800	0.249	449	0.5	0.5	3.237	A
	Exit	1	1		1445			1445	0.0	0.0	0.000	A
4	Entry	1	1	1	20	1800	0.011	20	0.0	0.0	1.864	A
			2	2,3,4	172	1800	0.095	172	0.2	0.1	2.641	A
		2	1	(1,2,3,4)	192			192	0.0	0.0	0.000	A
	Exit	1	1		538			538	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	204	1800	0.114	204	0.4	0.2	3.988	A
			2	1,3,4	69	1800	0.038	68	0.1	0.1	2.353	A
	Exit	1	1		330			330	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1582	2580	0.613	1583	3.6	1.7	4.374	A
	Exit	1	1		635			635	0.0	0.0	0.000	A
3	Entry	1	1	4	224	1800	0.125	225	0.2	0.1	2.378	A
			2	1,2,3	380	1800	0.211	381	0.5	0.3	3.056	A
	Exit	1	1		1208			1208	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	2.047	A
			2	2,3,4	139	1800	0.077	139	0.1	0.1	2.639	A
		2	1	(1,2,3,4)	157			157	0.0	0.0	0.000	A
	Exit	1	1		445			445	0.0	0.0	0.000	A

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** B - A180 - A1173 \_LargeRoundabout\_LaneSimulation\_Proposed Mitigation.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\A180 - A1173 Roundabout\Arup

**Report generation date:** 06/12/2017 16:04:20

- »Existing - 2017 Base, AM
- »Existing - 2017 Base, PM
- »Existing - 2019 Do Minimum, AM
- »Existing - 2019 Do Minimum, PM
- »Existing - 2019 Do Something, AM
- »Existing - 2019 Do Something, PM
- »Existing - 2032 Do Minimum, AM
- »Existing - 2032 Do Minimum, PM
- »Existing - 2032 Do Something, AM
- »Existing - 2032 Do Something, PM



## Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>Existing [Lane Simulation] - 2017 Base</b>								
Arm 1	0.3	2.55		A	0.2	2.39		A
Arm 2	0.5	2.55		A	1.5	3.09		A
Arm 3	1.4	4.99		A	0.7	3.15		A
Arm 4	0.3	2.87		A	0.2	2.43		A
<b>Existing [Lane Simulation] - 2019 Do Minimum</b>								
Arm 1	0.4	3.39		A	0.4	3.28		A
Arm 2	0.5	2.72		A	2.0	4.09		A
Arm 3	2.3	8.35		A	0.8	2.88		A
Arm 4	0.4	2.84		A	0.2	2.58		A
<b>Existing [Lane Simulation] - 2019 Do Something</b>								
Arm 1	0.5	3.75		A	0.5	3.60		A
Arm 2	0.6	2.89		A	3.0	5.15		A
Arm 3	3.0	7.90		A	0.7	2.95		A
Arm 4	0.5	2.87		A	0.2	2.69		A
<b>Existing [Lane Simulation] - 2032 Do Minimum</b>								
Arm 1	0.6	3.65		A	0.3	3.28		A
Arm 2	0.7	2.90		A	3.8	6.32		A
Arm 3	4.0	9.98		A	0.8	3.06		A
Arm 4	0.6	2.97		A	0.1	2.63		A
<b>Existing [Lane Simulation] - 2032 Do Something</b>								
Arm 1	0.7	3.94		A	0.5	3.78		A
Arm 2	0.9	3.21		A	6.3	9.35		A
Arm 3	6.7	13.89		B	1.1	3.17		A
Arm 4	0.7	3.05		A	0.2	2.72		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. Arm and junction delays are averages for all movements, including movements with zero delay.*

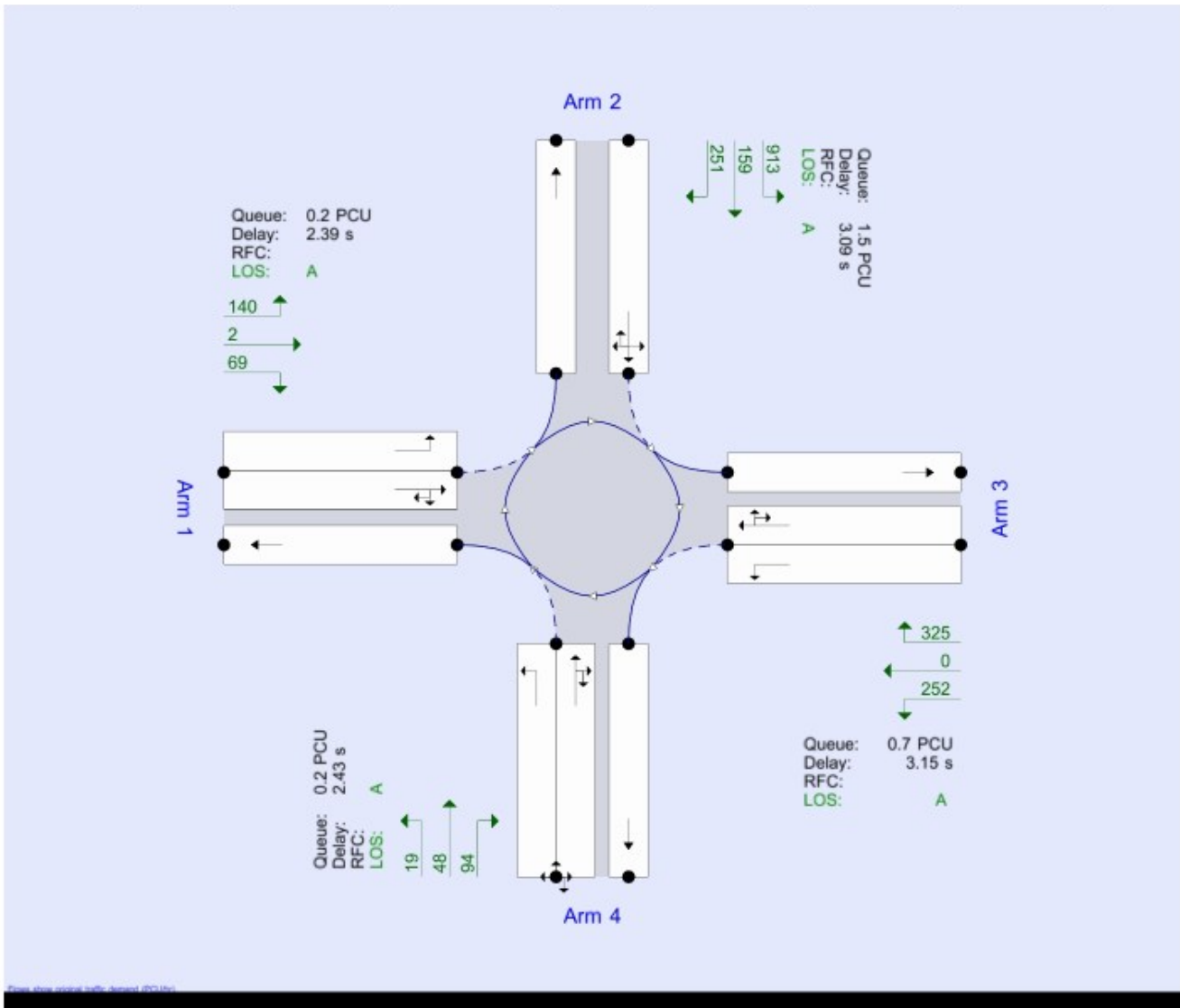
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	31/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	PCU	PCU	perHour	s	-Min	perMin



View this report with desktop PCU tool

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

### Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	1443315204	101	7.37

### 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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing	✓	✓	100.000	100.000

# Existing - 2017 Base, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	3.59	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A180 (W)	
2	A1173	
3	A180 (E)	
4	Matthew Ford Way	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.72	8.46	2.7	24.2	100.0	10.0	
2	4.09	7.98	29.1	39.3	100.0	9.5	
3	6.55	7.41	25.6	44.3	93.0	0.0	
4	4.62	8.54	23.5	17.7	93.0	11.0	

### Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1	1211	96.18
2	241	38.09
3	248	91.43
4	1025	21.11

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	1.004	3033
2	1.123	2993
3	1.219	3127
4	0.963	2891

*The slope and intercept shown above include any corrections and adjustments.*

### Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1	Evenly split	10.00
2	Evenly split	10.00
3	Evenly split	10.00
4	Evenly split	10.00

### Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1	1 [Give-way line]	1	2		Infinity	1800	2000
		2	1,3,4		Infinity	1800	2000
2	1 [Give-way line]	1	1,2,3,4		Infinity	1800	2993
		2					
3	1 [Give-way line]	1	4		Infinity	1800	2000
		2	1,2,3		Infinity	1800	2000
4	1 [Give-way line]	1	1	✓	9.00	1800	2000
		2	2,3,4	✓	9.00	1800	2000
	2	1	(1,2,3,4)		Infinity		

### Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1	1 [Give-way line]	1	0.502	1516
		2	0.502	1516
2	1 [Give-way line]	1	1.123	2993
3	1 [Give-way line]	1	0.609	1563
		2	0.609	1563
4	1 [Give-way line]	1	0.482	1445
		2	0.482	1445

### Lane Movements

Arm	Lane Level	Lane	Destination arm			
			1	2	3	4
1	1 [Give-way line]	1		✓		
		2	✓		✓	✓
2	1 [Give-way line]	1	✓	✓	✓	✓
		2				
3	1 [Give-way line]	1				✓
		2	✓	✓	✓	
4	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

## 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	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	316	100.000
2		ONE HOUR	✓	532	100.000
3		ONE HOUR	✓	927	100.000
4		ONE HOUR	✓	445	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	294	2	20
	2	183	1	304	44
	3	0	840	1	86
	4	76	151	218	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	6	0	10
	2	18	0	76	48
	3	0	21	0	27
	4	3	9	4	0

## Results

### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	2.55	0.3	A	283	425
2	2.55	0.5	A	445	668
3	4.99	1.4	A	807	1210
4	2.67	0.3	A	403	604

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	234	59	866	235	184	0.0	0.1	2.434	A
2	388	92	180	370	920	0.0	0.2	2.191	A
3	644	161	170	643	380	0.0	0.6	3.615	A
4	340	85	710	340	102	0.0	0.3	2.520	A

#### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	269	67	1062	269	221	0.1	0.2	2.509	A
2	425	106	211	423	1120	0.2	0.3	2.312	A
3	817	204	207	815	427	0.6	1.1	4.030	A
4	384	96	897	386	124	0.3	0.2	2.520	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	337	84	1263	337	265	0.2	0.2	2.550	A
2	524	131	264	523	1337	0.3	0.5	2.457	A
3	948	237	254	954	532	1.1	1.1	4.681	A
4	481	120	1046	482	163	0.2	0.3	2.654	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	352	88	1298	354	278	0.2	0.2	2.476	A
2	546	136	264	544	1388	0.5	0.5	2.554	A
3	977	244	262	978	546	1.1	1.4	4.985	A
4	488	122	1087	489	153	0.3	0.3	2.673	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	281	70	1042	281	229	0.2	0.3	2.432	A
2	446	112	213	448	1109	0.5	0.3	2.384	A
3	793	198	216	793	445	1.4	1.0	4.071	A
4	395	99	876	394	132	0.3	0.3	2.567	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	227	57	877	226	183	0.3	0.2	2.378	A
2	362	90	173	360	930	0.3	0.2	2.211	A
3	659	165	174	659	360	1.0	0.5	3.630	A
4	329	82	732	328	102	0.3	0.3	2.455	A

## Lane Results

*Lane Level notation: Lane Level 1 is always closest to the junction.*

### Lanes: Main Results for each time segment

**07:15 - 07:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	219	1800	0.122	219	0.0	0.1	2.454	A
			2	1,3,4	15	1800	0.008	15	0.0	0.0	2.143	A
	Exit	1	1		184			184	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	368	2791	0.132	370	0.0	0.2	2.191	A
	Exit	1	1		920			920	0.0	0.0	0.000	A
3	Entry	1	1	4	59	1800	0.033	59	0.0	0.0	2.543	A
			2	1,2,3	585	1800	0.325	583	0.0	0.6	3.719	A
	Exit	1	1		380			380	0.0	0.0	0.000	A
4	Entry	1	1	1	58	1800	0.032	58	0.0	0.1	2.037	A
			2	2,3,4	282	1800	0.157	282	0.0	0.2	2.623	A
			2	1	(1,2,3,4)	340			340	0.0	0.0	0.000
	Exit	1	1		102			102	0.0	0.0	0.000	A

**07:30 - 07:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	252	1800	0.140	252	0.1	0.2	2.539	A
			2	1,3,4	17	1800	0.009	17	0.0	0.0	2.070	A
	Exit	1	1		221			221	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	425	2756	0.154	423	0.2	0.3	2.312	A
	Exit	1	1		1120			1120	0.0	0.0	0.000	A
3	Entry	1	1	4	71	1800	0.040	72	0.0	0.1	2.688	A
			2	1,2,3	748	1800	0.414	743	0.6	1.1	4.155	A
	Exit	1	1		427			427	0.0	0.0	0.000	A
4	Entry	1	1	1	67	1800	0.037	67	0.1	0.0	2.163	A
			2	2,3,4	317	1800	0.176	318	0.2	0.2	2.598	A
		2	1	(1,2,3,4)	384			384	0.0	0.0	0.000	A
	Exit	1	1		124			124	0.0	0.0	0.000	A

**07:45 - 08:00**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	313	1800	0.174	313	0.2	0.2	2.572	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.253	A
	Exit	1	1		265			265	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	524	2697	0.194	523	0.3	0.5	2.457	A
	Exit	1	1		1337			1337	0.0	0.0	0.000	A
3	Entry	1	1	4	94	1800	0.052	94	0.1	0.1	2.788	A
			2	1,2,3	853	1800	0.474	860	1.1	1.1	4.864	A
	Exit	1	1		532			532	0.0	0.0	0.000	A
4	Entry	1	1	1	81	1800	0.045	81	0.0	0.1	2.122	A
			2	2,3,4	400	1800	0.222	401	0.2	0.2	2.767	A
		2	1	(1,2,3,4)	481			481	0.0	0.0	0.000	A
	Exit	1	1		163			163	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	329	1800	0.183	330	0.2	0.2	2.501	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.115	A
	Exit	1	1		278			278	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	546	2696	0.202	544	0.5	0.5	2.554	A
	Exit	1	1		1388			1388	0.0	0.0	0.000	A
3	Entry	1	1	4	89	1800	0.049	89	0.1	0.1	2.700	A
			2	1,2,3	888	1800	0.493	889	1.1	1.4	5.202	A
	Exit	1	1		546			546	0.0	0.0	0.000	A
4	Entry	1	1	1	81	1800	0.045	80	0.1	0.1	2.085	A
			2	2,3,4	408	1800	0.227	408	0.2	0.2	2.795	A
		2	1	(1,2,3,4)	488			488	0.0	0.0	0.000	A
	Exit	1	1		153			153	0.0	0.0	0.000	A



**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	281	1800	0.146	281	0.2	0.2	2.451	A
			2	1,3,4	19	1800	0.011	19	0.0	0.0	2.168	A
	Exit	1	1		229			229	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	448	2754	0.162	448	0.5	0.3	2.384	A
	Exit	1	1		1109			1109	0.0	0.0	0.000	A
3	Entry	1	1	4	75	1800	0.042	75	0.1	0.0	2.614	A
			2	1,2,3	718	1800	0.399	717	1.4	0.9	4.213	A
	Exit	1	1		445			445	0.0	0.0	0.000	A
4	Entry	1	1	1	71	1800	0.039	70	0.1	0.1	2.241	A
			2	2,3,4	324	1800	0.180	324	0.2	0.2	2.638	A
		2	1	(1,2,3,4)	395			395	0.0	0.0	0.000	A
	Exit	1	1		132			132	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	211	1800	0.117	210	0.2	0.2	2.386	A
			2	1,3,4	16	1800	0.009	16	0.0	0.0	2.279	A
	Exit	1	1		183			183	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	362	2799	0.129	360	0.3	0.2	2.211	A
	Exit	1	1		930			930	0.0	0.0	0.000	A
3	Entry	1	1	4	58	1800	0.032	58	0.0	0.0	2.818	A
			2	1,2,3	602	1800	0.334	601	0.9	0.5	3.708	A
	Exit	1	1		360			360	0.0	0.0	0.000	A
4	Entry	1	1	1	53	1800	0.029	53	0.1	0.0	2.218	A
			2	2,3,4	277	1800	0.154	275	0.2	0.3	2.505	A
		2	1	(1,2,3,4)	329			329	0.0	0.0	0.000	A
	Exit	1	1		102			102	0.0	0.0	0.000	A

# Existing - 2017 Base, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	2.99	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	471	96.18
2	176	38.09
3	487	91.43
4	586	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.30

### Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	218	100.000
2		ONE HOUR	✓	1323	100.000
3		ONE HOUR	✓	580	100.000
4		ONE HOUR	✓	182	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	7	140	2	89
2	251	0	913	159
3	0	325	3	252
4	19	48	94	1

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	50	11	0	2
2	3	0	20	10
3	0	58	50	5
4	2	47	0	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	2.39	0.2	A	198	295
2	3.09	1.5	A	1174	1761
3	3.15	0.7	A	498	744
4	2.43	0.2	A	146	219

#### Main Results for each time segment

##### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	182	40	320	163	211	0.0	0.1	2.319	A
2	957	239	133	957	350	0.0	0.6	2.259	A
3	395	99	370	395	719	0.0	0.4	2.879	A
4	120	30	411	120	355	0.0	0.1	2.329	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	195	49	397	195	243	0.1	0.1	2.350	A
2	1156	289	162	1155	430	0.6	1.0	2.551	A
3	492	123	434	493	883	0.4	0.4	2.952	A
4	149	37	491	149	437	0.1	0.1	2.387	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	234	59	491	235	294	0.1	0.1	2.373	A
2	1409	352	193	1409	533	1.0	1.3	3.024	A
3	607	152	514	610	1088	0.4	0.4	3.149	A
4	179	45	608	178	516	0.1	0.2	2.431	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	230	58	479	231	299	0.1	0.1	2.390	A
2	1426	357	194	1425	515	1.3	1.5	3.093	A
3	610	152	547	608	1072	0.4	0.7	3.147	A
4	171	43	607	171	547	0.2	0.1	2.319	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	195	49	381	196	238	0.1	0.2	2.362	A
2	1139	285	158	1136	418	1.5	1.0	2.600	A
3	480	120	427	480	868	0.7	0.5	3.015	A
4	140	35	479	141	427	0.1	0.1	2.365	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	162	40	307	162	212	0.2	0.1	2.286	A
2	956	239	127	956	343	1.0	0.5	2.238	A
3	392	98	362	390	721	0.5	0.5	2.828	A
4	115	29	405	115	347	0.1	0.1	2.306	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	104	1800	0.058	104	0.0	0.0	2.413	A
			2	1,3,4	58	1800	0.032	59	0.0	0.0	2.154	A
	Exit	1	1		211			211	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	957	2857	0.335	957	0.0	0.6	2.259	A
	Exit	1	1		350			350	0.0	0.0	0.000	A
3	Entry	1	1	4	180	1800	0.100	180	0.0	0.2	2.339	A
			2	1,2,3	214	1800	0.119	215	0.0	0.3	3.583	A
	Exit	1	1		719			719	0.0	0.0	0.000	A
4	Entry	1	1	1	15	1800	0.009	15	0.0	0.0	2.121	A
			2	2,3,4	105	1800	0.058	105	0.0	0.1	2.383	A
		2	1	(1,2,3,4)	120			120	0.0	0.0	0.000	A
	Exit	1	1		355			355	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	127	1800	0.070	126	0.0	0.1	2.457	A
			2	1,3,4	69	1800	0.038	69	0.0	0.0	2.168	A
	Exit	1	1		243			243	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1156	2824	0.409	1155	0.6	1.0	2.551	A
	Exit	1	1		430			430	0.0	0.0	0.000	A
3	Entry	1	1	4	230	1800	0.128	229	0.2	0.2	2.353	A
			2	1,2,3	262	1800	0.146	264	0.3	0.2	3.732	A
	Exit	1	1		883			883	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.009	17	0.0	0.0	2.176	A
			2	2,3,4	132	1800	0.073	133	0.1	0.1	2.421	A
		2	1	(1,2,3,4)	149			149	0.0	0.0	0.000	A
	Exit	1	1		437			437	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	150	1800	0.083	151	0.1	0.1	2.461	A
			2	1,3,4	84	1800	0.047	85	0.0	0.0	2.225	A
	Exit	1	1		294			294	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1409	2789	0.505	1409	1.0	1.3	3.024	A
	Exit	1	1		533			533	0.0	0.0	0.000	A
3	Entry	1	1	4	275	1800	0.153	274	0.2	0.2	2.544	A
			2	1,2,3	332	1800	0.185	335	0.2	0.2	3.905	A
	Exit	1	1		1088			1088	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	2.103	A
			2	2,3,4	157	1800	0.087	156	0.1	0.2	2.482	A
		2	1	(1,2,3,4)	179			179	0.0	0.0	0.000	A
	Exit	1	1		516			516	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	139	1800	0.077	140	0.1	0.0	2.449	A
			2	1,3,4	91	1800	0.051	90	0.0	0.1	2.297	A
	Exit	1	1		299			299	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1426	2788	0.512	1425	1.3	1.5	3.093	A
	Exit	1	1		515			515	0.0	0.0	0.000	A
3	Entry	1	1	4	277	1800	0.154	279	0.2	0.1	2.471	A
			2	1,2,3	333	1800	0.185	329	0.2	0.6	4.003	A
	Exit	1	1		1072			1072	0.0	0.0	0.000	A
4	Entry	1	1	1	21	1800	0.011	21	0.0	0.0	2.023	A
			2	2,3,4	151	1800	0.084	150	0.2	0.1	2.362	A
			2	1	(1,2,3,4)	171			171	0.0	0.0	0.000
	Exit	1	1		547			547	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	126	1800	0.070	127	0.0	0.1	2.442	A
			2	1,3,4	69	1800	0.038	69	0.1	0.1	2.228	A
	Exit	1	1		238			238	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1139	2828	0.403	1136	1.5	1.0	2.600	A
	Exit	1	1		418			418	0.0	0.0	0.000	A
3	Entry	1	1	4	222	1800	0.123	222	0.1	0.1	2.485	A
			2	1,2,3	258	1800	0.143	258	0.6	0.3	3.701	A
	Exit	1	1		868			868	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.009	17	0.0	0.0	2.153	A
			2	2,3,4	124	1800	0.069	123	0.1	0.1	2.394	A
			2	1	(1,2,3,4)	140			140	0.0	0.0	0.000
	Exit	1	1		427			427	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	106	1800	0.059	106	0.1	0.1	2.358	A
			2	1,3,4	56	1800	0.031	56	0.1	0.0	2.160	A
	Exit	1	1		212			212	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	956	2864	0.334	956	1.0	0.5	2.238	A
	Exit	1	1		343			343	0.0	0.0	0.000	A
3	Entry	1	1	4	184	1800	0.102	184	0.1	0.1	2.344	A
			2	1,2,3	208	1800	0.116	206	0.3	0.4	3.456	A
	Exit	1	1		721			721	0.0	0.0	0.000	A
4	Entry	1	1	1	13	1800	0.007	13	0.0	0.0	2.102	A
			2	2,3,4	102	1800	0.057	101	0.1	0.1	2.334	A
			2	1	(1,2,3,4)	115			115	0.0	0.0	0.000
	Exit	1	1		347			347	0.0	0.0	0.000	A

# Existing - 2019 Do Minimum, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	4.50	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	1456	96.18
2	248	38.09
3	258	91.43
4	1287	21.11

### Slope / Intercept / Capacity

*[same as above]*

### Lane Simulation: Arm options

*[same as above]*

### Lanes

*[same as above]*

### Entry Lane slope and intercept

*[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	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	328	100.000
2		ONE HOUR	✓	583	100.000
3		ONE HOUR	✓	1184	100.000
4		ONE HOUR	✓	459	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	305	2	21
2	191	1	346	45
3	0	1074	1	89
4	79	156	224	0

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	38	0	48
2	87	0	31	68
3	0	10	0	21
4	9	18	6	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.39	0.4	A	299	448
2	2.72	0.5	A	535	802
3	6.35	2.3	A	1069	1603
4	2.84	0.4	A	420	631

#### Main Results for each time segment

##### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	242	61	1111	243	199	0.0	0.2	3.225	A
2	442	111	187	440	1167	0.0	0.4	2.290	A
3	891	223	188	888	439	0.0	1.2	4.071	A
4	350	88	960	350	116	0.0	0.3	2.591	A



**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	293	73	1309	293	244	0.2	0.3	3.276	A
2	523	131	224	521	1378	0.4	0.4	2.420	A
3	1054	264	229	1050	515	1.2	1.7	4.787	A
4	415	104	1138	415	141	0.3	0.4	2.676	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	357	89	1593	356	293	0.3	0.4	3.389	A
2	642	161	267	641	1683	0.4	0.5	2.712	A
3	1270	318	282	1274	626	1.7	2.3	6.354	A
4	505	126	1383	504	173	0.4	0.4	2.838	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	352	88	1593	352	298	0.4	0.3	3.388	A
2	650	162	278	650	1668	0.5	0.4	2.723	A
3	1265	316	292	1266	636	2.3	2.0	6.241	A
4	507	127	1386	506	172	0.4	0.4	2.782	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	295	74	1300	294	241	0.3	0.4	3.330	A
2	523	131	226	521	1368	0.4	0.4	2.459	A
3	1045	261	231	1045	515	2.0	1.4	4.784	A
4	410	102	1133	409	144	0.4	0.3	2.690	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	253	63	1098	254	201	0.4	0.2	3.204	A
2	429	107	177	430	1175	0.4	0.3	2.356	A
3	887	222	192	890	415	1.4	1.0	4.053	A
4	336	84	964	336	118	0.3	0.3	2.646	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	225	1800	0.125	226	0.0	0.1	3.257	A
			2	1,3,4	18	1800	0.010	17	0.0	0.0	2.801	A
	Exit	1	1		199			199	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	442	2781	0.159	440	0.0	0.4	2.290	A
	Exit	1	1		1167			1167	0.0	0.0	0.000	A
3	Entry	1	1	4	69	1800	0.039	69	0.0	0.1	2.545	A
			2	1,2,3	822	1800	0.457	819	0.0	1.1	4.190	A
	Exit	1	1		439			439	0.0	0.0	0.000	A
4	Entry	1	1	1	59	1800	0.033	58	0.0	0.1	2.190	A
			2	2,3,4	291	1800	0.162	291	0.0	0.2	2.673	A
		2	1	(1,2,3,4)	350			350	0.0	0.0	0.000	A
	Exit	1	1		116			116	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	273	1800	0.152	274	0.1	0.3	3.308	A
			2	1,3,4	19	1800	0.011	19	0.0	0.0	2.838	A
	Exit	1	1		244			244	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	523	2741	0.191	521	0.4	0.4	2.420	A
	Exit	1	1		1378			1378	0.0	0.0	0.000	A
3	Entry	1	1	4	85	1800	0.047	84	0.1	0.1	2.504	A
			2	1,2,3	969	1800	0.539	965	1.1	1.6	4.958	A
	Exit	1	1		515			515	0.0	0.0	0.000	A
4	Entry	1	1	1	73	1800	0.041	73	0.1	0.1	2.327	A
			2	2,3,4	342	1800	0.190	342	0.2	0.3	2.748	A
		2	1	(1,2,3,4)	415			415	0.0	0.0	0.000	A
	Exit	1	1		141			141	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	331	1800	0.184	331	0.3	0.4	3.425	A
			2	1,3,4	25	1800	0.014	25	0.0	0.0	2.918	A
	Exit	1	1		293			293	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	642	2693	0.238	641	0.4	0.5	2.712	A
	Exit	1	1		1683			1683	0.0	0.0	0.000	A
3	Entry	1	1	4	99	1800	0.055	98	0.1	0.1	2.560	A
			2	1,2,3	1172	1800	0.651	1176	1.6	2.3	6.637	A
	Exit	1	1		626			626	0.0	0.0	0.000	A
4	Entry	1	1	1	88	1800	0.049	88	0.1	0.1	2.359	A
			2	2,3,4	417	1800	0.231	416	0.3	0.4	2.940	A
		2	1	(1,2,3,4)	505			505	0.0	0.0	0.000	A
	Exit	1	1		173			173	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	325	1800	0.180	325	0.4	0.3	3.432	A
			2	1,3,4	27	1800	0.015	27	0.0	0.0	2.819	A
	Exit	1	1		298			298	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	650	2679	0.242	650	0.5	0.4	2.723	A
	Exit	1	1		1668			1668	0.0	0.0	0.000	A
3	Entry	1	1	4	96	1800	0.053	96	0.1	0.1	2.669	A
			2	1,2,3	1170	1800	0.650	1170	2.3	2.0	6.504	A
	Exit	1	1		636			636	0.0	0.0	0.000	A
4	Entry	1	1	1	84	1800	0.047	84	0.1	0.1	2.269	A
			2	2,3,4	422	1800	0.235	423	0.4	0.3	2.887	A
			2	1	(1,2,3,4)	507			507	0.0	0.0	0.000
	Exit	1	1		172			172	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	274	1800	0.152	272	0.3	0.4	3.367	A
			2	1,3,4	22	1800	0.012	22	0.0	0.0	2.848	A
	Exit	1	1		241			241	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	523	2738	0.191	521	0.4	0.4	2.459	A
	Exit	1	1		1368			1368	0.0	0.0	0.000	A
3	Entry	1	1	4	83	1800	0.046	84	0.1	0.1	2.477	A
			2	1,2,3	962	1800	0.534	962	2.0	1.4	4.956	A
	Exit	1	1		515			515	0.0	0.0	0.000	A
4	Entry	1	1	1	71	1800	0.039	71	0.1	0.0	2.226	A
			2	2,3,4	339	1800	0.188	338	0.3	0.3	2.785	A
			2	1	(1,2,3,4)	410			410	0.0	0.0	0.000
	Exit	1	1		144			144	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	237	1800	0.131	238	0.4	0.2	3.240	A
			2	1,3,4	16	1800	0.009	16	0.0	0.0	2.698	A
	Exit	1	1		201			201	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	429	2793	0.154	430	0.4	0.3	2.356	A
	Exit	1	1		1175			1175	0.0	0.0	0.000	A
3	Entry	1	1	4	70	1800	0.039	70	0.1	0.0	2.407	A
			2	1,2,3	818	1800	0.454	820	1.4	1.0	4.179	A
	Exit	1	1		415			415	0.0	0.0	0.000	A
4	Entry	1	1	1	59	1800	0.033	58	0.0	0.1	2.271	A
			2	2,3,4	277	1800	0.154	277	0.3	0.2	2.726	A
			2	1	(1,2,3,4)	338			338	0.0	0.0	0.000
	Exit	1	1		118			118	0.0	0.0	0.000	A

