AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.1 Transport Assessment - Low Resolution Part 3

The Planning Act 2008

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

Document Ref: 6.3.22.1

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 22.1 Transport Assessment - Low Resolution Part 3

PINS REF.: EN020022

DOCUMENT: 6.3.22.1

DATE: 14 NOVEMBER 2019

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

Appendix 7 – Framework Construction Worker Travel Plan

AQUIND Limited

AQUIND INTERCONNECTOR

Construction Worker Travel Plan

The Planning Act 2008

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

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Document Ref: 6.3.22.2

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Construction Worker Travel Plan

PINS REF.: EN020022

DOCUMENT: 6.3.22.2

DATE: 14 NOVEMBER 2019

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Document	Construction Worker Travel Plan
Revision	001
Document Owner	WSP UK Limited
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Date	27 October 2019
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Date	30 October 2019

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TABLES

PLATES

1. INTRODUCTION

1.1. INTRODUCTION

1.1.1..1.1 This Framework Construction Worker Travel Plan (CWTP) has been prepared by WSP on behalf of AQUIND Limited in support of Development Consent Order (DCO) to construct and operate an electricity interconnector between France and UK, known as AQUIND Interconnector.

1.1.1..1.2 The Framework CWTP relates to construction stage of the Onshore components of the Proposed Development and specifically the following:

- The Onshore Cable consisting of two HVDC Circuits between Landfall in Eastney and Lovedean Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure in Lovedean; and
- HVAC Cables, and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the National Grid, at Lovedean Substation.

1.1.1..1.3 The Framework CWTP applies to the construction workforce for each of the Onshore components of the Proposed Development, nothing that the Converter Station will form the main compound for all construction works. This means that all construction workers will start and end their working day at the Converter Station.

1.1.1..1.4 The Framework CWTP details the tasks involved in developing initiatives for the Travel Plan, including management and co-ordination, which are set in the context of clear objectives to increase use of sustainable travel options and reduce single-occupancy car trips to and from the Proposed Development.

1.2. BENEFITS OF A WORKPLACE TRAVEL PLAN

1.2.1..1.1 This CWTP is a requirement of the planning application process, to support the aims of sustainable development and to help mitigate the transport demands and potential traffic impacts of the construction of the converter station.

1.2.1..1.2 Travel Plans establish a number of key benefits that extend to employees and the broader local area. These key benefits include:

- Improved quality of life for employees - through adopting healthier lifestyles e.g. replacing short car journeys with walking and cycling;
- Improved local air quality- through reduced traffic congestion in the local community, as a result of the use of alternative modes of the private car for many local journeys;

- Less vehicle congestion on local roads - as a result of fewer cars attempting to depart and access the construction site; and
- Cost savings for car sharers -by sharing journeys with colleagues, employees can benefit from sharing the financial and time cost of making these journeys.

1.2.1..1.3 By identifying an appropriate package of measures and ensuring a consistent approach and ensuring a consistent approach to delivering a WTP, a number of stakeholders will experience the benefits.

1.3. TRAVEL PLAN DOCUMENT STRUCTURE

1.3.1..1.1 This Travel Plan is set out in a further seven chapters:

- **Chapter 2** outlines the site access opportunities including current walking, cycling and public transport links, and the development proposals;
- **Chapter 3** sets out the Travel Plan vision and objectives;
- **Chapter 4** sets out the Travel Plan management strategy;
- **Chapter 5** outlines the Travel Plan measures;
- **Chapter 6** details the Travel Plan implementation action plan;
- **Chapter 7** presents targets and monitoring; and
- **Chapter 8** concludes the Travel Plan.

2. DEVELOPMENT PROPOSALS AND ACCESSIBILITY

2.1. INTRODUCTION

2.1.1..1.1 This chapter outlines the development proposals and reviews the existing transport conditions near the proposed construction site. Details of the existing walking and cycling networks, and public transport services are presented, along with a brief description of the local highway network.

2.2. SITE LOCATION

2.2.1..1.1 The proposed site location for the construction of the Interconnector Electricity Converter is located within agricultural land on the edge of the village of Lovedean, Hampshire. Lovedean is located approximately 13.5km to the north of Portsmouth city centre.

Figure 2.1 – Site location

2.2.1..1.2 The Converter Station area spans a number of small fields divided by hedgerows.

2.2.1..1.3 Individual farm properties are situated to the north, west and south of the Converter Station Area, connected by rural lanes. The existing Lovedean substation, associated pylons and overhead lines are dominant elements in the landscape of the proposed location and immediate surrounding area. It is located approximately 180m – 200m from the South Downs National Park boundary at its closest point, to the north and west.

2.3. PROPOSED DEVELOPMENT

2.3.1..1.1 The Applicant is proposing to construct and operate an electricity interconnector between France and the UK known as AQUIND Interconnector ('the Project').

2.3.1..1.2 The Project comprises a new marine and onshore High Voltage Direct Current ('HVDC') power cable transmission link between Normandy in France and Eastney, Hampshire, converter stations in both England and France and infrastructure necessary to facilitate the import and export of electricity between the high voltage alternating current ("HVAC") electricity transmission networks both countries.

2.3.1..1.3 The Onshore Components of the Proposed Development comprise the Converter Station, the Onshore Cable Corridor and the Landfall.

2.3.1..1.4 The UK Converter Station is proposed to be located adjacent to the existing National Grid Electricity Transmission ('NGET') substation, north-west of the village of Lovedean within the administrative boundary of Winchester City Council ('WCC').

2.3.1..1.5 The proposed Onshore Cable Route will travel through the administrative boundaries of WCC, Havant Borough Council ('HBC') and PCC, reaching the proposed Landfall location at Eastney, a district in the south-east of Portsmouth.

2.3.1..1.6 The Converter Station will act as the main construction compound for all Onshore components during the construction stage, meaning all construction workers will start and end their day at this location. Car parking for 150-200 vehicles will be provided at the Converter Station during the construction period.

2.4. PROPOSED CONSTRUCTION ACCESS TO THE CONVERTER STATION SITE

2.4.1..1.1 The proposed access to the Converter Station for Construction and Operational Stages will be taken from Broadway Lane.

2.4.1..1.2 The proposed access junction will implement a gated highway link between Day Lane, east of the existing bend, and at Broadway Lane, south of the existing bend. This will provide a managed facility for vehicles entering the site during the construction period with vehicle movements across Broadway Lane able to be marshalled. This link also provides for abnormal load movements and would be retained as a permanent feature (unadopted) to allow future access with such vehicles should it be required. General verge / vegetation clearance will be required on all sides of Broadway Lane to ensure that adequate visibility splay requirements are met, with all required land falling within the proposed Order Limit.

2.4.1..1.3 Construction worker trips by car to and from the Converter Station will all be required to us the follow permitted route:

- A3(M) Junction 2 – B2149 Dell Piece West – A3 Portsmouth Road – Lovedean Lane – Day Lane – Broadway Lane.

2.4.1..1.4 These routes are described briefly in the following paragraphs.

A3(M)

2.4.1..1.5 The A3(M) is a dual carriageway subject to national speed limit which routes to the east of the study area, it merges with the A27 at Havant and continues onto Guildford and London. Converter Station traffic will exit the A3(M) at Junction 2 (Horndean).

B2149 DELL PIECE WEST

2.4.1..1.6 Dell Piece West is a section of road between A3 (M) Junction 2 and Lakesmere Road. The route is subject to national speed limit and has narrow footway provision on its northern carriageway. After passing the Morrisons roundabout the speed limit reduces to 40 mph and a wide shared use footway/cycleway is provided on the northern carriageway.

A3 PORTSMOUTH ROAD

2.4.1..1.7 A3 Portsmouth Road routes for approximately 2.6km from A3 London Road to the junction with B2149 Dell Piece West. The road is subject to a 30mph speed limit and has footway provision on both sides of the carriageway. Residential properties are located on both sides of the carriageway but are separated from traffic by wide footways / shared-use paths.

2.4.1..1.8 There are bus stops located on either side of the road however only 4 bus stops are located along the construction traffic section of the road. Two bus stops are located on either side of the road approximately 100m from the junction with B2149 Dell Piece West and two bus stops are located either side of the road outside the junction with Keydell Avenue.

LOVEDEAN LANE

2.4.1..1.9 Lovedean Lane routes from A3 (Cowplain) to Downhouse Road for approximately 4.3km, providing access mainly to residential properties. Footways are provided up until the route leaves Lovedean and Coldhill Lane. The speed limit along this route is 30mph until Lovedean Lane passes Day Lane, here the speed limit is extended to 60mph. No bus stops are located along this route.

DAY LANE

2.4.1..1.10 Day Lane is a rural lane with a length of approximately 630 metres and connects Lovedean Lane to Broadway Lane. The lane is subject to a 60mph speed limit and has no footway provision or bus stops.

2.5. PUBLIC TRANSPORT

BUS

2.5.1..1.1 The nearest bus stops that serves services that fir with the proposed working hours or 07:00 to 19:00 is on A3 Portsmouth Road (at the junction with Lovedean Lane), which is a 33-minute walk from the Converter Station. This serves the Number 8 service to Clanfield, Waterlooville, Cosham Portsmouth City Centre and Southsea. In addition, bus services can be accessed from Eagle Avenue in Wecock Farm approximately 2.6km from the site location. This stop is served by First Bus route Number 7 and Stagecoach bus route Number 8, although neither provide a suitable arrival times to be used at the start of the day. At a typical walking speed of 4.8km/h, the stop will comprise of a 30-minute journey by foot from the site, via Day Lane, Lovedean Lane and Day Lane.

2.5.1..1.2 A summary of all bus routes accessible from the Converter station are shown in Table 1 below.

Table 1 - Local Bus Services

Service No.	Route	Start / Finish Times	Nearest bus stop from Converter Station
7 / 7C	City Centre – Cosham – Waterlooville – Wecock Farm	Bus arrival time at start of day : 06:39 Bus departure times at end of day: 19:44	Eagle Avenue, 30-minute walk
8	Clarence Pier – City Centre – Cosham – Waterlooville - Clanfield	Bus arrival time at start of day : 05:56, 06:30 Bus departure times at end of day: 20:05	A3 Portsmouth Road, 33-minute walk
37	Havant – Waterlooville – Cowplain – Clanfield - Petersfield	Bus arrival time at start of day : 06:07 Bus departure times at end of day: 19:58	A3 Portsmouth Road, 33-minute walk
39	Havant – Purbrook – Waterlooville – Wecock Farm	Bus arrival time at start of day : 06:37 Bus departure times at end of day: 19:11	Eagle Avenue, 30-minute walk

RAIL

2.5.1..1.3 Bedhampton Railway station is located approximately 10.4km south-east from the construction site but has no direct bus route from the station to the site or a cycle route.

2.5.1..1.4 Havant Railway station is also located approximately 12.3km south-east from the construction site. This could be accessed using bus service 37, which starts and ends at Havant bus station which is a six minute walk from the railway station. A summary of destinations that can be reached from Havant railway station are shown in Table 2.

Table 2 - Destination available from Havant Railway Station

Destination	Frequency	Travel Time
Portsmouth	5-6 per hour	12-18 minutes
Southampton	3-4 per hour	41-59 minutes
Chichester	3-4 per hour	11-21 minutes
Brighton	3-4 per hour	60-81 minutes
Guildford	4 per hour	46-56 minutes
London Waterloo	4 per hour	85-120 minutes

2.6. CYCLE ACCESS

2.6.1..1.1 The closest Sustrans route in proximity to the site is National Cycle Network (NCN) Route 222, which is approximately 24km long and provides a connection between Portsmouth and Petersfield. The route is located approximately 2.8km to the south-east of the construction site on A3 Portsmouth Road, connecting into Petersfield in the north and Waterlooville and Portsmouth tot the south.

2.6.1..1.2 In addition to the NCN 222, other roads around the Converter Station are suitable for cycling, including Lovedean lane, Milton Road, Day Lane and Broadway Lane.

3. TRAVEL PLAN VISION AND OBJECTIVES

3.1. TRAVEL PLAN VISION

3.1.1..1.1 The overarching vision for the development and implementation of the CWTP is outlined below:

"The proposed construction of the Proposed Development will accommodate employees and visitor journeys through a variety of integrated and sustainable transport options, with people able to access travel information on demand to make informed travel choices."

3.1.1..1.2 This vision will assist in guiding the development, implementation and evolution of this CWTP helping to ensure visitor journeys can be undertaken through a variety of integrated and sustainable travel options and thereby minimising the volume of single-occupancy car trips to and from the site. As a result, this will reduce traffic impacts on the surrounding highway network, reduce traffic congestion, improve air quality and enhance the operational road safety of the surrounding highway network.

3.2. TRAVEL PLAN OBJECTIVES

3.2.1..1.1 In pursuit of the vison set out above, the CWTP will be guided by specific objectives as outlined below:

- To manage the volume of single-occupancy car travel and the impact on local roads and communities;
- To ensure the site is accessible by sustainable transport options; and
- To facilitate informed travel choices, by ensuring both employees and visitors have access to real-time on demands travel information.

3.2.1..1.2 These objectives will help define and shape the package of measures to be introduced, collectively helping to achieve the vision statement.

4. TRAVEL PLAN MANAGEMENT

4.1.1..1.1 A Travel Plan Co-ordinator (TPC) will be identified who is responsible for implementing and promoting the CWTP.

4.1.1..1.2 The role will initially mean planning for all agreed deliverables to be established, integrated and available for use by employees and visitors as intended. More generally the role of TPC will encompass:

- Maintaining day-to-day responsibility for delivering the plan, including the agreed programme of measures;
- Acting as the main point of contact for queries relating to visitor and employee travel and liaising with transport service providers as required;
- Monitoring the plan to determine progress against the objectives, and preparing a concise annual monitoring report summarising modal outcomes for employee and visitor travel; and
- Working in partnership with AQUIND and other local employers to explore area-wide travel planning opportunities

4.1.1..1.3 The TPC will be a part-time position and will be appointed by AQUIND prior to occupation of the construction site.

5. TRAVEL PLAN MEASURES

5.1. INTRODUCTION

5.1.1..1.1 This CWTP has been developed to provide a range of measures to facilitate and encourage sustainable travel at the development.

5.1.1..1.2 Promoting car sharing, public transport and cycling will play a vital role in achieving a desirable outcome. Whilst many employees and visitors are likely to access the site using their own private vehicles, there remains opportunities to support car sharing.

5.1.1..1.3 The section presents travel planning measures proposed for the site, in four specific areas, and concludes by summarising how each element directly support the CWTP objectives. The four areas are summarised in Figure 5-1, and presented in further detail throughout this section.

Figure 5-1- Travel planning approach

5.2. TRAVEL INFORMATION AND ADVICE

TRAVEL INFORMATION NOTICE BOARD

5.2.1.1.1 A travel information board will be created for the site that draws together multi-modal travel information into a single place for employees and visitors to view. The notice board will be placed in an area visible to employees, and will be regularly updated by the TPC. The notice board will include bus service and rail connections, car sharing opportunities and parking information.

5.2.1.1.2 This will represent a primary means of promoting sustainable travel options to all site users at an early stage. The notice board will also promote information relating to new travel initiatives that may be introduced, transport service improvements and timetable where appropriate.

PROMOTION EVENTS

5.2.1.1.3 The promotion of sustainable travel throughout the year will be undertaken through involvement in national activities such as 'Ride to Work Week' and car sharing awareness events. These events will be advertised on the travel information notice board to actively encourage uptake. The coordination of these events will be facilitated by the TPC.

5.3. MANAGING CAR BASED TRAVEL

CAR SHARING

5.3.1.1.1 Promoting and managing shared car journeys can be facilitated through advertising opportunities to partake in the car share scheme on the travel information board and promoted to staff by the TPC. A car-sharing mobile app could also be developed to assist within this initiative.

PROMTOTING ACTIVE TRAVEL

5.3.1.1.2 Information on local walking and cycling routes will be promoted to staff via the travel information notice board. Secure cycle parking facilities will also be provided at the Converter Station compound.

CYCLE TO WORK SCHEME

5.3.1.1.3 Cycle to work schemes are a popular initiative for employees to source a bicycle and cycling equipment as a tax-free benefit. Cyclescheme is one such provider in the UK. The scheme is based on a tax-efficient salary-sacrifice arrangement and allows employees to be loaned bikes and accessories through their employer, with costs typically over 12-18 months, before purchasing the bike for a small sum at the end of the hire period. The scheme allows employees to spend up to £1,000 on bikes and equipment, tax-free, potentially saving a significant proportion of the overall value. The TPC will notify employee of cycle to work schemes available to them.

5.4. PROMOTING PUBLIC TRANSPORT

5.4.1..1.1 Timetabling information for local bus and rail services will be included on the travel information notice board, and will be regularly updated by the TPC.

5.4.1..1.2 Given the distance from the nearest train station to the construction site, it is anticipated that rail will not be a chosen mode of travel. A potential mitigation measure that could be considered is the provision a shuttle bus from the Havant Railway station to the site to promote a genuine modal shift towards rail.

5.5. SUMMARY

5.5.1..1.1 This chapter has highlighted a variety of travel planning measures to be introduced at the proposed development to encourage the use of sustainable transport options by employees and visitors. Some measures focus on raising awareness and providing travel information and advice so individuals can make informed choices on how to access the site and not otherwise assume car-based travel is the only viable option.

5.5.1..1.2 Other measures are designed to then actively encourage individuals to use these modes, ensuring the CWTP remains proactive in achieving its stated objectives over time. This includes investing in supporting infrastructure and services and rewarding sustainable travel patterns.

5.5.1..1.3 The TPC will provide a focal point for overseeing delivery and responding to changing travel demands over time with either revised or additional measures where benefits become apparent, and where investment can be focussed to achieve the most benefit.

6. IMPLEMENTATION ACTION PLAN

6.1.1..1.1 The site management will ultimately be responsible for implementing the measures set out within this Travel Plan. The measures will be implemented by the appointed TPC, who will assume day-to-day responsibility.