# Existing - 2019 Do Minimum, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	3.63	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	508	96.18
2	181	38.09
3	504	91.43
4	629	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	226	100.000
2		ONE HOUR	✓	1571	100.000
3		ONE HOUR	✓	621	100.000
4		ONE HOUR	✓	167	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	7	146	2	71
2	261	0	1146	164
3	0	358	3	260
4	20	49	97	1

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	66	75	0	10
2	36	0	6	20
3	0	21	77	4
4	0	67	5	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.26	0.4	A	206	309
2	4.09	2.0	A	1438	2158
3	2.86	0.8	A	570	855
4	2.58	0.2	A	152	228

#### Main Results for each time segment

##### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	164	41	369	163	217	0.0	0.1	3.099	A
2	1190	298	138	1185	395	0.0	1.2	2.518	A
3	462	116	377	462	946	0.0	0.3	2.676	A
4	121	30	464	123	375	0.0	0.1	2.500	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	205	51	483	204	250	0.1	0.2	3.183	A
2	1407	352	166	1412	501	1.2	1.1	3.045	A
3	559	140	449	559	1129	0.3	0.5	2.790	A
4	150	38	562	150	446	0.1	0.1	2.506	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	248	62	559	249	317	0.2	0.1	3.120	A
2	1734	433	201	1736	608	1.1	2.0	3.993	A
3	693	173	555	691	1382	0.5	0.8	2.859	A
4	183	46	694	183	551	0.1	0.2	2.584	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	237	59	557	236	304	0.1	0.4	3.259	A
2	1699	425	194	1703	599	2.0	1.7	4.092	A
3	674	168	544	675	1354	0.8	0.6	2.803	A
4	186	47	675	187	543	0.2	0.1	2.578	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	208	52	458	205	264	0.4	0.2	3.136	A
2	1419	355	166	1417	497	1.7	1.3	3.004	A
3	581	140	461	582	1121	0.6	0.4	2.738	A
4	150	37	574	149	450	0.1	0.2	2.496	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	174	44	382	174	225	0.2	0.2	2.998	A
2	1181	295	136	1179	419	1.3	1.0	2.502	A
3	488	117	390	489	925	0.4	0.4	2.671	A
4	122	31	484	122	375	0.2	0.1	2.476	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	102	1800	0.057	101	0.0	0.1	3.753	A
			2	1,3,4	62	1800	0.034	62	0.0	0.0	2.355	A
	Exit	1	1		217			217	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1190	2850	0.418	1185	0.0	1.2	2.518	A
	Exit	1	1		395			395	0.0	0.0	0.000	A
3	Entry	1	1	4	200	1800	0.111	201	0.0	0.1	2.380	A
			2	1,2,3	263	1800	0.146	261	0.0	0.2	2.933	A
	Exit	1	1		946			946	0.0	0.0	0.000	A
4	Entry	1	1	1	15	1800	0.008	14	0.0	0.0	2.051	A
			2	2,3,4	107	1800	0.059	108	0.0	0.0	2.570	A
	Exit	1	1	(1,2,3,4)	121			121	0.0	0.0	0.000	A
					375			375	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	131	1800	0.073	130	0.1	0.2	3.814	A
			2	1,3,4	74	1800	0.041	74	0.0	0.1	2.404	A
	Exit	1	1		250			250	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1407	2819	0.499	1412	1.2	1.1	3.045	A
	Exit	1	1		501			501	0.0	0.0	0.000	A
3	Entry	1	1	4	230	1800	0.128	230	0.1	0.2	2.467	A
			2	1,2,3	330	1800	0.183	329	0.2	0.3	3.055	A
	Exit	1	1		1129			1129	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.009	17	0.0	0.0	2.108	A
			2	2,3,4	133	1800	0.074	133	0.0	0.1	2.571	A
	Exit	1	1	(1,2,3,4)	150			150	0.0	0.0	0.000	A
					446			446	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	180	1800	0.089	161	0.2	0.1	3.823	A
			2	1,3,4	88	1800	0.049	88	0.1	0.0	2.291	A
	Exit	1	1		317			317	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1734	2779	0.624	1736	1.1	2.0	3.993	A
	Exit	1	1		608			608	0.0	0.0	0.000	A
3	Entry	1	1	4	293	1800	0.163	292	0.2	0.4	2.429	A
			2	1,2,3	400	1800	0.222	399	0.3	0.4	3.220	A
	Exit	1	1		1382			1382	0.0	0.0	0.000	A
4	Entry	1	1	1	23	1800	0.013	23	0.0	0.0	2.033	A
			2	2,3,4	161	1800	0.089	160	0.1	0.2	2.681	A
	Exit	1	1	(1,2,3,4)	183			183	0.0	0.0	0.000	A
					551			551	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	154	1800	0.085	153	0.1	0.3	4.036	A
			2	1,3,4	83	1800	0.048	83	0.0	0.1	2.398	A
	Exit	1	1		304			304	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1699	2787	0.610	1703	2.0	1.7	4.092	A
	Exit	1	1		599			599	0.0	0.0	0.000	A
3	Entry	1	1	4	282	1800	0.157	282	0.4	0.3	2.448	A
			2	1,2,3	392	1800	0.218	393	0.4	0.3	3.097	A
	Exit	1	1		1354			1354	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	2.108	A
			2	2,3,4	164	1800	0.091	164	0.2	0.1	2.656	A
		2	1	(1,2,3,4)	186			186	0.0	0.0	0.000	A
	Exit	1	1		543			543	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	132	1800	0.074	132	0.3	0.2	3.871	A
			2	1,3,4	74	1800	0.041	73	0.1	0.0	2.270	A
	Exit	1	1		284			284	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1419	2818	0.504	1417	1.7	1.3	3.004	A
	Exit	1	1		497			497	0.0	0.0	0.000	A
3	Entry	1	1	4	235	1800	0.131	235	0.3	0.1	2.417	A
			2	1,2,3	328	1800	0.181	327	0.3	0.3	3.010	A
	Exit	1	1		1121			1121	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	2.017	A
			2	2,3,4	132	1800	0.073	131	0.1	0.2	2.574	A
		2	1	(1,2,3,4)	150			150	0.0	0.0	0.000	A
	Exit	1	1		450			450	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	113	1800	0.063	113	0.2	0.1	3.598	A
			2	1,3,4	61	1800	0.034	61	0.0	0.1	2.291	A
	Exit	1	1		225			225	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1181	2853	0.414	1179	1.3	1.0	2.502	A
	Exit	1	1		419			419	0.0	0.0	0.000	A
3	Entry	1	1	4	195	1800	0.108	195	0.1	0.2	2.318	A
			2	1,2,3	273	1800	0.152	274	0.3	0.2	2.963	A
	Exit	1	1		925			925	0.0	0.0	0.000	A
4	Entry	1	1	1	14	1800	0.008	14	0.0	0.0	1.908	A
			2	2,3,4	108	1800	0.060	108	0.2	0.1	2.589	A
		2	1	(1,2,3,4)	122			122	0.0	0.0	0.000	A
	Exit	1	1		375			375	0.0	0.0	0.000	A



# Existing - 2019 Do Something, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	5.23	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	1577	96.18
2	248	38.09
3	328	91.43
4	1427	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	395	100.000
2		ONE HOUR	✓	694	100.000
3		ONE HOUR	✓	1265	100.000
4		ONE HOUR	✓	478	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	372	2	21
	2	250	1	387	56
	3	0	1175	1	89
	4	79	175	224	0

### Vehicle Mix

#### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	40	0	48
	2	85	0	29	64
	3	0	10	0	21
	4	9	18	6	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.75	0.5	A	380	539
2	2.89	0.6	A	639	959
3	7.90	3.0	A	1152	1728
4	2.87	0.5	A	442	662

#### Main Results for each time segment

##### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	283	71	1189	284	245	0.0	0.3	3.376	A
2	529	132	184	528	1269	0.0	0.5	2.385	A
3	941	235	249	940	463	0.0	1.2	4.260	A
4	354	88	1080	354	128	0.0	0.3	2.634	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	358	89	1417	357	292	0.3	0.4	3.417	A
2	628	157	223	631	1551	0.5	0.4	2.594	A
3	1128	282	295	1131	558	1.2	1.8	5.473	A
4	428	107	1280	429	146	0.3	0.3	2.745	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	441	110	1718	443	362	0.4	0.5	3.639	A
2	753	188	276	754	1884	0.4	0.6	2.886	A
3	1375	344	364	1376	666	1.8	3.0	7.899	A
4	525	131	1556	525	184	0.3	0.5	2.866	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	434	109	1745	436	375	0.5	0.5	3.752	A
2	772	193	282	774	1900	0.6	0.5	2.837	A
3	1378	345	368	1386	688	3.0	2.7	7.715	A
4	548	137	1572	548	182	0.5	0.4	2.845	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	350	87	1416	348	299	0.5	0.5	3.464	A
2	633	158	224	633	1539	0.5	0.5	2.579	A
3	1133	283	296	1131	562	2.7	1.9	5.455	A
4	434	108	1282	433	145	0.4	0.4	2.788	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	293	73	1188	292	249	0.5	0.3	3.335	A
2	520	130	185	520	1295	0.5	0.5	2.449	A
3	957	239	245	956	460	1.9	1.2	4.307	A
4	381	90	1075	362	126	0.4	0.3	2.699	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	265	1800	0.147	266	0.0	0.3	3.411	A
			2	1,3,4	18	1800	0.010	18	0.0	0.0	2.816	A
	Exit	1	1		245			245	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	529	2785	0.190	528	0.0	0.5	2.385	A
	Exit	1	1		1269			1269	0.0	0.0	0.000	A
3	Entry	1	1	4	68	1800	0.038	68	0.0	0.1	2.464	A
			2	1,2,3	873	1800	0.485	872	0.0	1.2	4.386	A
	Exit	1	1		463			463	0.0	0.0	0.000	A
4	Entry	1	1	1	57	1800	0.032	58	0.0	0.0	2.286	A
			2	2,3,4	296	1800	0.165	296	0.0	0.2	2.704	A
		2	1	(1,2,3,4)	354			354	0.0	0.0	0.000	A
	Exit	1	1		128			128	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	337	1800	0.187	337	0.3	0.4	3.436	A
			2	1,3,4	20	1800	0.011	20	0.0	0.0	3.087	A
	Exit	1	1		292			292	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	628	2742	0.229	631	0.5	0.4	2.594	A
	Exit	1	1		1551			1551	0.0	0.0	0.000	A
3	Entry	1	1	4	76	1800	0.042	76	0.1	0.1	2.526	A
			2	1,2,3	1052	1800	0.585	1056	1.2	1.7	5.674	A
	Exit	1	1		558			558	0.0	0.0	0.000	A
4	Entry	1	1	1	69	1800	0.038	69	0.0	0.1	2.297	A
			2	2,3,4	359	1800	0.200	360	0.2	0.3	2.835	A
		2	1	(1,2,3,4)	428			428	0.0	0.0	0.000	A
	Exit	1	1		146			146	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	416	1800	0.231	418	0.4	0.4	3.680	A
			2	1,3,4	24	1800	0.013	24	0.0	0.0	2.962	A
	Exit	1	1		362			362	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	753	2682	0.281	754	0.4	0.6	2.886	A
	Exit	1	1		1884			1884	0.0	0.0	0.000	A
3	Entry	1	1	4	97	1800	0.054	97	0.1	0.1	2.581	A
			2	1,2,3	1278	1800	0.710	1279	1.7	2.9	8.264	A
	Exit	1	1		666			666	0.0	0.0	0.000	A
4	Entry	1	1	1	87	1800	0.048	87	0.1	0.1	2.173	A
			2	2,3,4	438	1800	0.243	438	0.3	0.4	3.006	A
		2	1	(1,2,3,4)	525			525	0.0	0.0	0.000	A
	Exit	1	1		184			184	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	410	1800	0.228	411	0.4	0.5	3.822	A
			2	1,3,4	25	1800	0.014	25	0.0	0.0	2.588	A
	Exit	1	1		375			375	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	772	2676	0.288	774	0.6	0.5	2.837	A
	Exit	1	1		1900			1900	0.0	0.0	0.000	A
3	Entry	1	1	4	98	1800	0.055	98	0.1	0.0	2.462	A
			2	1,2,3	1281	1800	0.711	1288	2.9	2.6	8.081	A
	Exit	1	1		688			688	0.0	0.0	0.000	A
4	Entry	1	1	1	91	1800	0.051	91	0.1	0.0	2.363	A
			2	2,3,4	456	1800	0.254	456	0.4	0.3	2.939	A
		2	1	(1,2,3,4)	548			548	0.0	0.0	0.000	A
	Exit	1	1		182			182	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	331	1800	0.184	329	0.5	0.5	3.505	A
			2	1,3,4	19	1800	0.011	19	0.0	0.0	2.807	A
	Exit	1	1		299			299	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	633	2740	0.231	633	0.5	0.5	2.579	A
	Exit	1	1		1539			1539	0.0	0.0	0.000	A
3	Entry	1	1	4	77	1800	0.043	77	0.0	0.0	2.517	A
			2	1,2,3	1056	1800	0.588	1054	2.6	1.8	5.657	A
	Exit	1	1		562			562	0.0	0.0	0.000	A
4	Entry	1	1	1	72	1800	0.040	72	0.0	0.1	2.284	A
			2	2,3,4	362	1800	0.201	361	0.3	0.3	2.864	A
		2	1	(1,2,3,4)	434			434	0.0	0.0	0.000	A
	Exit	1	1		145			145	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	277	1800	0.154	276	0.5	0.3	3.360	A
			2	1,3,4	17	1800	0.009	17	0.0	0.0	2.938	A
	Exit	1	1		249			249	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	520	2784	0.187	520	0.5	0.5	2.449	A
	Exit	1	1		1295			1295	0.0	0.0	0.000	A
3	Entry	1	1	4	70	1800	0.039	70	0.0	0.1	2.383	A
			2	1,2,3	888	1800	0.493	886	1.8	1.1	4.444	A
	Exit	1	1		460			460	0.0	0.0	0.000	A
4	Entry	1	1	1	60	1800	0.033	60	0.1	0.0	2.405	A
			2	2,3,4	301	1800	0.167	301	0.3	0.2	2.759	A
		2	1	(1,2,3,4)	361			361	0.0	0.0	0.000	A
	Exit	1	1		128			128	0.0	0.0	0.000	A

# Existing - 2019 Do Something, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	4.33	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	573	96.18
2	181	38.09
3	600	91.43
4	753	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	320	100.000
2		ONE HOUR	✓	1772	100.000
3		ONE HOUR	✓	671	100.000
4		ONE HOUR	✓	183	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	7	240	2	71
2	335	0	1252	185
3	0	408	3	260
4	20	65	97	1

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	66	78	0	10
2	40	0	6	20
3	0	20	77	4
4	0	65	5	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.60	0.5	A	295	443
2	5.15	3.0	A	1625	2438
3	2.95	0.7	A	615	923
4	2.69	0.2	A	168	252

#### Main Results for each time segment

##### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	240	60	420	239	270	0.0	0.3	3.403	A
2	1338	334	134	1336	525	0.0	1.1	2.743	A
3	494	123	452	494	1018	0.0	0.4	2.712	A
4	137	34	552	137	394	0.0	0.1	2.525	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	298	75	521	298	320	0.3	0.3	3.480	A
2	1591	398	167	1599	652	1.1	1.8	3.447	A
3	612	153	525	611	1231	0.4	0.5	2.837	A
4	165	41	676	166	460	0.1	0.1	2.664	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	354	88	638	352	396	0.3	0.5	3.531	A
2	1950	488	200	1952	790	1.8	3.0	5.153	A
3	744	186	653	742	1499	0.5	0.7	2.954	A
4	200	50	833	201	562	0.1	0.1	2.672	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	354	88	640	355	394	0.5	0.4	3.600	A
2	1944	488	202	1944	792	3.0	2.8	5.101	A
3	739	185	659	739	1487	0.7	0.7	2.924	A
4	209	52	825	209	573	0.1	0.2	2.691	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	289	72	519	289	333	0.4	0.3	3.459	A
2	1594	398	161	1595	647	2.8	1.6	3.560	A
3	600	150	544	600	1212	0.7	0.5	2.803	A
4	163	41	689	163	455	0.2	0.1	2.655	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	237	59	431	238	273	0.3	0.2	3.352	A
2	1334	333	136	1334	533	1.6	1.1	2.792	A
3	503	126	457	504	1012	0.5	0.4	2.715	A
4	135	34	569	135	392	0.1	0.1	2.583	A



## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	182	1800	0.101	181	0.0	0.2	3.917	A
			2	1,3,4	59	1800	0.033	58	0.0	0.0	2.409	A
	Exit	1	1		270			270	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1338	2855	0.469	1338	0.0	1.1	2.743	A
	Exit	1	1		525			525	0.0	0.0	0.000	A
3	Entry	1	1	4	198	1800	0.109	196	0.0	0.1	2.345	A
			2	1,2,3	298	1800	0.165	298	0.0	0.2	2.990	A
	Exit	1	1		1018			1018	0.0	0.0	0.000	A
4	Entry	1	1	1	15	1800	0.008	15	0.0	0.0	2.108	A
			2	2,3,4	121	1800	0.067	122	0.0	0.1	2.587	A
		2	1	(1,2,3,4)	137			137	0.0	0.0	0.000	A
	Exit	1	1		394			394	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	227	1800	0.126	226	0.2	0.3	4.089	A
			2	1,3,4	72	1800	0.040	72	0.0	0.0	2.359	A
	Exit	1	1		320			320	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1591	2817	0.565	1589	1.1	1.8	3.447	A
	Exit	1	1		652			652	0.0	0.0	0.000	A
3	Entry	1	1	4	238	1800	0.132	237	0.1	0.2	2.450	A
			2	1,2,3	374	1800	0.208	374	0.2	0.3	3.119	A
	Exit	1	1		1231			1231	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	1.963	A
			2	2,3,4	147	1800	0.082	148	0.1	0.1	2.785	A
		2	1	(1,2,3,4)	165			165	0.0	0.0	0.000	A
	Exit	1	1		460			460	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	266	1800	0.148	265	0.3	0.4	4.102	A
			2	1,3,4	87	1800	0.049	87	0.0	0.1	2.431	A
	Exit	1	1		396			396	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1950	2781	0.701	1952	1.8	3.0	5.153	A
	Exit	1	1		790			790	0.0	0.0	0.000	A
3	Entry	1	1	4	283	1800	0.157	283	0.2	0.2	2.513	A
			2	1,2,3	461	1800	0.256	459	0.3	0.5	3.275	A
	Exit	1	1		1499			1499	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	1.980	A
			2	2,3,4	178	1800	0.099	179	0.1	0.1	2.777	A
		2	1	(1,2,3,4)	200			200	0.0	0.0	0.000	A
	Exit	1	1		562			562	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	284	1800	0.147	285	0.4	0.3	4.222	A
			2	1,3,4	90	1800	0.050	90	0.1	0.1	2.412	A
	Exit	1	1		394			394	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1944	2777	0.700	1944	3.0	2.8	5.101	A
	Exit	1	1		792			792	0.0	0.0	0.000	A
3	Entry	1	1	4	285	1800	0.159	285	0.2	0.2	2.432	A
			2	1,2,3	453	1800	0.252	453	0.5	0.5	3.280	A
	Exit	1	1		1487			1487	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	2.058	A
			2	2,3,4	186	1800	0.104	186	0.1	0.1	2.787	A
		2	1	(1,2,3,4)	209			209	0.0	0.0	0.000	A
	Exit	1	1		573			573	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	217	1800	0.120	217	0.3	0.2	4.051	A
			2	1,3,4	72	1800	0.040	72	0.1	0.0	2.347	A
	Exit	1	1		333			333	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1594	2824	0.564	1595	2.8	1.8	3.580	A
	Exit	1	1		647			647	0.0	0.0	0.000	A
3	Entry	1	1	4	227	1800	0.128	227	0.2	0.1	2.422	A
			2	1,2,3	373	1800	0.207	373	0.5	0.4	3.075	A
	Exit	1	1		1212			1212	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.010	17	0.0	0.0	1.931	A
			2	2,3,4	146	1800	0.081	145	0.1	0.1	2.765	A
		2	1	(1,2,3,4)	183			183	0.0	0.0	0.000	A
	Exit	1	1		455			455	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	178	1800	0.099	179	0.2	0.1	3.912	A
			2	1,3,4	59	1800	0.033	59	0.0	0.0	2.323	A
	Exit	1	1		273			273	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1334	2853	0.467	1334	1.6	1.1	2.792	A
	Exit	1	1		533			533	0.0	0.0	0.000	A
3	Entry	1	1	4	195	1800	0.108	195	0.1	0.2	2.336	A
			2	1,2,3	308	1800	0.171	309	0.4	0.2	2.995	A
	Exit	1	1		1012			1012	0.0	0.0	0.000	A
4	Entry	1	1	1	13	1800	0.007	13	0.0	0.0	2.011	A
			2	2,3,4	122	1800	0.068	122	0.1	0.1	2.665	A
		2	1	(1,2,3,4)	135			135	0.0	0.0	0.000	A
	Exit	1	1		392			392	0.0	0.0	0.000	A

# Existing - 2032 Do Minimum, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	6.24	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	1725	96.18
2	289	38.09
3	309	91.43
4	1514	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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
D7	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	408	100.000
2		ONE HOUR	✓	710	100.000
3		ONE HOUR	✓	1385	100.000
4		ONE HOUR	✓	533	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	380	2	24
2	231	1	425	53
3	0	1281	1	103
4	91	181	261	0

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	38	0	48
2	83	0	29	68
3	0	10	0	21
4	9	18	6	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.65	0.6	A	377	565
2	2.90	0.7	A	651	978
3	9.98	4.0	A	1269	1903
4	2.97	0.6	A	489	734

#### Main Results for each time segment

##### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	304	76	1293	304	244	0.0	0.3	3.274	A
2	533	133	215	534	1382	0.0	0.4	2.381	A
3	1044	261	235	1043	514	0.0	1.6	4.710	A
4	399	100	1139	399	139	0.0	0.4	2.692	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	377	94	1558	376	289	0.3	0.4	3.478	A
2	636	159	262	635	1671	0.4	0.7	2.623	A
3	1245	311	278	1242	619	1.6	2.4	6.116	A
4	487	122	1360	487	160	0.4	0.3	2.827	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	446	112	1896	446	345	0.4	0.6	3.646	A
2	778	195	318	777	2024	0.7	0.7	2.876	A
3	1514	379	329	1518	766	2.4	4.0	9.791	A
4	591	148	1649	592	198	0.3	0.5	2.971	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	456	114	1896	455	357	0.6	0.6	3.636	A
2	789	197	309	789	2043	0.7	0.7	2.903	A
3	1516	379	343	1531	755	4.0	3.7	9.982	A
4	576	144	1678	575	196	0.5	0.6	2.952	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	382	91	1548	363	289	0.6	0.4	3.389	A
2	629	157	258	632	1652	0.7	0.3	2.622	A
3	1243	311	274	1242	616	3.7	2.2	6.365	A
4	484	121	1354	484	162	0.6	0.4	2.806	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	315	79	1307	315	241	0.4	0.3	3.255	A
2	540	135	215	539	1407	0.3	0.5	2.423	A
3	1051	263	233	1053	521	2.2	1.4	4.830	A
4	399	100	1150	398	136	0.4	0.3	2.711	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	288	1800	0.159	288	0.0	0.3	3.300	A
			2	1,3,4	18	1800	0.010	18	0.0	0.0	2.889	A
	Exit	1	1		244			244	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	533	2742	0.194	534	0.0	0.4	2.361	A
	Exit	1	1		1382			1382	0.0	0.0	0.000	A
3	Entry	1	1	4	81	1800	0.045	80	0.0	0.1	2.627	A
			2	1,2,3	963	1800	0.535	963	0.0	1.5	4.864	A
	Exit	1	1		514			514	0.0	0.0	0.000	A
4	Entry	1	1	1	69	1800	0.039	69	0.0	0.1	2.280	A
			2	2,3,4	330	1800	0.183	330	0.0	0.3	2.780	A
		2	1	(1,2,3,4)	399			399	0.0	0.0	0.000	A
	Exit	1	1		139			139	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	352	1800	0.195	351	0.3	0.4	3.519	A
			2	1,3,4	25	1800	0.014	25	0.0	0.0	2.846	A
	Exit	1	1		289			289	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	636	2690	0.237	635	0.4	0.7	2.623	A
	Exit	1	1		1671			1671	0.0	0.0	0.000	A
3	Entry	1	1	4	91	1800	0.051	91	0.1	0.1	2.534	A
			2	1,2,3	1154	1800	0.641	1151	1.5	2.4	6.376	A
	Exit	1	1		619			619	0.0	0.0	0.000	A
4	Entry	1	1	1	82	1800	0.045	82	0.1	0.0	2.286	A
			2	2,3,4	405	1800	0.225	405	0.3	0.3	2.937	A
		2	1	(1,2,3,4)	487			487	0.0	0.0	0.000	A
	Exit	1	1		160			160	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	417	1800	0.231	417	0.4	0.5	3.694	A
			2	1,3,4	30	1800	0.017	30	0.0	0.0	2.945	A
	Exit	1	1		345			345	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	778	2628	0.296	777	0.7	0.7	2.876	A
	Exit	1	1		2024			2024	0.0	0.0	0.000	A
3	Entry	1	1	4	113	1800	0.063	114	0.1	0.1	2.564	A
			2	1,2,3	1401	1800	0.778	1404	2.4	4.0	10.311	B
	Exit	1	1		766			766	0.0	0.0	0.000	A
4	Entry	1	1	1	102	1800	0.057	102	0.0	0.1	2.297	A
			2	2,3,4	489	1800	0.272	490	0.3	0.4	3.110	A
		2	1	(1,2,3,4)	591			591	0.0	0.0	0.001	A
	Exit	1	1		198			198	0.0	0.0	0.000	A

**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	429	1800	0.238	428	0.5	0.5	3.695	A
			2	1,3,4	27	1800	0.015	27	0.0	0.0	2.766	A
	Exit	1	1		357			357	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	789	2639	0.299	789	0.7	0.7	2.903	A
	Exit	1	1		2043			2043	0.0	0.0	0.000	A
3	Entry	1	1	4	111	1800	0.062	112	0.1	0.1	2.682	A
			2	1,2,3	1405	1800	0.780	1418	4.0	3.6	10.515	B
	Exit	1	1		755			755	0.0	0.0	0.000	A
4	Entry	1	1	1	99	1800	0.055	99	0.1	0.1	2.325	A
			2	2,3,4	477	1800	0.265	476	0.4	0.4	3.082	A
		2	1	(1,2,3,4)	576			576	0.0	0.0	0.000	A
	Exit	1	1		196			196	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	340	1800	0.189	341	0.5	0.3	3.433	A
			2	1,3,4	22	1800	0.012	22	0.0	0.0	2.727	A
	Exit	1	1		289			289	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	629	2695	0.233	632	0.7	0.3	2.622	A
	Exit	1	1		1652			1652	0.0	0.0	0.000	A
3	Entry	1	1	4	93	1800	0.052	93	0.1	0.1	2.518	A
			2	1,2,3	1149	1800	0.639	1149	3.6	2.1	6.643	A
	Exit	1	1		616			616	0.0	0.0	0.000	A
4	Entry	1	1	1	85	1800	0.047	85	0.1	0.0	2.266	A
			2	2,3,4	399	1800	0.222	398	0.4	0.4	2.920	A
		2	1	(1,2,3,4)	484			484	0.0	0.0	0.000	A
	Exit	1	1		162			162	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	294	1800	0.163	294	0.3	0.3	3.294	A
			2	1,3,4	21	1800	0.012	21	0.0	0.0	2.688	A
	Exit	1	1		241			241	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	540	2742	0.197	539	0.3	0.5	2.423	A
	Exit	1	1		1407			1407	0.0	0.0	0.000	A
3	Entry	1	1	4	77	1800	0.043	77	0.1	0.1	2.614	A
			2	1,2,3	974	1800	0.541	976	2.1	1.4	4.993	A
	Exit	1	1		521			521	0.0	0.0	0.000	A
4	Entry	1	1	1	66	1800	0.038	66	0.0	0.0	2.332	A
			2	2,3,4	331	1800	0.184	330	0.4	0.3	2.791	A
		2	1	(1,2,3,4)	399			399	0.0	0.0	0.000	A
	Exit	1	1		136			136	0.0	0.0	0.000	A

# Existing - 2032 Do Minimum, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	5.03	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	621	96.18
2	210	38.09
3	611	91.43
4	788	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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
D8	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	276	100.000
2		ONE HOUR	✓	1885	100.000
3		ONE HOUR	✓	752	100.000
4		ONE HOUR	✓	193	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	8	184	2	82
2	329	0	1386	190
3	0	447	4	301
4	23	57	112	1

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	88	89	0	10
2	33	0	6	20
3	0	19	77	4
4	0	67	5	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.28	0.3	A	255	382
2	6.32	3.8	A	1720	2581
3	3.06	0.8	A	682	1039
4	2.63	0.1	A	178	267

#### Main Results for each time segment

##### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	211	53	473	212	265	0.0	0.1	3.039	A
2	1404	351	158	1403	527	0.0	1.4	2.910	A
3	558	140	448	557	1112	0.0	0.5	2.715	A
4	150	38	587	151	418	0.0	0.1	2.525	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	253	63	569	254	332	0.1	0.2	3.135	A
2	1699	425	190	1698	632	1.4	2.0	3.765	A
3	690	172	555	691	1333	0.5	0.6	2.890	A
4	173	43	727	174	519	0.1	0.1	2.571	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	308	77	687	308	408	0.2	0.3	3.276	A
2	2079	520	229	2078	765	2.0	3.8	6.323	A
3	832	208	671	831	1635	0.6	0.7	3.002	A
4	214	54	880	216	623	0.1	0.1	2.568	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	309	77	684	308	398	0.3	0.3	3.238	A
2	2062	516	234	2065	758	3.8	3.6	6.276	A
3	829	207	670	830	1629	0.7	0.8	3.064	A
4	214	53	867	214	633	0.1	0.1	2.627	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	244	61	553	243	324	0.3	0.2	3.213	A
2	1685	421	183	1684	613	3.6	1.8	3.918	A
3	678	170	547	680	1320	0.8	0.4	2.816	A
4	170	43	707	170	520	0.1	0.1	2.579	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	204	51	465	204	261	0.2	0.2	3.073	A
2	1394	348	159	1397	510	1.8	1.1	2.964	A
3	568	142	448	568	1108	0.4	0.4	2.696	A
4	148	37	579	148	437	0.1	0.1	2.536	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	143	1800	0.079	144	0.0	0.1	3.527	A
			2	1,3,4	68	1800	0.038	68	0.0	0.0	2.380	A
	Exit	1	1		265			265	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1404	2822	0.498	1403	0.0	1.4	2.910	A
	Exit	1	1		527			527	0.0	0.0	0.000	A
3	Entry	1	1	4	217	1800	0.121	217	0.0	0.1	2.336	A
			2	1,2,3	341	1800	0.189	340	0.0	0.3	3.001	A
	Exit	1	1		1112			1112	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	2.083	A
			2	2,3,4	132	1800	0.074	133	0.0	0.1	2.599	A
		2	1	(1,2,3,4)	150			150	0.0	0.0	0.000	A
	Exit	1	1		418			418	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	169	1800	0.094	169	0.1	0.1	3.716	A
			2	1,3,4	84	1800	0.047	84	0.0	0.1	2.340	A
	Exit	1	1		332			332	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1699	2785	0.610	1698	1.4	2.0	3.765	A
	Exit	1	1		632			632	0.0	0.0	0.000	A
3	Entry	1	1	4	274	1800	0.152	275	0.1	0.2	2.491	A
			2	1,2,3	416	1800	0.231	417	0.3	0.4	3.194	A
	Exit	1	1		1333			1333	0.0	0.0	0.000	A
4	Entry	1	1	1	21	1800	0.012	21	0.0	0.0	2.102	A
			2	2,3,4	152	1800	0.085	152	0.1	0.1	2.648	A
		2	1	(1,2,3,4)	173			173	0.0	0.0	0.000	A
	Exit	1	1		519			519	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	209	1800	0.116	208	0.1	0.3	3.939	A
			2	1,3,4	99	1800	0.055	100	0.1	0.0	2.381	A
	Exit	1	1		408			408	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2079	2742	0.758	2078	2.0	3.8	6.323	A
	Exit	1	1		765			765	0.0	0.0	0.000	A
3	Entry	1	1	4	333	1800	0.185	333	0.2	0.3	2.544	A
			2	1,2,3	499	1800	0.277	499	0.4	0.4	3.352	A
	Exit	1	1		1635			1635	0.0	0.0	0.000	A
4	Entry	1	1	1	28	1800	0.015	28	0.0	0.0	1.917	A
			2	2,3,4	188	1800	0.104	188	0.1	0.1	2.676	A
		2	1	(1,2,3,4)	214			214	0.0	0.0	0.000	A
	Exit	1	1		623			623	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	207	1800	0.115	207	0.3	0.2	3.848	A
			2	1,3,4	102	1800	0.058	101	0.0	0.1	2.411	A
	Exit	1	1		398			398	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2082	2736	0.754	2085	3.8	3.8	6.276	A
	Exit	1	1		758			758	0.0	0.0	0.000	A
3	Entry	1	1	4	335	1800	0.188	336	0.3	0.3	2.568	A
			2	1,2,3	494	1800	0.274	495	0.4	0.5	3.442	A
	Exit	1	1		1629			1629	0.0	0.0	0.000	A
4	Entry	1	1	1	25	1800	0.014	25	0.0	0.0	2.016	A
			2	2,3,4	188	1800	0.105	189	0.1	0.1	2.726	A
		2	1	(1,2,3,4)	214			214	0.0	0.0	0.000	A
	Exit	1	1		633			633	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	162	1800	0.090	162	0.2	0.2	3.845	A
			2	1,3,4	82	1800	0.045	81	0.1	0.1	2.367	A
	Exit	1	1		324			324	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1685	2793	0.603	1684	3.6	1.8	3.918	A
	Exit	1	1		613			613	0.0	0.0	0.000	A
3	Entry	1	1	4	274	1800	0.152	276	0.3	0.1	2.516	A
			2	1,2,3	404	1800	0.224	404	0.5	0.3	3.049	A
	Exit	1	1		1320			1320	0.0	0.0	0.000	A
4	Entry	1	1	1	22	1800	0.012	22	0.0	0.0	2.018	A
			2	2,3,4	148	1800	0.082	149	0.1	0.1	2.668	A
		2	1	(1,2,3,4)	170			170	0.0	0.0	0.000	A
	Exit	1	1		520			520	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	135	1800	0.075	135	0.2	0.1	3.651	A
			2	1,3,4	69	1800	0.038	69	0.1	0.0	2.312	A
	Exit	1	1		261			261	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1394	2820	0.494	1397	1.8	1.1	2.964	A
	Exit	1	1		510			510	0.0	0.0	0.000	A
3	Entry	1	1	4	232	1800	0.129	232	0.1	0.2	2.363	A
			2	1,2,3	335	1800	0.188	335	0.3	0.3	2.953	A
	Exit	1	1		1108			1108	0.0	0.0	0.000	A
4	Entry	1	1	1	18	1800	0.010	18	0.0	0.0	1.929	A
			2	2,3,4	130	1800	0.072	130	0.1	0.1	2.633	A
		2	1	(1,2,3,4)	148			148	0.0	0.0	0.000	A
	Exit	1	1		437			437	0.0	0.0	0.000	A

# Existing - 2032 Do Something, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	8.04	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	1846	96.18
2	289	38.09
3	379	91.43
4	1675	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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
D9	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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	✓	472	100.000
2		ONE HOUR	✓	821	100.000
3		ONE HOUR	✓	1488	100.000
4		ONE HOUR	✓	553	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	448	2	24
2	291	1	486	63
3	0	1382	1	103
4	91	201	261	0

### Vehicle Mix

#### Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	37	0	48
2	82	0	28	64
3	0	9	0	21
4	9	18	6	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.94	0.7	A	440	860
2	3.21	0.9	A	753	1130
3	13.89	8.7	B	1364	2046
4	3.05	0.7	A	507	761

#### Main Results for each time segment

##### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	359	90	1393	359	292	0.0	0.4	3.391	A
2	615	154	222	614	1530	0.0	0.6	2.497	A
3	1117	279	286	1119	551	0.0	1.6	5.101	A
4	420	105	1264	420	141	0.0	0.3	2.765	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	432	108	1672	434	344	0.4	0.4	3.531	A
2	739	185	260	738	1845	0.6	0.6	2.737	A
3	1335	334	339	1340	659	1.6	2.5	6.971	A
4	499	125	1515	501	164	0.3	0.3	2.846	A

**07:45 - 08:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	527	132	2032	528	419	0.4	0.5	3.939	A
2	899	225	315	898	2244	0.6	0.8	3.166	A
3	1627	407	416	1633	797	2.5	5.9	12.754	B
4	609	152	1841	610	208	0.3	0.5	2.964	A

**08:00 - 08:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	526	131	2032	524	427	0.5	0.7	3.874	A
2	911	228	318	910	2239	0.8	0.9	3.213	A
3	1636	409	423	1635	805	5.9	6.7	13.891	B
4	612	153	1847	612	212	0.5	0.7	3.049	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	436	109	1670	435	341	0.7	0.6	3.705	A
2	741	185	254	740	1851	0.9	0.7	2.778	A
3	1347	337	344	1351	651	6.7	2.6	7.698	A
4	490	122	1520	491	175	0.7	0.4	2.849	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	360	90	1393	361	279	0.6	0.4	3.394	A
2	615	154	213	615	1541	0.7	0.4	2.491	A
3	1123	281	275	1124	553	2.6	1.7	5.286	A
4	414	103	1258	414	141	0.4	0.3	2.669	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	339	1800	0.188	339	0.0	0.4	3.426	A
			2	1,3,4	20	1800	0.011	20	0.0	0.0	2.752	A
	Exit	1	1		292			292	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	615	2735	0.225	614	0.0	0.6	2.497	A
	Exit	1	1		1530			1530	0.0	0.0	0.000	A
3	Entry	1	1	4	79	1800	0.044	79	0.0	0.1	2.544	A
			2	1,2,3	1039	1800	0.577	1040	0.0	1.5	5.274	A
	Exit	1	1		551			551	0.0	0.0	0.000	A
4	Entry	1	1	1	69	1800	0.038	68	0.0	0.1	2.339	A
			2	2,3,4	352	1800	0.195	352	0.0	0.3	2.849	A
	Exit	1	1		420			420	0.0	0.0	0.000	A
					141			141	0.0	0.0	0.000	A

#### 07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	411	1800	0.229	412	0.4	0.4	3.564	A
			2	1,3,4	21	1800	0.012	21	0.0	0.0	2.945	A
	Exit	1	1		344			344	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	739	2693	0.274	738	0.6	0.6	2.737	A
	Exit	1	1		1845			1845	0.0	0.0	0.000	A
3	Entry	1	1	4	88	1800	0.049	89	0.1	0.0	2.524	A
			2	1,2,3	1247	1800	0.693	1251	1.5	2.5	7.257	A
	Exit	1	1		659			659	0.0	0.0	0.000	A
4	Entry	1	1	1	82	1800	0.046	82	0.1	0.0	2.350	A
			2	2,3,4	417	1800	0.232	420	0.3	0.2	2.944	A
	Exit	1	1		499			499	0.0	0.0	0.001	A
					164			164	0.0	0.0	0.000	A

#### 07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	499	1800	0.278	501	0.4	0.5	3.997	A
			2	1,3,4	27	1800	0.015	27	0.0	0.0	2.888	A
	Exit	1	1		419			419	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	899	2631	0.342	898	0.6	0.8	3.166	A
	Exit	1	1		2244			2244	0.0	0.0	0.000	A
3	Entry	1	1	4	114	1800	0.063	114	0.0	0.1	2.567	A
			2	1,2,3	1512	1800	0.840	1519	2.5	5.9	13.433	B
	Exit	1	1		797			797	0.0	0.0	0.000	A
4	Entry	1	1	1	98	1800	0.054	98	0.0	0.0	2.379	A
			2	2,3,4	512	1800	0.284	512	0.2	0.5	3.080	A
	Exit	1	1		609			609	0.0	0.0	0.001	A
					208			208	0.0	0.0	0.000	A



**08:00 - 08:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	497	1800	0.278	496	0.5	0.7	3.935	A
			2	1,3,4	28	1800	0.018	28	0.0	0.0	2.799	A
	Exit	1	1		427			427	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	911	2629	0.347	910	0.8	0.9	3.213	A
	Exit	1	1		2239			2239	0.0	0.0	0.000	A
3	Entry	1	1	4	114	1800	0.063	114	0.1	0.1	2.576	A
			2	1,2,3	1521	1800	0.845	1521	5.9	6.6	14.651	B
	Exit	1	1		805			805	0.0	0.0	0.000	A
4	Entry	1	1	1	103	1800	0.057	103	0.0	0.1	2.321	A
			2	2,3,4	509	1800	0.283	510	0.5	0.6	3.190	A
		2	1	(1,2,3,4)	612			612	0.0	0.0	0.003	A
	Exit	1	1		212			212	0.0	0.0	0.000	A

**08:15 - 08:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	414	1800	0.230	413	0.7	0.6	3.753	A
			2	1,3,4	22	1800	0.012	22	0.0	0.0	2.843	A
	Exit	1	1		341			341	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	741	2699	0.275	740	0.9	0.7	2.778	A
	Exit	1	1		1851			1851	0.0	0.0	0.000	A
3	Entry	1	1	4	93	1800	0.052	93	0.1	0.1	2.628	A
			2	1,2,3	1254	1800	0.697	1259	6.6	2.5	8.037	A
	Exit	1	1		651			651	0.0	0.0	0.000	A
4	Entry	1	1	1	81	1800	0.045	81	0.1	0.1	2.332	A
			2	2,3,4	409	1800	0.227	410	0.6	0.3	2.953	A
		2	1	(1,2,3,4)	490			490	0.0	0.0	0.000	A
	Exit	1	1		175			175	0.0	0.0	0.000	A

**08:30 - 08:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	341	1800	0.189	341	0.6	0.4	3.429	A
			2	1,3,4	19	1800	0.011	20	0.0	0.0	2.790	A
	Exit	1	1		279			279	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	615	2745	0.224	615	0.7	0.4	2.491	A
	Exit	1	1		1541			1541	0.0	0.0	0.000	A
3	Entry	1	1	4	75	1800	0.042	75	0.1	0.1	2.488	A
			2	1,2,3	1048	1800	0.582	1049	2.5	1.8	5.471	A
	Exit	1	1		553			553	0.0	0.0	0.000	A
4	Entry	1	1	1	71	1800	0.039	71	0.1	0.1	2.266	A
			2	2,3,4	343	1800	0.191	344	0.3	0.2	2.754	A
		2	1	(1,2,3,4)	414			414	0.0	0.0	0.000	A
	Exit	1	1		141			141	0.0	0.0	0.000	A

# Existing - 2032 Do Something, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	(5) A180 - A1173 Interchange- Existing	Large Roundabout	1,2,3,4	6.92	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	686	96.18
2	210	38.09
3	707	91.43
4	913	21.11

### Slope / Intercept / Capacity

[same as above]

### Lane Simulation: Arm options

[same as above]

### Lanes

[same as above]

### Entry Lane slope and intercept

[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
D10	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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	✓	370	100.000
2		ONE HOUR	✓	2087	100.000
3		ONE HOUR	✓	802	100.000
4		ONE HOUR	✓	208	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	8	278	2	82
	2	404	0	1472	211
	3	0	497	4	301
	4	23	72	112	1

### Vehicle Mix

#### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	66	74	0	10
	2	37	0	6	20
	3	0	19	77	4
	4	0	65	5	0

### Results

#### Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	3.76	0.5	A	342	513
2	9.35	6.3	A	1914	2870
3	3.17	1.1	A	734	1101
4	2.72	0.2	A	194	291

#### Main Results for each time segment

##### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	285	71	527	283	330	0.0	0.3	3.489	A
2	1579	395	168	1575	641	0.0	1.7	3.363	A
3	611	153	537	610	1206	0.0	0.5	2.808	A
4	160	40	697	160	450	0.0	0.2	2.493	A

**16:30 - 16:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	342	86	620	340	397	0.3	0.5	3.526	A
2	1867	467	194	1870	766	1.7	2.3	4.622	A
3	719	180	645	719	1419	0.5	0.6	2.925	A
4	192	48	824	193	540	0.2	0.1	2.533	A

**16:45 - 17:00**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	405	101	745	403	476	0.5	0.5	3.758	A
2	2274	569	232	2275	916	2.3	6.3	8.988	A
3	869	217	773	866	1734	0.6	1.1	3.170	A
4	233	58	989	232	650	0.1	0.2	2.724	A

**17:00 - 17:15**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	406	102	759	407	481	0.5	0.3	3.620	A
2	2301	575	234	2295	933	6.3	6.2	9.346	A
3	888	222	779	887	1751	1.1	0.9	3.090	A
4	237	59	1004	236	662	0.2	0.2	2.665	A

**17:15 - 17:30**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	331	83	616	332	396	0.3	0.3	3.575	A
2	1883	471	186	1879	761	6.2	2.5	5.097	A
3	721	180	640	721	1425	0.9	0.6	2.909	A
4	188	47	825	187	536	0.2	0.2	2.553	A

**17:30 - 17:45**

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	284	71	510	282	322	0.3	0.4	3.409	A
2	1577	394	158	1573	635	2.5	1.7	3.430	A
3	598	150	525	601	1207	0.6	0.3	2.800	A
4	153	38	681	152	445	0.2	0.2	2.582	A

## Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

### Lanes: Main Results for each time segment

#### 16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	211	1800	0.117	209	0.0	0.3	4.068	A
			2	1,3,4	74	1800	0.041	74	0.0	0.0	2.389	A
	Exit	1	1		330			330	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1579	2810	0.562	1575	0.0	1.7	3.363	A
	Exit	1	1		641			641	0.0	0.0	0.000	A
3	Entry	1	1	4	227	1800	0.128	226	0.0	0.2	2.344	A
			2	1,2,3	384	1800	0.213	384	0.0	0.3	3.125	A
	Exit	1	1		1206			1206	0.0	0.0	0.000	A
4	Entry	1	1	1	17	1800	0.010	17	0.0	0.0	1.993	A
			2	2,3,4	142	1800	0.079	142	0.0	0.2	2.571	A
		2	1	(1,2,3,4)	160			160	0.0	0.0	0.000	A
	Exit	1	1		450			450	0.0	0.0	0.000	A

#### 16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	255	1800	0.142	252	0.3	0.4	4.108	A
			2	1,3,4	87	1800	0.048	87	0.0	0.1	2.388	A
	Exit	1	1		397			397	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1867	2782	0.671	1870	1.7	2.3	4.622	A
	Exit	1	1		766			766	0.0	0.0	0.000	A
3	Entry	1	1	4	271	1800	0.150	271	0.2	0.2	2.407	A
			2	1,2,3	448	1800	0.249	448	0.3	0.4	3.278	A
	Exit	1	1		1419			1419	0.0	0.0	0.000	A
4	Entry	1	1	1	21	1800	0.012	21	0.0	0.0	1.962	A
			2	2,3,4	171	1800	0.095	172	0.2	0.1	2.618	A
		2	1	(1,2,3,4)	192			192	0.0	0.0	0.000	A
	Exit	1	1		540			540	0.0	0.0	0.000	A

#### 16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	300	1800	0.167	299	0.4	0.4	4.424	A
			2	1,3,4	104	1800	0.058	104	0.1	0.0	2.470	A
	Exit	1	1		476			476	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2274	2738	0.831	2275	2.3	6.3	8.968	A
	Exit	1	1		916			916	0.0	0.0	0.000	A
3	Entry	1	1	4	328	1800	0.182	328	0.2	0.2	2.582	A
			2	1,2,3	541	1800	0.300	538	0.4	0.8	3.573	A
	Exit	1	1		1734			1734	0.0	0.0	0.000	A
4	Entry	1	1	1	25	1800	0.014	25	0.0	0.0	2.023	A
			2	2,3,4	207	1800	0.115	207	0.1	0.2	2.831	A
		2	1	(1,2,3,4)	233			233	0.0	0.0	0.000	A
	Exit	1	1		650			650	0.0	0.0	0.000	A

**17:00 - 17:15**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	304	1800	0.169	306	0.4	0.3	4.193	A
			2	1,3,4	102	1800	0.057	102	0.0	0.1	2.473	A
	Exit	1	1		481			481	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	2301	2736	0.841	2295	6.3	6.2	9.346	A
	Exit	1	1		933			933	0.0	0.0	0.000	A
3	Entry	1	1	4	337	1800	0.187	337	0.2	0.3	2.536	A
			2	1,2,3	551	1800	0.308	550	0.8	0.6	3.473	A
	Exit	1	1		1751			1751	0.0	0.0	0.000	A
4	Entry	1	1	1	27	1800	0.015	27	0.0	0.0	2.061	A
			2	2,3,4	210	1800	0.116	209	0.2	0.2	2.756	A
		2	1	(1,2,3,4)	237			237	0.0	0.0	0.000	A
	Exit	1	1		662			662	0.0	0.0	0.000	A

**17:15 - 17:30**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	250	1800	0.139	252	0.3	0.2	4.173	A
			2	1,3,4	80	1800	0.046	80	0.1	0.1	2.389	A
	Exit	1	1		396			396	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1883	2790	0.675	1879	6.2	2.5	5.097	A
	Exit	1	1		761			761	0.0	0.0	0.000	A
3	Entry	1	1	4	273	1800	0.152	272	0.3	0.3	2.484	A
			2	1,2,3	448	1800	0.249	448	0.6	0.4	3.203	A
	Exit	1	1		1425			1425	0.0	0.0	0.000	A
4	Entry	1	1	1	20	1800	0.011	20	0.0	0.0	2.025	A
			2	2,3,4	188	1800	0.093	167	0.2	0.2	2.627	A
		2	1	(1,2,3,4)	188			188	0.0	0.0	0.000	A
	Exit	1	1		536			536	0.0	0.0	0.000	A

**17:30 - 17:45**

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	215	1800	0.119	213	0.2	0.3	3.954	A
			2	1,3,4	69	1800	0.039	70	0.1	0.1	2.359	A
	Exit	1	1		322			322	0.0	0.0	0.000	A
2	Entry	1	1	1,2,3,4	1577	2822	0.559	1573	2.5	1.7	3.430	A
	Exit	1	1		635			635	0.0	0.0	0.000	A
3	Entry	1	1	4	227	1800	0.126	227	0.3	0.1	2.411	A
			2	1,2,3	372	1800	0.207	374	0.4	0.2	3.070	A
	Exit	1	1		1207			1207	0.0	0.0	0.000	A
4	Entry	1	1	1	16	1800	0.009	15	0.0	0.0	1.971	A
			2	2,3,4	137	1800	0.076	137	0.2	0.2	2.679	A
		2	1	(1,2,3,4)	153			153	0.0	0.0	0.000	A
	Exit	1	1		445			445	0.0	0.0	0.000	A

## Appendix J

### A180 / A1173 Junction Improvement Scheme

A3 A B C D E F G



1

2

3

4

5

6

Drain

A1173

Proposed Carriageway widening to achieve 2no. 4m wide approach lanes.

**Notes:**

1. Preliminary layout subject to detailed design including full CDM compliance, statutory undertakers search/diversion requirements and Local Authority approval.
2. Red colouring on the drawing denotes the suggested improvements and not the colour of items, i.e. kerbline.
3. No existing utilities information available at this stage to inform design.

**Background Mapping:**

- OS digital mapping (under license from ENGIE)

**Geometries:**

Arm: A1173  
 Approach road half-width (V) = 4.09 m  
 Entry width (E) = 7.98 m  
 Effective flare length (l') = 29.1 m  
 Entry radius (R) = 39.3 m  
 Inscribed circle diameters (D) = 100.0 m  
 Conflict entry angle (PHI) = 9.5 deg

Rev	Date	By	Chkd	Appd
-	24/11/17	JH	AG	AG



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Client  
**ENGIE**

Project Title  
**Stallingborough Employment Site**

Drawing Title  
**Proposed Improvement Scheme for  
 A1173 / A180 Grade Separated  
 Roundabout**

Scale at A3 1:200  
 Role Transport  
 Suitability For Information

Arup Job No <b>248164</b>	Rev -
------------------------------	----------

Name  
**248164-SK-02**

**ISSUED FOR  
 DISCUSSION  
 PURPOSES**



## **Appendix K**

### **New Site Access Junction Model Outputs**

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017
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Filename: E - Site access (S)\_Proposed Mitigation.j9

Path: \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9\New Site Access - A1173\Arup

Report generation date: 30/11/2017 14:39:17

- »Proposed Mitigation - 2019 Do Something, AM
- »Proposed Mitigation - 2019 Do Something, PM
- »Proposed Mitigation - 2032 Do Something, AM
- »Proposed Mitigation - 2032 Do Something, PM
- »Proposed Mitigation - 2034 Do Something, AM
- »Proposed Mitigation - 2034 Do Something, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Proposed Mitigation - 2019 Do Something								
Arm 1	0.1	4.09	0.08	A	0.5	9.64	0.30	A
Arm 2	2.1	4.08	0.65	A	0.5	2.42	0.27	A
Arm 3	0.1	10.81	0.04	B	0.0	3.72	0.03	A
Arm 4	0.5	2.60	0.25	A	2.0	4.01	0.64	A
Proposed Mitigation - 2032 Do Something								
Arm 1	0.1	4.42	0.08	A	1.1	20.25	0.47	C
Arm 2	3.7	6.01	0.76	A	0.7	2.54	0.32	A
Arm 3	0.1	19.12	0.07	C	0.0	4.04	0.03	A
Arm 4	0.6	2.74	0.30	A	3.6	6.06	0.76	A
Proposed Mitigation - 2034 Do Something								
Arm 1	0.1	4.45	0.08	A	1.2	22.27	0.50	C
Arm 2	3.9	6.27	0.77	A	0.7	2.56	0.32	A
Arm 3	0.1	20.51	0.08	C	0.0	4.07	0.03	A
Arm 4	0.7	2.78	0.31	A	3.8	6.33	0.77	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.

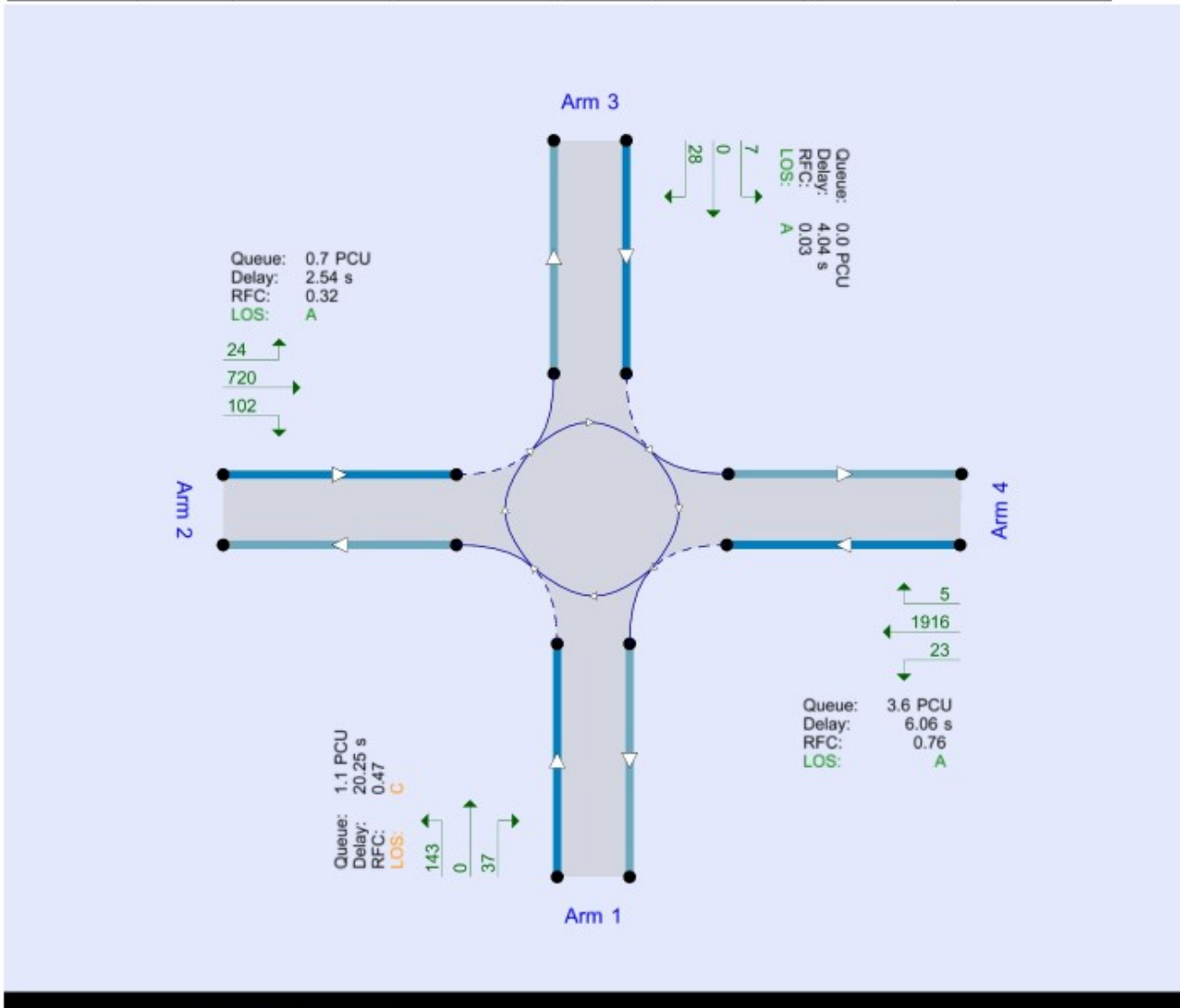
## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	30/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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	mph	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	38.00	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	2019 Do Something	AM	ONE HOUR	07:15	08:45	15
D2	2019 Do Something	PM	ONE HOUR	16:15	17:45	15
D3	2032 Do Something	AM	ONE HOUR	07:15	08:45	15
D4	2032 Do Something	PM	ONE HOUR	16:15	17:45	15
D5	2034 Do Something	AM	ONE HOUR	07:15	08:45	15
D6	2034 Do Something	PM	ONE HOUR	16:15	17:45	15

### Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Proposed Mitigation	100.000

# Proposed Mitigation - 2019 Do Something, 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	Site Access	Standard Roundabout	3.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Site Access (S)	
2	A1173 (W)	
3	Site Access (N)	
4	A1173 (E)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.65	7.14	24.4	20.0	40.1	15.5	
2	4.92	10.00	92.2	20.0	40.1	13.2	
3	3.64	7.11	20.7	20.0	40.1	17.3	
4	4.93	10.00	88.5	20.0	40.1	14.4	

## Slope / Intercept / Capacity

### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.702	1923
2	0.911	2962
3	0.688	1866
4	0.906	2943

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	2019 Do Something	AM	ONE HOUR	07:15	08:45	15

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		✓	102	100.000
2		✓	1723	100.000
3		✓	22	100.000
4		✓	635	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	75	0	27
	2	138	0	25	1560
	3	0	16	0	6
	4	28	602	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	45	0	71
	2	17	0	22	17
	3	0	54	0	81
	4	22	53	27	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.08	4.09	0.1	A
2	0.65	4.08	2.1	A
3	0.04	10.81	0.1	B
4	0.25	2.60	0.5	A

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	77	468	1595	0.048	78	0.1	3.581	A
2	1297	24	2940	0.441	1293	0.9	2.554	A
3	17	1295	975	0.017	16	0.0	6.030	A
4	478	116	2839	0.168	477	0.3	2.301	A

**07:30 - 07:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	92	580	1530	0.080	92	0.1	3.779	A
2	1549	29	2936	0.528	1547	1.3	3.032	A
3	20	1549	800	0.025	20	0.0	7.407	A
4	571	138	2818	0.203	571	0.4	2.419	A

**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	112	685	1442	0.078	112	0.1	4.089	A
2	1897	35	2930	0.647	1894	2.1	4.053	A
3	24	1896	561	0.043	24	0.1	10.758	B
4	699	169	2790	0.251	699	0.5	2.600	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	112	686	1442	0.078	112	0.1	4.090	A
2	1897	35	2930	0.647	1897	2.1	4.078	A
3	24	1899	559	0.043	24	0.1	10.807	B
4	699	170	2790	0.251	699	0.5	2.600	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	92	581	1530	0.080	92	0.1	3.781	A
2	1549	29	2936	0.528	1552	1.3	3.051	A
3	20	1554	787	0.025	20	0.0	7.441	A
4	571	139	2818	0.203	571	0.4	2.421	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	77	469	1594	0.048	77	0.1	3.587	A
2	1297	24	2940	0.441	1299	0.9	2.571	A
3	17	1300	971	0.017	17	0.0	6.053	A
4	478	116	2838	0.168	478	0.3	2.306	A

# Proposed Mitigation - 2019 Do Something, 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	Site Access	Standard Roundabout	3.96	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	2019 Do Something	PM	ONE HOUR	16:15	17:45	15

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		✓	180	100.000
2		✓	712	100.000
3		✓	35	100.000
4		✓	1630	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	143	0	37
	2	102	0	24	586
	3	0	28	0	7
	4	23	1602	5	0

## Vehicle Mix



### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	20	0	41
	2	56	0	61	41
	3	0	27	0	58
	4	62	13	68	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.30	9.64	0.5	A
2	0.27	2.42	0.5	A
3	0.03	3.72	0.0	A
4	0.64	4.01	2.0	A

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	1227	1062	0.128	135	0.2	4.804	A
2	536	31	2934	0.183	535	0.3	2.153	A
3	26	544	1491	0.018	26	0.0	3.247	A
4	1227	98	2855	0.430	1224	0.9	2.502	A

#### 16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	162	1468	893	0.181	161	0.3	6.090	A
2	640	38	2928	0.219	640	0.4	2.258	A
3	31	651	1418	0.022	31	0.0	3.431	A
4	1465	117	2837	0.516	1464	1.2	2.975	A