Table. 6-1. Implementation Action Plans

Travel Plan Measures	Delivery Trigger / Time	Delivery Responsibility
Appointment of TPC	Prior to initial occupation	Site Management
Full Travel Survey Undertaken	6 months post occupation	TPC
Travel Information Notice Board	From occupation, and to be regularly up-dated through-out occupancy	TPC
Promotional events	One month after occupation, and at regular intervals through-out occupancy	TPC
Promotion of car sharing	From occupation, and at regular intervals through-out occupancy	TPC
Provision of timetabling information	From occupation, to be updated when appropriate	TPC
'Cycle2work' scheme	From Occupation	Employer

7. TARGETS AND MONITORING

7.1. TRAVEL PLAN TARGET

7.1.1..1.1 The measures presented by this CWTP will ensure both employees and visitors are made aware of different travel options to access the construction site, and that sustainable travel options are actively promoted. The success of the measures set out in this CWTP will be assessed through a series of specific, measurable, achievable, realistic and time-bound (SMART) targets.

7.1.1..1.2 When considering the targets set out for the proposed development, and the subsequent monitoring of these targets, it is important to note the temporary nature of the construction site. As the proposed construction of the convertor will only be short term, it is not feasible to implement the type of long-term targets that would be typically included in a workplace travel plan. Therefore, all included targets are intended for short-term implementation and monitoring.

7.1.1..1.3 Due to the nature of the specialist construction skills workers required for the project, it is determined that these workers will travel from further afield than typical construction workers. Therefore, it has been determined the use of Census Data relating to the method of travel to work will not be a representative example of workers modal share. To provide a robust and representative method of determining initial travel modal shares it is assumed that all workers will drive to the site with a private car occupancy rate of 1.0

7.1.1..1.4 Therefore, due to the limited public transport opportunities close to the site and the distance travelled by the workers, the most appropriate measures for reducing trip generation are promotion of car sharing and provision of a shuttle bus service to / from Havant railway station. As such, the following framework targets are considered appropriate for the Proposed Development:

- 5% of construction workers participating; and
- 5% of construction workers traveling to the site by train and shuttle bus.

7.1.1..1.5 These targets, can be adjusted dependent on the results from the Full Travel Survey undertaken 6 months post occupation of the construction site.

7.2. MONITORING

7.2.1..1.1 The CWTP target, and construction workers modal travel splits will be monitored by the TPC through the undertaking of travel surveys at 6 months, 1 year and 2 years into the construction stage. This will enable monitoring/ potential adjustments to be made to the CWTP to reduce single occupancy vehicle travel to/from the site.

8. CONCLUSION

8.1. SUMMARY

8.1.1..1.1 This Framework CWTP has been prepared by WSP on behalf of AQUIND Limited in support of DCO to construct and operate an electricity interconnector between France and UK, known as AQUIND Interconnector. The Framework CWTP relates to construction stage of the Onshore components of the Proposed Development and specifically the following:

- The Onshore Cable consisting of two HVDC Circuits between Landfall in Eastney and Lovedean Converter Station;
- A Converter Station and associated electrical and telecommunications infrastructure in Lovedean; and
- HVAC Cables, and associated infrastructure connecting the Converter Station to the Great Britain electrical transmission network, the National Grid, at Lovedean Substation.

8.1.1..1.2 The Framework CWTP applies to the construction workforce for each of the Onshore components of the Proposed Development, nothing that the Converter Station will form the main compound for all construction works. This means that all construction workers will start and end their working day at the Converter Station.

8.1.1..1.3 The CWTP will be an iterative document, managed and implemented by a Travel Plan Co-ordinator (TPC), to provide relevant information relating to initiatives and measures aimed to reduce single occupancy car trips generated by the construction site.

8.1.1..1.4 Due to the nature of the specialist construction skills workers required for the project, it is determined that these workers will travel from further afield than typical construction workers. Therefore, due to the limited public transport opportunities close to the site and the distance travelled by the workers, the most appropriate measures for reducing trip generation are promotion of car sharing and provision of a shuttle bus service to / from Havant railway station.

8.2. CONCLUSION

8.2.1..1.1 The CWTP has considered the sustainable transport initiatives and measures that can be implemented to promote a reduction in single occupancy car use to the proposed Converter Station during the construction stage. Having regard to the nature of the proposals, and the specialist workers required for construction, a target of a 5% shift towards car sharing and 5% shift towards train travel has been proposed for the site. The WTP will be actively managed and monitored by a TPC.

8.2.1..1.2 It is therefore concluded that the WTP provides a sustainable access strategy for the proposed development.

Appendix G – FRAMEWORK TRAFFIC MANAGEMENT STRATEGY

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Appendix 22.1A Framework Traffic Management Strategy

The Planning Act 2008

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

Document Ref: 6.3.22.1A

PINS Ref.: EN020022

AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Appendix X.X Appendix Name

PINS REF.: EN020022

DOCUMENT: 6.3.22.1A

DATE: 14 NOVEMBER 2019

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Revision	001
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Date	11 November 2019
Approved By	C. Williams
Date	13 November 2019

CONTENTS

TABLES

PLATES

APPENDICES

FRAMEWORK TRAFFIC MANAGEMENT STRATEGY

1.1. INTRODUCTION

1.1.1.1. This document provides details of the Framework Traffic Management Strategy ('FTMS') required in connection with the construction of the Onshore Cable which forms part of the Proposed Development, running from the proposed Converter Station in Lovedean, Hampshire to the Landfall at Eastney, Portsmouth. This FTMS sets out the overarching principles and methodology to be used during the construction of the Proposed Development and will be developed in further detail, as required by the Development Consent Order ('DCO'), by appointed contractors prior to commencement of each phase of the works.

1.1.1.2. The FTMS should be read in conjunction with Appendix 22.1 (Transport Assessment) ('TA') of the Environmental Statement ('ES') Volume 3 (document reference 6.3.22.1), which details the anticipated impact on all forms of traffic and travel as a consequence of the construction of the Proposed Development and which in turn has informed the traffic management requirements to mitigate those anticipated impacts. Further details on construction traffic can be found within Appendix 22.2 (Outline Construction Traffic Management Plan) ('CTMP') of the ES Volume 3 (document reference 6.3.22.2), which covers the construction of the Converter Station and Onshore Cable Route.

1.1.1.3. A key aspect of the FTMS is the proposed programme for constructing the Onshore Cable, which aims to mitigate the impacts of the works by taking account of key constraints and sensitive locations along the route. In relation to this, the FTMS provides an indicative programme for construction that considers environmental constraints, major events, school terms and interaction between adjacent or nearby locations to minimise the impact where possible.

2. OVERARCHING TRAFFIC MANAGEMENT PRINCIPLES

2.1. INTRODUCTION

2.1.1.1. The FTMS has been developed with the aim of minimising disruption to all road-users, including pedestrians, cyclists, public transport users and car drivers. This section sets out the principles that will be followed by contractors during the construction of the Onshore Cable. These principles will be included within the Technical Specification issued to contractors as part of the construction tender process, along with specific details of traffic management requirements at key sections of the Onshore Cable Corridor as described within this document.

2.2. DESCRIPTION OF UK ONSHORE CABLE CORRIDOR

2.2.1.1. The Onshore Components of the Proposed Development comprise the Converter Station, the Onshore Cable and the Landfall. Four High Voltage Direct Current ('HVDC') Cables (two circuits) are proposed to be installed in the Onshore Cable Corridor between the Converter Station and the Landfall. The Onshore Cables will be installed in two ducts per circuit, mostly in trenches or in certain specific locations via trenchless installation methods (e.g. Horizontal Directional Drilling ('HDD')). The proposed Onshore Cable passes through the urban areas of Waterlooville, Purbrook, Drayton and Portsmouth, with the Landfall located at Eastney.

2.2.1.2. A typical cross-section of the cable trench arrangement in the highway is shown in Plate 1 showing each pair of Direct Current ('DC') Cables in its own trench. Each excavated trench would be approximately 0.7 m in width but could increase to 1 m in order to facilitate the cables being installed deeper, when navigating existing utility services. In the majority of cases, parallel trenches will be excavated at separate times for each circuit.

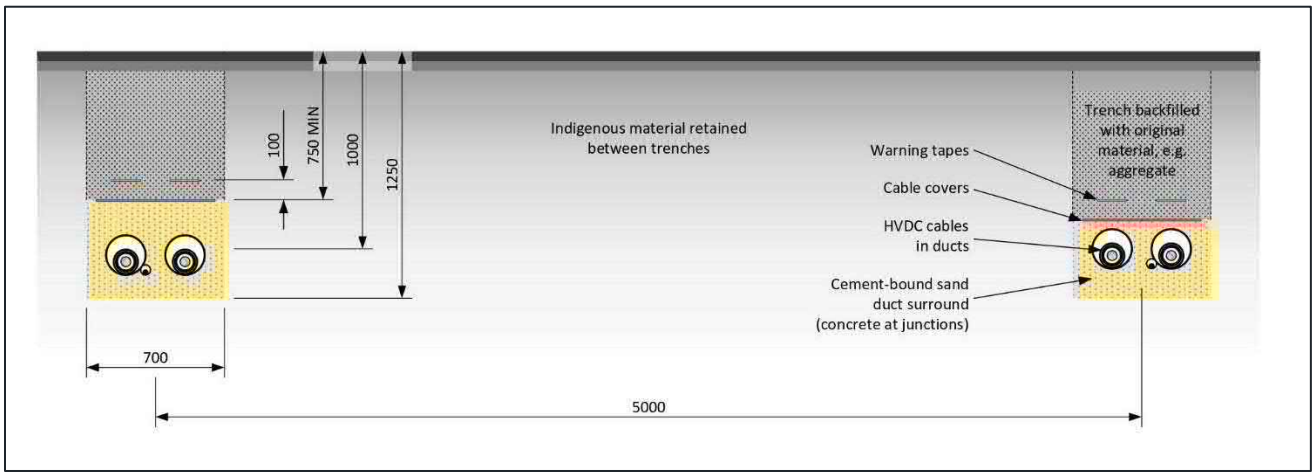


Plate 1 - Typical Arrangement of HVDC Cable in Road, Verges and Footpath

2.2.1.3. The Onshore Components of the Proposed Development have been split into 10 sections for ease of description as follows:

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

2.2.1.4. A plan showing these sections can be found in Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3). For the purposes of this study these Sections have also where appropriate been divided into shorter sub-sections as described in Section 2 to 10 of this report.

2.2.1.5. In some locations the Onshore Cable Corridor includes a number of route options. Where a number of options are present, these represent alternate routes which are still being considered due to constraints affecting the cable installation.

2.3. CONSTRUCTION METHODOLOGY OF ONSHORE CABLE ROUTE

2.3.1.1. During construction there will be a number of locations along the route at which construction work will be performed simultaneously, all of which will require traffic management measures when being completed in or immediately adjacent to roads. For the purposes of the FTMS, each location is referred to as a 'construction zone.' The stages of construction for the Onshore Cables are as follows:

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

2.3.1.2. A conservative estimate of the installation rate for cable ducts is approximately 18 m – 30 m per 10-hour day shift per circuit, on average, within urban areas and approximately 50 m per day in open country. These typical installation rates are per gang per shift and are dependent upon the level of obstacles and utility services encountered within the road or constraints that need to be observed to minimise impacts. At this stage however it is estimated that construction of the Onshore Cable within the public highway will progress at a rate of 100 m per week per circuit, which is at the lower end of the 18 m – 30 m installation rate per day. All part weeks (e.g. 2 days) have also been rounded-up to the next full week. Accordingly the assumptions regarding the rate of installation represent a robust and worst-case analysis of construction periods on each section.

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

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

2.3.1.5. There are up to six locations along the Onshore Cable Route where the ducts will be installed by trenchless installation methods. These locations will not require traffic management measures.

2.4. NEW ROADS AND STREETS WORKS ACTS 1991

2.4.1.1. All works in the highway to be carried out as part of the construction of the Proposed Development will observe requirements of the New Roads and Street Works Act ('NRSWA') (HM Government, 1991). The DCO replicates relevant sections of the NRSWA to provide powers to carry out the following within the Order Limits:

- Break up or open the street, or any sewer, drain or tunnel under it;
- Tunnel or bore under the street or carry out works to strengthen or repair the carriageway;
- Place or keep apparatus in, or under the street;
- Maintain, renew or alter apparatus in, or under the street or change its position;
- Execute and maintain any works to provide hard and soft landscaping;
- Carry out re-lining and placement of road markings;
- Removal and Installation of temporary and permanent signage;
- Removal, replace and relocate and street furniture; and
- Execute any works required for or incidental to any works related to the above tasks.

2.4.1.2. Prior to commencement of works in the highway, detailed designs for the works and the traffic management measures will be submitted for approval to the relevant Highway Authority.

2.5. TRAFFIC MANAGEMENT METHODOLOGY OF ONSHORE CABLE ROUTE

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

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

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

- It is anticipated that the cable duct installation will take place in 100 m sections, taking approximately five working days to complete each section including reinstatement of the highway;
- The Onshore Cable Route will include two circuits (as described in Section 2.2), with trench excavation and cable duct installation taking place at separate times for all parallel sections or circuit except where road closures are required;
- The construction corridor will generally be 4.0-6.0 m and 100-150 m long, although can be reduced by use of smaller plant to 2.0-3.0 m at local pinch points if required to avoid road closures; and
- Construction on footway will require 2.0 m on footway / verge and 3.0 m on carriageway to allow for construction vehicle access if no other parallel routes are available.

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

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

- Traffic management measures should provide for non-car modes, ensuring that safe and convenient routes are provided for pedestrians, cyclists and public transport users. Removal of such provision should only be considered as a last resort and where required must accompanied by suitable diversion routes.

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

2.5.2. TYPES OF TRAFFIC MANAGEMENT

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

Two-Way Shuttle Working with Temporary Traffic Signals

2.5.2.2. This type of traffic management will be employed along sections of the Onshore Cable Corridor that are single-carriageway two-lane (one in each direction) sections of highway and allows two-way traffic flow to be maintained past the construction zone. A diagram showing a typical layout of shuttle-working traffic signals is shown in Plate 2, which will follow standard Chapter 8 of the Traffic Signs Manual (DfT, 2009).

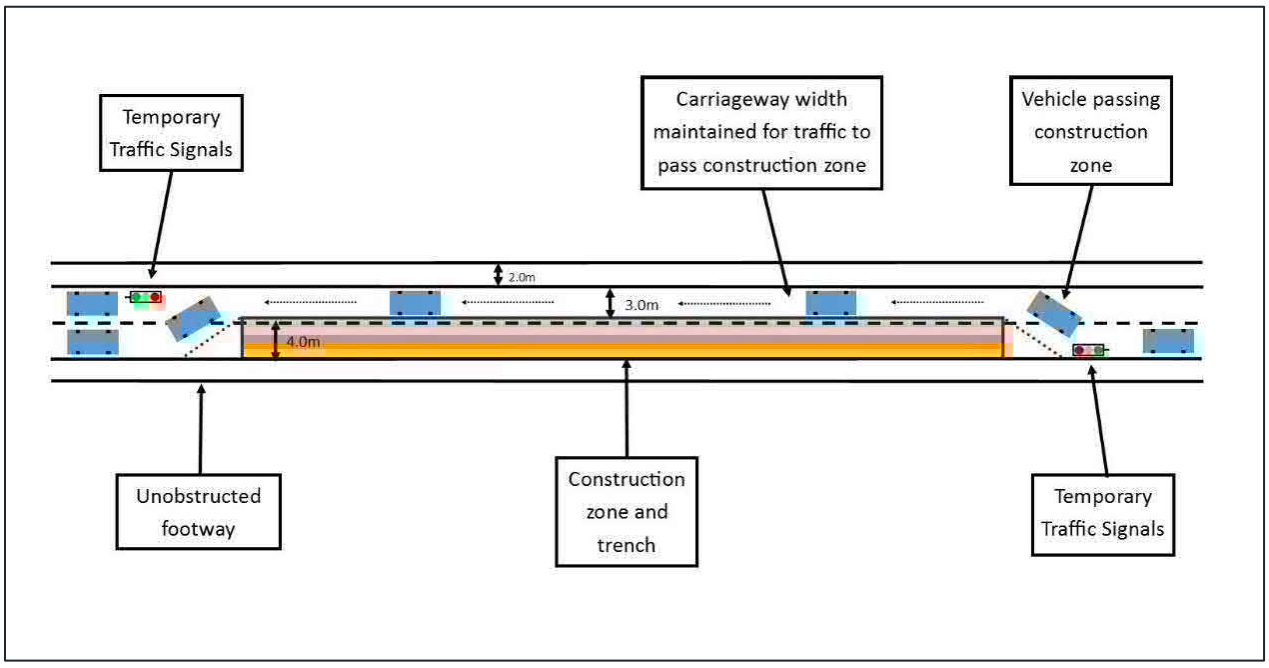


Plate 2 - Shuttle Working with Temporary Traffic Signals

2.5.2.3. Where two-way shuttle-working is installed the minimum lane width past the construction zone will be 3.0m on routes used by buses / Heavy Goods Vehicles

('HGVs') and ideally 3.25-3.7 m. Where a route is used only by cars and Light Goods Vehicles ('LGVs') the lane width may be reduced to 2.5 m. This follows guidance contained within Chapter 8 of the Traffic Signs Manual (DfT, 2009) and reflects the different road types that form part of the Onshore Cable Corridor. This means that the lane widths used will be defined by existing land-uses on any given street (e.g. residential or commercial) and access arrangements.

2.5.2.4. All shuttle-working traffic signals will run in Vehicle Actuated ('VA') mode during the off-peak period but be manually controlled during peak periods. With VA mode, detectors are used to monitor traffic flows and use this information to adjust the length of green-time to reduce delays. Manual operation during peak hours will allow traffic flow and queue lengths to be monitored, therefore giving the ability to mitigate blocking back of queues to adjacent or sensitive junctions.

Lane Closures without Shuttle Working Traffic Signals

2.5.2.5. On wider single carriageway roads and dual carriageways, it may be possible for lane closure to be implemented without the need for traffic signal control. At these locations either the carriageway will be wide enough to accommodate two-way traffic and the construction zone through lane realignment, or a single lane closure will be required where there are two or more lanes in each direction

2.5.2.6. Plate 3 shows a diagram of single lane closure on a dual carriageway link, with the same setup also appropriate for single carriageway roads where there is more than one lane in each direction. An example of this is A3 London Road, where the majority of its length has two-general traffic lanes and at least one bus lane. This will follow the requirements of Chapter 8 of the Traffic Signs Manual (DfT, 2009)

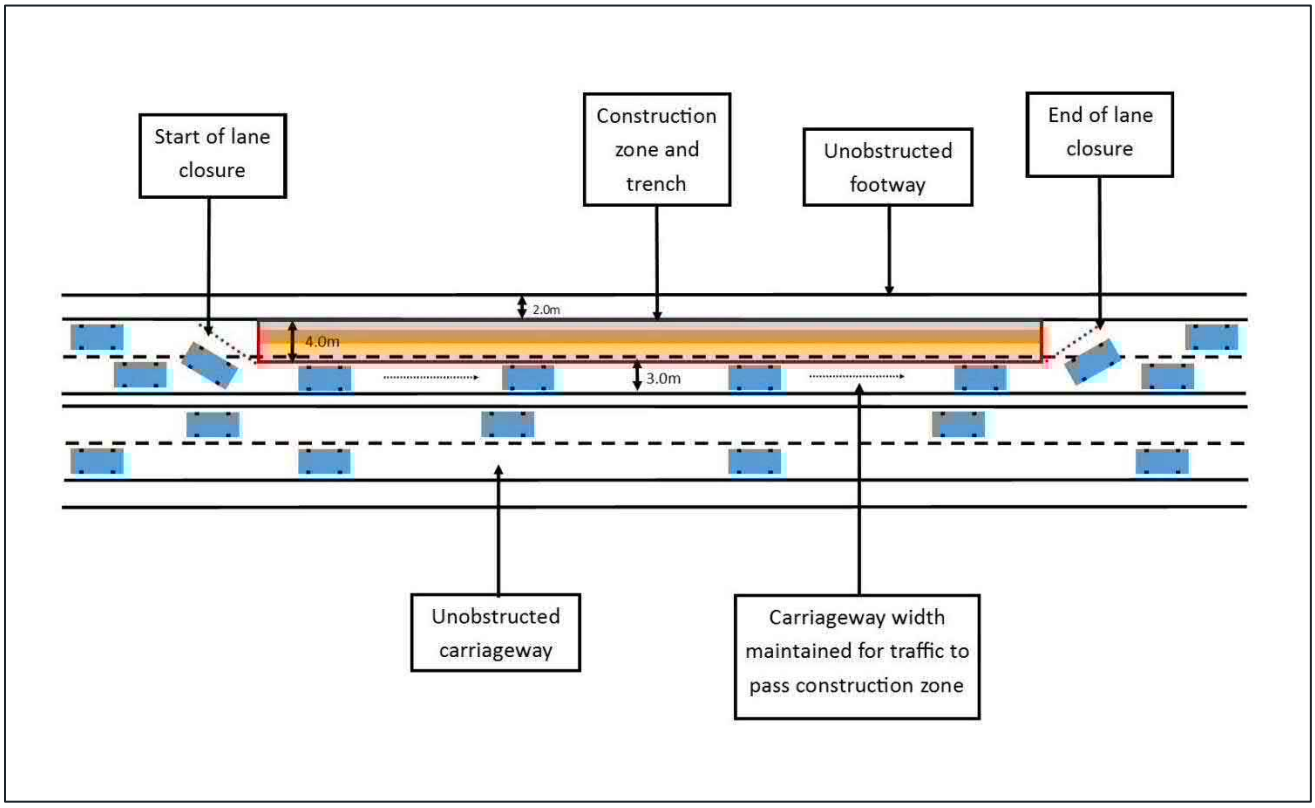


Plate 3 - Lane Closure without Shuttle Working Traffic Signals

2.5.2.7. As with the shuttle-working the minimum lane width past the construction zone will be 3.0 m on routes used by buses / HGVs and ideally 3.25-3.7 m.

2.5.3. RESIDENTIAL AND BUSINESS ACCESS

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

- As direct access, through access junctions or driveways directly onto residential

or business premises; and

- Via side-road junctions that adjoin the Onshore Cable Corridor.

2.5.3.2. Residential and business access will be maintained wherever possible, albeit with different traffic management approaches applied depending upon the circumstances as described below. It should be noted that the required traffic management will only be in place for 1-2 weeks for each individual side-road due to the way in which the construction corridor will progress in sections.

2.5.3.3. The type of traffic management is dependent on the location of the construction zone within the carriageway, which cannot yet be defined as detailed design of the traffic management will only be completed once a contractor is appointed. For example, side-roads on the northern side of the carriageway may not require temporary closure or traffic signal control when the construction zone is on the southern side of the carriageway. This will also apply to dual-carriageway and wide single-carriageway sections, where construction works on one side of the carriageway are unlikely to impact on the other side.

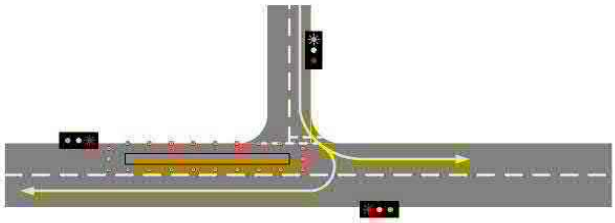
Residential Driveway Access

2.5.3.4. While residents will be informed about the construction works and encouraged to make alternative arrangements where possible, such as parking on-street, steel plating over the trench will be available during working hours (see Chapter 3 (Description of the Proposed Development) of the ES Volume 1 (document reference 6.1.3)) and in the case of emergencies. Where practicable, road plates may be installed outside of these times and construction fences removed to allow access over the construction zone.

2.5.3.5. Where the construction zone falls on the opposite side of the carriageway to driveways access will be maintained at all times, but drivers will be made aware of construction works/ traffic signal control as appropriate.

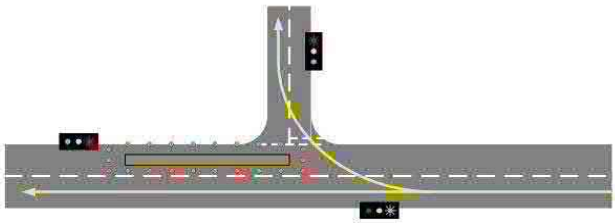
Business Access

2.5.3.6. Access to business premises will be maintained using either three-way traffic signals, with excavation of the trench taking place in two phases to allow a 3.0 m access to be maintained at all times, or through use of road plates This strategy is shown in Plate 4 below.

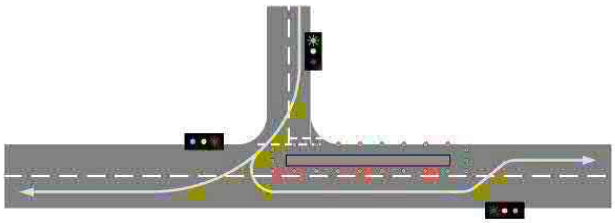


Construction zone approaching junction. Green signal on side-road / access allows vehicles to turn left and right along main road.

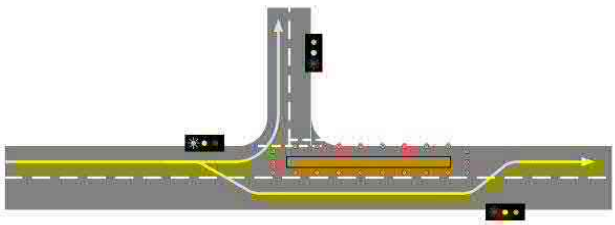
Construction zone approaching junction. Green signal on main road allows vehicles to pass construction zone and turn left into side-road / access.



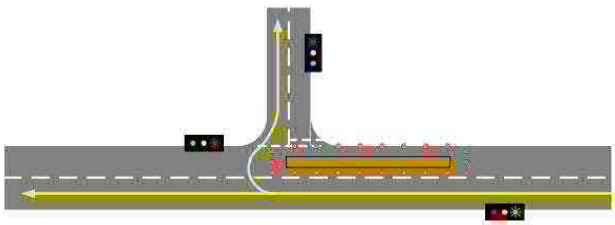
Construction zone approaching junction. Green signal on main road allows vehicles to turn right into side-road / access and pass construction zone.



Construction zone exiting junction. Green signal on side-road / access allows vehicles to turn left and right along main road.



Construction zone exiting junction. Green signal on main road allows vehicles to turn left into side-road / access and pass construction zone.



Construction zone exiting junction. Green signal on main road allows vehicles to pass construction zone and turn right into side-road / access.

Plate 4 - Access to Business / Side-Roads

2.5.3.7. This will be considered on an individual basis and will depend on the business and access arrangements.

Side-Road Access

2.5.3.8. Side-road access adjacent to the cable route will be considered on an individual basis with the traffic management used dependent on the characteristics of the road and junction. The strategy at this stage can be summarised as follows:

- For residential cul-de-sacs, side-road access will be maintained via either road plate or three-way traffic signals. The decision to use traffic signals will depend on the level of traffic flow and visibility from the side-road to the main road traffic signal approaches. Where visibility is poor, traffic signal control is likely to be required, although in all cases this will depend on the exact location of the construction zone;
- For side-roads that act as through-roads, temporary closure of the access will be considered but this depends on the category of road, what the side road provides access to and the suitability of diversion routes. Where closure is not an option, three-way traffic signals will be used if the location of the construction zone requires it.
- Where the side-road junction is controlled by traffic signals with the main road and where there is more than one approach lane at each entry, it may be possible to continue operating the existing signals through closure of a single lane on each entry. Where this is not possible, temporary traffic signals will be used instead of the existing control.

2.5.3.9. The exact traffic management strategy for side-road access will be agreed with the Highway Authority through submission of detailed designs and traffic management measures prior to commencement of works. It should be reiterated however that such traffic management will only be in place for a maximum of 1-2 weeks for each individual side-road and will be fully dependent upon the location of the Construction Zone.

2.6. NOTICE PERIODS FOR CONSTRUCTION WORKS

2.6.1.1. It is intended that submission of detailed designs and traffic management measures for approval will be required not less than three months before the intended comments of works on that part of the highway, with notice of the date on which the works are to start being provided not less than 14 days before those works commence. The application for approval to relevant Highway Authority will include the following information:

- Description of proposed construction works;

- Details of location, including information on construction zone such as working areas, safety zones and storage requirements;
- Timing and duration of works, including working hours and proposals for night working or weekend working where applicable;
- An illustration of the construction works;
- The technique to be used for underground works and depth of excavation;
- Traffic management, parking and Temporary Traffic Regulation Measures (for which statutory approval will be secured by the DCO) that will be required to facilitate the works. This will include full details of footway / carriageway use where required;
- Details of highway reinstatement, including whether interim or permanent and where interim when a permanent reinstatement is proposed to be carried out;
- Contract details for the person appointed by the contractor to deal with any issues that may occur during the construction activity.

2.6.1.2. The construction methodology will require the work to be completed in a number of phases as the installation of the Onshore Cable progresses along a section of highway. Where possible, an application for approval will be submitted for multiple phases (such as whole cable sections between Joint Bays), albeit noting that individual approvals may be required for each phase of work.

2.7. CONSTRUCTION PROGRAMME

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

2.7.1.2. The following wildlife events are taken into consideration and will be built into the phasing of enabling and construction works for the Converter Station and Onshore Cable:

- Badger breeding season from January to March;
- Bird breeding and nesting season from March to August;
- Plant growing season and winter wet season from August to November, at Kings Pond Meadow SINC and Denmead in Section 3; and
- Wintering bird season, from October to March.

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

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

2.7.1.4. An indicative onshore construction programme for the Onshore Cable is as follows:

- HDD and Landfall installation: Q3 2021 – Q1 2024
- Onshore HVDC Route Construction / Installation: Q3 2021 – Q4 2023

2.7.1.5. Further to this indicative programme, consideration has been given with the FTMS to the construction programme for each individual section of the Onshore Cable . This considers the constraints listed above and links between nearby sections of the Onshore Cable Corridor, where for example multiple construction zones in the same area should be avoided. The programme for each sub-section is presented as a month-by-month calendar year with the following categories:

- Green – construction may be completed at any time within the month;
- Amber – construction may take place during part of the month only;
- Red – construction should be avoided during this month.

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

2.8. COMMUNICATION STRATEGY

2.8.1.1. The communication strategy is recognised as a vital aspect of the construction phase. The communication strategy will allow key stakeholders (including the public), in addition to Hampshire County Council (HCC) and Portsmouth City Council (PCC), to be kept up-to-date with the programme and progress of the construction works. To facilitate this, a dedicated contact for dealing with all matters relating to the construction programme and traffic management strategy will be provided.

2.8.1.2. The key stakeholders for the project in this regard in addition to HCC and PCC are as follows:

- Local residents and road users;
- Local businesses;
- Parish Councils and neighbourhood groups;
- Schools and colleges and University of Portsmouth;

- Portsmouth Football Club;
- Pedestrian and cycle groups;
- East Coast Solent Partnership;
- Highways England ('HE');
- Network Rail;
- Emergency services;
- Utility companies;
- First Group and Stagecoach bus companies
- Local Media (Portsmouth News and Petersfield Post)

2.8.1.3. Communication with these stakeholders will be completed through the following channels:

2.8.2. MEDIA

2.8.2.1. Regular news releases will be issued to Portsmouth News, Horndean Post and Hampshire Chronicle to publicise planned works along key sections of the Onshore Cable Corridor (e.g. B2150 Hambledon Road through Waterlooville, A3 London Road, Havant Road and A2030 Eastern Road).

2.8.2.2. In addition to press releases, engagement will also be completed with local radio stations to publicise the construction programme as part of their traffic bulletins.

2.8.3. AQUIND INTERCONNECTOR CONSULTATION WEBSITE

2.8.3.1. The existing AQUIND Interconnector consultation website will be updated throughout the construction period with details of current and programmed construction works.

2.8.4. ROADWORKS.ORG

2.8.4.1. Through liaison with HCC / PCC through the streetworks process, all construction works will be added to the roadworks.org website as programmed. This will allow the public to keep up-to-date on current and programmed works;

2.8.5. MEMBER / PARISH COUNCIL BRIEFINGS:

2.8.5.1. Where appropriate, local members and parish councils will be briefed on upcoming works as a means of distributing information to the local community. This will also be key to managing expectations of disruption at key locations along the Onshore Cable Corridor.

2.8.6. LETTER / LEAFLET DROPS WITH RESIDENTS AND BUSINESSES

2.8.6.1. Letter drops will be completed to residential and business properties directly affected by the proposed construction works. This will allow residents and businesses to

change travel plans where appropriate and help minimise disruption.

2.8.7. FACE-TO-FACE CONTACT WITH RESIDENTS AND BUSINESSES

2.8.7.1. In some cases, it may be appropriate to meet with residents and businesses to discuss the construction works in more detail and respond to any specific access requirements.

2.8.8. SIGNAGE

2.8.8.1. On the highway network itself, the provision and location of signage will be an important factor in notifying road users of programmed construction works. While there will be 'Advanced Warning' signs placed on the highway before the works detailing start-date and periods of works, it is also intended that Variable Message Signs ('VMS') are provided at key locations along the Onshore Cable Corridor. These will be installed at least one week prior to commencement of the construction works along each section of highway

2.8.8.2. The use of VMS signs is proposed as these are considered more conspicuous than standard Advance Warning' signs and can be easily updated to reflect the intended programme of works. At this stage it is recommended that VMS signs are installed at the following locations:

- At the A3 London Road / Hulbert Road roundabout to warn road users of construction works on either B2150 Hambledon Road or A3 London Road;
- At the A3 London Road / Southampton Road / Spur Road roundabout in Cosham to warn road users of construction works on A3 London Road;
- At the A27 / A2030 Eastern Road roundabout in Farlington and A2030 Velder Avenue / Milton Road traffic signal junction in Fratton to warn road users of construction works on Eastern Road; and
- On Havant Road east and west of the junction with Farlington Avenue and Eastern Road to warn road users of construction works through this junction.

2.8.8.3. The location and full details of these signs will be agreed with each Highway Authority prior their implementation. It is noted that HCC used these at the A3 London Road / Hulbert Road roundabout prior to resurfacing of the A3 London Road in 2018.

2.9. PEDESTRIANS AND CYCLISTS

2.9.1.1. Pedestrian and cycle routes along the Onshore Cable Corridor will be maintained wherever possible, with full closure considered as the last resort, such as where it would prevent full closure of a major road. In all cases the construction works will ensure that pedestrians and cyclists can pass in a safe manner, with suitable barriers between the construction works. Particular attention will also be paid to the needs of people with mobility and visual impairments to ensure that their safety and free

movement is retained. All layouts will follow protocol defined by Chapter 8 of the Traffic Signs Manual (DfT, 2009).

2.9.2. PEDESTRIANS

2.9.2.1. Where construction works do obstruct a footway a minimum unobstructed width of 1.0 m will be provided alongside the construction corridor and where this is not possible a safe alternative route will be provided. This will include provision of suitable crossing facilities where required, including temporary replacement of existing pedestrian crossings that may need to be closed to facilitate construction.

2.9.2.2. In some locations, a footway closure may be required without a suitable alternative route being available nearby or on the opposite side of the carriageway. In these instances, a pedestrian route will be provided within the carriageway with a minimum unobstructed width of 1.0 m, albeit this will be wider where it does not impact on traffic flow. Suitable barriers will be provided, along with ramps and footway boards where these are required.

2.9.2.3. Some temporary footway closures may be required to facilitate delivery and collection of materials. In the majority of cases this will be mitigated through alternative footway links being available but where this is not possible, the following will apply:

- The footway be closed for no longer than 15 minutes in every one-hour period;
- Construction operatives will be made available to assist users past the works;
- Pedestrians with impaired mobility will need to wait no longer than 5 minutes; and
- Temporary footway closure signs are provided in place of the works.

2.9.3. CYCLISTS

2.9.3.1. Where there are shared-use paths or cycleways impacted by the works these will be kept open if possible, or a suitable diversion route provided.

2.9.3.2. Where full closure of cycle route is necessary and diversion routes are unsuitable temporary cycle facilities will be provided past the construction corridor where possible, such as on the Eastern Road shared-use path. This could be completed as part of a full lane closure or through provision of a temporary off-road route. The width of these temporary routes will be 2.5 m where possible, with a minimum of 1.5 m. If the temporary route is provided over unmade ground, then footway boards will be used to provide a formal surface.