#### 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	198	1797	662	0.299	197	0.5	9.561	A
2	784	46	2920	0.268	783	0.5	2.418	A
3	39	798	1317	0.029	38	0.0	3.720	A
4	1795	143	2814	0.638	1792	2.0	3.989	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	198	1800	660	0.300	198	0.5	9.644	A
2	784	46	2920	0.268	784	0.5	2.419	A
3	39	798	1317	0.029	39	0.0	3.722	A
4	1795	143	2814	0.638	1795	2.0	4.013	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	162	1473	890	0.182	163	0.3	6.140	A
2	640	38	2928	0.219	641	0.4	2.260	A
3	31	652	1417	0.022	32	0.0	3.433	A
4	1465	117	2837	0.516	1468	1.2	2.995	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	136	1232	1059	0.128	136	0.2	4.833	A
2	536	32	2933	0.183	536	0.3	2.157	A
3	26	546	1490	0.018	26	0.0	3.252	A
4	1227	98	2855	0.430	1229	0.9	2.516	A

# Proposed Mitigation - 2032 Do Something, 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	Site Access	Standard Roundabout	5.20	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)
D3	2032 Do Something	AM	ONE HOUR	07:15	08:45	15

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		✓	102	100.000
2		✓	2030	100.000
3		✓	22	100.000
4		✓	762	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	75	0	27
	2	138	0	25	1867
	3	0	16	0	6
	4	28	729	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	45	0	71
	2	17	0	22	16
	3	0	54	0	81
	4	22	50	27	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.08	4.42	0.1	A
2	0.76	6.01	3.7	A
3	0.07	19.12	0.1	C
4	0.30	2.74	0.6	A

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	77	563	1528	0.050	76	0.1	3.746	A
2	1528	24	2940	0.520	1523	1.2	2.941	A
3	17	1525	817	0.020	16	0.0	7.222	A
4	574	116	2839	0.202	572	0.4	2.359	A

#### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	92	674	1450	0.063	92	0.1	4.002	A
2	1825	29	2936	0.622	1822	1.9	3.746	A
3	20	1824	811	0.032	20	0.1	9.779	A
4	685	138	2818	0.243	685	0.5	2.507	A

#### 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	112	825	1344	0.084	112	0.1	4.414	A
2	2235	35	2930	0.763	2228	3.6	5.895	A
3	24	2230	331	0.073	24	0.1	18.802	C
4	839	169	2790	0.301	838	0.6	2.740	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	112	826	1344	0.084	112	0.1	4.416	A
2	2235	35	2930	0.763	2235	3.7	6.009	A
3	24	2237	326	0.074	24	0.1	19.123	C
4	839	170	2790	0.301	839	0.6	2.741	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	92	675	1449	0.083	92	0.1	4.007	A
2	1825	29	2936	0.622	1832	1.9	3.812	A
3	20	1834	604	0.033	20	0.1	9.900	A
4	685	139	2817	0.243	688	0.5	2.511	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	77	565	1527	0.050	77	0.1	3.750	A
2	1528	24	2940	0.520	1531	1.3	2.973	A
3	17	1532	811	0.020	17	0.0	7.271	A
4	574	116	2838	0.202	574	0.4	2.364	A

# Proposed Mitigation - 2032 Do Something, 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	Site Access	Standard Roundabout	5.90	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	2032 Do Something	PM	ONE HOUR	16:15	17:45	15

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		✓	180	100.000
2		✓	846	100.000
3		✓	35	100.000
4		✓	1944	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	143	0	37
	2	102	0	24	720
	3	0	28	0	7
	4	23	1916	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	20	0	41
	2	56	0	61	38
	3	0	27	0	58
	4	62	13	68	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.47	20.25	1.1	C
2	0.32	2.54	0.7	A
3	0.03	4.04	0.0	A
4	0.76	6.06	3.6	A

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	1463	897	0.151	135	0.2	5.839	A
2	637	31	2934	0.217	635	0.4	2.200	A
3	26	645	1422	0.019	26	0.0	3.408	A
4	1464	98	2855	0.513	1459	1.2	2.917	A

#### 16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	162	1750	696	0.233	161	0.4	8.330	A
2	761	38	2928	0.260	760	0.5	2.333	A
3	31	772	1335	0.024	31	0.0	3.649	A
4	1748	117	2837	0.616	1745	1.8	3.733	A

#### 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	198	2139	422	0.469	195	1.1	19.409	C
2	931	46	2921	0.319	931	0.7	2.542	A
3	39	945	1216	0.032	38	0.0	4.041	A
4	2140	143	2814	0.761	2134	3.5	5.947	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	198	2146	418	0.474	198	1.1	20.247	C
2	931	46	2920	0.319	931	0.7	2.543	A
3	39	946	1215	0.032	39	0.0	4.044	A
4	2140	143	2814	0.761	2140	3.6	6.064	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	162	1759	889	0.235	165	0.4	8.542	A
2	761	38	2927	0.260	761	0.5	2.335	A
3	31	773	1334	0.024	32	0.0	3.653	A
4	1748	117	2837	0.616	1754	1.8	3.799	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	136	1470	892	0.152	136	0.2	5.901	A
2	637	32	2933	0.217	637	0.4	2.205	A
3	26	647	1421	0.019	26	0.0	3.415	A
4	1464	98	2855	0.513	1466	1.2	2.947	A



# Proposed Mitigation - 2034 Do Something, 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	Site Access	Standard Roundabout	5.40	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)
D5	2034 Do Something	AM	ONE HOUR	07:15	08:45	15

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		✓	102	100.000
2		✓	2057	100.000
3		✓	22	100.000
4		✓	773	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	75	0	27
	2	138	0	25	1894
	3	0	16	0	6
	4	28	740	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	45	0	71
	2	17	0	22	16
	3	0	54	0	81
	4	22	51	27	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.08	4.45	0.1	A
2	0.77	6.27	3.9	A
3	0.08	20.51	0.1	C
4	0.31	2.78	0.7	A

### Main Results for each time segment

#### 07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	77	571	1522	0.050	76	0.1	3.761	A
2	1549	24	2940	0.527	1543	1.3	2.982	A
3	17	1545	803	0.021	16	0.0	7.349	A
4	582	115	2839	0.205	580	0.4	2.383	A

#### 07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	92	684	1443	0.064	92	0.1	4.023	A
2	1849	29	2936	0.630	1847	2.0	3.828	A
3	20	1848	594	0.033	20	0.1	10.062	B
4	695	138	2818	0.247	694	0.5	2.534	A

#### 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	112	837	1336	0.084	112	0.1	4.444	A
2	2265	35	2930	0.773	2257	3.8	6.144	A
3	24	2260	311	0.078	24	0.1	20.110	C
4	851	169	2790	0.305	850	0.7	2.775	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	112	838	1335	0.084	112	0.1	4.447	A
2	2265	35	2930	0.773	2265	3.9	6.274	A
3	24	2267	306	0.079	24	0.1	20.510	C
4	851	170	2790	0.305	851	0.7	2.776	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	92	685	1442	0.084	92	0.1	4.028	A
2	1849	29	2936	0.630	1857	2.0	3.901	A
3	20	1859	587	0.034	20	0.1	10.200	B
4	695	139	2817	0.247	696	0.5	2.537	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	77	573	1521	0.050	77	0.1	3.766	A
2	1549	24	2940	0.527	1551	1.3	3.015	A
3	17	1553	797	0.021	17	0.0	7.403	A
4	582	116	2838	0.205	582	0.4	2.388	A

# Proposed Mitigation - 2034 Do Something, 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	Site Access	Standard Roundabout	6.19	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	2034 Do Something	PM	ONE HOUR	16:15	17:45	15

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		✓	180	100.000
2		✓	856	100.000
3		✓	35	100.000
4		✓	1970	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	143	0	37
	2	102	0	24	730
	3	0	28	0	7
	4	23	1942	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	20	0	41
	2	56	0	61	38
	3	0	27	0	58
	4	62	13	68	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.50	22.27	1.2	C
2	0.32	2.56	0.7	A
3	0.03	4.07	0.0	A
4	0.77	6.33	3.8	A

### Main Results for each time segment

#### 16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	136	1482	883	0.153	135	0.2	5.942	A
2	644	31	2934	0.220	643	0.4	2.207	A
3	26	653	1417	0.019	26	0.0	3.421	A
4	1483	98	2855	0.520	1478	1.2	2.959	A

#### 16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	162	1773	679	0.238	161	0.4	8.590	A
2	770	38	2928	0.263	769	0.5	2.342	A
3	31	781	1329	0.024	31	0.0	3.667	A
4	1771	117	2837	0.624	1768	1.9	3.812	A

#### 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	198	2167	403	0.492	195	1.1	21.169	C
2	942	46	2921	0.323	942	0.7	2.556	A
3	39	956	1208	0.032	38	0.0	4.067	A
4	2169	143	2814	0.771	2162	3.7	6.195	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	198	2174	398	0.498	198	1.2	22.266	C
2	942	46	2920	0.323	942	0.7	2.556	A
3	39	957	1208	0.032	39	0.0	4.070	A
4	2169	143	2814	0.771	2169	3.8	6.330	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	162	1783	672	0.241	165	0.4	8.838	A
2	770	38	2927	0.263	770	0.5	2.345	A
3	31	783	1327	0.024	32	0.0	3.671	A
4	1771	117	2837	0.624	1778	1.9	3.885	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	136	1490	878	0.154	136	0.2	6.013	A
2	644	32	2933	0.220	645	0.4	2.211	A
3	26	655	1415	0.019	26	0.0	3.425	A
4	1483	98	2855	0.520	1486	1.2	2.990	A

## Appendix L

Proposed Scheme for New Site  
Access Junction



NOTES  
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Letter	Amendment	Drawn	Date
CLIENT NORTH EAST LINCOLNSHIRE COUNCIL			
PROJECT SHIP STALLINGBOROUGH INTERCHANGE			
TITLE PROPOSED LAYOUT			
DRAWN T Morley	DATE Dec 2017	PROJECT ID HD002 - 15	
CHECKED 	DATE 	DRAWING No.	000 - 01
ORIGINAL SIZE A1 (840 x 594)	SCALE 1:2000		



## Appendix M

### Pyewipe Roundabout Model Output

**Pyewipe Roundabout - Traffic Flow Composition**

Approach	AM Peak								
	2017 Flows (PCUs)			2019 Flows (PCUs)			2032 Flows (PCUs)		
	Base	Committed	Development	Base	Committed	Development	Base	Committed	Development
Arm 1 - A180 (e)	2117	0	0	2184	0	73	2538	0	73
Arm 2 - Estate Road 2	373	0	0	384	0	0	447	0	0
Arm 3 - A180 (w)	1896	0	0	1955	0	3	2273	14	3
Arm 4 - Estate Road 1	110	0	0	114	0	0	132	1	0
Arm 5 - Gilbey Road	141	0	0	146	0	0	169	20	0
<b>Junction Total</b>	<b>4637</b>	<b>0</b>	<b>0</b>	<b>4783</b>	<b>0</b>	<b>76</b>	<b>5559</b>	<b>35</b>	<b>76</b>
<b>Development as a % of Junction Total</b>	<b>0.0%</b>			<b>1.6%</b>			<b>1.3%</b>		

Approach	PM Peak								
	2017 Flows (PCUs)			2019 Flows (PCUs)			2032 Flows (PCUs)		
	Base	Committed	Development	Base	Committed	Development	Base	Committed	Development
Arm 1 - A180 (e)	1583	0	0	1630	0	38	1888	0	38
Arm 2 - Estate Road 2	537	0	0	553	0	0	640	0	0
Arm 3 - A180 (w)	1825	0	0	1880	0	77	2177	11	77
Arm 4 - Estate Road 1	232	0	0	239	0	0	277	3	0
Arm 5 - Gilbey Road	241	0	0	248	0	0	287	20	0
<b>Junction Total</b>	<b>4418</b>	<b>0</b>	<b>0</b>	<b>4550</b>	<b>0</b>	<b>115</b>	<b>5269</b>	<b>34</b>	<b>115</b>
<b>Development as a % of Junction Total</b>	<b>0.0%</b>			<b>2.5%</b>			<b>2.1%</b>		

<b>Junctions 9</b>
<b>ARCADY 9 - Roundabout Module</b>
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2017
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk
<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Pyewipe Roundabout (vArup)2 RevA.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9  
\Pyewipe Roundabout\Arup\TN Edits

**Report generation date:** 30/11/2017 12:27:06

- 
- »2017 Base, AM
  - »2017 Base, PM
  - »2019 Do Minimum, AM
  - »2019 Do Minimum, PM
  - »2019 Do Something, AM
  - »2019 Do Something, PM
  - »2032 Do Minimum, AM
  - »2032 Do Minimum, PM
  - »2032 Do Something, AM
  - »2032 Do Something, PM

## Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC
<b>2017 Base</b>				
1 - A180 (E)	4.5	0.81	1.8	0.63
2 - Estate Rd 2	0.5	0.29	0.7	0.41
3 - A180 (W)	7.5	0.88	4.5	0.82
4 - Estate Rd 1	0.2	0.16	0.5	0.32
5 - Gilbey Rd	0.3	0.20	0.7	0.41
<b>2019 Do Minimum</b>				
1 - A180 (E)	5.8	0.84	2.1	0.65
2 - Estate Rd 2	0.6	0.30	0.9	0.44
3 - A180 (W)	11.3	0.91	5.8	0.85
4 - Estate Rd 1	0.3	0.17	0.6	0.34
5 - Gilbey Rd	0.4	0.22	0.9	0.44
<b>2019 Do Something</b>				
1 - A180 (E)	7.3	0.87	2.2	0.67
2 - Estate Rd 2	0.7	0.31	0.9	0.45
3 - A180 (W)	13.1	0.93	7.6	0.88
4 - Estate Rd 1	0.3	0.18	0.6	0.36
5 - Gilbey Rd	0.4	0.22	0.9	0.46
<b>2032 Do Minimum</b>				
1 - A180 (E)	37.8	1.00	3.8	0.78
2 - Estate Rd 2	0.9	0.40	1.5	0.58
3 - A180 (W)	135.5	1.11	50.6	1.02
4 - Estate Rd 1	0.3	0.20	0.9	0.44
5 - Gilbey Rd	0.5	0.29	1.7	0.61
<b>2032 Do Something</b>				
1 - A180 (E)	62.7	1.03	4.1	0.79
2 - Estate Rd 2	0.9	0.40	1.6	0.59
3 - A180 (W)	149.6	1.12	83.8	1.06
4 - Estate Rd 1	0.3	0.20	0.8	0.43
5 - Gilbey Rd	0.5	0.29	1.6	0.59

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	(untitled)
Location	
Site number	
Date	25/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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

### 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
D3	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D4	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D7	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D8	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D11	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D12	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2017 Base, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	9.76	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	A180 (E)	
2	Estate Rd 2	
3	A180 (W)	
4	Estate Rd 1	
5	Gilbey Rd	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A180 (E)	7.25	7.25	0.0	25.0	93.0	17.0	
2 - Estate Rd 2	4.50	9.50	30.0	30.0	93.0	16.0	
3 - A180 (W)	7.00	7.00	0.0	35.0	93.0	17.0	
4 - Estate Rd 1	4.60	7.50	14.0	34.1	93.0	18.0	
5 - Gilbey Rd	3.75	7.20	15.0	21.0	93.0	19.0	

### Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1 - A180 (E)	336	30.00
2 - Estate Rd 2	1918	30.00
3 - A180 (W)	476	40.00
4 - Estate Rd 1	2311	25.00
5 - Gilbey Rd	2151	20.00

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A180 (E)	1.111	3045
2 - Estate Rd 2	0.816	2865
3 - A180 (W)	1.071	2934
4 - Estate Rd 1	0.646	2320
5 - Gilbey Rd	0.628	2135

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
D3	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1967	100.000
2 - Estate Rd 2		ONE HOUR	✓	337	100.000
3 - A180 (W)		ONE HOUR	✓	1932	100.000
4 - Estate Rd 1		ONE HOUR	✓	123	100.000
5 - Gilbey Rd		ONE HOUR	✓	143	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	7	339	1409	106	106
	2 - Estate Rd 2	175	2	128	15	17
	3 - A180 (W)	1507	165	1	140	119
	4 - Estate Rd 1	45	7	45	0	26
	5 - Gilbey Rd	58	17	64	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	9	7	7	1
	2 - Estate Rd 2	32	0	40	22	23
	3 - A180 (W)	10	17	0	15	17
	4 - Estate Rd 1	27	0	41	0	7
	5 - Gilbey Rd	10	6	28	20	0

## 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 - A180 (E)	0.81	7.58	4.5	A	1805	2707
2 - Estate Rd 2	0.29	5.18	0.5	A	309	464
3 - A180 (W)	0.88	13.21	7.5	B	1773	2659
4 - Estate Rd 1	0.16	6.47	0.2	A	113	169
5 - Gilbey Rd	0.20	6.73	0.3	A	131	197

## Main Results for each time segment

### 07:15 - 07:30

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 - A180 (E)	1481	370	229	2791	0.531	1476	1344	0.0	1.2	2.918	A
2 - Estate Rd 2	254	63	1307	1799	0.141	253	398	0.0	0.2	3.111	A
3 - A180 (W)	1455	364	324	2587	0.562	1449	1236	0.0	1.4	3.503	A
4 - Estate Rd 1	93	23	1574	1304	0.071	92	199	0.0	0.1	3.705	A
5 - Gilbey Rd	108	27	1465	1214	0.089	107	201	0.0	0.1	3.806	A

### 07:30 - 07:45

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 - A180 (E)	1768	442	274	2741	0.645	1765	1607	1.2	1.9	3.935	A
2 - Estate Rd 2	303	76	1563	1590	0.191	303	476	0.2	0.3	3.739	A
3 - A180 (W)	1737	434	388	2519	0.689	1733	1478	1.4	2.4	5.069	A
4 - Estate Rd 1	111	28	1883	1104	0.100	110	238	0.1	0.1	4.516	A
5 - Gilbey Rd	129	32	1753	1034	0.124	128	240	0.1	0.2	4.655	A

### 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 - A180 (E)	2166	541	334	2674	0.810	2156	1958	1.9	4.4	7.295	A
2 - Estate Rd 2	371	93	1909	1307	0.284	370	580	0.3	0.5	5.131	A
3 - A180 (W)	2127	532	474	2427	0.876	2108	1806	2.4	7.1	11.933	B
4 - Estate Rd 1	135	34	2293	840	0.161	135	290	0.1	0.2	6.367	A
5 - Gilbey Rd	157	39	2134	794	0.198	157	293	0.2	0.3	6.614	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 - A180 (E)	2166	541	336	2672	0.811	2165	1972	4.4	4.5	7.584	A
2 - Estate Rd 2	371	93	1918	1301	0.285	371	583	0.5	0.5	5.176	A
3 - A180 (W)	2127	532	476	2425	0.877	2126	1813	7.1	7.5	13.211	B
4 - Estate Rd 1	135	34	2310	829	0.163	135	292	0.2	0.2	6.474	A
5 - Gilbey Rd	157	39	2150	784	0.201	157	295	0.3	0.3	6.727	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 - A180 (E)	1768	442	276	2738	0.646	1778	1627	4.5	2.0	4.055	A
2 - Estate Rd 2	303	76	1575	1580	0.192	304	480	0.5	0.3	3.770	A
3 - A180 (W)	1737	434	390	2517	0.690	1757	1488	7.5	2.5	5.405	A
4 - Estate Rd 1	111	28	1906	1089	0.102	111	240	0.2	0.1	4.591	A
5 - Gilbey Rd	129	32	1775	1020	0.126	129	243	0.3	0.2	4.734	A

### 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 - A180 (E)	1481	370	230	2789	0.531	1484	1353	2.0	1.2	2.958	A
2 - Estate Rd 2	254	63	1314	1793	0.142	254	400	0.3	0.2	3.126	A
3 - A180 (W)	1455	364	326	2586	0.563	1459	1242	2.5	1.4	3.569	A
4 - Estate Rd 1	93	23	1585	1297	0.071	93	200	0.1	0.1	3.730	A
5 - Gilbey Rd	108	27	1475	1208	0.089	108	202	0.2	0.1	3.832	A





# 2017 Base, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	6.24	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 - A180 (E)	266	30.00
2 - Estate Rd 2	1730	30.00
3 - A180 (W)	446	40.00
4 - Estate Rd 1	2397	25.00
5 - Gilbey Rd	2506	20.00

### 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	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1583	100.000
2 - Estate Rd 2		ONE HOUR	✓	537	100.000
3 - A180 (W)		ONE HOUR	✓	1825	100.000
4 - Estate Rd 1		ONE HOUR	✓	232	100.000
5 - Gilbey Rd		ONE HOUR	✓	241	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	2	161	1343	24	53
	2 - Estate Rd 2	312	0	213	3	9
	3 - A180 (W)	1661	77	2	25	60
	4 - Estate Rd 1	157	3	61	1	10
	5 - Gilbey Rd	143	13	84	0	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	9	5	10	6
	2 - Estate Rd 2	3	0	8	50	13
	3 - A180 (W)	3	35	0	28	12
	4 - Estate Rd 1	1	0	16	0	20
	5 - Gilbey Rd	2	0	14	0	0

## 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 - A180 (E)	0.63	3.73	1.8	A	1453	2179
2 - Estate Rd 2	0.41	4.54	0.7	A	493	739
3 - A180 (W)	0.82	8.30	4.5	A	1675	2512
4 - Estate Rd 1	0.32	7.05	0.5	A	213	319
5 - Gilbey Rd	0.41	10.12	0.7	B	221	332

### Main Results for each time segment

#### 16:15 - 16:30

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 - A180 (E)	1192	298	181	2857	0.417	1189	1707	0.0	0.8	2.273	A
2 - Estate Rd 2	404	101	1180	1897	0.213	403	191	0.0	0.3	2.536	A
3 - A180 (W)	1374	343	304	2614	0.526	1369	1279	0.0	1.2	3.014	A
4 - Estate Rd 1	175	44	1634	1273	0.137	174	40	0.0	0.2	3.447	A
5 - Gilbey Rd	181	45	1708	1091	0.166	181	100	0.0	0.2	4.181	A

**16:30 - 16:45**

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 - A180 (E)	1423	356	217	2817	0.505	1422	2042	0.8	1.1	2.720	A
2 - Estate Rd 2	483	121	1411	1699	0.284	482	228	0.3	0.4	3.113	A
3 - A180 (W)	1641	410	364	2550	0.643	1638	1529	1.2	1.9	4.116	A
4 - Estate Rd 1	209	52	1954	1072	0.195	208	48	0.2	0.3	4.387	A
5 - Gilbey Rd	217	54	2043	902	0.240	216	119	0.2	0.3	5.548	A

**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 - A180 (E)	1743	436	265	2763	0.631	1740	2493	1.1	1.8	3.703	A
2 - Estate Rd 2	591	148	1726	1428	0.414	590	279	0.4	0.7	4.516	A
3 - A180 (W)	2009	502	445	2462	0.816	1999	1871	1.9	4.4	7.960	A
4 - Estate Rd 1	255	64	2386	800	0.319	254	58	0.3	0.5	6.938	A
5 - Gilbey Rd	265	66	2494	647	0.410	264	146	0.3	0.7	9.883	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 - A180 (E)	1743	436	266	2761	0.631	1743	2504	1.8	1.8	3.728	A
2 - Estate Rd 2	591	148	1730	1425	0.415	591	280	0.7	0.7	4.544	A
3 - A180 (W)	2009	502	446	2461	0.816	2009	1875	4.4	4.5	8.304	A
4 - Estate Rd 1	255	64	2396	793	0.322	255	58	0.5	0.5	7.045	A
5 - Gilbey Rd	265	66	2505	641	0.414	265	146	0.7	0.7	10.123	B

**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 - A180 (E)	1423	356	219	2815	0.506	1426	2057	1.8	1.1	2.742	A
2 - Estate Rd 2	483	121	1416	1694	0.285	484	229	0.7	0.4	3.135	A
3 - A180 (W)	1641	410	365	2548	0.644	1651	1535	4.5	1.9	4.246	A
4 - Estate Rd 1	209	52	1968	1063	0.196	210	48	0.5	0.3	4.449	A
5 - Gilbey Rd	217	54	2058	893	0.242	218	120	0.7	0.3	5.653	A

**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 - A180 (E)	1192	298	183	2855	0.417	1193	1716	1.1	0.8	2.287	A
2 - Estate Rd 2	404	101	1184	1893	0.214	405	192	0.4	0.3	2.548	A
3 - A180 (W)	1374	343	305	2613	0.526	1377	1284	1.9	1.2	3.056	A
4 - Estate Rd 1	175	44	1642	1268	0.138	175	40	0.3	0.2	3.472	A
5 - Gilbey Rd	181	45	1717	1085	0.167	182	100	0.3	0.2	4.217	A

# 2019 Do Minimum, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	13.49	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 - A180 (E)	347	30.00
2 - Estate Rd 2	1977	30.00
3 - A180 (W)	491	40.00
4 - Estate Rd 1	2385	25.00
5 - Gilbey Rd	2220	20.00

### 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	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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 - A180 (E)		ONE HOUR	✓	2029	100.000
2 - Estate Rd 2		ONE HOUR	✓	348	100.000
3 - A180 (W)		ONE HOUR	✓	1993	100.000
4 - Estate Rd 1		ONE HOUR	✓	127	100.000
5 - Gilbey Rd		ONE HOUR	✓	148	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	7	350	1453	110	109
	2 - Estate Rd 2	181	2	132	15	18
	3 - A180 (W)	1555	170	1	144	123
	4 - Estate Rd 1	46	8	46	0	27
	5 - Gilbey Rd	60	18	66	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	18	14	15	2
	2 - Estate Rd 2	35	0	62	40	41
	3 - A180 (W)	20	32	0	28	32
	4 - Estate Rd 1	46	0	61	0	14
	5 - Gilbey Rd	21	13	48	37	0

## 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 - A180 (E)	0.84	9.61	5.8	A	1862	2793
2 - Estate Rd 2	0.30	5.90	0.6	A	319	479
3 - A180 (W)	0.91	19.56	11.3	C	1829	2743
4 - Estate Rd 1	0.17	7.55	0.3	A	117	175
5 - Gilbey Rd	0.22	7.97	0.4	A	136	204

### Main Results for each time segment

#### 07:15 - 07:30

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 - A180 (E)	1528	382	236	2781	0.549	1522	1386	0.0	1.4	3.244	A
2 - Estate Rd 2	262	65	1347	1770	0.148	261	411	0.0	0.2	3.442	A
3 - A180 (W)	1500	375	335	2574	0.583	1494	1274	0.0	1.7	4.047	A
4 - Estate Rd 1	96	24	1624	1278	0.075	95	205	0.0	0.1	4.210	A
5 - Gilbey Rd	111	28	1511	1189	0.094	111	208	0.0	0.1	4.372	A

**07:30 - 07:45**

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 - A180 (E)	1824	456	282	2729	0.668	1820	1658	1.4	2.3	4.493	A
2 - Estate Rd 2	313	78	1611	1558	0.201	312	492	0.2	0.4	4.172	A
3 - A180 (W)	1792	448	400	2504	0.716	1786	1524	1.7	3.0	6.087	A
4 - Estate Rd 1	114	29	1942	1077	0.106	114	245	0.1	0.2	5.170	A
5 - Gilbey Rd	133	33	1807	1006	0.132	133	248	0.1	0.2	5.396	A

**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 - A180 (E)	2234	558	344	2661	0.839	2221	2012	2.3	5.6	9.045	A
2 - Estate Rd 2	383	96	1966	1273	0.301	382	598	0.4	0.6	5.826	A
3 - A180 (W)	2194	549	489	2409	0.911	2165	1859	3.0	10.3	16.379	C
4 - Estate Rd 1	140	35	2356	816	0.171	139	298	0.2	0.3	7.361	A
5 - Gilbey Rd	163	41	2193	769	0.212	162	302	0.2	0.3	7.768	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 - A180 (E)	2234	558	346	2658	0.840	2233	2033	5.6	5.8	9.607	A
2 - Estate Rd 2	383	96	1977	1265	0.303	383	603	0.6	0.6	5.895	A
3 - A180 (W)	2194	549	491	2407	0.912	2191	1869	10.3	11.3	19.564	C
4 - Estate Rd 1	140	35	2381	800	0.175	140	300	0.3	0.3	7.546	A
5 - Gilbey Rd	163	41	2216	754	0.216	163	305	0.3	0.4	7.969	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 - A180 (E)	1824	456	287	2725	0.669	1838	1689	5.8	2.3	4.697	A
2 - Estate Rd 2	313	78	1626	1546	0.202	314	498	0.6	0.4	4.223	A
3 - A180 (W)	1792	448	403	2501	0.717	1824	1537	11.3	3.2	6.802	A
4 - Estate Rd 1	114	29	1979	1054	0.108	115	249	0.3	0.2	5.305	A
5 - Gilbey Rd	133	33	1841	985	0.135	134	252	0.4	0.2	5.541	A

**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 - A180 (E)	1528	382	238	2779	0.550	1531	1397	2.3	1.4	3.297	A
2 - Estate Rd 2	262	65	1355	1763	0.149	262	414	0.4	0.3	3.462	A
3 - A180 (W)	1500	375	336	2572	0.583	1506	1281	3.2	1.7	4.149	A
4 - Estate Rd 1	96	24	1636	1270	0.075	96	206	0.2	0.1	4.245	A
5 - Gilbey Rd	111	28	1523	1181	0.094	112	209	0.2	0.1	4.408	A

# 2019 Do Minimum, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	7.47	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 - A180 (E)	274	30.00
2 - Estate Rd 2	1783	30.00
3 - A180 (W)	459	40.00
4 - Estate Rd 1	2468	25.00
5 - Gilbey Rd	2581	20.00

### 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	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1631	100.000
2 - Estate Rd 2		ONE HOUR	✓	552	100.000
3 - A180 (W)		ONE HOUR	✓	1880	100.000
4 - Estate Rd 1		ONE HOUR	✓	239	100.000
5 - Gilbey Rd		ONE HOUR	✓	248	100.000



## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	2	166	1383	25	55
	2 - Estate Rd 2	321	0	219	3	9
	3 - A180 (W)	1711	79	2	26	62
	4 - Estate Rd 1	162	3	63	1	10
	5 - Gilbey Rd	147	13	87	0	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	19	10	19	13
	2 - Estate Rd 2	7	0	17	77	26
	3 - A180 (W)	7	57	0	46	23
	4 - Estate Rd 1	3	0	30	0	23
	5 - Gilbey Rd	5	0	27	0	0

## 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 - A180 (E)	0.65	4.18	2.1	A	1497	2245
2 - Estate Rd 2	0.44	5.13	0.9	A	507	760
3 - A180 (W)	0.85	10.41	5.8	B	1725	2588
4 - Estate Rd 1	0.34	7.84	0.6	A	219	329
5 - Gilbey Rd	0.44	11.65	0.9	B	228	341