2.9.3.3. In some cases it may be required to narrow a shared-use path past the construction corridor to a width that is not suitable for cycle use (I.e. 1.0 m). In these circumstances 'Cyclists dismount and use footway' signs will be used as a last resort, noting that his would only be completed for one 100 m section at a time.

2.9.3.4. Where road closures are required for construction of the Onshore Cable Route cycle

access will be maintained at all times.

2.10. PUBLIC TRANSPORT

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

2.10.1.2. Construction of the Onshore Cable Route within the A3 London Road will require works within the existing bus lane or suspension of the bus lane to mitigate the impact on general traffic flow. As with the rest of the Onshore Cable Corridor this will be completed in 100 m sections and therefore bus priority will be maintained where the bus lane is suspended through provision of temporary bus priority traffic signals.

2.11. SCHOOL ACCESS

2.11.1.1. Construction of the Onshore Cable Route will take place during school holidays on links that contain schools or where they are located directly adjacent to the Onshore Cable Corridor. This includes the following links and schools:

- Solent Junior School on Solent Road and Solent Infant School on Evelegh Road, adjacent to Farlington Avenue; and
- Mooring Way Infant School, Moorings Way.

2.11.1.2. Consideration will also be given to schools located close to the Onshore Cable Corridor, given the potential impact of the construction works.

2.12. RESPONSIVE TRAFFIC MANAGEMENT PROTOCOL

2.12.1.1. It is proposed that the FTMS required to support the Proposed Development operates as a 'live' and responsive strategy. This means that, in continuous liaison with HCC / PCC, an approved TMS will be amended where required to reflect traffic conditions and events that may impact upon the construction works or capacity of the highway network surrounding the Onshore Cable Corridor. Examples of this can include:

- a protocol to temporarily suspend and remove works if a road traffic accident or other emergency event on either the Onshore Cable Corridor or surrounding network requires road closures and diversion of traffic;
- where the construction zone is at key junctions within the network, management of traffic signals adjacent to the Onshore Cable Corridor during peak hours to ensure signal timings reflect additional traffic flows;
- Management of traffic signal junctions along diversion routes associated with road closures;
- Provision of traffic marshalling around schools adjacent to the Onshore Cable

Corridor to mitigate the impact of traffic redistribution onto such links.

2.12.1.2. The ability of the FTMS to respond to events away from the Onshore Cable Corridor itself will mitigate impact of the works should these events occur. This is particularly important for the A3 London Road and A2030 Eastern Road, both of which experience a significant increase in traffic flow when there are road traffic accidents on either the A3(M) or M275.

2.12.1.3. In addition to this, the CTMP includes provision for a road safety officer, who will be responsible for the continual monitoring of the road works for the Onshore Cable Route to ensure the proactive management of road safety. They will ensure there is sufficient road signage to warn the public and inform construction related traffic to ensure compliance and route choice. There will also be contact telephone numbers for public to raise concerns as well as the provision of a website. Receptors that attract vulnerable people will be updated on a regular basis with visits (e.g. schools) as necessary.

2.13. EMERGENCY SERVICES

2.13.1.1. The Onshore Cable Corridor runs past a number of emergency services locations therefore meaning that access by emergency vehicles will need to be actively managed where possible to minimise delays. The Onshore Cable Corridor runs nearby or adjacent to the following bases:

- Waterlooville Fire Station - A3 Maurepas Way;
- Eastern Road Ambulance Station, albeit this does not provide emergency response; and
- Eastney Lifeboat Station – Ferry Road.

2.13.1.2. At Waterlooville Fire Station access will be maintained at all times by excavation of the trench taking place in two phases to allow a suitable width access between works or through use of road plates.

2.13.1.3. In proximity to Eastney Lifeboat Station, the works along Fort Cumberland Road will be facilitated by shuttle working traffic signals. This will maintain access to Ferry Road and the Lifeboat Station at all times.

2.13.1.4. Along the remainder of the Onshore Cable Corridor each construction location zone will be setup to ensure access by emergency vehicles is achievable. To facilitate access and minimise delay through the works, a protocol will be setup for management of temporary signals. This could include implementation of an 'all red' phase to clear the construction zone of traffic or extended green times to give priority to an approaching vehicle.

2.13.1.5. Under the responsive traffic management protocol described in Section 2.12 there will also be an option to temporarily suspend works if required to mitigate the impacts

of the road traffic accident or other emergency event in proximity to the Onshore Cable Corridor.

3. SECTION 1 – LOVEDEAN (CONVERTOR STATION AREA)

3.1.1.1. The Onshore Cable Route will not be constructed within public highway within Section 1 but some traffic management will be required to facilitate construction of the temporary and permanent access junction for the Converter Station. This is described below and shown on Drawing EN02022-TMS-1 included in Appendix 1 to this FTMS.

3.1.1.2. Broadway Lane and Day Lane within the vicinity of the Converter Station Area are rural lanes without street lightning of footways and are subject to a national speed limit (60 mph).

3.2. CONVERTER STATION ACCESS JUNCTION

3.2.1.1. Construction of the Converter Station access junction / access road will be primarily constructed 'off-line' in order to avoid impacting upon traffic flow along Broadway Lane and Day Lane. However, it is likely that construction work on each access junction bellmouth will require some limited narrowing of the existing carriageway, which will only accommodate one-way traffic flow. This will be accommodated by the implementation of three-way temporary traffic signals to control traffic flow in the vicinity of the access. The exact location of the temporary traffic signals will be determined by the contractor(s), however, it is envisaged that these would be located as follows to provide adequate visibility for approaching traffic:

- Adjacent to Broadway Cottages on Broadway Lane south of the proposed access junction;
- 20 m north of the give-way line on Broadway Lane north of the proposed access junction (at the junction with Day Lane); and
- 75 m east of the junction of the Broadway Lane / Day Lane junction on Day Lane.

3.2.1.2. To reduce traffic speeds within the vicinity of the access works it is also proposed that a temporary 30 mph speed limit is implemented.

3.2.1.3. The timeframe for this traffic management to be in place will be dependent upon the construction schedule of the access junction. Currently, the anticipated programme for these works suggests that traffic management will need to be in place for 8-12 weeks to facilitate construction of the access junction.

3.2.1.4. Table 1 shows a breakdown of the calendar year, showing availability for the construction of the access works to take place within this Section.

Table 1 - Section 1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
1	Converter Station Access	TBC	Shuttle Working	8-12 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: N/A											
Other Restrictions											
Sections						Total Availability					
None						52 Weeks					

3.2.1.5. This shows that construction can take place during any month of the year. It is also considered that there are no constraints on the construction programme presented by works on adjacent sections of the Onshore Cable Corridor.

4. SECTION 2 ANMORE

4.1.1.1. The Onshore Cable Route will run north to south through Section 2. The Onshore Cable Corridor in this Section is primarily within agricultural fields. The only impacted public highways in this Section will be at the intersection of the Onshore Cable Corridor and Broadway Lane. The Onshore Cable Corridor crosses Broadway Lane at approximately 200 m east of the junction with Edney's Lane.

4.1.1.2. Below is a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Corridor to take place within this Section.

Table 2 - Section 2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
2	Broadway Lane	6	Road Closure	1 Day
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: N/A											
Other Restrictions											
Sections						Total Availability					
Section 3.1 – 2 weeks						50					

4.1.1.3. Programming of these works at separate times to Section 3.1 will minimise the impact resulting from the proposed traffic management strategy for Broadway Lane and Anmore Road.

4.2. DESCRIPTION OF TRAFFIC MANAGEMENT

4.2.1.1. It is likely that a full road closure will be required to allow the Onshore Cable to cross Broadway Lane. It is anticipated that this road closure will need to be in place for one

day per circuit. This is described below and shown on Drawing EN02022-TMS-1 and EN02022-TMS-2 included in Appendix 1 to this FTMS.

4.2.1.2. A diversion route will need to be implemented to mitigate the impact of the proposed road closure on Broadway Lane. The diversion route will need to take account of the following:

- The nature of rural lanes within the vicinity of the road closure and their suitability for accommodating diverted traffic; and
- The general origin and destination of traffic using Broadway Lane.

4.2.1.3. Taking account of these factors, it is recommended that diversions be implemented that route traffic via Edney's Lane, Anmore Road, Anmore Lane and Broadway Lane as shown in Drawing EN02022-TMS-11 included in Appendix 2 to this FTMS. Taking into account this proposed diversionary routing, the closure of Broadway Lane should be scheduled so as to not coincide with construction in Anmore Road, a link which is contained within Section 3 of the Onshore Cable Corridor.

4.2.1.4. Appropriate signage will be provided along this diversion at all appropriate junction locations. Broadway Lane to the east of the Onshore Cable Corridor provides the sole vehicular access to several residential properties, as well as to the Lower Chapters Bed and Breakfast. Broadway Lane to the east of the Onshore Cable Corridor will remain open to ensure access to properties and the bed and breakfast is retained throughout the duration of works

5. SECTION 3 – DENMEAD/KINGS POND MEADOW

5.1.1.1. As with Section 2, the Onshore Cable Corridor within Section 3 is contained primarily within agricultural fields. However, there are two limited sections of public highway which are likely to be impacted within this section. The impacted highway includes the following:

- **Sub-Section 3.1**: Anmore Road: up-to 180 m between agricultural fields to the north and south; and
- **Sub-Section 3.2:** B2150 Hambledon Road to Soake Road (180m).

5.1.1.2. Both of these links are likely to require traffic management to facilitate the construction of the Onshore Cable Route. The construction works within this section are likely to take a maximum of 1-2 weeks to complete per circuit.

5.2. SUB-SECTION 3.1 – ANMORE ROAD

5.2.1.1. Table 3 below provides a summary of the traffic management requirements for Section 3.1.

Table 3 – Sub-Section 3.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.1	Anmore Road	160	Road Closure	1 Day to 2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May
Other Restrictions				
Sections		Total Availability		
Section 2 – 1 week Section 3.2 – 2 weeks		49		

5.2.1.2. Programming of these works at separate times will minimise the impact resulted from the proposed traffic management strategy for Broadway Lane and Anmore Road.

DESCRIPTION OF TRAFFIC MANAGEMENT

5.2.1.3. The Onshore Cable Corridor will cross Anmore Road between agricultural fields to the north and south, requiring a full road closure for the period of the construction works. At this stage, the exact cable alignment has not been determined, and there are two possible route options for each circuit to cross Anmore Road. The proposals are shown on Drawing EN02022-TMS-2 included in Appendix 1 to this FTMS. The possible options for cable routing in this location are as follows:

- The first option is for the Cable to intersect Anmore Road in a north-south orientation, whilst moving from the fields to the immediate north of the carriageway, to those in the south. As this would mean the cable route only impacts a limited section of highway, this option would likely require a one-day road closure per circuit; and
- The second option is for the cable route to run along Anmore Road in an east-west alignment for an up-to 160m section between the northern field (opposite Soake Road / Clifton Crescent) and southern field (west of 142 Anmore Road). This option would likely require a 2 weeks closure per circuit.

5.2.1.4. If the second route option is used, access to residential properties will be restricted for vehicles for the entire period of construction. This will impact up to three residential properties, with alternative on-street parking available on Clifton Crescent.

5.2.1.5. As is stated above, any road closures on Anmore Road should be scheduled to avoid coinciding with any closure of Broadway Lane. The recommended diversion route for the road closure on Anmore Road is via Mill Road, B2150 Hambledon Road and Soake Road as shown in Drawing EN02022-TMS-11 included in Appendix 2 to this FTMS.

5.2.1.6. Taking into account this proposed diversion, it is also recommended that the closure of Anmore Road should not take place at the same time as any works on B2150 Hambledon Road (Section 3.2).

5.3. SUB-SECTION 3.2 - B2150 HAMBLEDON ROAD TO SOAKE ROAD

5.3.1.1. Within Sub-Section 3.2, the Onshore Cable Corridor includes a section of B2150 Hambledon Road between the point from which the cable exits the agricultural fields, to the junction with Soake Road. Table 3 below provides a summary of the traffic management requirements for Section 3.2.

Table 4 – Sub-Section 3.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
3.2	B2150 Hambledon Road to Soake Road	180	Shuttle working TS	2 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Other Restrictions											
Sections						Total Availability					
Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks						23 weeks					

5.3.1.2. Construction along this section of B2150 Hambledon Road will likely require implementation of single lane closure, with shuttle working being implemented through the use of temporary traffic signals to allow for continued two-way traffic flow. Where the cable enters / exits agricultural fields, the construction corridor will be phased / managed in line with the standard protocol set out in the technical specification issued to contractors in order to ensure that a continuous pedestrian link is provided along the northern side of the carriageway.

5.3.1.3. Where the Onshore Cable Corridor intersects the junction with Soake Road, temporary three-way traffic signals may need to be implemented to allow continuous access to the Byng's Business Park and Jewson Builders Merchant at the southern end of Soake Road. This will mitigate the need for HGV's wishing to access these businesses from using the less suitable Anmore Road / northern half of Soake Road as a temporary diversion route.

5.3.1.4. No residential properties are impacted by this section of the Onshore Cable Corridor.

6. SECTION 4 – HAMBLEDON ROAD TO FARLINGTON AVENUE

6.1.1.1. This section provides a summary of the proposed TMS for the longest section the Onshore Cable Corridor, which runs from B2150 Hambledon Road between Denmead and Waterlooville and Burnham Road in Farlington. This section has been split into six sub-sections, based upon similarities in road types and commonalities in traffic management requirements. The total length of this section is 6.7 km, and the sub-sections are as follows:

- **Sub-Section 4.1** – B2150 Hambledon Road between Soake Road and Milton Road;
- **Sub-Section 4.2** – B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road;
- **Sub-Section 4.3** – A3 London Road to Ladybridge Roundabout;
  - **Sub-Section 4.31** – A3 London Road between Forest End Roundabout and south of the junction with Forest End;
  - **Sub-Section 4.32** - A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields);
  - **Sub-Section 4.33** - A3 London Road between south of southern end of bus lanes (in proximity to Poppy Fields) and Post Office Road;
  - **Sub-Section 4.34** - A3 London Road between Post Office Road and Rocking Horse Nursery;
  - **Sub-Section 4.35** - A3 London Road between Rocking Horse Nursery and Ladybridge Roundabout;
- **Sub-Section 4.4** – A3 London Road to Portsdown Hill Road;
  - **Sub-Section 4.41** - A3 London Road between Ladybridge Roundabout and start of bus lane;
  - **Sub-Section 4.42** - A3 London Road between start of bus lane and Lansdowne Avenue;
  - **Sub-Section 4.43** - A3 London Road between Lansdowne Avenue and bus lane (south of The Brow);

- **Sub-Section 4.44** - A3 London Road between bus lane (south of The Brow) and Portsdown Hill Road; and

- **Sub-Section 4.5** – B2177 Portsdown Hill Road.

6.1.1.2. The FTMS proposals for Section 4 are shown on Drawing EN02022-TMS-3, 4 and 5 included in Appendix 1

6.2. SUB-SECTION 4.1 – B2150 HAMBLEDON ROAD BETWEEN SOAKE ROAD AND MILTON ROAD

6.2.1.1. Section 4.1 includes the section of B2150 Hambledon Road between the junction with Soake Road and the roundabout with Milton Road. All of B2150 Hambledon Road in this subsection is single carriageway and is subject to a 30 mph speed limit.

6.2.1.2. Table 5 shows availability for the construction of the Onshore Cable Route to take place within this subsection.

Table 5 – Sub-Section 4.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.1	B2150 Hambledon Road between Soake Road and Milton Road	1300	Shuttle working TS	8-13 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 2 week restriction due to Christmas.

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks	32 weeks

6.2.1.3. December has been categorised as 'Amber' due to the proximity of the southern end

of B2150 Hambledon Road in this sub-section to Wellington Retail Park, Asda Superstore on A3 Maurepas Way and Lidl supermarket on Elettra Avenue. As December is typically be a very busy period in this location, construction should only take place during the first two weeks of the month. In addition to these considerations, construction within Section 4.1 should not take place simultaneously with the following:

- Section 3.2 - B2150 Hambledon Road to Soake Road;
- Section 4.2 - B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road (1.0 km); and
- Section 4.31, 4.33, 4.34 and 4.35 – All sections of A3 London Road between A3 Maurepas Way and Ladybridge Road that require shuttle working traffic signals.

6.2.1.4. This phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. Specifically, it will ensure that there is not more than one location of traffic management that requires shuttle working on B2150 Hambledon Road, A3 Maurepas Way and A3 London Road at any one time.

6.2.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

6.2.2.1. For the majority of this subsection construction will likely be able to be facilitated by shuttle working traffic signals. Opportunities to reduce the length of shuttle working will however be taken where possible and practical, such as at the following:

- By constructing one circuit within Southdown View / Hambledon Road and the Hambledon Road spur that runs parallel to the B2150 Hambledon Road. This is described in further detail in paragraph 6.2.2.3 – 6.2.2.6 and would remove disruption from B2150 Hambledon Road for 450m or 5 weeks for one circuit; and
- Use of lane realignment between the junction with The Hundred and the roundabout junction with Milton Road. The use of right-turn lanes to facilitate construction works will likely enable construction to take place without impacting on two-way traffic flow for 200m or 2 weeks for each circuit.

6.2.2.2. These options will help minimise the length of time shuttle working traffic signals are required on B2150 Hambledon Road.

Southdown View / Hambledon Parade / Hambledon Road

6.2.2.3. Southdown View runs parallel to B2150 Hambledon Road between Darnell Road and Sunnymead Drive and provides access to 13 residential properties (all with off-road parking) and a public car park which serves an area of open space which comprises of approximately 10 acres of woodland. The carriageway width of Southdown View

is less than 6.0 m, so to avoid road closure, the construction corridor will be narrowed through the use of smaller plant. Two-way traffic flow will be facilitated by an informal 'give-and-take' approach which is appropriate for a link with such low traffic flows. Construction along this link is anticipated to take approximately 1-2 weeks per circuit.