### Main Results for each time segment

#### 16:15 - 16:30

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 - A180 (E)	1228	307	187	2849	0.431	1225	1757	0.0	0.8	2.455	A
2 - Estate Rd 2	416	104	1215	1868	0.222	414	196	0.0	0.3	2.752	A
3 - A180 (W)	1415	354	313	2602	0.544	1410	1317	0.0	1.3	3.289	A
4 - Estate Rd 1	180	45	1682	1250	0.144	179	41	0.0	0.2	3.687	A
5 - Gilbey Rd	187	47	1758	1069	0.175	186	103	0.0	0.2	4.539	A

**16:30 - 16:45**

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 - A180 (E)	1466	367	223	2808	0.522	1465	2102	0.8	1.2	2.974	A
2 - Estate Rd 2	496	124	1454	1667	0.298	496	234	0.3	0.5	3.419	A
3 - A180 (W)	1690	423	374	2536	0.666	1687	1575	1.3	2.2	4.615	A
4 - Estate Rd 1	215	54	2012	1047	0.205	214	49	0.2	0.3	4.741	A
5 - Gilbey Rd	223	56	2103	879	0.254	222	123	0.2	0.4	6.103	A

**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 - A180 (E)	1796	449	272	2753	0.652	1792	2564	1.2	2.1	4.147	A
2 - Estate Rd 2	608	152	1779	1392	0.437	606	286	0.5	0.9	5.087	A
3 - A180 (W)	2070	517	458	2446	0.846	2056	1927	2.2	5.6	9.754	A
4 - Estate Rd 1	263	66	2454	775	0.339	262	60	0.3	0.6	7.678	A
5 - Gilbey Rd	273	68	2566	625	0.437	271	150	0.4	0.8	11.276	B

**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 - A180 (E)	1796	449	274	2751	0.653	1796	2579	2.1	2.1	4.185	A
2 - Estate Rd 2	608	152	1782	1389	0.438	608	287	0.9	0.9	5.130	A
3 - A180 (W)	2070	517	459	2445	0.847	2069	1931	5.6	5.8	10.410	B
4 - Estate Rd 1	263	66	2468	767	0.343	263	61	0.6	0.6	7.839	A
5 - Gilbey Rd	273	68	2580	617	0.442	273	151	0.8	0.9	11.647	B

**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 - A180 (E)	1466	367	226	2806	0.523	1470	2122	2.1	1.2	2.999	A
2 - Estate Rd 2	496	124	1459	1662	0.299	498	236	0.9	0.5	3.445	A
3 - A180 (W)	1690	423	376	2534	0.667	1704	1581	5.8	2.2	4.823	A
4 - Estate Rd 1	215	54	2031	1035	0.208	216	50	0.6	0.3	4.827	A
5 - Gilbey Rd	223	56	2123	868	0.257	225	124	0.9	0.4	6.252	A

**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 - A180 (E)	1228	307	188	2848	0.431	1229	1768	1.2	0.8	2.474	A
2 - Estate Rd 2	416	104	1221	1864	0.223	416	197	0.5	0.3	2.767	A
3 - A180 (W)	1415	354	314	2601	0.544	1419	1322	2.2	1.3	3.340	A
4 - Estate Rd 1	180	45	1692	1244	0.145	180	41	0.3	0.2	3.717	A
5 - Gilbey Rd	187	47	1769	1063	0.176	187	103	0.4	0.2	4.586	A

# 2019 Do Something, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	15.68	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 - A180 (E)	347	30.00
2 - Estate Rd 2	2058	30.00
3 - A180 (W)	491	40.00
4 - Estate Rd 1	2418	25.00
5 - Gilbey Rd	2253	20.00

### 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
D7	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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 - A180 (E)		ONE HOUR	✓	2102	100.000
2 - Estate Rd 2		ONE HOUR	✓	348	100.000
3 - A180 (W)		ONE HOUR	✓	2023	100.000
4 - Estate Rd 1		ONE HOUR	✓	127	100.000
5 - Gilbey Rd		ONE HOUR	✓	148	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	7	350	1526	110	109
	2 - Estate Rd 2	181	2	132	15	18
	3 - A180 (W)	1585	170	1	144	123
	4 - Estate Rd 1	46	8	46	0	27
	5 - Gilbey Rd	60	18	66	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	18	14	15	2
	2 - Estate Rd 2	35	0	62	40	41
	3 - A180 (W)	20	32	0	28	32
	4 - Estate Rd 1	46	0	61	0	14
	5 - Gilbey Rd	21	13	48	37	0

## 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 - A180 (E)	0.87	11.76	7.3	B	1929	2893
2 - Estate Rd 2	0.31	6.22	0.7	A	319	479
3 - A180 (W)	0.93	22.42	13.1	C	1856	2785
4 - Estate Rd 1	0.18	7.68	0.3	A	117	175
5 - Gilbey Rd	0.22	8.16	0.4	A	136	204

### Main Results for each time segment

#### 07:15 - 07:30

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 - A180 (E)	1582	396	236	2781	0.569	1577	1408	0.0	1.5	3.390	A
2 - Estate Rd 2	262	65	1402	1733	0.151	261	411	0.0	0.3	3.530	A
3 - A180 (W)	1523	381	334	2574	0.592	1516	1328	0.0	1.8	4.130	A
4 - Estate Rd 1	96	24	1646	1267	0.075	95	205	0.0	0.1	4.251	A
5 - Gilbey Rd	111	28	1533	1176	0.095	111	208	0.0	0.1	4.422	A

**07:30 - 07:45**

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 - A180 (E)	1890	472	282	2729	0.692	1886	1684	1.5	2.5	4.837	A
2 - Estate Rd 2	313	78	1677	1517	0.206	312	491	0.3	0.4	4.315	A
3 - A180 (W)	1819	455	400	2504	0.726	1813	1589	1.8	3.2	6.314	A
4 - Estate Rd 1	114	29	1968	1066	0.107	114	245	0.1	0.2	5.233	A
5 - Gilbey Rd	133	33	1834	993	0.134	133	248	0.1	0.2	5.477	A

**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 - A180 (E)	2314	579	343	2662	0.870	2297	2041	2.5	7.0	10.748	B
2 - Estate Rd 2	383	96	2043	1230	0.312	382	597	0.4	0.6	6.123	A
3 - A180 (W)	2227	557	488	2410	0.924	2193	1936	3.2	11.7	18.045	C
4 - Estate Rd 1	140	35	2385	806	0.174	139	297	0.2	0.3	7.471	A
5 - Gilbey Rd	163	41	2222	757	0.215	162	302	0.2	0.4	7.923	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 - A180 (E)	2314	579	346	2658	0.871	2313	2065	7.0	7.3	11.762	B
2 - Estate Rd 2	383	96	2057	1219	0.314	383	603	0.6	0.7	6.219	A
3 - A180 (W)	2227	557	491	2407	0.925	2222	1949	11.7	13.1	22.422	C
4 - Estate Rd 1	140	35	2413	788	0.177	140	300	0.3	0.3	7.684	A
5 - Gilbey Rd	163	41	2248	741	0.220	163	305	0.4	0.4	8.156	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 - A180 (E)	1890	472	287	2724	0.694	1908	1721	7.3	2.6	5.139	A
2 - Estate Rd 2	313	78	1696	1502	0.208	314	499	0.7	0.4	4.380	A
3 - A180 (W)	1819	455	404	2500	0.727	1857	1607	13.1	3.3	7.237	A
4 - Estate Rd 1	114	29	2012	1039	0.110	115	249	0.3	0.2	5.395	A
5 - Gilbey Rd	133	33	1874	969	0.137	134	253	0.4	0.2	5.648	A

**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 - A180 (E)	1582	396	238	2779	0.570	1587	1420	2.6	1.5	3.454	A
2 - Estate Rd 2	262	65	1411	1725	0.152	262	414	0.4	0.3	3.553	A
3 - A180 (W)	1523	381	337	2572	0.592	1529	1337	3.3	1.8	4.244	A
4 - Estate Rd 1	96	24	1660	1259	0.076	96	206	0.2	0.1	4.285	A
5 - Gilbey Rd	111	28	1546	1169	0.095	112	209	0.2	0.1	4.462	A

# 2019 Do Something, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	8.84	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 - A180 (E)	274	30.00
2 - Estate Rd 2	1825	30.00
3 - A180 (W)	459	40.00
4 - Estate Rd 1	2552	25.00
5 - Gilbey Rd	2664	20.00

### 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
D8	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1670	100.000
2 - Estate Rd 2		ONE HOUR	✓	552	100.000
3 - A180 (W)		ONE HOUR	✓	1956	100.000
4 - Estate Rd 1		ONE HOUR	✓	239	100.000
5 - Gilbey Rd		ONE HOUR	✓	248	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	2	166	1422	25	55
	2 - Estate Rd 2	321	0	219	3	9
	3 - A180 (W)	1787	79	2	26	62
	4 - Estate Rd 1	162	3	63	1	10
	5 - Gilbey Rd	147	13	87	0	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	19	10	19	13
	2 - Estate Rd 2	7	0	17	77	26
	3 - A180 (W)	7	57	0	46	23
	4 - Estate Rd 1	3	0	30	0	23
	5 - Gilbey Rd	5	0	27	0	0

## 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 - A180 (E)	0.67	4.38	2.2	A	1532	2299
2 - Estate Rd 2	0.45	5.33	0.9	A	507	760
3 - A180 (W)	0.88	13.24	7.6	B	1795	2692
4 - Estate Rd 1	0.36	8.31	0.6	A	219	329
5 - Gilbey Rd	0.46	12.52	0.9	B	228	341

### Main Results for each time segment

#### 16:15 - 16:30

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 - A180 (E)	1257	314	187	2849	0.441	1254	1814	0.0	0.9	2.500	A
2 - Estate Rd 2	416	104	1245	1846	0.225	414	196	0.0	0.3	2.796	A
3 - A180 (W)	1473	368	313	2602	0.566	1467	1346	0.0	1.4	3.448	A
4 - Estate Rd 1	180	45	1739	1224	0.147	179	41	0.0	0.2	3.777	A
5 - Gilbey Rd	187	47	1815	1046	0.178	186	103	0.0	0.2	4.659	A

**16:30 - 16:45**

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 - A180 (E)	1501	375	223	2808	0.535	1500	2170	0.9	1.3	3.051	A
2 - Estate Rd 2	496	124	1489	1641	0.302	496	234	0.3	0.5	3.495	A
3 - A180 (W)	1758	440	374	2536	0.693	1754	1610	1.4	2.4	5.004	A
4 - Estate Rd 1	215	54	2079	1020	0.211	214	49	0.2	0.3	4.898	A
5 - Gilbey Rd	223	56	2171	856	0.260	222	123	0.2	0.4	6.328	A

**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 - A180 (E)	1839	460	272	2753	0.668	1835	2643	1.3	2.2	4.336	A
2 - Estate Rd 2	608	152	1821	1363	0.446	606	286	0.5	0.9	5.281	A
3 - A180 (W)	2154	538	458	2446	0.880	2134	1969	2.4	7.2	11.934	B
4 - Estate Rd 1	263	66	2532	750	0.351	262	60	0.3	0.6	8.080	A
5 - Gilbey Rd	273	68	2644	603	0.453	271	150	0.4	0.9	12.007	B

**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 - A180 (E)	1839	460	274	2751	0.668	1839	2662	2.2	2.2	4.380	A
2 - Estate Rd 2	608	152	1825	1360	0.447	608	287	0.9	0.9	5.327	A
3 - A180 (W)	2154	538	459	2445	0.881	2152	1974	7.2	7.6	13.243	B
4 - Estate Rd 1	263	66	2551	738	0.356	263	61	0.6	0.6	8.305	A
5 - Gilbey Rd	273	68	2663	593	0.460	273	151	0.9	0.9	12.522	B

**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 - A180 (E)	1501	375	226	2805	0.535	1505	2196	2.2	1.3	3.082	A
2 - Estate Rd 2	496	124	1495	1636	0.303	498	236	0.9	0.5	3.526	A
3 - A180 (W)	1758	440	376	2534	0.694	1779	1617	7.6	2.5	5.339	A
4 - Estate Rd 1	215	54	2105	1005	0.214	216	50	0.6	0.3	5.014	A
5 - Gilbey Rd	223	56	2197	842	0.265	225	124	0.9	0.4	6.525	A

**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 - A180 (E)	1257	314	188	2848	0.441	1259	1826	1.3	0.9	2.517	A
2 - Estate Rd 2	416	104	1250	1841	0.226	416	197	0.5	0.3	2.814	A
3 - A180 (W)	1473	368	314	2601	0.566	1477	1352	2.5	1.4	3.514	A
4 - Estate Rd 1	180	45	1750	1218	0.148	180	41	0.3	0.2	3.811	A
5 - Gilbey Rd	187	47	1827	1040	0.180	187	103	0.4	0.2	4.710	A



# 2032 Do Minimum, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	95.55	F

### 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 - A180 (E)	414	30.00
2 - Estate Rd 2	2299	30.00
3 - A180 (W)	570	40.00
4 - Estate Rd 1	2770	25.00
5 - Gilbey Rd	2579	20.00

### 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
D9	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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 - A180 (E)		ONE HOUR	✓	2358	100.000
2 - Estate Rd 2		ONE HOUR	✓	404	100.000
3 - A180 (W)		ONE HOUR	✓	2330	100.000
4 - Estate Rd 1		ONE HOUR	✓	148	100.000
5 - Gilbey Rd		ONE HOUR	✓	192	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	8	407	1689	127	127
	2 - Estate Rd 2	210	2	153	18	21
	3 - A180 (W)	1807	197	1	182	143
	4 - Estate Rd 1	54	9	54	0	31
	5 - Gilbey Rd	79	31	77	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	18	14	15	2
	2 - Estate Rd 2	35	0	62	40	41
	3 - A180 (W)	20	32	0	26	32
	4 - Estate Rd 1	46	0	60	0	14
	5 - Gilbey Rd	18	9	48	37	0

## 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 - A180 (E)	1.00	52.10	37.8	F	2164	3246
2 - Estate Rd 2	0.40	7.66	0.9	A	371	556
3 - A180 (W)	1.11	167.48	135.5	F	2138	3207
4 - Estate Rd 1	0.20	7.76	0.3	A	136	204
5 - Gilbey Rd	0.29	8.72	0.5	A	176	264

### Main Results for each time segment

#### 07:15 - 07:30

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 - A180 (E)	1775	444	281	2719	0.653	1767	1615	0.0	2.1	4.272	A
2 - Estate Rd 2	304	76	1564	1633	0.186	303	484	0.0	0.3	3.904	A
3 - A180 (W)	1754	439	388	2505	0.700	1743	1479	0.0	2.8	5.690	A
4 - Estate Rd 1	111	28	1883	1169	0.095	111	249	0.0	0.1	4.709	A
5 - Gilbey Rd	145	36	1752	1072	0.135	144	241	0.0	0.2	4.925	A

**07:30 - 07:45**

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 - A180 (E)	2120	530	336	2659	0.797	2111	1926	2.1	4.3	7.371	A
2 - Estate Rd 2	363	91	1870	1410	0.258	363	578	0.3	0.5	4.959	A
3 - A180 (W)	2095	524	464	2425	0.864	2078	1768	2.8	7.1	12.102	B
4 - Estate Rd 1	133	33	2245	967	0.138	133	297	0.1	0.2	5.970	A
5 - Gilbey Rd	173	43	2090	886	0.195	172	288	0.2	0.3	6.403	A

**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 - A180 (E)	2596	649	391	2599	0.999	2507	2170	4.3	26.7	30.421	D
2 - Estate Rd 2	445	111	2224	1151	0.387	443	673	0.5	0.9	7.332	A
3 - A180 (W)	2565	641	559	2325	1.104	2301	2108	7.1	73.1	71.344	F
4 - Estate Rd 1	163	41	2521	814	0.200	162	340	0.2	0.3	7.639	A
5 - Gilbey Rd	211	53	2350	743	0.284	211	333	0.3	0.5	8.577	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 - A180 (E)	2596	649	393	2597	1.000	2552	2182	26.7	37.8	52.102	F
2 - Estate Rd 2	445	111	2262	1123	0.396	445	682	0.9	0.9	7.661	A
3 - A180 (W)	2565	641	565	2319	1.106	2316	2141	73.1	135.5	167.484	F
4 - Estate Rd 1	163	41	2537	805	0.202	163	344	0.3	0.3	7.759	A
5 - Gilbey Rd	211	53	2363	736	0.287	211	337	0.5	0.5	8.722	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 - A180 (E)	2120	530	363	2629	0.806	2251	2167	37.8	5.0	14.517	B
2 - Estate Rd 2	363	91	1986	1325	0.274	365	628	0.9	0.5	5.423	A
3 - A180 (W)	2095	524	481	2407	0.870	2385	1870	135.5	62.8	151.349	F
4 - Estate Rd 1	133	33	2538	805	0.165	133	328	0.3	0.3	7.428	A
5 - Gilbey Rd	173	43	2357	739	0.233	173	315	0.5	0.4	8.087	A

**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 - A180 (E)	1775	444	304	2694	0.659	1786	1811	5.0	2.2	4.574	A
2 - Estate Rd 2	304	76	1582	1620	0.188	305	509	0.5	0.3	3.954	A
3 - A180 (W)	1754	439	392	2501	0.701	1994	1495	62.8	3.0	14.068	B
4 - Estate Rd 1	111	28	2116	1039	0.107	112	269	0.3	0.2	5.379	A
5 - Gilbey Rd	145	36	1970	952	0.152	145	258	0.4	0.2	5.676	A

# 2032 Do Minimum, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	34.23	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 - A180 (E)	333	30.00
2 - Estate Rd 2	2066	30.00
3 - A180 (W)	532	40.00
4 - Estate Rd 1	2858	25.00
5 - Gilbey Rd	2991	20.00

### 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
D10	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1888	100.000
2 - Estate Rd 2		ONE HOUR	✓	641	100.000
3 - A180 (W)		ONE HOUR	✓	2188	100.000
4 - Estate Rd 1		ONE HOUR	✓	280	100.000
5 - Gilbey Rd		ONE HOUR	✓	308	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	2	192	1602	29	63
	2 - Estate Rd 2	372	0	254	4	11
	3 - A180 (W)	1981	92	2	41	72
	4 - Estate Rd 1	187	4	76	1	12
	5 - Gilbey Rd	181	26	100	0	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	19	10	19	13
	2 - Estate Rd 2	7	0	17	77	26
	3 - A180 (W)	7	57	0	34	23
	4 - Estate Rd 1	3	0	29	0	23
	5 - Gilbey Rd	5	0	27	0	0

## 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 - A180 (E)	0.78	6.64	3.8	A	1732	2599
2 - Estate Rd 2	0.58	7.88	1.5	A	588	882
3 - A180 (W)	1.02	71.05	50.6	F	2008	3012
4 - Estate Rd 1	0.44	10.21	0.9	B	257	385
5 - Gilbey Rd	0.61	18.44	1.7	C	283	424

### Main Results for each time segment

#### 16:15 - 16:30

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 - A180 (E)	1421	355	226	2794	0.509	1417	2040	0.0	1.1	2.893	A
2 - Estate Rd 2	483	121	1408	1729	0.279	481	235	0.0	0.4	3.207	A
3 - A180 (W)	1647	412	362	2538	0.649	1639	1526	0.0	2.0	4.343	A
4 - Estate Rd 1	211	53	1945	1147	0.184	210	56	0.0	0.2	4.209	A
5 - Gilbey Rd	232	58	2036	974	0.238	231	119	0.0	0.3	5.352	A

**16:30 - 16:45**

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 - A180 (E)	1697	424	271	2745	0.618	1695	2438	1.1	1.8	3.797	A
2 - Estate Rd 2	576	144	1684	1513	0.381	575	282	0.4	0.7	4.271	A
3 - A180 (W)	1967	492	433	2462	0.799	1958	1825	2.0	4.2	7.677	A
4 - Estate Rd 1	252	63	2325	943	0.267	251	67	0.2	0.4	5.702	A
5 - Gilbey Rd	277	69	2433	786	0.352	276	143	0.3	0.6	7.805	A

**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 - A180 (E)	2079	520	326	2684	0.775	2071	2891	1.8	3.7	6.446	A
2 - Estate Rd 2	706	176	2057	1220	0.578	702	340	0.7	1.5	7.740	A
3 - A180 (W)	2409	602	529	2361	1.020	2296	2230	4.2	32.3	37.314	E
4 - Estate Rd 1	308	77	2745	717	0.430	307	80	0.4	0.8	9.589	A
5 - Gilbey Rd	339	85	2881	573	0.592	335	171	0.6	1.5	16.514	C

**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 - A180 (E)	2079	520	329	2680	0.776	2078	2931	3.7	3.8	6.640	A
2 - Estate Rd 2	706	176	2065	1214	0.581	706	343	1.5	1.5	7.881	A
3 - A180 (W)	2409	602	532	2358	1.021	2336	2239	32.3	50.6	71.053	F
4 - Estate Rd 1	308	77	2787	695	0.444	308	81	0.8	0.9	10.207	B
5 - Gilbey Rd	339	85	2922	554	0.612	339	173	1.5	1.7	18.443	C

**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 - A180 (E)	1697	424	281	2733	0.621	1705	2619	3.8	1.8	3.920	A
2 - Estate Rd 2	576	144	1695	1503	0.383	580	291	1.5	0.7	4.354	A
3 - A180 (W)	1967	492	437	2459	0.800	2151	1838	50.6	4.6	20.572	C
4 - Estate Rd 1	252	63	2516	840	0.300	253	71	0.9	0.5	6.749	A
5 - Gilbey Rd	277	69	2620	697	0.397	281	149	1.7	0.7	9.660	A

**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 - A180 (E)	1421	355	229	2791	0.509	1424	2062	1.8	1.2	2.931	A
2 - Estate Rd 2	483	121	1416	1723	0.280	484	237	0.7	0.4	3.239	A
3 - A180 (W)	1647	412	364	2536	0.650	1658	1535	4.6	2.1	4.536	A
4 - Estate Rd 1	211	53	1965	1136	0.186	212	57	0.5	0.3	4.276	A
5 - Gilbey Rd	232	58	2057	964	0.241	233	120	0.7	0.4	5.468	A

# 2032 Do Something, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	113.35	F

### 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 - A180 (E)	414	30.00
2 - Estate Rd 2	2379	30.00
3 - A180 (W)	570	40.00
4 - Estate Rd 1	2804	25.00
5 - Gilbey Rd	2613	20.00

### 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
D11	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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 - A180 (E)		ONE HOUR	✓	2431	100.000
2 - Estate Rd 2		ONE HOUR	✓	404	100.000
3 - A180 (W)		ONE HOUR	✓	2361	100.000
4 - Estate Rd 1		ONE HOUR	✓	148	100.000
5 - Gilbey Rd		ONE HOUR	✓	192	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	8	407	1762	127	127
	2 - Estate Rd 2	210	2	153	18	21
	3 - A180 (W)	1838	197	1	182	143
	4 - Estate Rd 1	54	9	54	0	31
	5 - Gilbey Rd	79	31	77	5	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	18	14	15	2
	2 - Estate Rd 2	35	0	62	40	41
	3 - A180 (W)	20	32	0	26	32
	4 - Estate Rd 1	46	0	60	0	14
	5 - Gilbey Rd	18	9	48	37	0

## 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 - A180 (E)	1.03	77.77	62.7	F	2231	3346
2 - Estate Rd 2	0.40	7.72	0.9	A	371	556
3 - A180 (W)	1.12	183.20	149.6	F	2166	3250
4 - Estate Rd 1	0.20	7.68	0.3	A	136	204
5 - Gilbey Rd	0.29	8.70	0.5	A	176	264

### Main Results for each time segment

#### 07:15 - 07:30

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 - A180 (E)	1830	458	281	2719	0.673	1821	1638	0.0	2.3	4.523	A
2 - Estate Rd 2	304	76	1619	1604	0.190	303	484	0.0	0.3	3.992	A
3 - A180 (W)	1777	444	388	2505	0.710	1766	1533	0.0	2.9	5.859	A
4 - Estate Rd 1	111	28	1905	1161	0.096	111	248	0.0	0.1	4.744	A
5 - Gilbey Rd	145	36	1775	1062	0.136	144	241	0.0	0.2	4.976	A



**07:30 - 07:45**

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 - A180 (E)	2185	546	336	2659	0.822	2175	1952	2.3	5.0	8.287	A
2 - Estate Rd 2	363	91	1933	1379	0.263	362	577	0.3	0.5	5.110	A
3 - A180 (W)	2122	531	464	2425	0.875	2103	1832	2.9	7.7	12.956	B
4 - Estate Rd 1	133	33	2271	960	0.139	133	296	0.1	0.2	6.020	A
5 - Gilbey Rd	173	43	2116	877	0.197	172	288	0.2	0.3	6.486	A

**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 - A180 (E)	2677	669	389	2601	1.029	2541	2183	5.0	38.8	39.533	E
2 - Estate Rd 2	445	111	2266	1142	0.390	443	664	0.5	0.9	7.425	A
3 - A180 (W)	2600	650	555	2330	1.116	2309	2155	7.7	80.2	76.957	F
4 - Estate Rd 1	163	41	2528	819	0.199	162	336	0.2	0.3	7.582	A
5 - Gilbey Rd	211	53	2361	744	0.284	211	330	0.3	0.5	8.566	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 - A180 (E)	2677	669	391	2599	1.030	2581	2194	38.8	62.7	77.771	F
2 - Estate Rd 2	445	111	2300	1118	0.398	445	672	0.9	0.9	7.720	A
3 - A180 (W)	2600	650	560	2324	1.119	2322	2184	80.2	149.6	183.200	F
4 - Estate Rd 1	163	41	2543	811	0.201	163	339	0.3	0.3	7.684	A
5 - Gilbey Rd	211	53	2373	738	0.287	211	333	0.5	0.5	8.695	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 - A180 (E)	2185	546	360	2633	0.830	2412	2168	62.7	6.1	32.378	D
2 - Estate Rd 2	363	91	2131	1238	0.293	365	640	0.9	0.6	5.960	A
3 - A180 (W)	2122	531	491	2397	0.886	2377	2005	149.6	85.9	179.214	F
4 - Estate Rd 1	133	33	2538	814	0.164	133	330	0.3	0.3	7.325	A
5 - Gilbey Rd	173	43	2355	747	0.231	173	317	0.5	0.4	7.972	A

**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 - A180 (E)	1830	458	311	2686	0.681	1845	1907	6.1	2.5	4.958	A
2 - Estate Rd 2	304	76	1640	1589	0.191	305	517	0.6	0.3	4.053	A
3 - A180 (W)	1777	444	392	2500	0.711	2109	1553	85.9	3.1	25.885	D
4 - Estate Rd 1	111	28	2225	986	0.113	112	276	0.3	0.2	5.703	A
5 - Gilbey Rd	145	36	2073	901	0.161	145	263	0.4	0.2	6.062	A

# 2032 Do Something, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Pyewipe Roundabout AM- Existing Base	Large Roundabout	1,2,3,4,5	49.81	E

### 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 - A180 (E)	333	30.00
2 - Estate Rd 2	2107	30.00
3 - A180 (W)	532	40.00
4 - Estate Rd 1	2943	25.00
5 - Gilbey Rd	3076	20.00

### 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
D12	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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 - A180 (E)		ONE HOUR	✓	1926	100.000
2 - Estate Rd 2		ONE HOUR	✓	641	100.000
3 - A180 (W)		ONE HOUR	✓	2265	100.000
4 - Estate Rd 1		ONE HOUR	✓	280	100.000
5 - Gilbey Rd		ONE HOUR	✓	308	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	2	192	1640	29	63
	2 - Estate Rd 2	372	0	254	4	11
	3 - A180 (W)	2058	92	2	41	72
	4 - Estate Rd 1	187	4	76	1	12
	5 - Gilbey Rd	181	26	100	0	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - A180 (E)	2 - Estate Rd 2	3 - A180 (W)	4 - Estate Rd 1	5 - Gilbey Rd
From	1 - A180 (E)	0	19	10	19	13
	2 - Estate Rd 2	7	0	17	77	26
	3 - A180 (W)	7	57	0	34	23
	4 - Estate Rd 1	3	0	29	0	23
	5 - Gilbey Rd	5	0	27	0	0

## 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 - A180 (E)	0.79	7.09	4.1	A	1767	2651
2 - Estate Rd 2	0.59	8.25	1.6	A	588	882
3 - A180 (W)	1.06	107.30	83.8	F	2078	3118
4 - Estate Rd 1	0.43	9.74	0.8	A	257	385
5 - Gilbey Rd	0.59	17.10	1.6	C	283	424

### Main Results for each time segment

#### 16:15 - 16:30

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 - A180 (E)	1450	362	226	2794	0.519	1445	2097	0.0	1.2	2.954	A
2 - Estate Rd 2	483	121	1436	1710	0.282	481	235	0.0	0.4	3.256	A
3 - A180 (W)	1705	426	362	2538	0.672	1696	1554	0.0	2.2	4.627	A
4 - Estate Rd 1	211	53	2003	1130	0.187	210	56	0.0	0.3	4.287	A
5 - Gilbey Rd	232	58	2093	960	0.242	230	119	0.0	0.3	5.457	A

**16:30 - 16:45**

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 - A180 (E)	1731	433	270	2745	0.631	1729	2506	1.2	1.9	3.923	A
2 - Estate Rd 2	576	144	1718	1492	0.386	575	281	0.4	0.7	4.366	A
3 - A180 (W)	2036	509	433	2462	0.827	2025	1859	2.2	4.9	8.781	A
4 - Estate Rd 1	252	63	2391	928	0.271	251	67	0.3	0.4	5.834	A
5 - Gilbey Rd	277	69	2500	773	0.358	276	142	0.3	0.6	8.002	A

**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 - A180 (E)	2121	530	324	2686	0.789	2112	2921	1.9	4.0	6.862	A
2 - Estate Rd 2	706	176	2098	1198	0.589	702	338	0.7	1.6	8.031	A
3 - A180 (W)	2494	623	529	2361	1.056	2322	2271	4.9	48.0	49.626	E
4 - Estate Rd 1	308	77	2772	729	0.423	307	79	0.4	0.8	9.309	A
5 - Gilbey Rd	339	85	2909	585	0.579	336	169	0.6	1.5	15.762	C

**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 - A180 (E)	2121	530	326	2683	0.790	2120	2952	4.0	4.1	7.095	A
2 - Estate Rd 2	706	176	2107	1191	0.593	706	340	1.6	1.6	8.250	A
3 - A180 (W)	2494	623	532	2358	1.057	2351	2281	48.0	83.8	107.304	F
4 - Estate Rd 1	308	77	2802	713	0.432	308	80	0.8	0.8	9.740	A
5 - Gilbey Rd	339	85	2940	571	0.594	339	170	1.5	1.6	17.099	C

**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 - A180 (E)	1731	433	286	2728	0.635	1740	2804	4.1	2.0	4.081	A
2 - Estate Rd 2	576	144	1730	1483	0.389	580	296	1.6	0.7	4.457	A
3 - A180 (W)	2036	509	437	2459	0.828	2347	1873	83.8	6.2	59.046	F
4 - Estate Rd 1	252	63	2710	761	0.331	253	73	0.8	0.5	7.782	A
5 - Gilbey Rd	277	69	2810	631	0.439	280	153	1.6	0.9	11.435	B

**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 - A180 (E)	1450	362	229	2791	0.520	1453	2125	2.0	1.2	2.996	A
2 - Estate Rd 2	483	121	1445	1703	0.283	484	238	0.7	0.4	3.290	A
3 - A180 (W)	1705	426	364	2536	0.673	1721	1564	6.2	2.3	4.916	A
4 - Estate Rd 1	211	53	2028	1117	0.189	212	57	0.5	0.3	4.370	A
5 - Gilbey Rd	232	58	2120	947	0.245	234	120	0.9	0.4	5.603	A

## Appendix N

### Westgate Roundabout Model Output

## Westgate Roundabout - Traffic Flow Composition

Approach	AM Peak								
	2017 Flows (PCUs)			2019 Flows (PCUs)			2032 Flows (PCUs)		
	Base	Committed	Development	Base	Committed	Development	Base	Committed	Development
Arm 1 - Pyewipe Road	774	0	0	798	0	16	928	4	16
Arm 2 - Birchin Way	197	0	0	203	0	0	237	0	0
Arm 3 - A180 (e)	1631	0	0	1682	0	31	1955	0	31
Arm 4 - Moody Lane	218	0	0	225	0	0	262	2	0
Arm 5 - A180 Westgate	1912	0	0	1972	0	57	2292	4	57
<b>Junction Total</b>	<b>4732</b>	<b>0</b>	<b>0</b>	<b>4880</b>	<b>0</b>	<b>104</b>	<b>5674</b>	<b>10</b>	<b>104</b>
<b>Development as a % of Junction Total</b>	<b>0.0%</b>			<b>2.1%</b>			<b>1.8%</b>		

Approach	PM Peak								
	2017 Flows (PCUs)			2019 Flows (PCUs)			2032 Flows (PCUs)		
	Base	Committed	Development	Base	Committed	Development	Base	Committed	Development
Arm 1 - Pyewipe Road	739	0	0	761	0	7	881	0	7
Arm 2 - Birchin Way	259	0	0	267	0	0	309	0	0
Arm 3 - A180 (e)	2166	0	0	2231	0	77	2583	0	77
Arm 4 - Moody Lane	287	0	0	296	0	0	342	8	0
Arm 5 - A180 Westgate	1436	0	0	1479	0	32	1713	1	32
<b>Junction Total</b>	<b>4887</b>	<b>0</b>	<b>0</b>	<b>5034</b>	<b>0</b>	<b>116</b>	<b>5828</b>	<b>9</b>	<b>116</b>
<b>Development as a % of Junction Total</b>	<b>0.0%</b>			<b>2.3%</b>			<b>1.9%</b>		

# Junctions 9

## ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []  
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**Filename:** Westgate Roundabout (Existing)2.j9

**Path:** \\global\europa\Leeds\Jobs\240000\248164-00\0 Arup\0-11 Transportation\0-11-07 Calcs-Specs\Models\Junctions9  
\Westgate Roundabout\Arup\TN Edits

**Report generation date:** 30/11/2017 12:17:47

- 
- »2017 Base, AM
  - »2017 Base, PM
  - »2019 Do Minimum, AM
  - »2019 Do Minimum, PM
  - »2019 Do Something, AM
  - »2019 Do Something, PM
  - »2032 Do Minimum, AM
  - »2032 Do Minimum, PM
  - »2032 Do Something, AM
  - »2032 Do Something, PM

## Summary of junction performance

	AM		PM	
	Queue (PCU)	RFC	Queue (PCU)	RFC
<b>2017 Base</b>				
1 - Pyewipe Road	30.7	1.05	1.8	0.65
2 - Birchin Way	5.3	0.88	1.4	0.57
3 - A180 (W)	4.4	0.80	47.1	1.02
4 - Moody Lane	1.3	0.49	33.7	1.27
5 - A180 (E)	31.3	1.00	3.2	0.76
<b>2019 Do Minimum</b>				
1 - Pyewipe Road	40.1	1.08	2.2	0.68
2 - Birchin Way	5.6	0.87	1.7	0.63
3 - A180 (W)	5.7	0.83	82.5	1.06
4 - Moody Lane	1.7	0.53	34.2	1.25
5 - A180 (E)	61.1	1.04	3.9	0.79
<b>2019 Do Something</b>				
1 - Pyewipe Road	45.3	1.09	2.4	0.70
2 - Birchin Way	5.1	0.85	1.9	0.66
3 - A180 (W)	6.2	0.84	120.5	1.09
4 - Moody Lane	1.8	0.55	29.4	1.18
5 - A180 (E)	90.6	1.08	4.4	0.80
<b>2032 Do Minimum</b>				
1 - Pyewipe Road	66.0	1.12	8.2	0.90
2 - Birchin Way	4.0	0.79	12.9	1.02
3 - A180 (W)	33.3	1.00	330.3	1.27
4 - Moody Lane	5.8	0.84	23.8	1.08
5 - A180 (E)	297.3	1.29	11.9	0.93
<b>2032 Do Something</b>				
1 - Pyewipe Road	71.1	1.13	10.2	0.93
2 - Birchin Way	3.6	0.76	16.3	1.06
3 - A180 (W)	40.8	1.01	399.1	1.31
4 - Moody Lane	6.2	0.85	18.4	1.04
5 - A180 (E)	351.7	1.32	14.9	0.95

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	(untitled)
Location	
Site number	
Date	25/08/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	GLOBAL\sam.vickers
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



### 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
D3	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓
D4	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓
D5	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D6	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D7	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D8	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓
D9	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D10	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D11	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓
D12	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

### Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

# 2017 Base, AM

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	49.16	E

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description
1	Pyewipe Road	
2	Birchin Way	
3	A180 (W)	
4	Moody Lane	
5	A180 (E)	

### Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Pyewipe Road	4.75	6.75	10.0	20.0	83.0	15.0	
2 - Birchin Way	3.25	4.25	8.0	17.0	83.0	20.0	
3 - A180 (W)	7.25	7.25	0.0	18.0	83.0	25.0	
4 - Moody Lane	4.00	4.00	0.0	26.0	83.0	25.0	
5 - A180 (E)	7.25	7.25	0.0	33.0	83.0	18.0	

### Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
1 - Pyewipe Road	2103	35.00
2 - Birchin Way	2710	25.00
3 - A180 (W)	652	30.00
4 - Moody Lane	2036	15.00
5 - A180 (E)	728	70.00

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Pyewipe Road	0.676	2208
2 - Birchin Way	0.445	1416
3 - A180 (W)	1.029	2877
4 - Moody Lane	0.553	1608
5 - A180 (E)	1.062	2881

*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
D3	2017 Base	AM	ONE HOUR	07:15	08:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	774	100.000
2 - Birchin Way		ONE HOUR	✓	198	100.000
3 - A180 (W)		ONE HOUR	✓	1630	100.000
4 - Moody Lane		ONE HOUR	✓	218	100.000
5 - A180 (E)		ONE HOUR	✓	1912	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	66	441	106	161
	2 - Birchin Way	54	0	92	7	45
	3 - A180 (W)	418	66	2	42	1102
	4 - Moody Lane	36	7	78	0	97
	5 - A180 (E)	155	84	1454	218	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	5	6	3	8
	2 - Birchin Way	11	0	13	0	16
	3 - A180 (W)	6	29	0	58	10
	4 - Moody Lane	31	0	51	0	30
	5 - A180 (E)	9	5	5	6	0

## 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 - Pyewipe Road	1.05	119.84	30.7	F	710	1065
2 - Birchin Way	0.88	95.46	5.3	F	182	273
3 - A180 (W)	0.80	9.02	4.4	A	1496	2244
4 - Moody Lane	0.49	19.40	1.3	C	200	300
5 - A180 (E)	1.00	53.36	31.3	F	1754	2632

## Main Results for each time segment

### 07:15 - 07:30

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 - Pyewipe Road	583	146	1431	1241	0.470	579	497	0.0	0.9	5.731	A
2 - Birchin Way	149	37	1843	596	0.250	148	167	0.0	0.4	9.012	A
3 - A180 (W)	1227	307	443	2421	0.507	1223	1548	0.0	1.1	3.305	A
4 - Moody Lane	164	41	1386	842	0.195	163	279	0.0	0.3	7.177	A
5 - A180 (E)	1439	360	495	2355	0.611	1433	1054	0.0	1.6	4.088	A

### 07:30 - 07:45

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 - Pyewipe Road	696	174	1711	1052	0.662	692	594	0.9	2.0	10.458	B
2 - Birchin Way	178	44	2202	436	0.408	176	200	0.4	0.8	15.520	C
3 - A180 (W)	1465	366	529	2332	0.628	1462	1850	1.1	1.8	4.556	A
4 - Moody Lane	196	49	1658	692	0.283	195	334	0.3	0.5	9.817	A
5 - A180 (E)	1719	430	593	2252	0.763	1712	1260	1.6	3.3	6.951	A

### 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 - Pyewipe Road	852	213	2033	834	1.022	792	718	2.0	17.1	58.404	F
2 - Birchin Way	218	55	2588	265	0.824	206	237	0.8	3.7	60.380	F
3 - A180 (W)	1795	449	616	2243	0.800	1785	2178	1.8	4.2	8.510	A
4 - Moody Lane	240	60	2008	498	0.482	237	393	0.5	1.2	18.524	C
5 - A180 (E)	2105	526	720	2116	0.995	2030	1525	3.3	22.0	31.079	D

### 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 - Pyewipe Road	852	213	2069	810	1.053	798	725	17.1	30.7	119.837	F
2 - Birchin Way	218	55	2627	247	0.883	212	239	3.7	5.3	95.455	F
3 - A180 (W)	1795	449	625	2233	0.804	1794	2214	4.2	4.4	9.021	A
4 - Moody Lane	240	60	2021	491	0.489	240	399	1.2	1.3	19.398	C
5 - A180 (E)	2105	526	726	2110	0.998	2068	1535	22.0	31.3	53.361	F

### 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 - Pyewipe Road	696	174	1820	978	0.712	807	612	30.7	2.8	35.966	E
2 - Birchin Way	178	44	2412	343	0.519	194	215	5.3	1.3	29.869	D
3 - A180 (W)	1465	366	592	2268	0.646	1475	2014	4.4	2.0	5.071	A
4 - Moody Lane	196	49	1703	667	0.294	199	364	1.3	0.6	10.488	B
5 - A180 (E)	1719	430	603	2240	0.767	1830	1298	31.3	3.6	11.809	B

### 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 - Pyewipe Road	583	146	1446	1231	0.473	590	502	2.8	1.0	6.018	A
2 - Birchin Way	149	37	1867	585	0.255	153	169	1.3	0.4	9.440	A
3 - A180 (W)	1227	307	451	2413	0.509	1231	1568	2.0	1.2	3.375	A
4 - Moody Lane	164	41	1399	835	0.197	165	283	0.6	0.3	7.302	A
5 - A180 (E)	1439	360	500	2350	0.613	1447	1064	3.6	1.7	4.240	A



# 2017 Base, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	55.02	F

### 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 - Pyewipe Road	1381	35.00
2 - Birchin Way	1961	25.00
3 - A180 (W)	535	30.00
4 - Moody Lane	2783	15.00
5 - A180 (E)	794	70.00

### 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	2017 Base	PM	ONE HOUR	16:15	17:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	739	100.000
2 - Birchin Way		ONE HOUR	✓	259	100.000
3 - A180 (W)		ONE HOUR	✓	2166	100.000
4 - Moody Lane		ONE HOUR	✓	287	100.000
5 - A180 (E)		ONE HOUR	✓	1436	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	82	399	32	226
	2 - Birchin Way	80	0	100	4	75
	3 - A180 (W)	457	56	1	23	1629
	4 - Moody Lane	70	6	51	0	160
	5 - A180 (E)	296	68	1003	65	4

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	1	3	0	3
	2 - Birchin Way	0	0	5	33	3
	3 - A180 (W)	2	8	0	82	2
	4 - Moody Lane	1	0	23	0	3
	5 - A180 (E)	2	8	5	2	0

## 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 - Pyewipe Road	0.65	8.25	1.8	A	678	1017
2 - Birchin Way	0.57	17.49	1.4	C	238	356
3 - A180 (W)	1.02	67.08	47.1	F	1988	2981
4 - Moody Lane	1.27	356.19	33.7	F	263	395
5 - A180 (E)	0.76	7.48	3.2	A	1318	1977

### Main Results for each time segment

#### 16:15 - 16:30

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 - Pyewipe Road	556	139	941	1608	0.346	554	677	0.0	0.5	3.499	A
2 - Birchin Way	195	49	1336	840	0.232	194	159	0.0	0.3	5.732	A
3 - A180 (W)	1631	408	364	2520	0.647	1623	1165	0.0	1.9	4.086	A
4 - Moody Lane	216	54	1894	608	0.355	214	93	0.0	0.6	9.574	A
5 - A180 (E)	1081	270	540	2300	0.470	1077	1569	0.0	0.9	3.064	A

**16:30 - 16:45**

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 - Pyewipe Road	664	166	1125	1458	0.456	663	809	0.5	0.9	4.643	A
2 - Birchin Way	233	58	1598	694	0.336	232	190	0.3	0.5	8.032	A
3 - A180 (W)	1947	487	436	2445	0.796	1939	1394	1.9	3.9	7.194	A
4 - Moody Lane	258	65	2264	447	0.577	255	111	0.6	1.4	19.441	C
5 - A180 (E)	1291	323	645	2190	0.589	1289	1874	0.9	1.5	4.157	A

**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 - Pyewipe Road	814	203	1360	1265	0.643	810	955	0.9	1.8	8.051	A
2 - Birchin Way	285	71	1942	501	0.570	282	229	0.5	1.3	16.743	C
3 - A180 (W)	2385	596	531	2344	1.017	2279	1692	3.9	30.3	35.383	E
4 - Moody Lane	316	79	2676	267	1.182	255	135	1.4	16.7	157.663	F
5 - A180 (E)	1581	395	741	2090	0.757	1574	2190	1.5	3.1	7.202	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 - Pyewipe Road	814	203	1365	1261	0.645	814	963	1.8	1.8	8.246	A
2 - Birchin Way	285	71	1948	497	0.574	285	230	1.3	1.4	17.491	C
3 - A180 (W)	2385	596	535	2340	1.019	2317	1698	30.3	47.1	67.077	F
4 - Moody Lane	316	79	2717	250	1.266	248	136	16.7	33.7	356.190	F
5 - A180 (E)	1581	395	748	2082	0.759	1581	2217	3.1	3.2	7.480	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 - Pyewipe Road	664	166	1156	1432	0.464	668	874	1.8	0.9	4.863	A
2 - Birchin Way	233	58	1627	677	0.344	236	198	1.4	0.5	8.476	A
3 - A180 (W)	1947	487	440	2440	0.798	2118	1422	47.1	4.3	17.999	C
4 - Moody Lane	258	65	2445	368	0.701	357	114	33.7	9.0	222.980	F
5 - A180 (E)	1291	323	733	2097	0.616	1297	2068	3.2	1.7	4.732	A

**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 - Pyewipe Road	556	139	953	1597	0.348	558	691	0.9	0.6	3.560	A
2 - Birchin Way	195	49	1350	832	0.234	196	161	0.5	0.3	5.845	A
3 - A180 (W)	1631	408	367	2517	0.648	1640	1179	4.3	1.9	4.258	A
4 - Moody Lane	216	54	1914	600	0.360	250	94	9.0	0.6	11.909	B
5 - A180 (E)	1081	270	560	2279	0.474	1084	1603	1.7	0.9	3.154	A



# 2019 Do Minimum, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	71.24	F

### 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 - Pyewipe Road	2168	35.00
2 - Birchin Way	2794	25.00
3 - A180 (W)	671	30.00
4 - Moody Lane	2099	15.00
5 - A180 (E)	750	70.00

### 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	2019 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	799	100.000
2 - Birchin Way		ONE HOUR	✓	203	100.000
3 - A180 (W)		ONE HOUR	✓	1682	100.000
4 - Moody Lane		ONE HOUR	✓	225	100.000
5 - A180 (E)		ONE HOUR	✓	1972	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	68	455	110	166
	2 - Birchin Way	55	0	95	7	46
	3 - A180 (W)	431	68	2	44	1137
	4 - Moody Lane	38	7	80	0	100
	5 - A180 (E)	160	87	1500	224	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	10	13	6	17
	2 - Birchin Way	21	0	25	0	31
	3 - A180 (W)	13	49	100	76	21
	4 - Moody Lane	51	0	71	0	50
	5 - A180 (E)	19	11	11	13	0

## 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 - Pyewipe Road	1.08	151.27	40.1	F	733	1100
2 - Birchin Way	0.87	98.74	5.6	F	186	279
3 - A180 (W)	0.83	11.53	5.7	B	1543	2315
4 - Moody Lane	0.53	25.55	1.7	D	206	310
5 - A180 (E)	1.04	92.14	61.1	F	1810	2714

### Main Results for each time segment

#### 07:15 - 07:30

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 - Pyewipe Road	602	150	1474	1215	0.495	597	512	0.0	1.1	6.513	A
2 - Birchin Way	153	38	1899	576	0.265	151	172	0.0	0.4	10.470	B
3 - A180 (W)	1266	317	455	2406	0.526	1261	1595	0.0	1.3	3.781	A
4 - Moody Lane	169	42	1428	818	0.207	168	288	0.0	0.4	8.534	A
5 - A180 (E)	1485	371	510	2337	0.635	1477	1086	0.0	1.9	4.642	A

**07:30 - 07:45**

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 - Pyewipe Road	718	180	1761	1025	0.701	713	613	1.1	2.5	12.754	B
2 - Birchin Way	182	46	2268	417	0.438	181	206	0.4	0.9	18.739	C
3 - A180 (W)	1512	378	543	2315	0.653	1508	1905	1.3	2.2	5.362	A
4 - Moody Lane	202	51	1708	666	0.304	201	344	0.4	0.7	11.935	B
5 - A180 (E)	1773	443	610	2231	0.795	1764	1299	1.9	4.1	8.465	A

**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 - Pyewipe Road	880	220	2048	835	1.054	801	735	2.5	22.1	70.986	F
2 - Birchin Way	224	56	2609	270	0.828	211	240	0.9	4.1	65.473	F
3 - A180 (W)	1852	463	622	2235	0.829	1839	2198	2.2	5.5	10.648	B
4 - Moody Lane	248	62	2063	473	0.524	244	398	0.7	1.6	23.875	C
5 - A180 (E)	2171	543	740	2093	1.037	2043	1567	4.1	36.3	45.087	E

**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 - Pyewipe Road	880	220	2077	815	1.079	808	743	22.1	40.1	151.268	F
2 - Birchin Way	224	56	2642	256	0.874	217	243	4.1	5.6	98.736	F
3 - A180 (W)	1852	463	631	2226	0.832	1851	2228	5.5	5.7	11.527	B
4 - Moody Lane	248	62	2079	464	0.533	247	402	1.6	1.7	25.547	D
5 - A180 (E)	2171	543	748	2085	1.041	2072	1579	36.3	61.1	92.140	F

**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 - Pyewipe Road	718	180	1979	880	0.816	850	640	40.1	7.2	105.089	F
2 - Birchin Way	182	46	2600	274	0.667	194	229	5.6	2.8	61.090	F
3 - A180 (W)	1512	378	625	2232	0.677	1525	2169	5.7	2.6	6.252	A
4 - Moody Lane	202	51	1759	638	0.317	206	391	1.7	0.7	12.979	B
5 - A180 (E)	1773	443	621	2219	0.799	1998	1344	61.1	4.8	34.270	D

**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 - Pyewipe Road	602	150	1493	1202	0.500	626	520	7.2	1.1	7.310	A
2 - Birchin Way	153	38	1943	557	0.274	162	176	2.8	0.5	11.570	B
3 - A180 (W)	1266	317	473	2388	0.530	1271	1632	2.6	1.4	3.910	A
4 - Moody Lane	169	42	1449	806	0.210	171	295	0.7	0.4	8.765	A
5 - A180 (E)	1485	371	517	2329	0.638	1496	1103	4.8	2.0	4.898	A

# 2019 Do Minimum, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	74.70	F

### 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 - Pyewipe Road	1423	35.00
2 - Birchin Way	2020	25.00
3 - A180 (W)	551	30.00
4 - Moody Lane	2867	15.00
5 - A180 (E)	818	70.00

### 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	2019 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	761	100.000
2 - Birchin Way		ONE HOUR	✓	266	100.000
3 - A180 (W)		ONE HOUR	✓	2232	100.000
4 - Moody Lane		ONE HOUR	✓	296	100.000
5 - A180 (E)		ONE HOUR	✓	1479	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	84	411	33	233
	2 - Birchin Way	82	0	103	4	77
	3 - A180 (W)	471	58	1	24	1678
	4 - Moody Lane	72	6	53	0	165
	5 - A180 (E)	305	70	1033	67	4

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	3	6	0	6
	2 - Birchin Way	0	0	12	58	6
	3 - A180 (W)	5	16	0	90	5
	4 - Moody Lane	3	0	41	0	7
	5 - A180 (E)	5	17	11	4	0

## 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 - Pyewipe Road	0.68	9.65	2.2	A	698	1047
2 - Birchin Way	0.63	21.79	1.7	C	244	366
3 - A180 (W)	1.06	107.04	82.5	F	2048	3072
4 - Moody Lane	1.25	374.75	34.2	F	272	407
5 - A180 (E)	0.79	8.84	3.9	A	1357	2036

### Main Results for each time segment

#### 16:15 - 16:30

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 - Pyewipe Road	573	143	969	1583	0.362	571	696	0.0	0.6	3.740	A
2 - Birchin Way	200	50	1376	817	0.245	199	163	0.0	0.3	6.206	A
3 - A180 (W)	1680	420	375	2507	0.670	1672	1200	0.0	2.1	4.515	A
4 - Moody Lane	223	56	1950	590	0.378	220	96	0.0	0.7	10.699	B
5 - A180 (E)	1113	278	556	2281	0.488	1109	1615	0.0	1.0	3.358	A

**16:30 - 16:45**

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 - Pyewipe Road	684	171	1158	1430	0.478	683	832	0.6	1.0	5.070	A
2 - Birchin Way	239	60	1646	668	0.358	238	195	0.3	0.6	8.920	A
3 - A180 (W)	2007	502	448	2430	0.826	1996	1435	2.1	4.8	8.575	A
4 - Moody Lane	266	67	2329	429	0.620	262	115	0.7	1.7	23.239	C
5 - A180 (E)	1330	332	663	2168	0.613	1327	1928	1.0	1.7	4.673	A

**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 - Pyewipe Road	838	209	1399	1236	0.678	833	970	1.0	2.2	9.319	A
2 - Birchin Way	293	73	1998	473	0.619	289	233	0.6	1.6	20.359	C
3 - A180 (W)	2457	614	546	2327	1.056	2289	1741	4.8	47.0	49.185	E
4 - Moody Lane	326	81	2696	274	1.189	262	138	1.7	17.7	163.304	F
5 - A180 (E)	1628	407	748	2080	0.783	1620	2210	1.7	3.8	8.433	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 - Pyewipe Road	838	209	1405	1230	0.681	838	978	2.2	2.2	9.651	A
2 - Birchin Way	293	73	2008	468	0.626	293	235	1.6	1.7	21.791	C
3 - A180 (W)	2457	614	550	2323	1.058	2315	1750	47.0	82.5	107.042	F
4 - Moody Lane	326	81	2726	262	1.246	260	139	17.7	34.2	374.750	F
5 - A180 (E)	1628	407	755	2073	0.786	1628	2231	3.8	3.9	8.842	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 - Pyewipe Road	684	171	1180	1413	0.484	689	908	2.2	1.0	5.276	A
2 - Birchin Way	239	60	1663	658	0.363	244	205	1.7	0.6	9.360	A
3 - A180 (W)	2007	502	454	2423	0.828	2313	1453	82.5	6.0	58.818	F
4 - Moody Lane	266	67	2648	294	0.904	285	119	34.2	29.4	363.708	F
5 - A180 (E)	1330	332	751	2078	0.640	1337	2183	3.9	2.0	5.384	A

**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 - Pyewipe Road	573	143	999	1559	0.368	574	732	1.0	0.6	3.861	A
2 - Birchin Way	200	50	1406	800	0.250	201	167	0.6	0.4	6.428	A
3 - A180 (W)	1680	420	378	2504	0.671	1695	1230	6.0	2.2	4.797	A
4 - Moody Lane	223	56	1976	579	0.385	338	97	29.4	0.7	27.172	D
5 - A180 (E)	1113	278	614	2220	0.502	1117	1700	2.0	1.1	3.588	A

# 2019 Do Something, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	91.81	F

### 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 - Pyewipe Road	2231	35.00
2 - Birchin Way	2875	25.00
3 - A180 (W)	671	30.00
4 - Moody Lane	2133	15.00
5 - A180 (E)	756	70.00

### 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
D7	2019 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	815	100.000
2 - Birchin Way		ONE HOUR	✓	203	100.000
3 - A180 (W)		ONE HOUR	✓	1713	100.000
4 - Moody Lane		ONE HOUR	✓	225	100.000
5 - A180 (E)		ONE HOUR	✓	2029	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	68	471	110	166
	2 - Birchin Way	55	0	95	7	46
	3 - A180 (W)	437	68	2	44	1162
	4 - Moody Lane	38	7	80	0	100
	5 - A180 (E)	160	87	1557	224	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	10	13	6	17
	2 - Birchin Way	21	0	25	0	31
	3 - A180 (W)	12	49	100	76	21
	4 - Moody Lane	51	0	71	0	50
	5 - A180 (E)	19	11	11	13	0

## 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 - Pyewipe Road	1.09	185.70	45.3	F	748	1122
2 - Birchin Way	0.85	89.52	5.1	F	186	279
3 - A180 (W)	0.84	12.31	6.2	B	1572	2358
4 - Moody Lane	0.55	27.37	1.8	D	206	310
5 - A180 (E)	1.08	128.59	90.6	F	1862	2793

### Main Results for each time segment

#### 07:15 - 07:30

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 - Pyewipe Road	614	153	1517	1191	0.515	609	517	0.0	1.2	6.907	A
2 - Birchin Way	153	38	1953	558	0.274	151	172	0.0	0.5	10.917	B
3 - A180 (W)	1290	322	455	2406	0.536	1284	1649	0.0	1.4	3.847	A
4 - Moody Lane	169	42	1451	805	0.210	168	288	0.0	0.4	8.703	A
5 - A180 (E)	1528	382	514	2331	0.655	1519	1105	0.0	2.1	4.907	A



**07:30 - 07:45**

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 - Pyewipe Road	733	183	1811	999	0.733	726	618	1.2	2.9	14.452	B
2 - Birchin Way	182	46	2331	400	0.456	180	206	0.5	1.0	20.127	C
3 - A180 (W)	1540	385	543	2316	0.665	1536	1968	1.4	2.3	5.531	A
4 - Moody Lane	202	51	1735	653	0.310	201	344	0.4	0.7	12.289	B
5 - A180 (E)	1824	456	615	2225	0.820	1813	1321	2.1	4.8	9.538	A

**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 - Pyewipe Road	897	224	2061	836	1.073	808	738	2.9	25.2	78.373	F
2 - Birchin Way	224	56	2632	274	0.816	212	237	1.0	3.9	63.102	F
3 - A180 (W)	1886	472	614	2243	0.841	1872	2230	2.3	5.9	11.266	B
4 - Moody Lane	248	62	2095	459	0.539	244	391	0.7	1.7	25.326	D
5 - A180 (E)	2234	558	747	2086	1.071	2053	1592	4.8	50.1	57.370	F

**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 - Pyewipe Road	897	224	2081	823	1.090	817	745	25.2	45.3	169.856	F
2 - Birchin Way	224	56	2659	263	0.851	219	240	3.9	5.1	89.518	F
3 - A180 (W)	1886	472	623	2234	0.844	1885	2255	5.9	6.2	12.313	B
4 - Moody Lane	248	62	2113	450	0.551	247	395	1.7	1.8	27.368	D
5 - A180 (E)	2234	558	755	2078	1.075	2072	1605	50.1	90.6	128.588	F

**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 - Pyewipe Road	733	183	2132	790	0.928	771	653	45.3	35.8	185.702	F
2 - Birchin Way	182	46	2678	255	0.717	188	225	5.1	3.7	71.929	F
3 - A180 (W)	1540	385	601	2257	0.682	1554	2266	6.2	2.6	6.292	A
4 - Moody Lane	202	51	1766	636	0.318	207	389	1.8	0.7	13.078	B
5 - A180 (E)	1824	456	626	2213	0.824	2159	1347	90.6	6.8	80.232	F

**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 - Pyewipe Road	614	153	1543	1174	0.523	752	526	35.8	1.3	13.493	B
2 - Birchin Way	153	38	2109	493	0.310	165	186	3.7	0.6	14.104	B
3 - A180 (W)	1290	322	514	2346	0.550	1294	1760	2.6	1.5	4.143	A
4 - Moody Lane	169	42	1497	781	0.217	171	311	0.7	0.4	9.137	A
5 - A180 (E)	1528	382	523	2322	0.658	1546	1145	6.8	2.2	5.305	A

# 2019 Do Something, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	93.39	F

### 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 - Pyewipe Road	1458	35.00
2 - Birchin Way	2063	25.00
3 - A180 (W)	551	30.00
4 - Moody Lane	2951	15.00
5 - A180 (E)	836	70.00

### 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
D8	2019 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	768	100.000
2 - Birchin Way		ONE HOUR	✓	266	100.000
3 - A180 (W)		ONE HOUR	✓	2308	100.000
4 - Moody Lane		ONE HOUR	✓	296	100.000
5 - A180 (E)		ONE HOUR	✓	1511	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	84	418	33	233
	2 - Birchin Way	82	0	103	4	77
	3 - A180 (W)	487	58	1	24	1738
	4 - Moody Lane	72	6	53	0	165
	5 - A180 (E)	305	70	1065	67	4

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	3	6	0	6
	2 - Birchin Way	0	0	12	58	6
	3 - A180 (W)	5	16	0	90	5
	4 - Moody Lane	3	0	41	0	7
	5 - A180 (E)	5	17	11	4	0

## 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 - Pyewipe Road	0.70	10.59	2.4	B	705	1057
2 - Birchin Way	0.66	24.70	1.9	C	244	366
3 - A180 (W)	1.09	149.07	120.5	F	2118	3177
4 - Moody Lane	1.18	362.86	29.4	F	272	407
5 - A180 (E)	0.80	9.74	4.4	A	1387	2080

### Main Results for each time segment

#### 16:15 - 16:30

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 - Pyewipe Road	578	145	992	1562	0.370	576	708	0.0	0.6	3.836	A
2 - Birchin Way	200	50	1405	800	0.250	199	163	0.0	0.4	6.378	A
3 - A180 (W)	1738	434	375	2507	0.693	1728	1229	0.0	2.3	4.832	A
4 - Moody Lane	223	56	2007	573	0.389	220	96	0.0	0.7	11.204	B
5 - A180 (E)	1138	284	568	2266	0.502	1133	1659	0.0	1.1	3.470	A