6.2.2.4. Construction works through the junction of Southdown View / Sunnymead Drive / Hambledon Parade will be managed through the use of temporary traffic signals, with construction being phased to ensure that the carriageway remains open at all times.

6.2.2.5. Hambledon Parade is approximately 140 m in length and provides access to a number of retail / commercial units on the northern side of the carriageway. On-street parking is provided on either side of Hambledon Parade and provides capacity for 23 cars, with two additional two accessible bays and a loading bay. To accommodate construction, the on-street parking spaces on one side of the carriageway may need to be temporarily suspended to mitigate the need for a full road closure. To further mitigate the impact of construction on retail / commercial units, it is proposed that construction corridor will be split into 70 m sections therefore allowing some on-street parking to remain on both sides of the carriageway throughout the duration of the works. A one-way system will be implemented along Hambledon Parade during construction to minimise traffic congestion. Construction along this link is anticipated to take 2 weeks.

6.2.2.6. The Hambledon Road spur, running parallel to the north of the B2150 is a residential cul-de-sac providing access to 16 residential properties, all of which have dedicated off-road parking. The carriageway is approximately 5.0m wide on this link, with the northern verge / footway providing an additional 4.0m. This total width of 9.0m provides adequate space for construction but will require use of smaller plant in order to avoid a full road closure. Two-way traffic flow will be facilitated by an informal 'give-and-take' approach which is appropriate for a link with such low traffic flows and the majority of residents will continue to be able to park off-road on driveways. It is anticipated that construction along this link will take approximately 1-2 weeks per circuit.

B2150 Hambledon Road

6.2.2.7. Construction of the Onshore Cable Route along B2150 will require shuttle working traffic signals, although opportunities for lane realignment will be take approach to the junctions with Darnel Road and Milton Road to maintain two-way traffic flow. For example, retaining two free-flow traffic lanes for 200 m between The Hundred and Milton Road by use of right-turn lanes and central hatching will remove the requirements for shuttle working traffic signals for 2 weeks per circuit.

6.2.2.8. Several junctions intersect B2150 Hambledon Road in Section 4.1, with the required traffic management at each location dependent upon the exact location of the construction zone within the carriageway, which is not possible to define at this stage.

The following junctions, however, will be subject to traffic signal control due to their existing layout or classification:

- B2150 Hambledon Road / Darnel Road – either lane realignment and use of existing traffic signals or temporary three-way traffic signals;
- B2150 / Hambledon Road / Sunnymead Drive – temporary three-way traffic signals; and
- B2150 / Hambledon Road / Milton Road / Elettra Avenue roundabout – temporary traffic signals.

6.2.2.9. The traffic management required for the following junctions will be determined by the contractor and dependent upon location of the construction zone, albeit with access retained at all times, either directly or my alternative routes:

- B2150 Hambledon Road / Sickle Way;
- B2150 Hambledon Road / Hambledon Parade;
- B2150 Hambledon Road / Charlesworth Drive;
- B2150 Hambledon Road / Petersham Drive; and
- B2150 Hambledon Road / The Hundred.

6.3. SUB-SECTION 4.2 – B2150 HAMBLEDON ROAD AND A3 MAUREPAS WAY BETWEEN MILTON ROAD AND A3 LONDON ROAD

6.3.1.1. Sub-section 4.2 includes B2150 Hambledon Road to the south of the roundabout with Milton Road, as well as A3 Maurepas Way between the roundabout with Houghton Avenue and Forest End Roundabout. Table 6 provides details of programme availability and traffic management proposals for this sub-section.

Table 6 – Sub-Section 4.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.2	B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road	1000	Lane Closure	10 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 4 weeks due to Christmas shopping											
Other Restrictions											
Sections							Total Availability				
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 2 weeks							24 weeks				

6.3.1.2. December has been categorised as 'Red' as this section contains vehicular accesses to Wellington Retail Park, Asda Superstore on A3 Maurepas Way and Lidl supermarket on Elettra Avenue and Waterlooville town centre. As December will be a busy period in this location, construction of this section of the Onshore Cable should not take place during this month. In addition to these considerations, construction within Section 4.2 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2 and 4.1 – B2150 Hambledon Road north-west of this section'
- Section 4.31, 4.33, 4.34, 4.35, 4.41 and 4.43 – All sections of A3 London Road between A3 Maurepas Way and Portsdown Hill Road that require shuttle working traffic signals.

6.3.1.3. Phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. Specifically, it will ensure that construction along Sub-Section 4.2 does not occur at the same time as traffic management that requires shuttle working on B2150 Hambledon Road, A3 Maurepas Way and A3 London Road.

6.3.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

B2150 Hambledon Road

6.3.2.1. Construction along B2150 Hambledon Road in this subsection will require implementation of single lane closures. To facilitate continued access to Wellington Retail Park throughout the duration of works, temporary turning restrictions may need to be implemented at the junction of B2150 Hambledon Road / Aston Road.

Temporary turning restrictions will prohibit right turn movements at this junction, allowing it to remain operational via a left-in, left-out arrangement. These temporary access arrangements are likely to be in place for one week per circuit.

B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue Roundabout

6.3.2.2. Temporary traffic signals may also need to be implemented at the roundabout junction of B2150 Hambledon Road / A3 Maurepas Way / Houghton Avenue. Traffic management is likely to be required at this junction for approximately one week.

A3 Maurepas Way

6.3.2.3. Construction within A3 Maurepas Way may require a closure of one lane of the dual carriageway. On the A3 in this section a minimum of three lanes will remain operational, and two-way flow will be maintained at all times. The link provides the entry to the Asda Waterlooville Superstore car park, access to this car park will be retained throughout the duration of works.

6.3.2.4. Waterlooville Fire Station gains vehicular access from A3 Maurepas Way on this link. Vehicular access from the fire station will be retained at all times through-out the duration of works through phased construction maintaining a suitable access width at all times.

Forest End Roundabout

6.3.2.5. Temporary traffic signals may be required at Forest End Roundabout. Construction through this junction is likely to be in place for 2-3 days per circuit.

6.4. SUB-SECTION 4.31 - A3 LONDON ROAD BETWEEN FOREST END ROUNDABOUT AND SOUTH OF THE JUNCTION WITH FOREST END

6.4.1.1. A limited section of shuttle working may be required between Forest End Roundabout and just south of the junction with Forest End, where the central island ends. The programme availability to complete this sub-section is shown in Table 7 below.

Table 7 – Sub-Section 4.31 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.31	A3 London Road between Forest End Roundabout and south of the junction with Forest End	100	Shuttle Working	1 week

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and part of May, June, July, August and part of September (15 weeks) available.

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks **Section 4.1 = 13 weeks** **Section 4.2 = 10 weeks** **Section 4.32 = 10 weeks** **Section 4.33 = 3 weeks** **Section 4.34 = 2 weekends** **Section 4.35 = 2 weeks** **Section 4.41 = 1 week** **Section 4.43 = 2 weeks**	8 Weeks, based on links with similar calendar restrictions

6.4.1.2. Due to the high traffic flows at this location and close proximity to Waterlooville town centre, construction should not take place outside of the summer months, Easter school holidays, May half-term and early September as shown on Table 7. In addition to these considerations, construction within Section 4.3 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2, 4.1 and 4.2 - B2150 Hambledon Road and A3 Maurepas Way;
- Sub-Sections 4.32, 4.33, 4.34, 4.35 - All other parts of Section 4.3 - A3 London Road between A3 Maurepas Way and Ladybridge Road; and
- Sub-sections 4.41 and 4.43 – Parts of A3 London Road between Ladybridge

roundabout and Portsdown Hill road that require shuttle working traffic signals.

6.4.1.3. This phasing of works will mitigate disruption to traffic flow within the Denmead and Waterlooville area, particularly those trips which travel along the B2150 Hambledon Road and A3 London Road to / from Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.2 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.5. SUB-SECTION 4.32 - A3 LONDON ROAD BETWEEN SOUTH OF JUNCTION WITH FOREST END AND SOUTHERN END OF BUS LANES (IN PROXIMITY TO POPPY FIELDS)

6.5.1.1. Construction within this section can be completed through lane realignment, thereby maintaining two-way traffic flow for the entirety of this sub- section. Where the construction zone is located, the bus lanes and general traffic lane will merge from two to one lane. To mitigate the impact on public transport, temporary bus priority traffic signals will be provided where possible to maintain bus priority over general traffic. Table 8 provides details of the available programme for this sub-section.

Table 8 – Sub-Section 4.32 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.32	A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields)	1000	Lane Closure	10 weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No other calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 4.31 = 1 week Section 4.33 = 3 weeks	42 weeks

Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks	

6.5.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;
- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals.

6.6. SUB-SECTION 4.33 - A3 LONDON ROAD BETWEEN SOUTH OF SOUTHERN END OF BUS LANES (IN PROXIMITY TO POPPY FIELDS) AND POST OFFICE ROAD

6.6.1.1. Shuttle working will be required between the junction of A3 London Road / Poppy Fields and the junction of A3 London Road / Post Office Road. The programme availability to complete these works is shown on Table 9 below.

Table 9 – Sub-Section 4.33 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.33	A3 London Road between Poppy Fields and just south of Post Office Road	250	Shuttle Working	3 weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and June, July, August (12 weeks) available											
Other Restrictions											
Sections						Total Availability					

Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 2 weeks Section 4.32 = 10 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks	10 weeks, based on links with similar calendar restrictions

6.6.1.2. Due to the high traffic flows at this location, no construction should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 9s. In addition to these considerations, construction within Section 4.3 should not take place simultaneously with the following Sections:

- Sub-Sections 3.2, 4.1 and 4.2 - B2150 Hambledon Road and A3 Maurepas Way;
- Sub-Sections 4.31,4.32, 4.34, 4.35 - All other parts of Section 4.3 - A3 London Road between A3 Maurepas Way and Ladybridge Road; and
- Sub-sections 4.41 and 4.43 – Parts of A3 London Road between Ladybridge roundabout and Portsdown Hill road that require shuttle working traffic signals.

6.6.1.3. As with other sub-sections of A3 London Road, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.33 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.7. SUB-SECTION 4.34 - A3 LONDON ROAD BETWEEN POST OFFICE ROAD AND ROCKING HORSE NURSERY

6.7.1.1. A full road closure may need to be implemented on the section of the A3 London Road between Post Office Road and Rocking Horse Nursery and Pre-School, a distance of approximately 90m. It is anticipated that this closure would take place either:

- Over the course of one weekend per circuit, with construction taking place from Saturday sunrise until Sunday sunset, (including night-working); or
- Over the course of two-weekends per circuit, with construction only taking place during working hours.

6.7.1.2. The programme availability to complete these works is shown on Table 10 below.

Table 10 – Sub-Section 4.34 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.34	A3 London Road between Post Office Road and Rocking Horse Nursery	90	Road Closure	2 weekends

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 4.31 Section 4.41 section 4.43	48 weeks

6.7.1.3. Given off-peak nature of the road closure requirements within sub-section 4.34 there are no calendar restrictions. The will however will most likely be completed at a similar time to sub-section 4.33 and 4.35. During the period of road closure, it will be necessary to provide a diversion route for all traffic, with the following proposed to the east of A3 London Road as shown on Drawing EN02022-TMS-11 included in Appendix 2:

- From Ladybridge roundabout along Ladybridge Road, Stakes Road, Stakes Hill Road, and Rocksville Drive to A3 London Road at Forest End Roundabout.

6.7.1.4. To minimise the impact of the road closure, construction works will not be completed simultaneously with Sections 4.31, 4.41 and 4.43, all of which require shuttle working traffic signals elsewhere on the A3 London Road.

6.8. SUB-SECTION 4.35 - A3 LONDON ROAD BETWEEN ROCKING HORSE NURSERY AND LADYBRIDGE ROUNDABOUT

6.8.1.1. Shuttle working will also be required for this sub-section between Rocking Horse Nursery and Pre-School and Ladybridge Roundabout. Table 11 provides details of the programme availability for completion of construction in this sub-section.

Table 11 - Sub-Section 4.35 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.35	A3 London Road between Rocking Horse Nursery and Ladybridge roundabout	170	Shuttle Working	2 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 3 weeks Section 4.44 = 4 weeks	9 weeks, based on links with similar calendar restrictions

6.8.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 11

6.8.1.3. As with other sub-sections of A3 London Road, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.35 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.8.1.4. Several junctions intersect A3 London Road in Section 4.3. Those junctions which provide connections to the eastern side of the carriageway are, for the most part, accessible by alternate routes on the wider network. While the exact traffic management for each side-road can only be determined once the exact construction zone location is confirmed, at this stage it is proposed that the following are subject to Temporary traffic signals:

- A3 London Road / Mill Road priority junction (due to the proximity of Mill Hill Primary School); and
- A3 London Road / Ladybridge Road / Marrels Wood Garden.

6.8.1.5. As noted, the technical specification issued to contractors will set out the standard protocol for enabling continued access to cul-de-sacs throughout the duration of works.

6.8.1.6. It should be noted that the majority of the side roads to the west of A3 London Road in this section form part of the West of Waterlooville Major Development Area (MDA) which is currently in build out stage. As such, existing cul-de-sacs which currently gain sole vehicular access from A3 London Road which may require temporary traffic signals during construction, may be more suited to temporary suspension of access from the A3 during construction as the wider road network of the MDA develops and the residential streets gain further permeability.

6.9. SUB-SECTION 4.41 - A3 LONDON ROAD BETWEEN LADYBRIDGE ROUNDABOUT AND START OF BUS LANE

6.9.1.1. Immediately south of Ladybridge roundabout the A3 London Road does not include bus lanes, for a distance of approximately 70 m, and will therefore require shuttle working traffic signals to facilitate construction of the Onshore Cable Route. Table 12 provides details of the programme availability for completion of constructions in this

sub-section.

Table 12 - Sub-Section 4.41 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.41	A3 London Road between Ladybridge roundabout and start of bus lane	80	Shuttle Working	1 week

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 3.2 = 2 weeks Section 4.1 = 13 weeks Section 4.2 = 10 weeks Section 4.31 = 1 week Section 4.33 = 3 weeks Section 4.42 = 9 weeks Section 4.43 = 3 weeks Section 4.44 = 4 weeks	8 weeks, based on links with similar calendar restrictions

6.9.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 12.

6.9.1.3. As with sub-section 4.35, this phasing of works will mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of sub-section 4.41 is not completed at the same time as any other works on A3 London Road north of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road south of Ladybridge roundabout.

6.10. SUB-SECTION 4.42 - A3 LONDON ROAD BETWEEN START OF BUS LANE AND LANSDOWNE AVENUE

6.10.1.1. Construction within this section can be completed through lane realignment, thereby maintaining two-way traffic flow for the entirety of this sub- section. Where the construction zone is located, the bus lanes and general traffic lane will merge from two to one lane. To mitigate the impact on public transport, temporary bus priority traffic signals will be provided where possible to maintain bus priority over general traffic. Table 13 provides details of the available programme for this sub-section.

Table 13 - Sub-Section 4.42 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.42	A3 London Road between start of bus lane and Lansdowne Avenue	850	Lane Closure	9 weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No other calendar restrictions identified

Other Restrictions

Sections	Total Availability
Section 4.33 = 3 weeks Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.43 = 3 weeks Section 4.44 = 4 weeks	39 weeks

6.10.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;

- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals; and
- Sub-Section 4.44 – A3 London Road south of Ladybridge Roundabout where lane closure are required.

6.11. SUB-SECTION 4.43 - A3 LONDON ROAD BETWEEN LANSDOWNE AVENUE AND BUS LANE (SOUTH OF THE BROW)

6.11.1.1. Sub-section 4.43 may require shuttle working traffic signals, although temporary removal of existing pedestrian refuge islands may allow for two-way traffic flow to be maintained due to the wide carriageway width. The worst-case requirement of shuttle working traffic signals has the programme constraints identified in Table 14.

Table 14 - Sub-Section 4.43 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.43	A3 London Road between Lansdown Avenue and start of bus lane (south of The Brow)	250	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Only Easter Holidays (2 weeks) and June, July, August (15 weeks) available

Other Restrictions

Sections	Total Availability
Section 4.33 = 3 weeks **Section 4.34 = 2 weekends** **Section 4.35 = 2 weeks** **Section 4.41 = 1 week** **Section 4.42 = 9 weeks** **Section 4.44 = 4 weeks**	10 weeks, based on links with similar calendar restrictions

6.11.1.2. Given the requirement for shuttle-working and volume of traffic which uses A3 London Road in this section, no construction work on this section should take place outside of the of the summer months, Easter school holidays, May half-term and early September as shown on Table 14.

6.11.1.3. The phasing of works aims to mitigate disruption to traffic, particularly those trips which travel along the A3 London Road between Waterlooville, Purbrook, Cosham and Portsmouth. The programme will ensure that the construction of this sub-section is not completed at the same time as any other works on A3 London Road south of Ladybridge roundabout nor during any periods where shuttle working traffic signals are required on either B2150 Hambledon Road or A3 London Road north of Ladybridge roundabout.

6.12. SUB-SECTION 4.44 - A3 LONDON ROAD BETWEEN BUS LANE (SOUTH OF THE BROW) AND PORTSDOWN HILL ROAD

6.12.1.1. As with sub-sections 4.32 and 4.42 construction within this sub-section can be accommodated for through the use of either lane realignment as a result of the wide carriageways and bus lanes. This means that overall, 2.25km out of 3.20km construction along A3 London Road can be accommodated while retaining two-way traffic flow and avoiding the need for shuttle working traffic signals. Table 15 shows the programme availability for sub-section 4.44.

Table 15 – Sub-Section 4.44 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.44	A3 London Road start of bus lane (south of The Brow) and Portsdown Hill Road	400	Lane Closure	4 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No other calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 4.31 = 1 week Section 4.33 = 3 weeks	34 weeks

Section 4.34 = 2 weekends Section 4.35 = 2 weeks Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 2 weeks	

6.12.1.2. Given the limited impact of construction along this section it is proposed that works can be completed all year round. To minimise impacts on public transport the construction within this section should not take place simultaneously with the following:

- Sub-Sections 4.31, 4.33, 4.34 and 4.35 – Sections of A3 London Road north of Ladybridge Roundabout that require shuttle working traffic signals;
- Sub-Sections 4.41 and 4.43 – Sections of A3 London Road of Ladybridge roundabout that require shuttle working traffic signals; and
- Sub-Section 4.42 – A3 London Road south of Ladybridge Roundabout where lane closure are required.

6.12.1.3. As with the northern part of A3 London Road, in this Section, the majority of side roads to the east of the construction corridor are accessible via alternate routes on wider road network. While the exact traffic management for each side-road can only be determined once the exact construction zone location is confirmed, at this stage it is proposed that the following are subject to temporary traffic signals:

- A3 London Road / The Brow: The Brow also provides access to multiple residential roads and Purbrook Park school; and
- A3 London Road / A3 southbound slip road: No properties gain access from this link.

6.13. SUB-SECTION 4.5 – B2177 PORTSDOWN HILL ROAD

6.13.1.1. Section 4.5 spans between the priority controlled junction of A3 London Road / southbound slip road and the priority controlled junction of B2177 Portsdown Hill Road / Farlington Avenue. Table 16 below shows the available programme for completion of construction on sub-section 4.5.

Table 16 - Sub-Section 4.5 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.5	Portsdown Hill Road between A3 London Road and Farlington Avenue	600	Shuttle Working	6 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 4.41 = 1 week Section 4.42 = 9 weeks Section 4.43 = 2 weeks Section 4.44 = 4 weeks Section 5.1 = 7 weeks section 5.2 = 4 weeks						25 weeks					

6.13.1.2. Aside from this however, construction work should not take place on Portsdown Hill Road at the same time as the following:

- Sub-Sections 4.41, 4.42, 4.43 and 4.44 – A3 London Road between Ladybridge Roundabout and Portsdown Hill Road; and
- Section 5.1 and 5.2 – Farlington Avenue.

6.13.1.3. The aim of these restrictions is to mitigate the potential cumulative impacts of multiple construction zones being located within a similar area as the same time. Specifically, it will avoid works on Portsdown Hill Road being completed at the same time as construction on A3 London Road south of Ladybridge Roundabout and Farlington Avenue.

6.13.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

6.13.2.1. It is likely that shuttle working will be required for the entirety of the highway network contained within Section 4.5, should off-road alternatives adjacent to Portsdown Hill Road be considered unsuitable by the contractor. Without the use of off-road alternative construction works on the carriageway will take up to 7 weeks per circuit.

6.13.2.2. Three-way temporary traffic signals will be required at the Portsdown Hill Road priority junction, where the spur road provides a link to / from A3 London Road. Temporary traffic signals or road plating will be required to maintain access may be required at the following junctions whilst the construction corridor intersect the B2177 in these locations:

- Priority junction of B2177 Portsdown Hill Road / Hilltop Crescent: This junction provides the sole vehicular access to approximately 50 private residential properties; and
- Priority junction of B2177 Portsdown Hill Road / Hoylake Road: This junction provides the sole vehicular access point to 16 private residential properties.

6.13.2.3. It should be noted that the Order limits in this Sub-section are inclusive of both the verge to the immediate south of B2177 Portsdown Hill Road, and Portsdown Hill Viewpoint Car Park. This may enable works to be completed with considerably lessened disruption to the operation of B2177 Portsdown Hill. Should works be completed in the section of car park / verge contained within the Order Limit, the section of shuttle working would reduce from approximately 600 m to approximately 400 m. This would consequently reduce the length of time traffic management is required in this Section to approximately 4 weeks.

7. SECTION 5 – FARLINGTON

7.1.1.1. Section 5 spans from the junction of B2177 Hambledon Road / Farlington Avenue in the north to the junction of A2030 Eastern Road / Fitzherbert road in the south. For ease of assessment, Section 5 has been split into two subsections, these subsections are as follows:

- **Sub-Section 5.1** – Farlington Avenue between Portsdown Hill Road and Sea View Road;
- **Sub-Section 5.2** - Farlington Avenue between Sea View Road and Havant Road;
- **Sub-Section 5.3** - Evelegh Road
- **Sub-Section 5.4** – crossing of Havant Road into Farlington Avenue or Portsmouth Water land; and
- **Sub-Section 5.5** – Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road.

7.1.1.2. The FTMS proposals are shown on Drawing EN02022-TMS-5 and 6 included in Appendix 1 to this FTMS.

7.2. SUB-SECTION 5.1 – FARLINGTON AVENUE BETWEEN PORTSDOWN HILL ROAD AND SEA VIEW ROAD

7.2.1.1. Two-way flow is likely to be able to be retained on Farlington Avenue through the use of shuttle working traffic signals between the junction with B2177 Portsdown Hill Road and the junction with Sea View Road. Table 17 shows the programme availability for construction along this sub-section.

Table 17 - Sub-Section 5.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.1	Farlington Avenue between Portsdown Hill Road and Sea View Road	650	Shuttle Working	7 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Assume work between Easter Holidays and end of summer holidays (15 weeks)

Other Restrictions	
Sections	Total Availability
Section 4.5 = 6 weeks Section 5.2 = 4 weeks Section 5.3 = 2 weeks Setion 5.5 = 8 weeks	13 weeks

7.2.1.2. Construction along sub-section 5.1 will take approximately 7 weeks per circuit. In order for the programme to be deliverable in conjunction with Sub-section 5.2 and 5.3 construction will be limited to school holidays where possible and with the exception of June and early July. In addition, construction along this section should not take place simultaneously with the following:

- Section 4.5 – Portsdown Hill Road;
- Section 5.2, 5.3 – Farlington Avenue south of Sea View Road and Evelegh Road; and
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.2.1.3. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.2.1.4. The majority of side roads which have junctions with Farlington Avenue are accessible via more than one junction and therefore alternative access is available implemented. Temporary three-way signals or road plating will be required to provide access to the Blake Road cul-de-sac.

7.3. SUB-SECTION 5.2 FARLINGTON AVENUE BETWEEN SEA VIEW ROAD AND HAVANT ROAD

7.3.1.1. Due to width restrictions on the southern section of Farlington Avenue between the junction with Sea View Road and the junction with Havant Road, a temporary road closure may be required on this link. Table 18 shows the available programme for construction on this sub-section.

Table 18 - Sub-Section 5.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.2	Farlington Avenue between Sea View Road and Havant Road	350	Road Closure	4 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

Easter and summer holidays only (8 weeks)

Other Restrictions

Sections	Total Availability
Section 4.5 = 6 weeks Section 5.1 = 7 weeks Section 5.3 = 2 weeks Section 5.5 = 8 weeks	6 weeks

7.3.1.2. Due to the location of Solent Infant School on Evelegh Road and Solent Junior School on Solent Road construction should take place during the school holidays to avoid impacts to school trips. Avoidance of term time for construction is also fundamental to ensure that emergency access is maintained during term time. In addition, construction along this section should not take place simultaneously with the following:

- Section 4.5 – Portsdown Hill Road;
- Section 5.1 and 5.3 Farlington Avenue between Portsdown Hill Road and Sea View Road and Evelegh Road;
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.3.1.3. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.3.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

7.3.2.1. While it is anticipated that a full road closure will be required, a limited section of shuttle working may be able to be implemented on Farlington Avenue between the junction with Sea View Road and the junction with Solent Road. This would allow two-way traffic to be retained on this link for the duration of works. This section is approximately 200 m long and thus it is anticipated that works would be in place on this link for approximately 2 weeks in total per circuit.

7.3.2.2. Access to residential properties which are to be impacted by the proposed road closure will not be possible for the duration of works. The section of Farlington Avenue which may require a temporary road closure to accommodate construction is approximately 350m in length but would be split into construction zones of approximately 100 m in length. As such it is only access to an estimated 10-15 properties which would be impacted at any one time.

7.3.2.3. Where road closures are required, it will not be possible for vehicles to access residential properties expect in an emergency. Access for pedestrians will however be retained at all times. To help minimise disruption to residents during road closures, the existing waiting restrictions on Farlington Avenue will be suspended, if agreed with PCC. This will allow for limited on-street parking on sections of Farlington Avenue north or south of the road closure.

7.4. SUB-SECTION 5.3 - EVELEGH ROAD

7.4.1.1. The Order Limit in this location also includes the section of Evelegh Road which spans from the junction with Farlington Avenue in the west to the 70th Portsmouth Scouts Hut in the east, providing an alternative route for one circuit along the Portsmouth Water land that runs parallel to Farlington Avenue. This section of Evelegh Road is likely to require a temporary road closure to accommodate construction. Use of this route would halve the road closure time required on Farlington Avenue between Solent Road and Havant Road.

7.4.1.3. Table 19 shows the available programme for construction on this sub-section.

Table 19 - Sub-Section 5.3 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.3	Evelegh Road	150	Road Closure	2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: Easter and summer holidays only (8 weeks)											
Other Restrictions											
Sections						Total Availability					
Section 5.1 = 8 weeks Section 5.2 = 4 weeks Section 5.5 = 9 weeks						4 weeks					

7.4.1.4. The part of Evelegh Road also provides the sole vehicular access to Solent Infant School, as stated above, all road closures on this route should be scheduled to avoid term times. Construction should also not take place simultaneously with the following sub-sections:

- Section 5.1 and 5.2 Farlington Avenue between Portsdown Hill Road and Havant Road; and
- Section 5.5 – Havant Road between the junction with Farlington Avenue and Eastern Road.

7.4.1.5. These restrictions will mitigate the cumulative impacts associated with construction being completed across several locations in the same area.

7.4.1.6. Where road closures are required, it will not be possible for vehicles to access residential properties expect in an emergency. Access for pedestrians will however be retained at all times.

7.5. DIVERSION ROUTES FOR ROAD CLOSURES ON FARLINGTON AVENUE AND EVELEGH ROAD

7.5.1.1. Appropriate diversion routes have been identified, as can be seen in Drawing EN02022-TMS-12 included in Appendix 2 to this FTMS. The diversion routes for Farlington Avenue will direct vehicles away from the Solent Road / Sea View Road and Galt Road / Evelegh Road routes which are the shortest alternative routes during road closures for traffic wishing to continue to the northern or southern end of Farlington Avenue. The proposed diversion routes are as follows:

- For traffic left from Havant Road to Farlington Avenue: The diversion will be eastwards along A2030 Havant Road, Bedhampton Road and Portsdown Hill Road with the opposite used for southbound traffic; and
- For traffic turning right from Havant Road to Farlington Avenue: The diversion with westwards along the Havant Road, A3 London Road, Boundary Way and Portsdown Hill Road to reach the northern end of Farlington Avenue with the opposite used for southbound traffic.

7.5.1.2. Should Evelegh Road be used for one circuit, traffic will be diverted along Galt Road to gain access to the eastern end of Evelegh Road.

7.5.1.3. Appropriate signage will be provided along this diversion at all junction locations. To mitigate 'rat-running' on roads adjacent to adjacent to Farlington Avenue 'Access Only' signs will be provided at main junctions.

7.6. SUB-SECTION 5.4 – CROSSING OF HAVANT ROAD INTO FARLINGTON AVENUE OR PORTSMOUTH WATER LAND

7.6.1.1. Where the Onshore Cable Corridor crosses Havant Road it is anticipated that two temporary road closures will also be required. The road closures are anticipated to be required at the following locations, assuming the contractor routes one circuit along Farlington Avenue and one through the parallel Portsmouth Water land:

- On Havant Road directly to the south of the signal-controlled junction with Farlington Avenue; and
- On A2030 Havant Road between the junctions with A2030 Eastern Road and the junction with Waterworks Road.

7.6.1.2. It is anticipated that these road closures will be required to allow the cable to move from across the respective junctions into and out of the main carriageway on Havant Road. Table 20 shows the available programme for construction on this sub-section.

Table 20 - Sub-Section 5.4 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.4	Havant Road	N/A	Road Closure	1-2 Weekends

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 4 weeks Christmas embargo, 2 weeks for South Central / Victorious Festival

Other Restrictions

Sections	Total Availability
Section 5.2 = 4 weeks Section 5.3 = 2 weeks Section 5.5 = 8 weeks	30 weeks

7.6.1.3. It is anticipated that this closure would take place either:

- Over the course of one weekend per circuit, with construction taking place from Saturday sunrise until Sunday sunset, (including night-working); or
- Over the course of two-weekends per circuit, with construction only taking place only during working hours.

7.6.1.4. Given that construction will take place during non-peak periods, there are only limited calendar restriction, relating to only Christmas and the South Central / Victorious Festival weekends. In addition, construction on this link should not coincide with:

- Section 5.2 – Farlington Avenue between Sea View Road and Havant Road;
- Section 5.3 – Evelegh Road; and
- Section 5.5 – Havant Road and Eastern Road.

7.6.1.5. These restrictions will ensure that traffic disruption is not exacerbated within the local

area, particularly given the need for diversion routes.

7.7. DIVERSION ROUTES FOR ROAD CLOSURES ON HAVANT ROAD

7.7.1.1. The proposed weekend road closures on Havant Road will require diversion routes to be implemented as follows, also shown on Drawing EN02022-TMS-13 and 14 included in Appendix 2:

- For traffic turning right from Havant Road to A2030 Eastern Road: The diversion will be eastwards along A2030 Eastern Road, onto the A27 via the J1 of the A3(M)) and back onto the A2030 Eastern Road at the A27 Farlington roundabout; and
- For traffic turning right from Havant Road to Farlington Avenue: The diversion with westwards along the Havant Road, A3 London Road, Boundary Way and Portsdown Hill Road. To reach the northern end of Farlington Avenue.

7.7.1.2. Access to Waterworks Road from Havant Road will be maintained for the duration of the road closure in this location.

7.7.1.3. The entirety of Havant Road / A2030 Havant Road contained within the Order Limit in Section 5.2 also forms part of the Area 3 HE Agreed Diversion Routes for the A27. Due to the designation of this route as an HE Agreed Diversion, any roadworks on this link will be coordinated with HE and scheduled as to not coincide with planned roadworks on the A27.

7.8. SUB-SECTION 5.5 – HAVANT ROAD AND A2030 EASTERN ROAD BETWEEN FARLINGTON AVENUE AND FITZHERBERT ROAD

7.8.1.1. The section of Havant Road / A2030 Havant Road which is included in the Order Limit spans from the signal controlled junction of Farlington Avenue / Havant Road to the priority controlled junction of A2030 Eastern Road / Waterworks Road. The section of A2030 Eastern Road contained within Section 5.5 spans from the signal junction with A2030 Havant Road / Havant Road to the junction with Fitzherbert Road. Table 21 shows the available programme for construction on this sub-section.

Table 21 - Sub-Section 5.5 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
5.5	Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road	800	Lane Closure	8 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions:

2 weeks for South Coast / Victorious Festival + 4 weeks at Christmas

Other Restrictions

Sections	Total Availability
Section 5-2 = 4 weeks Section 5.4 = 2 weekends Section 6 = 1 week	41 weeks

7.8.1.2. As with Section 5.4, construction work should be avoided in December due to Christmas shopping period and proximity to Sainsbury's / B&M Home Store in Farlington. Certain parts of May and August should also be avoided due to the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

7.8.2. DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

Havant Road

7.8.2.1. The Onshore Cable Corridor runs through Farlington Avenue / Havant Road / A2030 Eastern Road traffic signal junction, which is dual carriageway and comprises of four lanes, two in each direction. When the construction zone is running east/west along Havant Road, rather than north/south as described in Sub-section 5.4, single lane closures will be required. As a result it will also be necessary to temporarily restrict right turns between Havant Road and Farlington Avenue and between Havant Road and between Havant Road and A2030 Eastern Road in order to minimise traffic delays at the junction. The single lane closures are anticipated to be in place for

approximately 2 weeks per circuit.

A2030 Eastern Road

7.8.2.2. Construction in A2030 Eastern Road in Sub-Section 5.5 can be accommodated using temporary single lane closures. These lane closures will be in place on only one of the carriageways at any given time to minimise disruption to road users. The part of A2030 Eastern Road contained within Section 5.2 is approximately 600 m in length, and thus it is anticipated that the proposed single lane closures will be in place for approximately 7 weeks per circuit should the Onshore Cable Corridor remain within the carriageway for the entire section. Opportunities to reduce the length of lane closures will however be taken where possible and practical, through the use of Zetland Field on the eastern side of the Eastern Road. If this is used in its entirety, the length of lane closures will be reduced by 250 m and 3 weeks per circuit.

7.8.2.3. Where works are completed off-carriageway, a temporary closure and diversion of the shared-use path will be required that is present on both sides of the Eastern Road. Due the limited options for suitable diversions away from Eastern Road, any temporary closures will be facilitated by a diversion route that runs parallel to the construction zone. As with the overall works, any closure will be limited to 100 m at a time as the construction zone progresses along Eastern Road.

8. SECTION 6 – SAINSBURY'S CAR PARK

8.1.1.1. The highway network in Section 6 is inclusive of Fitzherbert Road between the junction with A2030 Eastern Road and the access to the car park of Sainsbury's Farlington Superstore. Also included in this section is the part of Sainsbury's car park. The FTMS proposals are shown on Drawing EN02022-TMS-6 included in Appendix 1 to this FTMS.

8.1.1.2. Table 22 shows a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Route to take place within this section.

Table 22 - Section 6 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
6	Fitzherbert Road	60	Lane Closure	1 Week
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
											
Notes on Calendar Restrictions: 2 weeks for South Coast / Victorious Festival + December for Christmas											
Other Restrictions											
Sections						Total Availability					
Section 5.5 = 8 weeks						38 weeks					

8.1.1.3. As with Section 5.5 construction work should be avoided in December due to Christmas shopping period and proximity to Sainsbury's and B&M Home Store. Certain parts of May and August should also be avoided due the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

8.1.1.4. Construction within this section should also not take place simultaneously with Section 5.5, to minimise the traffic impact within this area.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

Fitzherbert Road

8.1.1.5. Within Fitzherbert Road, it is anticipated that construction can be accommodated with the use of single lane closures. The part of Fitzherbert Road contained within Section 6 is approximately 60 m long and thus it is anticipated that these single lane closures will be in place for approximately 4-5 days per circuit.