**16:30 - 16:45**

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 - Pyewipe Road	690	173	1187	1407	0.491	689	846	0.6	1.0	5.272	A
2 - Birchin Way	239	60	1680	650	0.368	238	195	0.4	0.6	9.304	A
3 - A180 (W)	2075	519	448	2430	0.854	2061	1470	2.3	5.8	9.978	A
4 - Moody Lane	266	67	2395	414	0.643	261	115	0.7	1.9	25.444	D
5 - A180 (E)	1358	340	677	2153	0.631	1355	1979	1.1	1.8	4.929	A

**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 - Pyewipe Road	846	211	1433	1210	0.699	840	974	1.0	2.4	10.126	B
2 - Birchin Way	293	73	2041	453	0.646	288	232	0.6	1.8	22.612	C
3 - A180 (W)	2541	635	545	2328	1.092	2304	1784	5.8	65.1	63.399	F
4 - Moody Lane	326	81	2711	284	1.148	270	138	1.9	15.9	147.886	F
5 - A180 (E)	1664	416	753	2074	0.802	1654	2228	1.8	4.2	9.202	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 - Pyewipe Road	846	211	1441	1203	0.703	845	982	2.4	2.4	10.588	B
2 - Birchin Way	293	73	2053	447	0.655	292	233	1.8	1.9	24.697	C
3 - A180 (W)	2541	635	550	2323	1.094	2320	1795	65.1	120.5	149.072	F
4 - Moody Lane	326	81	2731	276	1.183	273	139	15.9	29.2	325.269	F
5 - A180 (E)	1664	416	760	2067	0.805	1663	2244	4.2	4.4	9.736	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 - Pyewipe Road	690	173	1206	1392	0.496	696	923	2.4	1.0	5.498	A
2 - Birchin Way	239	60	1696	641	0.373	244	205	1.9	0.6	9.800	A
3 - A180 (W)	2075	519	455	2423	0.856	2401	1486	120.5	38.8	121.784	F
4 - Moody Lane	266	67	2737	273	0.975	265	119	29.2	29.4	362.863	F
5 - A180 (E)	1358	340	761	2066	0.658	1367	2242	4.4	2.1	5.724	A

**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 - Pyewipe Road	578	145	1026	1535	0.377	580	772	1.0	0.6	3.976	A
2 - Birchin Way	200	50	1436	783	0.256	201	170	0.6	0.4	6.614	A
3 - A180 (W)	1738	434	378	2504	0.694	1883	1259	38.8	2.5	7.770	A
4 - Moody Lane	223	56	2163	509	0.438	337	98	29.4	0.9	43.603	E
5 - A180 (E)	1138	284	657	2174	0.523	1141	1843	2.1	1.2	3.837	A

# 2032 Do Minimum, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	274.36	F

### 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 - Pyewipe Road	2525	35.00
2 - Birchin Way	3257	25.00
3 - A180 (W)	788	30.00
4 - Moody Lane	2444	15.00
5 - A180 (E)	873	70.00

### 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
D9	2032 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	932	100.000
2 - Birchin Way		ONE HOUR	✓	236	100.000
3 - A180 (W)		ONE HOUR	✓	1955	100.000
4 - Moody Lane		ONE HOUR	✓	264	100.000
5 - A180 (E)		ONE HOUR	✓	2296	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	79	529	127	197
	2 - Birchin Way	64	0	110	8	54
	3 - A180 (W)	501	79	3	51	1321
	4 - Moody Lane	45	8	93	0	118
	5 - A180 (E)	186	101	1743	265	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	10	13	6	17
	2 - Birchin Way	21	0	25	0	31
	3 - A180 (W)	13	49	100	76	21
	4 - Moody Lane	49	0	71	0	49
	5 - A180 (E)	19	11	11	12	0

## 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 - Pyewipe Road	1.12	263.78	66.0	F	855	1283
2 - Birchin Way	0.79	59.28	4.0	F	217	325
3 - A180 (W)	1.00	55.85	33.3	F	1794	2691
4 - Moody Lane	0.84	78.48	5.8	F	242	363
5 - A180 (E)	1.29	509.33	297.3	F	2107	3160

### Main Results for each time segment

#### 07:15 - 07:30

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 - Pyewipe Road	702	175	1712	1093	0.642	694	595	0.0	2.0	9.955	A
2 - Birchin Way	178	44	2206	494	0.359	175	199	0.0	0.7	13.877	B
3 - A180 (W)	1472	368	533	2312	0.637	1463	1848	0.0	2.1	5.077	A
4 - Moody Lane	199	50	1660	701	0.283	196	336	0.0	0.6	10.908	B
5 - A180 (E)	1729	432	592	2237	0.773	1714	1264	0.0	3.7	7.497	A

**07:30 - 07:45**

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 - Pyewipe Road	838	209	2007	918	0.913	813	707	2.0	8.1	33.037	D
2 - Birchin Way	212	53	2585	358	0.593	208	235	0.7	1.7	29.129	D
3 - A180 (W)	1758	439	626	2219	0.792	1748	2167	2.1	4.4	9.068	A
4 - Moody Lane	237	59	1979	545	0.435	235	395	0.6	1.1	17.710	C
5 - A180 (E)	2064	516	708	2118	0.975	2007	1507	3.7	18.0	27.630	D

**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 - Pyewipe Road	1026	257	2011	916	1.121	903	808	8.1	39.0	108.874	F
2 - Birchin Way	260	65	2658	332	0.783	252	256	1.7	3.6	51.559	F
3 - A180 (W)	2152	538	678	2167	0.993	2076	2232	4.4	23.6	33.326	D
4 - Moody Lane	291	73	2339	369	0.788	278	414	1.1	4.4	54.441	F
5 - A180 (E)	2528	632	841	1981	1.276	1978	1776	18.0	155.6	165.007	F

**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 - Pyewipe Road	1026	257	2002	921	1.114	918	819	39.0	66.0	219.004	F
2 - Birchin Way	260	65	2661	330	0.786	258	258	3.6	4.0	59.280	F
3 - A180 (W)	2152	538	684	2160	0.996	2114	2235	23.6	33.3	55.848	F
4 - Moody Lane	291	73	2382	348	0.835	285	416	4.4	5.8	78.483	F
5 - A180 (E)	2528	632	858	1963	1.288	1963	1809	155.6	296.9	412.542	F

**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 - Pyewipe Road	838	209	2071	880	0.952	865	749	66.0	59.2	263.783	F
2 - Birchin Way	212	53	2689	321	0.662	217	247	4.0	2.7	45.218	E
3 - A180 (W)	1758	439	656	2189	0.803	1870	2250	33.3	5.3	17.922	C
4 - Moody Lane	237	59	2113	480	0.495	254	412	5.8	1.6	26.202	D
5 - A180 (E)	2064	516	757	2067	0.999	2062	1611	296.9	297.3	509.330	F

**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 - Pyewipe Road	702	175	2177	817	0.859	802	643	59.2	34.2	212.929	F
2 - Birchin Way	178	44	2747	300	0.593	181	232	2.7	2.0	38.517	E
3 - A180 (W)	1472	368	632	2213	0.665	1483	2296	5.3	2.4	6.047	A
4 - Moody Lane	199	50	1705	679	0.293	202	410	1.6	0.6	11.689	B
5 - A180 (E)	1729	432	603	2226	0.777	2217	1304	297.3	175.1	384.351	F

# 2032 Do Minimum, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	257.68	F

### 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 - Pyewipe Road	1648	35.00
2 - Birchin Way	2341	25.00
3 - A180 (W)	640	30.00
4 - Moody Lane	3320	15.00
5 - A180 (E)	950	70.00

### 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
D10	2032 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	882	100.000
2 - Birchin Way		ONE HOUR	✓	308	100.000
3 - A180 (W)		ONE HOUR	✓	2583	100.000
4 - Moody Lane		ONE HOUR	✓	350	100.000
5 - A180 (E)		ONE HOUR	✓	1714	100.000



## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	98	476	38	270
	2 - Birchin Way	95	0	119	5	89
	3 - A180 (W)	545	67	1	27	1943
	4 - Moody Lane	87	7	61	0	195
	5 - A180 (E)	353	81	1196	79	5

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	3	6	0	6
	2 - Birchin Way	0	0	12	58	6
	3 - A180 (W)	5	16	0	90	5
	4 - Moody Lane	3	0	41	0	7
	5 - A180 (E)	5	17	11	3	0

## 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 - Pyewipe Road	0.90	32.29	8.2	D	809	1214
2 - Birchin Way	1.02	134.93	12.9	F	283	424
3 - A180 (W)	1.27	507.51	330.3	F	2370	3555
4 - Moody Lane	1.08	233.86	23.8	F	321	482
5 - A180 (E)	0.93	24.09	11.9	C	1573	2359

### Main Results for each time segment

#### 16:15 - 16:30

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 - Pyewipe Road	664	166	1121	1457	0.456	661	807	0.0	0.9	4.743	A
2 - Birchin Way	232	58	1592	702	0.330	230	189	0.0	0.5	8.103	A
3 - A180 (W)	1945	486	435	2431	0.800	1928	1387	0.0	4.1	7.350	A
4 - Moody Lane	263	66	2251	516	0.511	259	112	0.0	1.1	15.217	C
5 - A180 (E)	1290	323	643	2177	0.593	1284	1867	0.0	1.6	4.385	A

**16:30 - 16:45**

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 - Pyewipe Road	793	198	1337	1292	0.614	790	951	0.9	1.6	7.510	A
2 - Birchin Way	277	69	1902	547	0.506	275	225	0.5	1.1	14.024	B
3 - A180 (W)	2322	581	520	2344	0.991	2250	1657	4.1	22.1	28.951	D
4 - Moody Lane	315	79	2637	380	0.827	303	133	1.1	4.1	45.881	E
5 - A180 (E)	1541	385	753	2066	0.746	1535	2187	1.6	3.1	7.334	A

**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 - Pyewipe Road	971	243	1600	1090	0.891	950	1037	1.6	6.8	24.246	C
2 - Birchin Way	339	85	2292	351	0.967	312	258	1.1	7.8	73.801	F
3 - A180 (W)	2844	711	614	2246	1.266	2243	1990	22.1	172.2	161.838	F
4 - Moody Lane	385	96	2703	357	1.079	341	155	4.1	15.2	127.244	F
5 - A180 (E)	1887	472	780	2039	0.925	1858	2264	3.1	10.5	19.207	C

**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 - Pyewipe Road	971	243	1621	1074	0.904	966	1045	6.8	8.2	32.291	D
2 - Birchin Way	339	85	2326	334	1.015	319	261	7.8	12.9	134.935	F
3 - A180 (W)	2844	711	625	2235	1.272	2235	2019	172.2	324.5	400.201	F
4 - Moody Lane	385	96	2703	357	1.080	351	157	15.2	23.8	223.377	F
5 - A180 (E)	1887	472	784	2035	0.927	1882	2270	10.5	11.9	24.090	C

**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 - Pyewipe Road	793	198	1377	1261	0.629	818	994	8.2	1.8	9.031	A
2 - Birchin Way	277	69	1963	516	0.537	323	232	12.9	1.3	24.734	C
3 - A180 (W)	2322	581	561	2301	1.009	2299	1725	324.5	330.3	507.510	F
4 - Moody Lane	315	79	2723	350	0.900	342	137	23.8	17.0	233.856	F
5 - A180 (E)	1541	385	797	2022	0.762	1574	2269	11.9	3.6	9.403	A

**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 - Pyewipe Road	664	166	1154	1431	0.464	668	927	1.8	0.9	4.993	A
2 - Birchin Way	232	58	1618	689	0.336	235	204	1.3	0.5	8.511	A
3 - A180 (W)	1945	486	441	2425	0.802	2417	1412	330.3	212.1	404.503	F
4 - Moody Lane	263	66	2740	344	0.767	312	118	17.0	4.9	125.761	F
5 - A180 (E)	1290	323	784	2034	0.634	1297	2268	3.6	1.9	5.398	A

# 2032 Do Something, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	314.54	F

### 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 - Pyewipe Road	2587	35.00
2 - Birchin Way	3337	25.00
3 - A180 (W)	788	30.00
4 - Moody Lane	2479	15.00
5 - A180 (E)	880	70.00

### 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
D11	2032 Do Something	AM	ONE HOUR	07:15	08:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	948	100.000
2 - Birchin Way		ONE HOUR	✓	236	100.000
3 - A180 (W)		ONE HOUR	✓	1987	100.000
4 - Moody Lane		ONE HOUR	✓	264	100.000
5 - A180 (E)		ONE HOUR	✓	2353	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	79	545	127	197
	2 - Birchin Way	64	0	110	8	54
	3 - A180 (W)	507	79	3	51	1347
	4 - Moody Lane	45	8	93	0	118
	5 - A180 (E)	186	101	1800	265	1

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	10	13	6	17
	2 - Birchin Way	21	0	25	0	31
	3 - A180 (W)	13	49	100	76	21
	4 - Moody Lane	49	0	71	0	49
	5 - A180 (E)	19	11	11	12	0

## 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 - Pyewipe Road	1.13	280.74	71.1	F	870	1305
2 - Birchin Way	0.76	53.20	3.6	F	217	325
3 - A180 (W)	1.01	65.41	40.8	F	1823	2735
4 - Moody Lane	0.85	83.04	6.2	F	242	363
5 - A180 (E)	1.32	590.72	351.7	F	2159	3239

### Main Results for each time segment

#### 07:15 - 07:30

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 - Pyewipe Road	714	178	1753	1076	0.663	705	599	0.0	2.1	10.700	B
2 - Birchin Way	178	44	2259	485	0.366	175	199	0.0	0.7	14.291	B
3 - A180 (W)	1496	374	533	2312	0.647	1487	1901	0.0	2.2	5.217	A
4 - Moody Lane	199	50	1684	691	0.288	196	336	0.0	0.6	11.135	B
5 - A180 (E)	1771	443	597	2232	0.794	1755	1283	0.0	4.1	8.178	A

**07:30 - 07:45**

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 - Pyewipe Road	852	213	2036	911	0.935	823	710	2.1	9.6	37.384	E
2 - Birchin Way	212	53	2625	358	0.593	208	234	0.7	1.7	29.181	D
3 - A180 (W)	1786	447	622	2223	0.804	1776	2211	2.2	4.7	9.524	A
4 - Moody Lane	237	59	2007	535	0.444	235	392	0.6	1.2	18.322	C
5 - A180 (E)	2115	529	713	2112	1.002	2033	1529	4.1	24.6	34.544	D

**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 - Pyewipe Road	1044	261	2012	925	1.129	914	807	9.6	42.1	116.356	F
2 - Birchin Way	260	65	2673	341	0.762	253	253	1.7	3.3	47.683	E
3 - A180 (W)	2188	547	671	2174	1.006	2097	2256	4.7	27.4	36.969	E
4 - Moody Lane	291	73	2360	364	0.799	277	407	1.2	4.6	56.929	F
5 - A180 (E)	2591	648	843	1978	1.310	1976	1794	24.6	178.3	191.449	F

**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 - Pyewipe Road	1044	261	2002	931	1.122	928	818	42.1	71.1	232.163	F
2 - Birchin Way	260	65	2675	340	0.764	259	255	3.3	3.6	53.199	F
3 - A180 (W)	2188	547	677	2168	1.009	2134	2257	27.4	40.8	65.408	F
4 - Moody Lane	291	73	2403	343	0.847	284	409	4.6	6.2	83.042	F
5 - A180 (E)	2591	648	860	1961	1.321	1960	1827	178.3	335.9	468.768	F

**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 - Pyewipe Road	852	213	2067	893	0.954	879	756	71.1	64.3	280.737	F
2 - Birchin Way	212	53	2700	331	0.640	217	246	3.6	2.4	40.492	E
3 - A180 (W)	1786	447	648	2197	0.813	1927	2269	40.8	5.7	23.180	C
4 - Moody Lane	237	59	2169	456	0.520	255	406	6.2	1.8	29.585	D
5 - A180 (E)	2115	529	771	2052	1.031	2052	1653	335.9	351.7	590.723	F

**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 - Pyewipe Road	714	178	2178	829	0.861	814	643	64.3	39.2	231.497	F
2 - Birchin Way	178	44	2763	310	0.574	180	229	2.4	1.8	35.223	E
3 - A180 (W)	1496	374	625	2220	0.674	1509	2319	5.7	2.5	6.211	A
4 - Moody Lane	199	50	1730	668	0.297	203	403	1.8	0.7	12.000	B
5 - A180 (E)	1771	443	608	2220	0.798	2213	1325	351.7	241.5	483.121	F

# 2032 Do Something, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Westgate Roundabout	Large Roundabout	1,2,3,4,5	300.98	F

### 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 - Pyewipe Road	1683	35.00
2 - Birchin Way	2383	25.00
3 - A180 (W)	640	30.00
4 - Moody Lane	3404	15.00
5 - A180 (E)	969	70.00

### 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
D12	2032 Do Something	PM	ONE HOUR	16:15	17:45	15	✓

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 - Pyewipe Road		ONE HOUR	✓	888	100.000
2 - Birchin Way		ONE HOUR	✓	308	100.000
3 - A180 (W)		ONE HOUR	✓	2660	100.000
4 - Moody Lane		ONE HOUR	✓	350	100.000
5 - A180 (E)		ONE HOUR	✓	1746	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	98	482	38	270
	2 - Birchin Way	95	0	119	5	89
	3 - A180 (W)	562	67	1	27	2003
	4 - Moody Lane	87	7	61	0	195
	5 - A180 (E)	353	81	1228	79	5

## Vehicle Mix

### Heavy Vehicle Percentages

		To				
		1 - Pyewipe Road	2 - Birchin Way	3 - A180 (W)	4 - Moody Lane	5 - A180 (E)
From	1 - Pyewipe Road	0	3	6	0	6
	2 - Birchin Way	0	0	12	58	6
	3 - A180 (W)	5	16	0	90	5
	4 - Moody Lane	3	0	41	0	7
	5 - A180 (E)	5	17	11	3	0

## 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 - Pyewipe Road	0.93	39.83	10.2	E	815	1222
2 - Birchin Way	1.06	164.21	16.3	F	283	424
3 - A180 (W)	1.31	598.51	399.1	F	2441	3661
4 - Moody Lane	1.04	175.51	18.4	F	321	482
5 - A180 (E)	0.95	29.81	14.9	D	1602	2403

### Main Results for each time segment

#### 16:15 - 16:30

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 - Pyewipe Road	669	167	1144	1439	0.465	665	819	0.0	0.9	4.882	A
2 - Birchin Way	232	58	1620	689	0.337	230	189	0.0	0.5	8.336	A
3 - A180 (W)	2003	501	435	2431	0.824	1984	1415	0.0	4.7	8.192	A
4 - Moody Lane	263	66	2307	507	0.519	259	111	0.0	1.2	15.725	C
5 - A180 (E)	1314	329	655	2163	0.608	1308	1910	0.0	1.7	4.575	A

**16:30 - 16:45**

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 - Pyewipe Road	798	200	1364	1272	0.628	795	958	0.9	1.7	7.898	A
2 - Birchin Way	277	69	1935	533	0.520	275	224	0.5	1.1	14.757	B
3 - A180 (W)	2391	598	519	2344	1.020	2283	1690	4.7	31.9	37.500	E
4 - Moody Lane	315	79	2670	384	0.819	304	132	1.2	3.9	44.414	E
5 - A180 (E)	1570	392	760	2058	0.763	1563	2213	1.7	3.4	7.855	A

**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 - Pyewipe Road	978	244	1630	1071	0.913	953	1038	1.7	8.0	27.719	D
2 - Birchin Way	339	85	2326	339	1.000	307	256	1.1	9.1	84.245	F
3 - A180 (W)	2929	732	610	2251	1.301	2249	2024	31.9	201.7	192.323	F
4 - Moody Lane	385	96	2705	372	1.035	351	154	3.9	12.6	108.616	F
5 - A180 (E)	1922	481	783	2035	0.945	1885	2273	3.4	12.7	22.270	C

**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 - Pyewipe Road	978	244	1654	1052	0.929	969	1046	8.0	10.2	39.830	E
2 - Birchin Way	339	85	2364	320	1.058	310	259	9.1	16.3	164.212	F
3 - A180 (W)	2929	732	619	2242	1.307	2241	2056	201.7	373.5	461.990	F
4 - Moody Lane	385	96	2704	373	1.034	362	156	12.6	18.4	175.507	F
5 - A180 (E)	1922	481	787	2031	0.947	1913	2279	12.7	14.9	29.811	D

**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 - Pyewipe Road	798	200	1413	1235	0.646	831	1000	10.2	2.0	10.127	B
2 - Birchin Way	277	69	2013	494	0.560	336	231	16.3	1.4	33.399	D
3 - A180 (W)	2391	598	572	2289	1.045	2289	1777	373.5	399.1	598.508	F
4 - Moody Lane	315	79	2724	366	0.860	348	137	18.4	10.1	159.939	F
5 - A180 (E)	1570	392	800	2018	0.778	1613	2272	14.9	4.0	10.729	B

**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 - Pyewipe Road	669	167	1173	1417	0.472	673	923	2.0	1.0	5.128	A
2 - Birchin Way	232	58	1644	677	0.342	235	202	1.4	0.6	8.768	A
3 - A180 (W)	2003	501	441	2424	0.826	2418	1438	399.1	295.2	517.251	F
4 - Moody Lane	263	66	2742	360	0.733	290	117	10.1	3.5	66.824	F
5 - A180 (E)	1314	329	774	2044	0.643	1323	2259	4.0	2.0	5.528	A



## Appendix 7B

### Framework Travel Plan

ENGIE

## Stallingborough Employment Site

### Framework Travel Plan

ARUP-TR-02

Issue 1 | 22 December 2017

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 248164

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**ARUP**

# Document Verification

<b>Job title</b>		Stallingborough Employment Site		<b>Job number</b>	
				248164	
<b>Document title</b>		Framework Travel Plan		<b>File reference</b>	
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<b>Document ref</b>		ARUP-TR-02			
<b>Revision</b>	<b>Date</b>	<b>Filename</b>	2017-12-22 Framework Travel Plan		
Issue 1	22 Dec 2017	<b>Description</b>	First Issue		
			Prepared by	Checked by	Approved by
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		Name			
		Signature			
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		Name			
		Signature			
<b>Issue Document Verification with Document</b>					
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# 1 Introduction

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Ove Arup and Partners Ltd (Arup) has been appointed by ENGIE to prepare a Framework Travel Plan to accompany a planning application for a proposed mixed-use development at Stallingborough in North East Lincolnshire.

In 2016, Fairhurst prepared a Transport Assessment (document ref.: D/I/D/114577/601 – “Fairhurst TA”) to support a planning application for the site. A Framework Travel Plan incorporated in the Fairhurst TA set out the opportunities and measures for encouraging mode transfer to non-car modes. This standalone document has been produced to incorporate the development changes and to be a reference document to develop further. The Travel Plan section of the Fairhurst TA has been used to inform this standalone Framework TP in support of the development.

Since the production of the Fairhurst TA, the proposed quantum of development at the site has changed, and a TA addendum (document ref.: ARUP-TR-01) has been prepared by Arup to incorporate these changes.

## 1.1 Importance of Travel Plans

Travel Plans are aimed at delivering sustainable transport objectives and providing a range of benefits to the community as a whole including:

- reducing congestion and peak time conflicts;
- reducing energy use and harmful transport emissions;
- facilitating improved public transport through economies of scale and transport efficiency; and
- improving accessibility.

Benefits to developments and their users include:

- releasing additional site capacity or capital by reducing requirements for car parking spaces and site maintenance costs;
- reducing business operating costs by introducing more efficient and sustainable transport options such as business bike mileage;
- assisting staff recruitment and retention by encouraging improved accessibility and a wider range of travel choice;
- enhancing the image of an organisation and supporting health workforce policies by offering healthier sustainable travel choices and;
- supporting Corporate Social Responsibility and Environmental Management Systems.

## 2 Development Proposals

### 2.1 Site Location

The site lies approximately 1.5km north of Stallingborough. It is located on the north-eastern quadrant of the A180/A1173 junction and fronts both the A1173 and A180. The site location is shown on Figure 1.

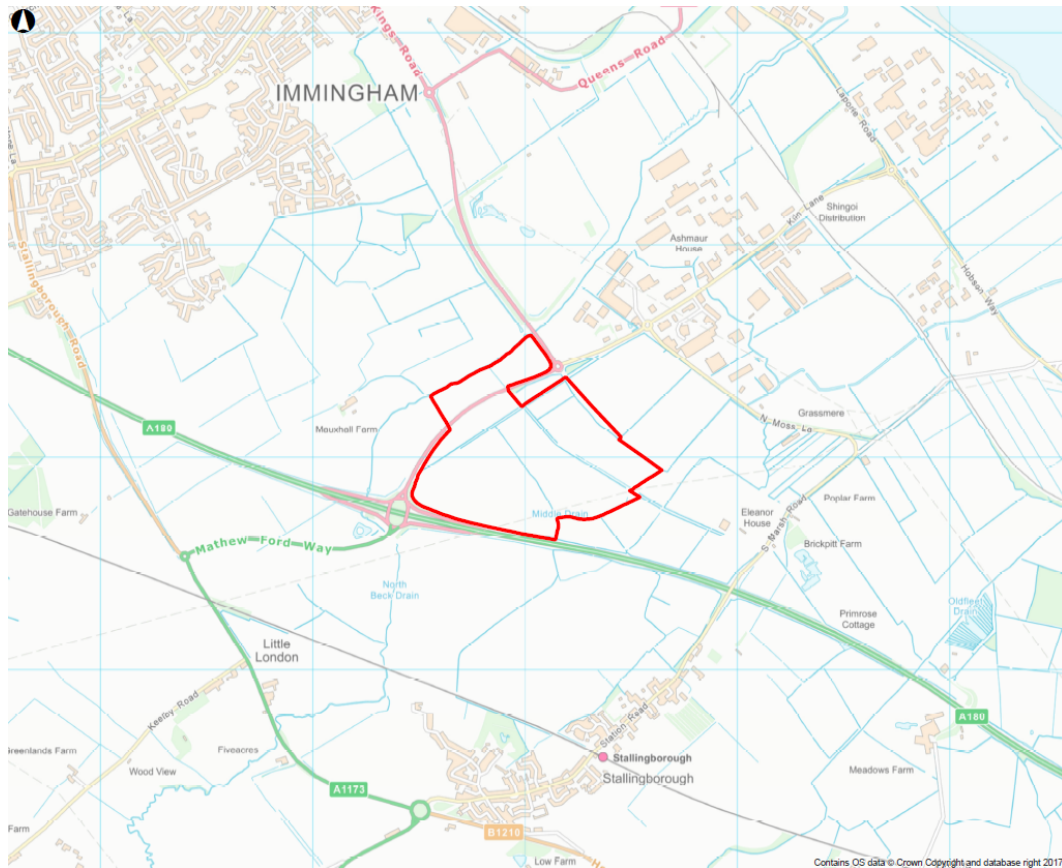


Figure 1: Site Location Plan

### 2.2 Proposed Development

The proposal is to redevelop the existing agricultural fields to deliver a mixed-use scheme comprising business use, general industry, and storage and distribution. The proposed uses and quantum of development are summarised in Table 2.1.

Table 2.1: Proposed Development Mix

Proposed Use	Quantum
Business – B1(b) and B1(c)	1,737 sq m
General Industry – B2	21,455 sq m
Storage and Distribution – B8	96,984 sq m

The proposed development is being delivered in phases over the next 15 years (anticipated completion of final phase in 2032). Table 2.2 summarises the

quantum of development being delivered for each phase and the anticipated construction/delivery timescales.

**Table 2.2: Anticipated Delivery Timescales (Phasing)**

Phase	Uses	Anticipated Delivery Timescales
Phase 1A	B1 – 1,737 sq m (1 unit) B2 – 9,195 sq m (3 units) B8 – 15,421 sq m (2 units)	2018 - 2022
Phase 1B	B2 – 6,130 sq m (2 units) B8 – 36,973 sq m (4 units)	2020 - 2024
Phase 2	B2 – 6,130 sq m (2 units) B8 – 44,590 sq m (6 units)	2023 - 2032

## 2.3 Proposed Site Access

Vehicular access to all phases of the development will be from the A1173 via the following junctions:

- A new four-arm roundabout on the A1173 between the A180 Stallingborough Interchange and the A1173 / Kiln Lane roundabout. The northern arm of the roundabout will provide access to part of Phase 1A, while the southern arm will provide access to the remainder of Phase 1A, the entirety of Phase 1B and part of Phase 3.
- An improved approach to the southern arm of the existing A1173 / Kiln Lane roundabout will provide access to the remainder of Phase 3.

## 2.4 Car Parking

Car parking will be provided in accordance with NELC parking standards and will comply with Policy 37 of the NELC Local Plan, which states:

*“Where private and/or public on-site parking for public use is to be provided at least 5% of parking bays, should be designed, set out and reserved for people with mobility impairments. Such parking bays should be located as close to the main access to the building as possible.”*

The policy also states:

*“Where 100 or more parking places are to be provided to serve a commercial development, a minimum of three charging points should be provided for electric vehicles”.*

## 3 Site Assessment and Transport Audit

This site assessment provides a “point in time” overview of the transport links serving the site. This information is to be reviewed periodically and updated, if necessary, to take account of any changes to public transport routes / services and to identify any additional issues.

<b>Key Action:</b>	Review the site audit, updating as necessary
<b>To be completed by:</b>	Annually
<b>Responsibility of:</b>	Travel Plan Co-ordinator

### 3.1 Pedestrian Accessibility

An 800m threshold distance relates to the typical distance that people are prepared to walk before considering motorised modes of travel and a 2km threshold distance is that below which car trips could be replaced by walking trips.

Given the rural nature of the site, pedestrian infrastructure is limited. Pedestrian access to the site is currently via a public right of way that crosses the development site, however, this walking route does not provide any significant links to the surrounding area.

As part of the proposals, footways will be provided between the site’s internal network and the bus stop provided as part of the new site access junction arrangement. This includes crossing facilities at the new roundabout.

### 3.2 Cycle Accessibility

Cycling England’s “*Integrating Cycling into Development Proposals*” (2009) notes that “*Most cycle journeys for non-work purposes and those to rail stations are between 0.5 miles [0.8 km] and 2 miles [3.2 km], but many cyclists are willing to cycle much further. For work, a distance of 5 miles [8 km] should be assumed*”.

Based on these distances, the isochrone map below (Figure 2) demonstrates that the site is within a reasonable cycling distance of the residential areas of Stallingborough, Immingham and the south-western outskirts of Healing. There are no traffic-free cycle routes in the vicinity of the site, and so any cycling journeys to the site would be on-road.