8.1.1.6. It is anticipated that temporary three-way signals may need to be implemented at the junction of Fitzherbert Road and the access to Sainsbury's Car Park. The temporary signals will ensure that access to Sainsbury's Car Park is maintained at all times throughout construction.

Sainsbury's Car Park

8.1.1.7. The Order Limits contain a portion of the car park of Sainsbury's Farlington Superstore. It is anticipated that partial closure of the car park may be required for the duration of works. This partial closure would likely include the temporary suspension of parking spaces on the western side of the Car Park. Construction taking place in Sainsbury's Car Park may require the temporary realignment of the Car Park's internal road, making it one way in the southbound direction on the western side.

9. SECTION 7 – FARLINGTON JUNCTION TO AIRPORT SERVICE ROAD

9.1.1.1. Section 7 is inclusive of the A2030 Eastern Road between the junction with A27 Havant Bypass and the junction with Airport Service Road. It is anticipated that construction in Section 7 will take place entirely off carriageway, and thus no traffic management measures are deemed necessary in this Section.

9.1.1.2. Table 23 shows a breakdown of the calendar year, showing availability for the construction of the Onshore Cable Route to take place within this section. Certain parts of May and August should also be avoided due the South Coast and Victorious Music Festivals, which use the nearby Farlington playing fields as a campsite for those attending these events.

Table 23 - Section 7 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
7	A2030 Eastern Road north of Airport Service Road	N/A	N/A	N/A
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: 2 weeks for South Coast / Victorious Festival + 4 Weeks in December for Christmas											
Other Restrictions											
Sections						Total Availability					
N/A						46 weeks					

9.1.1.3. As these works are not being completed on carriageway there is no requirement avoid simultaneous construction with other nearby sections

10. SECTION 8 – EASTERN ROAD (ADJACENT TO GREAT SALTERNS GOLF COURSE) TO MOORINGS WAY

10.1.1.1. Section 8 is inclusive of the part of A2030 Eastern Road between the signal controlled junction A2030 Eastern Road / Airport Service Road in the north and the priority controlled junction of A2030 Eastern Road / Eastern Avenue in the south. Also included within Section 8 is the entirety of Eastern Avenue. The FTMS proposals are shown on Drawing EN02022-TMS-7 and 8 included in Appendix 1

10.1.1.2. For the purpose of this assessment, Section 8 has been split into two subsections as follows:

- **Sub-Section 8.1** –A2030 Eastern Road between the junction with Airport Service Road and the junction with Tangier Road;
- **Sub-Section 8.2** –A2030 Eastern Road between the junction Tangier Road and the junction with Eastern Avenue; and
- **Sub-Section 8.3** –Eastern Avenue.

10.1.1.3. Where works are completed off-carriageway on the Eastern side of Eastern Road, a temporary closure and diversion of the shared-use path will be required which forms part of National Cycle Network Route 222. Due the limited options for suitable diversions away from Eastern Road, any temporary closures will be facilitated by a diversion route that runs parallel to the construction zone. As with the overall works, any closure will be limited to 100 m at a time as the construction zone progresses along Eastern Road.

10.2. SUB-SECTION 8.1 – A2030 EASTERN ROAD BETWEEN THE JUNCTION WITH AIRPORT SERVICE ROAD AND TANGIER ROAD

10.2.1.1. Table 24 shows details of the programme availability for Section 8.1. Due the volume of traffic which uses Eastern Road construction works should be limited to Easter holiday, summer holiday periods or June (outside of the football season). During the summer construction will also need to avoid Victorious Festival at the end of August.

Table 24 – Sub-Section 8.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.1	A2030 Eastern Road between Airport Service Road and Tangier Road	1200	Lane Closures	4 Weeks (24hr, 7-Day construction) 9 Weeks (10hr, 7-Day construction)

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and June, July, August (13 weeks) available

Other Restrictions

Sections	Total Availability
Section 8.2 = 1-10 weeks	5-14 weeks depending on option used for Section 8.2

10.2.1.2. Construction within this section should also not take place simultaneously with any other construction works within A2030 Eastern Road contained in Section 8 to mitigate the cumulative impacts of the construction taking place in two sections of the same road.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

10.2.1.3. It is anticipated that the construction corridor on A2030 Eastern Road will require single lane closures on both the southbound and northbound carriageways between

the junction with Airport Service Road and the junction with Tangier Road. These single lane closures will be scheduled as so they do not take place concurrently on the northbound and southbound carriageways as to minimise disruption. This section of Section 8.1 is approximately 1200 m long.

10.2.1.4. Discussions with PCC indicate that due to the heavily trafficked nature of this link, the use of 24-hour, seven-day a week working would be preferable in this section to minimise the period that traffic management is in place. Use of 24-hour working by construction teams on this link would increase the progression rate to approximately 45 m per 24-hour period. At this rate of construction, works on this link are likely to take approximately 4 weeks per circuit.

10.2.1.5. If 24-hour working was employed on a five-day working week the period of construction per circuit would be 6 weeks. If the standard 10-hour day was used across a seven-day period, the construction period would take 9 weeks per circuit. This highlights the mitigation achieved by use of 24-hour, seven-day a week working.

10.2.1.6. It should also be noted that between the junction with Burrfields Road and Tangier Road may be able accommodate installation of at least one circuit off-carriageway, using the verge on the eastern verge of the A2030 Eastern Road. Where on-carriageway works are required, the preferred option would be single lane closures on the southbound carriageway only. This is preferred over use of the northbound carriageway as the two-lane southbound carriageway merges into one lane further downstream, therefore meaning that a single lane closure will have only a minor impact on overall traffic delay.

10.2.1.7. Four junctions intersect the A2030 in Section 8.1, these are as follows:

- Signal controlled junction of A2030 Eastern Road / Airport Service Road;
- Signal controlled junction of A2030 Eastern Road / Burrfields Road;
- Priority controlled access junction, providing access to Langstone Harbour Viewing Car Park; and
- Signal controlled junction of A2030 Eastern Road / Tangier Road.

10.2.1.8. Due to the volume of traffic which travels through the three signal-controlled junctions in Section 8.1, it is not considered appropriate to temporarily suspend side road access throughout construction regardless of which, if any, of the carriageways on this link are impacted. Whilst the roads which gain access from these signal junctions are not cul-de-sacs, and consequently remain accessible via alternate routes on the wider road network, the level of demand on them renders it unfeasible for access to be temporarily suspended via A2030 Eastern Road. Where necessary, temporary lights will instead be implemented, if required, although depending on the location of the Construction Zone it may be possible for each junction to operate under the existing traffic signal control but with single lane closures on entry or exit.

10.2.1.9. A2030 Eastern Road in Section 8.1 grants the sole vehicular access to The Great Salterns Mansion Harvester, and Harbourside Holiday Park, a complex of 69 holiday homes. Both the Harvester and Holiday Park gain access exclusively from the signal-controlled junction of A2030 Eastern Road / Burrfields Road, and thus access will continue to be facilitated through phasing of the construction.

10.2.1.10. The access to Langstone Harbour Viewing Car Park may require temporary suspension throughout the course of construction on the southbound carriageway, although where possible it will be maintained by road plating of the access. This access will only be impacted by the installation of one cable, and the for a period of one week or less.

10.3. SUB-SECTION 8.2 - A2030 EASTERN ROAD BETWEEN TANGIER ROAD AND EASTERN AVENUE

10.3.1.1. Section 8.2 includes the section of A2030 Eastern Road which spans from the junction with Tangier Road to the junction with Eastern Avenue. Table 24 shows details of the programme availability for Section 8.2. Due the volume of traffic which uses Eastern Road construction works should be limited to Easter holiday, summer holiday periods or May / June outside of the football season. During the summer construction will also need to avoid Victorious Festival at the end of August.

Table 25 - Sub-Section 8.2 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.2	A2030 Eastern Road between Tangier Road and Eastern Avenue	1300	Lane Closures	1 Week (24-hr, 7-Day working and use of Milton Common) 10 Weeks (Eastern Road only, 7-Day working)

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter Holidays (2 weeks) and half of May (outside football

season) June, July, August (15 weeks) available	
Other Restrictions	
Sections	Total Availability
Section 8.1 = 4-9 weeks depending on working hours	8-13 weeks depending on Option used for Section 8.1

10.3.1.2. Construction within this section should also not take place simultaneously with any other construction works within A2030 Eastern Road contained in Section 8 to mitigate the cumulative impacts of the construction taking place in two sections of the same road.

DESCRIPTION OF TRAFFIC MANAGEMENT MEASURES

10.3.1.3. Section 8.2 is inclusive of multiple options for cable routeing, these options are as set out below. Any construction taking place within the carriageway of A2030 Eastern Road will be facilitated by single lane closures.

Option 1 – Both Circuits within Milton Common

10.3.1.4. Both circuits exiting the carriageway at the junction of A2030 Eastern Road at the junction of A2030 Eastern Road / Tangier Road, travelling south through the centre of Milton Common.

10.3.1.5. Should both circuits be accommodated off carriageway Milton Common, then traffic management in the form of single lane closures would only be required for 300m. As with Section 8.1, 24-hour, seven-day a week working would be preferable to minimise the period of disruption, leading to a 1 week construction period.

10.3.1.6. If 24-hour working was employed on a five-day working week the period of construction per circuit would be 2 weeks. If the standard 10-hour day was used across a seven-day period, the construction period would take 3 weeks per circuit. This highlights the mitigation achieved by use of 24-hour, seven-day a week working.

Option 2 – One Circuit within Milton Common

10.3.1.7. Should it only be practicable for one of the construction corridors to be accommodated off-carriageway, one construction corridor may be required to be installed on-carriageway. This would require a single lane closure on the southbound carriageway of A2030 Eastern Road between Tangier Road and Eastern Avenue. For the majority of this section the Eastern Road contains only one southbound lane, the lane closure would be accommodated by lane realignment. This would involve either the existing central hatching or one of the two northbound lanes operating in the southbound direction. It is considered that this will not have a significant impact

on northbound traffic flow, due to this being constrained further south by the Eastern Road / Velder Avenue / Milton Road traffic signal junction.

10.3.1.8. This would involve the same construction period as Option 1 for one circuit but the other would require 10 weeks of single lane closures if standard 10-hour day was used across a seven-day period. 24-hour working is not possible on this link due to proximity of residential properties.

10.3.1.9. There are no junctions which intersect the southbound carriageway of A2030 Eastern Road in the section which would be impacted by this single lane closure. Furthermore, no private properties gain access from the southbound carriageway in this part of A2030 Eastern Road.

Option 3 – Both Circuits within A2030 Eastern Road

10.3.1.10. Should the use of all off-carriageway options be excluded by contractors as unfeasible, both cable circuits will be placed in A2030 Eastern Road in Section 8.2. This would require temporary single lane closures on both the southbound and northbound carriageways, albeit at separate times. Should both cable circuits be placed within the carriageway, traffic management would span between the junctions with Tangier Road and the junction with Eastern Avenue. This section of A2030 Eastern Road is approximately 1.3 km in length and it is anticipated that if required, the traffic management on this link will be in place for 10 weeks per circuit if standard 10-hour day was used across a seven-day

10.3.1.11. It should be noted that 24-hour working is not appropriate on the majority of the section of A2030 Eastern Road contained within Section 8.2, due to its proximity to residential dwellings.

10.3.1.12. Six junctions intersect A2030 Eastern Road between the junction with Tangier Road and the junction with Eastern Avenue, these junctions are as follows:

- A2030 Eastern Road / Sword Sands Road;
- A2030 Eastern Road / Hayling Avenue;
- A2030 Eastern Road / Stride Avenue;
- A2030 Eastern Road / Kirpal Road / East Shore Road;
- A2030 Eastern Road / Langstone Road; and
- A2030 Eastern Road / Eastern Avenue.

10.3.1.13. It is proposed that, should this route be required, a temporary restriction of right turn movements is implemented at the junction with Hayling Avenue, Stride Avenue, Langstone Road and Sword Sands Road throughout the duration of construction on carriageway.

10.4. SUB-SECTION 8.3 - EASTERN AVENUE

10.4.1.1. Eastern Avenue, a residential street off the A2030, which gives access to several side roads and private residential properties. Traffic management on Eastern Avenue will only be required in the eventuality that works cannot be accommodated in Milton Common. Table 26 shows a details of the programme availability for Section 8.3.

Table 26 - Sub-Section 8.3 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.3	Eastern Avenue	220	Road Closure	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions

Sections	Total Availability
section 9.11 = 3 weeks Section 9.12 = 5 weeks	44 weeks

10.4.1.2. Eastern Avenue is approximately 220 m long and thus it is anticipated that if traffic management measures on this link are required, they will be in place for approximately 3 weeks per circuit. Due to width restrictions on this link, should construction be required in Eastern Avenue, a full road closure will likely be required. Use of the route option that includes Milton Common rather than Eastern Avenue would remove the need for this road closure.

10.4.1.3. Eastern Avenue provides the sole vehicular access to the residential roads of Salterns Avenue, Shore Avenue and Lacey Road. As such, if use of this link is required construction on this link be split into two parts. The first construction zone would span from the junction of A2030 Eastern Road / Eastern Avenue to just north of the junction of Eastern Avenue / Salterns Avenue. This would allow vehicular access to Salterns Avenue, the adjoining roads, and the southern section of Eastern Avenue to be retained via the junction with Moorings Way. The second construction

zone would span the remainder of Eastern Avenue which falls to the south of the junction with Salterns Avenue, this would allow continued access to Salterns Avenue / Shore Avenue and the northern section of Eastern Avenue to be retained.

11. SECTION 9 - MOORINGS WAY TO BRANSBURY ROAD

11.1.1.1. Depending upon the chosen route in Section 8, Section 9 will either start at the Moorings Way to Furze Lane bus link (if the Onshore Cable Route is constructed within the centre of Milton Common) or at the point on Moorings Way adjacent to Eastern Avenue. The FTMS proposals are shown on Drawing EN02022-TMS-8 included in Appendix 1 to this FTMS.

11.1.1.2. Contained within Section 9 are the following eight sub-sections:

- **Sub-Section 9.1** – Moorings Way:
  - **Sub-section 9.11** - Moorings Way between Eastern Avenue and Goodwit Road;
  - **Sub-section 9.12** – Moorings Way between Goodwit Road and the Moorings Way to Furze Lane Bus Link;
- **Sub-Section 9.2** – Furze Lane:
  - **Sub-section 9.21** – Moorings Way to Furze Lane bus link;
  - **Sub-section 9.22** – Furze Lane;
- **Sub-Section 9.3** – Other Roads to Bransbury Park:
  - **Sub-section 9.31** – Locksway Road;
  - **Sub-section 9.32** – Longshore Way;
  - **Sub-section 9.41** – Kingsley Road; and
  - **Sub-section 9.42** - Yeo Court

11.1.1.3. It should be noted that sub-sections 9.11 and 9.12 will only be required if Section 8 of the Onshore Cable Route is constructed along the section of the A2030 Eastern Road between Hayling Avenue and Eastern Avenue or on the western side of Milton Common. Conversely, if the Onshore Cable Route is constructed within the centre of Milton Common, Section 9 will start at sub section 9.21.

11.1.1.4. Additionally, sub-section 9.21 and 9.22 will only be affected if the Onshore Cable is built along the eastern side of the University of Portsmouth Langstone Student Village complex and via Longshore Way. If this option is not taken forward, sub-section 9.32 will not be necessary.

11.2. SUB-SECTION 9.11 – MOORINGS WAY BETWEEN EASTERN AVENUE AND GOODWIT ROAD

11.2.1.1. As with Section 8, the Order Limits with Section 9.11 and 9.12 contains multiple options for cable routeing along Moorings Way. These options are as follows:

- All works accommodated off-carriageway along the southern edge of Milton Common, with the construction corridor re-joining the carriageway at the start of the Moorings Way Furze Lane Bus Link; and
- One circuit to be placed in the carriageway on Moorings Way and one installed within the southern edge of Milton Common.

11.2.1.2. It is not anticipated that there would be any eventuality in which both HVDC Circuits would need to be accommodated within the carriageway on Moorings Way.

11.2.1.1. Table 27 shows the programme availability for Sub-section 9.11, which will require shuttle working traffic signals to facilitate installation of at least one of the HVDC cables. These restrictions would not be required if the Cables were installed within the edge of Milton Common.

Table 27 - Sub-Section 9.11 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.11	Moorings Way between Eastern Avenue and Godwit Road (passes Mooring Way Infant School)	250	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: Only Easter and Summer holidays = 8 weeks

Other Restrictions

Sections	Total Availability
Section 9.12 = 5 weeks	8 weeks

11.2.1.2. As this sub-section runs past Moorings Way Infant school as restriction has been placed on construction works to during school holidays only. In addition, it is recommended that construction does not take place simultaneously with works in Sub-Section 9.12 (Moorings Ways) when these works are taking place on carriageway. These restriction to minimise disruption to residents and school pick-up / drop-off times.

11.3. SUB-SECTION 9.12 – MOORINGS WAY BETWEEN GOODWIT ROAD AND MOORINGS WAY TO FURZE LANE BUS LINK

11.3.1.1. Table 28 shows the programme availability for Sub-section 9.11, which will require shuttle working traffic signals to facilitate installation of at least one of the cable cicuits. These restrictions would not be required if the Onshore Cables were installed within the edge of Milton Common.

Table 28 - Sub-Section 9.12 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.12	Moorings Way between Goodwit Road and Moorings Way to Furze Lane Bus Link	500	Shuttle Working	5 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar Restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 9.11 = 3 weeks						49 weeks					

11.3.1.2. As this sub-section runs past Moorings Way Infant school as restriction has been placed on construction works to during school holidays only. In addition, it is recommended that construction does not take place simultaneously with works in Sub-Section 9.12 (Moorings Ways) when these works are taking place on carriageway. These restriction to minimise disruption to residents and school pick-up / drop-off times.

11.3.1.3. To accommodate one circuit on-carriageway, shuttle working would be required on Moorings Way between the cycle connection that links Eastern Avenue with Moorings Way and the junction of Moorings Way / Sanderling Road. This section of Moorings Way is approximately 800 m in length and thus it is anticipated that construction on this link will take approximately 8 weeks to complete.

11.3.1.4. The section of Moorings Way in Section 9 contains junctions with the following side roads:

- Warren Avenue;
- Schooner Way; and
- Sanderling Road.