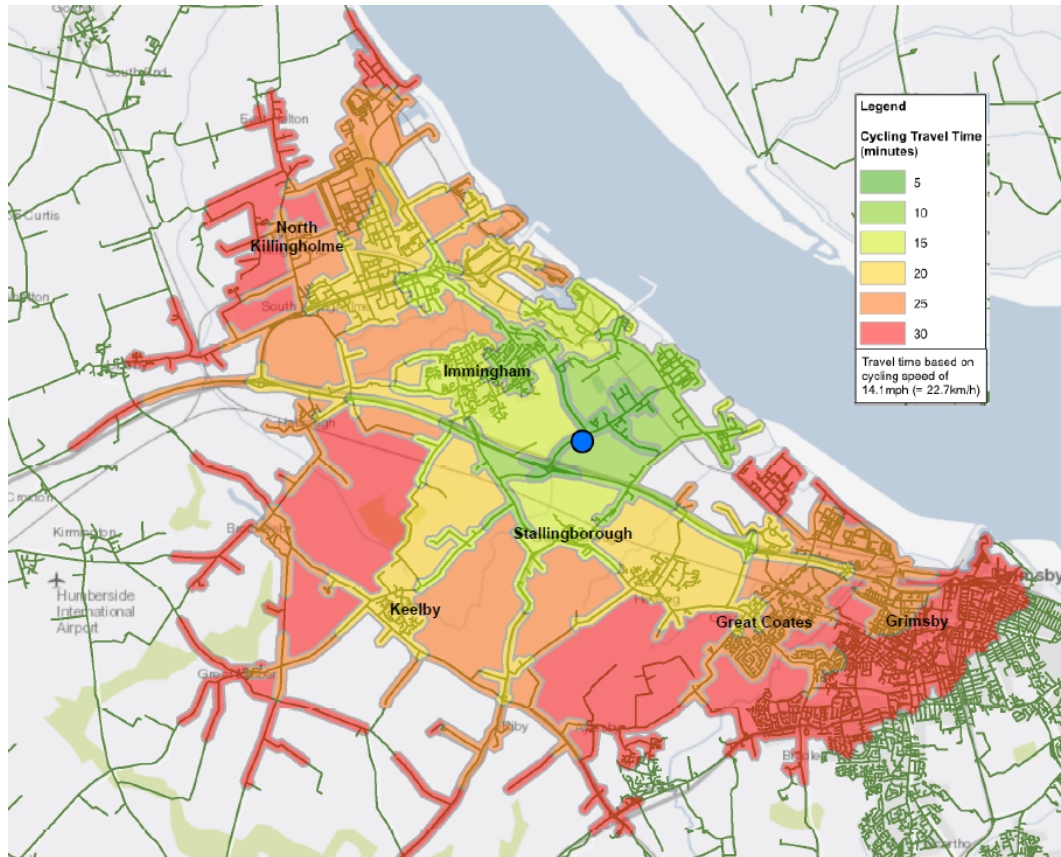


Figure 2: Cycle Journey Times

### 3.3 Public Transport

There is one bus service in the local area (Service 5M, operated by Stagecoach) which serves Stallingborough Industrial Park via Grimsby, Immingham and South Killingholme. The bus stop is located approximately 230m from the site access, although there are currently no footways linking the bus stop to the site. However, NELC submitted a successful funding bid to the Department of Transport in 2016 through the *Sustainable Travel, Transition Year Revenue Competition 16/17* that will see an extension to the existing route and improvements to the 5M service.

In addition to the above destinations, the 5M bus service calls at Grimsby Town railway station. Mainline services from this station serve local and regional destinations including Cleethorpes, Scunthorpe, Doncaster, Sheffield, Manchester Piccadilly and Manchester Airport.

Stallingborough railway station lies approximately 1.5km south of the site. In accordance with the guidance on cycle journeys detailed in the previous section, Stallingborough station is within a reasonable cycling distance of the site, and therefore presents the opportunity for multi-modal trips to the proposed development. The station lies on the Cleethorpes to Barton-on-Humber line and provides local services to Healing, Grimsby town, and Grimsby Port.

### 3.4 Local Highway Network

The site fronts the A1173, which is a generally wide single carriageway lined by grass verges and agricultural land. The road forms an at grade four-arm roundabout junction with Kiln Lane and the existing site access. Street lighting is provided in the vicinity of the roundabout.

At its western end, the A1173 forms a grade-separated roundabout with the A180. The A180 is part of Highway England's trunk road network and, in the vicinity of the site, is of a good standard (dual carriageway with two lanes in each direction). The A180 becomes the M180 motorway around 15km west of the site and continues west to connect to the wider strategic road network. To the east of the site, the A180 continues as a dual carriageway into Grimsby with at grade junctions within the urban area.

Recent highway improvements have improved access to the port, and simultaneously reduced HGV and vehicle movements through the centres of Immingham and Stallingborough:

- The A18 / A180 Link was opened in July 2016 and runs from a new roundabout on the B1210 to Stallingborough Interchange. This link enables vehicles, and particularly HGVs, travelling to the port from rural areas south of the A180 to bypass Immingham.
- The A160 Port of Immingham improvement includes dualling of the A160 southwest of South Killingholme and a range of other measures to improve access to port areas north of Immingham.

## 4 Travel Plan Objectives and Responsibilities

### 4.1 Framework Travel Plan Aims

The overall aims of the Travel Plan are:

- to minimise car usage to the development through the introduction of measures to encourage sustainable travel; and
- to promote the health and environmental benefits associated with travel by public transport, walking and cycling.

The Travel Plan is a dynamic and working document that will grow and develop with time and in accordance with the changing circumstances of the development.

### 4.2 Travel Plan Objectives

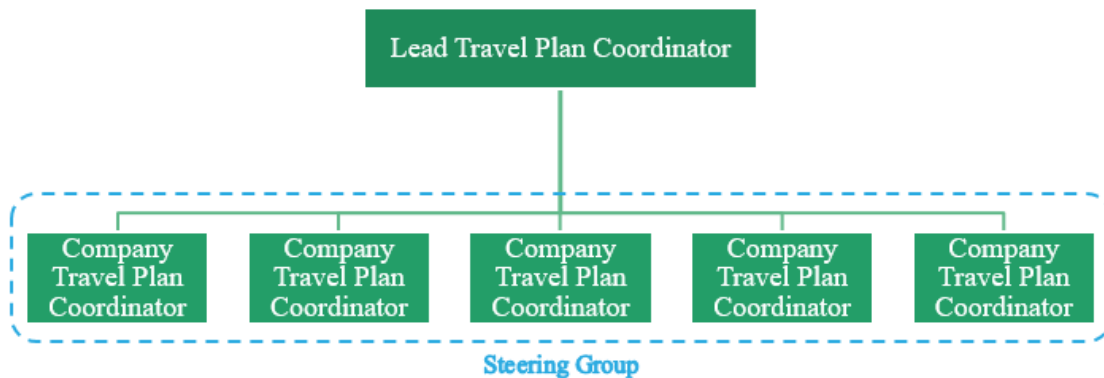
The overall objectives of the Travel Plan are as follows:

- reduce travel by private car, particularly single occupancy car journeys;
- encourage a reduction in car dependency;
- maximise accessibility for walking, cycling and public transport as important transport modes;
- increase staff awareness of the environmental and health implications of different travel choices;
- encourage sustainable travel choices among users of the site;
- minimise the impacts of the development upon the local community; and
- maximise transport choice through innovative measures.

### 4.3 Roles and Responsibilities

ENGIE (‘the Developer’) will sign up to the overarching Framework Travel Plan and will have overall responsibility for its implementation, including any start-up funding required to implement necessary measures.

Figure 3: Travel Plan Roles



### 4.3.1 Lead Travel Plan Coordinator

Prior to the site occupation, and also before the marketing of the development commences, a Lead Travel Plan Coordinator (LTPC) will be appointed and initially funded by ENGIE to act as the lead in Travel Plan related matters and to focus the efforts of all site occupiers. Following occupation of the site, the site management company will become the LTPC. The LTPC will effectively be responsible for overall delivery of the Travel Plan targets and agreeing appropriate mitigation measures where necessary. The LTPC will be in place for 5 years after the site is first occupied, or until the targets set out have been met and it is agreed by all parties that a Travel Plan Co-ordinator is no longer necessary.

The responsibilities of the Lead Travel Plan Co-ordinator would be as follows:

- implementation and day-to-day running of the Travel Plan, demonstrating full commitment and enthusiasm towards it;
- participate in the Framework Travel Plan Steering Group (See Section 4.4);
- undertake monitoring consistent with the agreed framework, and ensure that the results are communicated to NELC;
- communicating the Travel Plan across the site, including promotion of the benefits of travel planning, acting as a point of contact for staff based at the site requiring information, and updating the website as required;
- periodically reviewing the Travel Plan and updating the document as necessary;
- liaise with appropriate third parties in the area, including public transport operators, planning/highway authorities and other stakeholders, to encourage consistency;
- review of Company Action Plans for individual businesses on the site;
- providing a Travel Survey ‘template’ to Company Co-ordinators so all staff surveys are on the same basis; and
- liaise with employers in the wider area to explore opportunities for co-operation in achieving the aims of the Travel Plan.

<b>Key Action:</b>	Appoint a Travel Plan Co-ordinator
<b>To be completed by:</b>	6 months prior to first occupation
<b>Responsibility of:</b>	NELC

## 4.4 Travel Plan Steering Group

Following occupation of the site, the Developer will set up and manage the Travel Plan Steering Group, headed by the Lead Co-ordinator, which will take on responsibility for continued implementation, monitoring and review of the Travel Plan post-occupation. The NELC Travel Plan Officer will be part of the Steering Group to ensure all measures are considered and approved by the Council.

Additional members of the Steering Group will include representatives of the businesses on the site and other stakeholders that have an interest in the delivery of the Travel Plan, for example, local bus operators.

All companies that set up business on the site (the ‘Occupiers’) will sign up to the overarching Travel Plan. To ensure the Plan is effectively operated a staff member from each company will be appointed to the role of Company Travel Plan Coordinator (the ‘Company Co-ordinator’). The role of the Company Co-ordinator will be to oversee the development and implementation of a business specific Action Plan and monitor its progress, reporting annually to the Steering Group. The Company Action Plan will focus on the measures of the overarching document that are most likely to be successful for that company.

The Company Co-ordinators will be responsible for:

- liaison with the Lead Co-ordinator/ Steering Group;
- preparation of Company Action Plan and submission to the Lead Coordinator/ Steering Group;
- coordinating final Company Action Plans with the Steering Group;
- taking an active role in the Steering Group;
- implementation of the overarching Action Plan measures within each business, including initial travel surveys and supplying results to the Lead Co-ordinator;
- being the point of contact for travel information for staff and visitors in their company;
- providing information to visitors about travel to the development;
- monitoring progress of the Action Plan through repeat surveys and using the findings to develop new measures as necessary to encourage sustainable travel and set revised travel targets;
- producing an annual monitoring report and attending a review meeting with the Lead Co-ordinator.

The Steering Group will meet on an annual basis within one month of the completion of the travel surveys to be undertaken as part of the monitoring framework in relation to the following:

- to agree a monitoring framework for use in determining the extent to which the travel plan targets have been met;
- to discuss the results of the monitoring and the extent to which the existing travel plan measures have achieved the targets;
- to agree on the production of action plans, further mitigation measures and the timescales for implementation such that the travel plan targets are achieved, should monitoring identify that this is necessary; and
- agree targets in the future (once the initial targets have been met).

<b>Key Action:</b>	Establish Travel Plan Steering Group
<b>To be completed by:</b>	3 months prior to occupation of second occupier/tenant

<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)
<b>Key Action:</b>	Further meetings of Travel Plan Steering Group
<b>To be completed by:</b>	Annually
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

## 5 Travel Plan Measures

### 5.1 Introduction

This Framework Travel Plan is an overarching document for the entire development site and involves a wide range of potential measures at a number of levels, comprising:

- **Start-up measures**, which would be implemented by ENGIE ‘up-front’ to facilitate the development;
- **Wider measures** to be considered/ funded/ implemented by ENGIE or through developer contributions as the development progresses; and
- **Business-specific Action Plans**

Measures set out in this Framework are in outline at this stage, reflecting the early stages of the development proposals. Proposals will be refined as the scheme moves forward and opportunities are clarified. Business specific measures are wide ranging and include measures that could be more or less useful to individual companies, depending on how each business operates (e.g. bus ticket incentives may be of little value to night shift workers). Each occupier will therefore be required to prepare and implement a company Action Plan, based on the measures set out in this document, to support and best deliver the overall aim of this overarching Travel Plan.

The following sections set out a range of measures that are to be implemented to encourage use of sustainable modes of travel to and from the site. The site location and nature of the surrounding highway network are not particularly conducive to encouraging walking and cycling trips. It is therefore considered that the main focus of the Travel Plan should be to implement measures to encourage public transport and car sharing.

### 5.2 Start-up Measures

#### 5.2.1 Walking

As previously stated, the surrounding highway network is not conducive to encouraging walking trips to the site. However, to accommodate users who may wish to access the site on foot, the following measures are to be considered.

**Table 5.1: Travel Plan Measures – Walking**

Measure	Responsibility	Implementation
A map showing pedestrian routes serving the site, to be displayed on Travel Plan Information Boards and the Travel Plan website.	TPC	Ongoing
Advice on personal safety and preferred routes <i>The provision of information detailing well-lit preferred routes from local transport drop-</i>	TPC	On occupation and ongoing thereafter

<i>offs, and general personal safety advice may improve the confidence of lone walkers and encourage more staff to walk to work.</i>		
Provision of guaranteed rides home by taxi for staff in emergency situations.	Tenants/Employers	As required by staff
Provision of pedestrian crossing facilities on the A1173 to provide accessibility between the two development areas and new bus stop.	The Developer	Prior to occupation of Phase 1B

## 5.2.2 Cycling

As with walking, the surrounding highway network does not have specific facilities to accommodate cyclists. However, proficient cyclists may wish to cycle to the site and the following measures should therefore be considered for implementation.

**Table 5.2: Travel Plan Measures – Cycling**

Measure	Responsibility	Implementation
The provision of covered long- and short-stay cycle parking. Cycle parking will be integrated into the public realm. <i>Use of cycle parking will be monitored as part of the monitoring framework.</i>	The Developer	Prior to occupation
A map showing cycle routes serving the site and the locations of cycle parking facilities will be provided and displayed on the Information Board and intranet/website.	TPC	On occupation and ongoing thereafter
The provision of shower/changing facilities with drying facilities and secure lockers, available to all site staff. <i>This will encourage cycling throughout the year as staff could change before work, particularly when the weather conditions are adverse.</i>	Tenant/Investor in each of the individual plots	Prior to occupation
Participation in subsidised cycle purchase schemes for purchasing bikes and equipment <i>For example, the Halfords, “Cycle2Work” scheme, which provides employees with bicycles and cycling safety equipment at up to 42% less than the equivalent high street cost.</i>	TPC	Prior to occupation and ongoing thereafter
Establish Bicycle User Groups to provide a regular forum for discussion and feedback.	TPC	On occupation and ongoing thereafter
Discounts on cycling equipment could also be arranged, possibly agreed with a local retailer. <i>This could include discounts on bike purchase, on-site cycle repair service or free cycle accessories.</i>	TPC	Prior to occupation and ongoing thereafter
Provision of guaranteed rides home by taxi for staff in emergency situations.	Tenants/Employers	As required by staff



### 5.2.3 Public Transport

The use of public transport will be encouraged and the following measures considered for implementation.

**Table 5.3: Travel Plan Measures – Public Transport**

Measure	Responsibility	Implementation
<p>Consultation with NELC and local bus operators to monitor the final outcome of the successful <i>Sustainable Travel, Transition Year Revenue Competition 16/17</i> bid. If the final improvements do not directly serve the proposed development, further discussions may be required to explore how services to the site could be improved. Any improvements not covered by the funding application would likely be funded by the Developer.</p> <p><i>This could include the provision of bus stops adjacent to the site on the A1173.</i></p> <p><i>Improvements could be made to the 5M bus service, including amending the route to serve the proposed development, increasing the frequency, and extending the operational hours to dovetail with the first phase of development.</i></p>	The Developer / TPC	Prior to occupation of the site, then ongoing thereafter
<p>Provision of advance information to maximise awareness of travel options and encourage modal shift.</p> <p><i>Such information on site would detail public transport connections to the site and all services passing close to the site, identifying the 5M bus route and Stallingborough train station.</i></p>	TPC	Ongoing
<p>Subsidised bus travel for staff to encourage trial use of public transport.</p> <p><i>This could be permanent or an ‘introductory’ offer available through the Travel Plan.</i></p>	TPC	On occupation
<p>Additional incentives to encourage public transport use to be explored i.e. prize draws.</p>	TPC	On occupation and periodically thereafter
<p>The provision of season ticket loans.</p> <p><i>An interest free loan can help staff with the initial payment of an initially lump sum to buy annual travel, with repayments collected back monthly over the year.</i></p>	Tenants/Employers	Ongoing as appropriate
<p>Provision of guaranteed rides home by taxi for staff in emergency situations.</p>	Tenants/Employers	As appropriate
<p>Encourage use of public transport for business trips where appropriate.</p>	TPC	On occupation and ongoing thereafter
<p>Provision of pedestrian crossing facilities on the A1173 to promote access to a new bus stop.</p>	The Developer	Prior to occupation

## 5.2.4 Reducing Car Travel

A key objective of the Travel Plan is to minimise single occupancy car use and promote sustainable transport modes including, where appropriate, facilities for charging plug-in vehicles. Table 5.4 sets out the potential measures to be implemented.

**Table 5.4: Travel Plan Measures – Reducing Car Travel**

Measure	Responsibility	Implementation
Promotion of a car share scheme. <i>Consider implementation of priority parking for car sharers.</i>	TPC	On occupation and ongoing thereafter
Incentives to increase car sharing should be explored, potentially including the following: <ul style="list-style-type: none"> <li>Free car wash.</li> <li>Entry into a free prize draw (monitored to ensure staff do not subscribe and continue to park off site).</li> </ul>	TPC	On occupation and ongoing thereafter
Provision for electric vehicle charging points. <i>Electric vehicle charging points will be included as part of the development in line with NELC parking standards.</i>	The Developer	Prior to occupation
Personalised travel planning. <i>Staff at the site will be provided with personalised travel plan information by the TPC for their individual journeys to work to encourage the use of other modes rather than the private car.</i>	TPC	On occupation and ongoing thereafter
Investigate potential for flexible working practices, including varied start and finish times, teleconferencing and remote working, or compressed working weeks.	TPC	On occupation and ongoing thereafter
On-site services for employees. <i>The provision of on-site facilities can help to reduce lunchtime car use, i.e. food.</i>	TPC	As appropriate

It is considered that the above measures relating to walking, cycling, public transport and reducing car travel could all be implemented prior to or at the time of occupation of the development, and would be sufficient to make the development accessible by sustainable transport from the outset.

## 5.3 Wider Measures

Wider measures considered include a range of options, some of which could be in place in the early stages (eg. local facilities) and others that may require further consideration. Some of the measures could be long-term and delivered through a combination of public sector funding and/or Developer contributions as the development is built out.

Measures that minimise car trips by employees to/from the development during the day (e.g. for lunch breaks) should be considered. A potential measure to encourage employees to remain at the site throughout the working day is to provide local amenities and facilities on-site. Facilities could include:

- Shop / food outlet;
- Café;
- Cash point;
- Crèche / nursery; and
- Pharmacy.

An additional measure for consideration includes participation in any area-wide travel initiatives that may come forward in the lead up to the development opening, including the potential measures set out in the ‘Delivering Growth Through Sustainable Travel’ funding application (e.g. area-wide travel planning scheme).

## 5.4 Business Specific Action Plans

Each occupier of the proposed development will develop a business-specific Company Action Plan based on the measures set out above. Company Action Plans will be monitored, and progress will be reported annually to the Travel Plan Steering Group for review. The Company Action Plans will focus on the measures that are most likely to be successful for each individual company.

Occupiers will be encouraged to propose any additional measures or enhancements that could improve the success of the Travel Plan. Each occupier would fund, implement, market, and continually monitor and review their Company Action Plan. The level of funding required would suit the measures to be implemented and would also cover the basic costs of managing and marketing the Travel Plan, undertaking surveys etc. This would be in addition to staff time for the Company Co-ordinator to carry out Travel Plan duties.

## 6 Targets, Monitoring and Review

### 6.1 Targets

The objective of the Travel Plan is to minimise overall trips to the site by car, particularly single occupancy car journeys. The setting of sustainable travel targets will provide a benchmark against which the progress of the Travel Plan can be measured.

Final travel targets will be set by the Steering Group, in agreement with NELC, following the completion of the initial travel surveys upon occupation and a thorough review of the data obtained. It should be noted that some of the travel planning measures and initiatives would be in place prior to the first travel surveys being undertaken in order to promote sustainable travel from the day of opening. The initial travel targets will be reviewed following completion of the first formal travel survey post occupation.

Census 2011 data relating to ‘method of travel to work’ has been obtained for the North East Lincolnshire 001 and 007 Middle Layer Super Output Areas. These areas include the development site and a number of existing employment / industrial sites the data is therefore considered to be representative of the travel patterns that can be expected of a development in this location.

The modal split obtained from the travel to work data has been used as a baseline from which the travel plan targets have been derived. Indicative five-year mode share targets are presented in Table 6.1.

**Table 6.1: Indicative 5 Year Mode Share Targets**

Mode	Baseline Mode Share for North East Lincolnshire 001 /007	Five-Year Target Mode Share	Target Modal Shift
Car Driver	75%	65%	-10%
Car Passenger	7%	10%	+3%
Cyclist	3%	4%	+1%
Pedestrian	8%	8%	0
Bus	4%	9%	+5%
Rail	1%	2%	+1%
Other	2%	2%	0

A reduction of 10% of car drivers has been set as an initial target. It is anticipated that the most significant modal shift will be towards public transport, particularly bus, as these are the most viable modes for travel to the proposed development.

Following achievement of the initial vehicle trip generation targets, appropriate adjustments to the targets will be identified by the Travel Plan Co-ordinator and agreed by the Travel Plan Steering Group as part of the annual monitoring and review process.

## 6.2 Monitoring

### 6.2.1 Travel Plan Monitoring Framework

Monitoring of the Travel Plan will indicate how well it is performing at meeting the targets that are set throughout the life of the plan. Monitoring will also assist in refining Travel Plan measures and establishing new targets, as appropriate. As such, the Travel Plan becomes a continuous and on-going process of monitoring and review, rather than a one-off event.

To facilitate this, as part of the establishment of the Travel Plan Steering Group in the early stages of the development of the Travel Plan, a key action is the agreement of a Travel Plan Monitoring Framework, assigning persons responsible for tasks that need to be carried out as part of the monitoring exercise. The Travel Plan Monitoring Framework should be agreed during the first meeting of the Travel Plan Steering Group. The Travel Plan Steering Group would decide on production of action plans and mitigation, where necessary.

The Travel Plan Co-ordinator will be responsible for ensuring monitoring associated with the site is undertaken, and reporting the results to the Travel Plan Steering Group.

The Travel Plan Monitoring Framework for the development will include the following:

- travel surveys for staff and visitors;
- monitoring of parking provided for staff and visitors;
- visual surveys to assess the use of cycle parking and electric vehicle charging points;
- record comments made by management and employees on the Travel Plan; and
- record uptake of funded Travel Plan measures.

<b>Key Action:</b>	Produce Travel Plan Monitoring Framework, for agreement at the first meeting of the Travel Plan Steering Group.
<b>To be completed by:</b>	3-4 months prior to occupation
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

### 6.2.2 Travel Surveys and Counts

Within the first 3 months of occupation, each Company Co-ordinator shall arrange for a staff travel survey to be carried out to establish existing travel patterns and obtain the views of staff on existing barriers to sustainable travel and any measures that could be implemented to encourage sustainable travel. The survey data would be collected via self-completion questionnaires, which help to identify travel requirements and set targets for modal split. There are two levels of survey to be undertaken:

- **Detailed survey** – to be undertaken as an initial survey (within 3 months of occupation) and repeated every 2 years.
- **Snapshot survey** – a shorter survey, which may be used to assess the progress of the Plan in the years between full surveys, or to test the effect of any new travel measures that are introduced.

The Lead Co-ordinator will assess the effects of the various initiatives annually, based on the travel survey results from each business, as supplied by each Company Co-ordinator. The purpose of this monitoring is to:

- provide a running assessment of how staff travel to the site;
- assess performance against the aims and targets of the Travel Plan;
- demonstrate continued support at all levels; and
- guide implementation of revised targets or further travel initiatives if necessary.

<b>Key Action:</b>	Undertake detailed staff travel surveys
<b>To be completed by:</b>	Within 3 months of site occupation and biennially thereafter
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

<b>Key Action:</b>	Undertake snapshot surveys
<b>To be completed by:</b>	Annually
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

### 6.2.3 Visual Surveys of Cycle and Electric Vehicle Parking

To reflect possible variation in the level of cycle use through the year (for example, associated with seasonal weather conditions), the use of cycle parking by both staff and visitors to the site would be surveyed on a regular basis. This would enable average and maximum use of cycle parking to be identified through the year. Cycle parking on the site would be increased if the monitoring indicates there is sufficient demand. Appropriate locations and quantity of additional cycle parking would be agreed by the Steering Group, having regard to the monitoring results.

A similar exercise can be undertaken for electric vehicle charging points. If surveys indicate additional demand for charging points, these can be installed as required.

### 6.2.4 Annual Monitoring Report

An Annual Monitoring Report will be prepared by the Lead Travel Plan Co-ordinator with input from the Company Travel Plan Coordinators, and provided to NELC. The Annual Monitoring Report will present monitoring information, including staff travel survey results, and will compare this against the targets set out in the Travel Plan. If the Annual Monitoring Report indicates that the Travel

Plan targets are not being met, it would be the responsibility of the Travel Plan Co-ordinator to identify an Action Plan for the following 12 months. The Action Plan would contain a programme of measures and tasks such that the travel plan targets are achieved, alongside the person(s) responsible and timescale for delivery.

The Action Plan will be submitted with the Annual Monitoring Report for agreement by the Travel Plan Steering Group. Monitoring of the agreed measures would be undertaken as part of the monitoring framework for the following 12 months and agreed by the Travel Plan Steering Group.

<b>Key Action:</b>	Prepare and submit Annual Monitoring Report and Action Plan.
<b>To be completed by:</b>	Within one month of completion of monitoring and annually thereafter.
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

### 6.3 Travel Plan Review

The Travel Plan is intended to be a dynamic working document that will develop with time and in accordance with the changing circumstances of the development. As such, it will be regularly reviewed by the Travel Plan Coordinator(s) in liaison with the NELC.

## 7 Communication Strategy

### 7.1 Introduction

The effective communication of the Travel Plan will be essential to its success. Promotion and marketing of the measures including general information, progression, benefits and achievements require successful dissemination to staff and visitors. This section sets out a number of possible options for the communication of the plan.

### 7.2 Travel Information Pack

A comprehensive Travel Information Pack will be produced by the Lead Co-ordinator/ Steering Group, agreed with NELC, and distributed to all businesses on the site upon occupation. This is a key measure to encourage sustainable travel and would contain information about the development and the local area, a copy of the most recently published bus timetable, local walking and cycling routes, information regarding the car sharing scheme, and details of any travel initiatives offered to employees. The Travel Information Pack would also direct staff to websites or points of contacts for the following:

- **Public Transport** - Links to websites where staff could obtain the most up to date timetable information (e.g. [traveline.org.uk](http://traveline.org.uk), [nationalrail.co.uk](http://nationalrail.co.uk)).
- **Taxis** – Contact details for local taxi companies.
- **Cycling** – The UK’s national cycling organisation website ([www.ctc.org.uk](http://www.ctc.org.uk)), which contains information about cycle clubs and groups, cycle training and advice for safe cycling. This will enable those who currently do not cycle to develop the skills and confidence to do so.

The Travel Information Pack will be periodically reviewed and updated by the Lead Co-ordinator/ Steering Group.

<b>Key Action:</b>	Produce a Travel Information Pack
<b>To be completed by:</b>	Within 3 months of occupation of the site, and reviewed periodically thereafter.
<b>Responsibility of:</b>	Travel Plan Co-ordinator / Steering Group

### 7.3 Travel Plan Information Boards

Information boards at appropriate locations within buildings should be considered to provide up-to-date information about the Travel Plan for both staff and visitors. The boards will include the following:

- Information about the Travel Plan and its aims and objectives;
- Public transport links, including bus timetables, service destinations, and details of safe pedestrian routes, bus stops and services, and Stallingborough train station and services;
- Telephone numbers of local taxi firms;



- Contact details of the Travel Plan Co-ordinator;
- Details of local cycle shops, especially if these offer discounts to organisations implementing Travel Plans;
- Information about any Travel Plan measures or initiatives;
- Details about any Travel Plan meetings, workshops and events and information from previous events; and
- A message board where staff can place notices (e.g. for possible car sharing opportunities or cycle equipment for sale etc.).

<b>Key Action:</b>	Provide Travel Plan Information Boards
<b>To be completed by:</b>	On site occupation
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

## 7.4 Travel Plan Website

A travel webpage will be developed for the site, which will provide travel information and a copy of the Travel Plan. The website will be made available to external users so that visitors to all businesses on site can access relevant and up-to-date sustainable travel information at all times. It will specifically emphasise how the development can be accessed by public transport, as well as walking and cycling. Directions and information for visitors travelling by car (for example, identifying the number of parking spaces) would be given least prominence.

The website will reflect the information provided on the Travel Plan Information Boards plus links to travel planning websites. There will also be options for users to share their travel experiences and comments to improve the current Travel Plan.

<b>Key Action:</b>	Establish a Travel Plan website.
<b>To be completed by:</b>	3-6 months prior to site occupation.
<b>Responsibility of:</b>	Travel Plan Co-ordinator(s)

## 8 Implementation

Table 8.1 summarises the key actions identified in this document that will enable the successful implementation of the Travel Plan.

**Table 8.1: Key Actions for the Development of the Travel Plan**

Key Action	Timescales	Responsibility
<b>Key Actions Prior to Occupation</b>		
Appoint a Travel Plan Co-ordinator	6 months prior to occupation	NELC / The Developer
Produce Travel Plan Monitoring Framework, for agreement at the first meeting of the Travel Plan Steering Group.	3-4 months prior to occupation	TPC
Establish a Travel Plan Website	3-6 months prior to site occupation	TPC
<b>Key Actions Up to One Year Post-Occupation</b>		
Establish the Travel Plan Steering Group	3 months prior to occupation of second occupier/tenant	TPC
Undertake initial staff travel survey	Within 3 months of site occupation	All TPCs
Prepare and submit Annual Monitoring Report and Action Plan.	Within one of completion of monitoring and annually thereafter.	TPC / Steering Group
Produce a Travel Information Pack	Within 3 months of occupation of the site, and review periodically thereafter.	TPC / Steering Group
Produce Travel Plan Information Boards	On occupation	All TPCs
<b>Ongoing Key Actions</b>		
Further meetings of Travel Plan Steering Group	Annually	All TPCs / Steering Group
Undertake detailed staff travel surveys	Annually	All TPCs
Undertake snapshot surveys	As required	All TPCs
Review the site audit, updating as necessary	Annually	All TPCs