11.3.1.5. None of the side roads adjoining this link are cul-de-sacs, and therefore all are accessible via alternate routes throughout the duration of works. Where possible, access onto Mooring Way will also be maintained through road plating.

11.4. SECTION 9.21 – MOORINGS WAY TO FURZE LANE BUS LINK

11.4.1.1. Table 29 shows the programme availability for Sub-section 9.21. The Moorings Way to Furze Lane Bus Link is a single lane road for the exclusive use of buses and cyclists. It provides a connection between Moorings Way and Furze Lane.

Table 29 - Sub-Section 9.21 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.21	Moorings Way to Furze Lane bus link	370	Road Closure	3 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar Restrictions identified

Other Restrictions	
Sections	Total Availability
Section 9.22 = 2 weeks	50 weeks

11.4.1.2. Due to width restrictions on this link it is anticipated that a full road closure will be required throughout the duration of works. In order to minimise disruption both circuits should be constructed within the Bus Link at the same time.

11.4.1.3. Throughout the duration of works, the adjoining footway will remain open to allow pedestrians continued passage. It is also anticipated that this footway will be temporarily open up to allow for use by cyclists throughout the duration of the works. Continued access to this link as a through-route for pedestrians and cyclists is required due to the long diversion which would otherwise be required.

11.4.1.4. To mitigate the closure of the Bus Link, a shuttle bus service will be provided for the period of construction works, routing along Moorings Way and Locksway Road and linking Service 13 which will continue along Milton Road. Such a measure will ensure that access to the bus service is retained for all existing passengers.

11.5. SUB-SECTION 9.22 – FURZE LANE

11.5.1.1. Table 30 shows the programme availability for Sub-section 9.22. Furze Lane provides a link between the Furze Lane bus link and Locksway Road.

Table 30 – Sub-Section 9.22 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.22	Furze Lane	150	Shuttle Working	2 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions	
Sections	Total Availability
Section 9.21 = 3 weeks	49 weeks

11.5.1.2. Furze Lane is approximately 150 m long and thus it is anticipated that construction on this link will take 2 weeks per circuit. It is anticipated that on this link, two-way shuttle working facilitated by temporary signals will be required throughout the duration of works.

11.5.1.3. Temporary suspension of access to the junctions with Broom Square may be required during works. Suspension of access to Broom Square will only be implemented at one of the two access junctions at any one time to ensure that access is retained at all times.

11.6. SUB-SECTION 9.31 - LOCKSWAY ROAD

11.6.1.1. Sub-section 9.31 contains the section of Locksway Road between the access road to Milton Piece Allotments and Thatched House Public House. Table 31 shows the programme availability for Sub-section 9.22

Table 31 – Sub-Section 9.31 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.31	Locksway Road between access rod to Milton Piece Allotments and	90	Shuttle Working	1 Week

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: N/A

Other Restrictions	
Sections	Total Availability
Section 9.22 = 2 weeks Section 9.32 = 2 weeks	48 weeks

11.6.1.2. It is anticipated that shuttle working facilitated by temporary traffic signals will be required on the section of Locksway Road between the junction with Furze Lane and the access to Thatched House Public House to accommodate installation of each cable circuit.

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

11.6.1.4. The part of Locksway Road for which shuttle working is required provides exclusive vehicular access to Locks Sailing Club, Langstone Harbour Fishermen's Association, Thatched House Public House and Old Oyster Public House. Access to all of the aforementioned premises will be retained throughout construction where possible.

11.7. SUB-SECTION 9.32 – LONGSHORE WAY

If the Cable route uses the Portsmouth University playing fields shuttle working traffic signals will be required on Longshore Way for 70-150 or 1-2 weeks per circuit, depending on where the playing fields. Table 32 shows the programme availability for sub-section 9.32.

Table 32 – Sub-Section 9.32 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.32	Longshore Way	150	Shuttle Working	2 Weeks
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
Section 9.31 = 1 week						51 weeks					

11.7.1.1. The only restriction on construction relates to Section 9.31 Locksway Way Road. This will avoid two sets of shuttle working traffic signals within the same vicinity.

11.8. SUB-SECTION 9.41 - KINGSLEY ROAD

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

- The first option is for the Cables to intersect Kingsley Road in a north-south orientation, whilst moving from the fields to the immediate north of the carriageway, to those in the south. As this would mean the cable route only impacts a limited section of highway, this option would likely require shuttle working to be implemented for 1-2 days as the construction corridor passes across the link; and
- The second option is for the cable route to run along Kingsley Road in an east-west alignment for an up-to 150 m section between Yeo Court and Ironbridge Lane.

11.8.1.2. Regardless of which options is used for construction, it is anticipated that shuttle working facilitated by temporary traffic signals will enable two-way flow to be retained on this link throughout the duration of works.

11.8.1.3. Table 33 provides the programme availability for Section 9.41 assuming that the full 150m of Kingsley Road is required.

Table 33 – Sub-Section 9.41 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.41	Kingsley Road between Ironbridge Lane and Yeo Court	150	Shuttle Working	2 Weeks

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: No calendar restrictions identified

Other Restrictions	
Sections	Total Availability
N/A	52 weeks

11.8.1.4. No calendar restrictions have been identified for Section 9.41 and no restrictions apply due to construction on nearby links.

11.9. SUB-SECTION 9.42 – YEO COURT

11.9.1.1. The entirety of Yeo Court is contained within Section 9. It is anticipated that a full road closure will be required on this link for approximately one week. During this closure, vehicle access will not be possible for the duration of the works but pedestrian access will be retained at all times. Table 34 shows the programme availability for completion of Sub-section 9.42.

Table 34 – Sub-Section 9.42 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.42	Yeo Court	40	Road Closure	1 Week
Calendar Restrictions				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions: No calendar restrictions identified											
Other Restrictions											
Sections						Total Availability					
N/A						52 weeks					

12. SECTION 10 - EASTNEY (LANDFALL)

12.1.1.1. Section 10 contains the part of the Onshore Cable Corridor between the junction of Henderson Road / Bransbury Road and Landfall in the car park off Fort Cumberland Road near to Fraser Range. The highway links included in Section 10 are as follows:

- **Sub-section 10.1** Henderson Road – between the junction with Bransbury Road and the junction with Fort Cumberland Road; and
- **Sub-section 10.2** Fort Cumberland Road – between the junction with Henderson Road and the junction with Lumsden Road;

12.1.1.2. The FTMS proposals are shown on Drawing EN02022-TMS-9 included in Appendix 1.

12.2. SUB-SECTION 10.1 – HENDERSON ROAD

12.2.1.1. Table 35 provides the programme availability for Section 10.1 along Henderson Road

Table 35 – Sub-Section 10.1 Programme Availability

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
10.1	Henderson Road	300	Shuttle Working	3 Weeks

Calendar Restrictions

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Notes on Calendar Restrictions: 1 week for Great South Run

Other Restrictions

Sections	Total Availability
Section 10.2 - 4 weeks	47 weeks

12.2.1.2. As the Great South Run route uses Bransbury Road and Henderson Road it is proposed that construction work avoids the month of October, when this event is usually held.

12.2.1.3. Overall, Henderson Road is able to accommodate the construction corridor and retain two-way traffic through the use of single lane closures with shuttle working traffic signals. This would be for approximately 300 m or 3 weeks per circuit.

12.3. SUB-SECTION 10.2 – FORT CUMBERLAND ROAD

12.3.1.1. Table 36 provides the programme availability for Section 10.2 along Fort Cumberland Road.

Table 36 – Sub-Section 10.2 Programme Availability

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

Calendar Restrictions											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Notes on Calendar Restrictions:											

Other Restrictions	
Sections	Total Availability
Section 10.1 - 4 weeks	48 weeks

12.3.1.2. Fort Cumberland Road is able to accommodate the construction corridor and retain two-way traffic through the use of single lane closures with shuttle working traffic signals. This would be for approximately 300 m or 3 weeks per circuit. Temporary traffic signals / road plating will be required for the following side roads:

- Henderson Road;
- Halliday Crescent;
- Ferry Road;
- Gibralter Road; and
- Lumsden Road.

12.3.1.3. None of these links are cul-de-sacs, and as such the Onshore Cable Corridor in Section 10 does not form the sole access point for any of them. As such, access will be maintained at all times via alternate routes on the wider road network.

12.3.1.4. A temporary suspension of access to the car parks serving the flats on the southern side of the carriageway may be required as works progress.

12.3.1.5. Vehicular access to Eastney lifeboat station will be maintained throughout the duration of construction through the strategic phasing of construction zones in Henderson Road to ensure access to either Ferry Road or Fort Cumberland Road is retained at all times.

13. SUMMARY OF FTMS

13.1.1.1. This document has provided the Framework Traffic Management Strategy for construction of the Proposed Development, based upon the Order Limits, the construction methodology and national guidance regarding the design / implementation of traffic management measures. The Final TMS to be implemented for each phase of the Proposed Development will be dependent upon the detailed design of the Onshore Cable and contractor preferences, noting the requirements contained within this document and the Contractor's Technical Specification. All detailed proposals for TMS will be discussed with HCC / PCC at the earliest opportunity to allow for review and amendment of proposals if required.

13.1.1.2. A summary of the FTMS by section is provided below.

13.1.1.3. Those marked with * represent options for the Onshore Cable Corridor which may not be required due to alternative options being available.

Table 37 – Section 1 – Lovedean (Converter Station Area)

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

Table 38 – Section 2 – Anmore

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

Table 39 – Section 3 Denmead/ Kings Pond Meadow

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

Table 40 – Section 4 - B2150 Hambledon Road to Farlington Avenue

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
4.1	B2150 Hambledon Road between Soake Road and Milton Road	1300	Shuttle working TS	8-13 weeks
4.2	B2150 Hambledon Road and A3 Maurepas Way between Milton Road and A3 London Road	1000	Lane Closure	10 weeks
4.31	A3 London Road between Forest End Roundabout and south of the junction with Forest End	100	Shuttle Working	1 week
4.32	A3 London Road between south of junction with Forest End and southern end of bus lanes (in proximity to Poppy Fields)	1000	Lane Closure	10 weeks
4.33	A3 London Road between Poppy Fields and just south of Post Office Road	250	Shuttle Working	3 weeks

4.34	A3 London Road between Post Office Road and Rocking Horse Nursery	90	Road Closure	2 weekends
4.35	A3 London Road between Rocking Horse Nursery and Ladybridge roundabout	170	Shuttle Working	2 weeks
4.41	A3 London Road between Ladybridge roundabout and start of bus lane	80	Shuttle Working	1 week
4.42	A3 London Road between start of bus lane and Lansdowne Avenue	850	Lane Closure	9 weeks
4.43	A3 London Road between Lansdown Avenue and start of bus lane (south of The Brow)	250	Shuttle Working	3 Weeks
4.44	A3 London Road start of bus lane (south of The Brow) and Portsdown Hill Road	400	Lane Closure	4 Weeks
4.5	Portsdown Hill Road between A3 London Road and Farlington Avenue	600	Shuttle Working	6 Weeks

Table 41 - Section 5 – Farlington

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

5.5	Havant Road and A2030 Eastern Road between Farlington Avenue and Fitzherbert Road	800	Lane Closure	8 Weeks

Table 42 - Section 6 –Sainsbury's Car Park

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

Section 7 – Farlington Junction to Airport Service Road

13.1.1.4. No traffic management is required in Section 7.

Section 8 – A2030 Eastern Road to Moorings Way

Table 43 - Section 8 – A2030 Eastern Road to Moorings Way

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
8.1	A2030 Eastern Road between Airport Service Road and Tangier Road	1200	Lane Closures	4 Weeks (24hr, 7-Day construction) 9 Weeks (10hr, 7-Day construction)
8.2	A2030 Eastern Road between Tangier Road and Eastern Avenue	1300	Lane Closures	1 Week (24-hr, 7-Day working and use of Milton Common) 10 Weeks (Eastern Road only, 7-Day working)
8.3	Eastern Avenue	220	Road Closure	3 Weeks

Table 44 - Section 9 – Moorings Way to Bransbury Road

Section	Description	Length (m)	Proposed TM	Duration Per Circuit
9.11	Moorings Way between Eastern Avenue and Godwit Road (passes Mooring Way Infant School)	250	Shuttle Working	3 Weeks
9.12	Moorings Way between Goodwit Road and Moorings Way to Furze Lane Bus Link	500	Shuttle Working	5 Weeks
9.21	Moorings Way to Furze Lane bus link	370	Road Closure	3 Weeks
9.22	Furze Lane	150	Shuttle Working	2 Weeks
9.31	Locksway Road between access rod to Milton Piece Allotments and	90	Shuttle Working	1 Week
9.32	Longshore Way	150	Shuttle Working	2 Weeks
9.41	Kingsley Road between Ironbridge Lane and Yeo Court	150	Shuttle Working	1 Day to 2 Weeks
9.42	Yeo Court	40	Road Closure	1 Week

Table 45 - Section 10 – Eastney (Landfall)

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

REFERENCES

Department for Transport. (2009). Traffic Signs Manual Chapter 8: Traffic Safety Measures and Signs for Roadworks and Temporary Situations.

Department for Transport. (2012). New Roads and Street Works Act 1991: Code of Practice of Co-ordination of Street Works and Works for Road Purposes and Related Matters (Fourth Edition).

Department for Transport. (2013). Safety at Streetworks and Roadworks: A Code of Practice .

HM Government. (1991). New Roads and Street Works Act.

Appendix 1 – FTMS Drawings

N

SECTION 1

Key

- Red Line Boundary
- Section Breaks
- BOAT
- Footpath
- Temporary Road Closure
- Temporary Shuttle Working
- D — Diversion Point
- Temporary signals
- Lovedean Substation
- 30 — Temporary speed limits to be implemented

Shuttle working may be required during construction of Converter Station access junction

Diversion route to be required for closure of Broadway Lane, see Drawing EN020022-TMS11

CONTINUED ON SHEET 2 BELOW

0 0.1 0.2 0.4 Km

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

REV	DATE	BY	DESCRIPTION	CHK	APP
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DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
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CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 1

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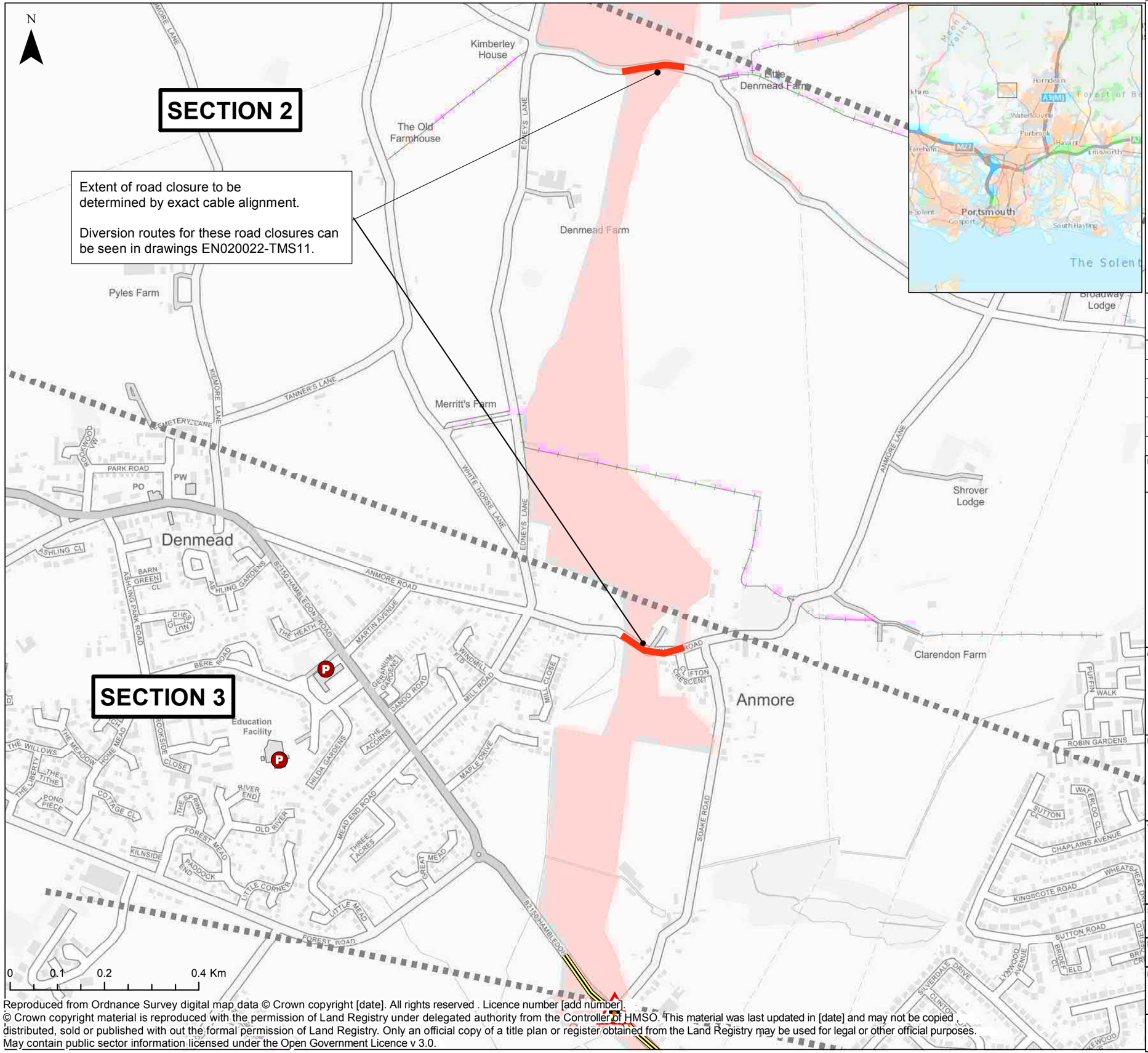

Key

- Order Limits
- Section Breaks
- Temporary Road Closure
- Temporary Shuttle Working
- Temporary signals may be required

Public Rights of Way

- Bridleway
- Footpath

School Type

- Primary

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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TITLE: FrameworkTraffic Management Plan - Section 2/3

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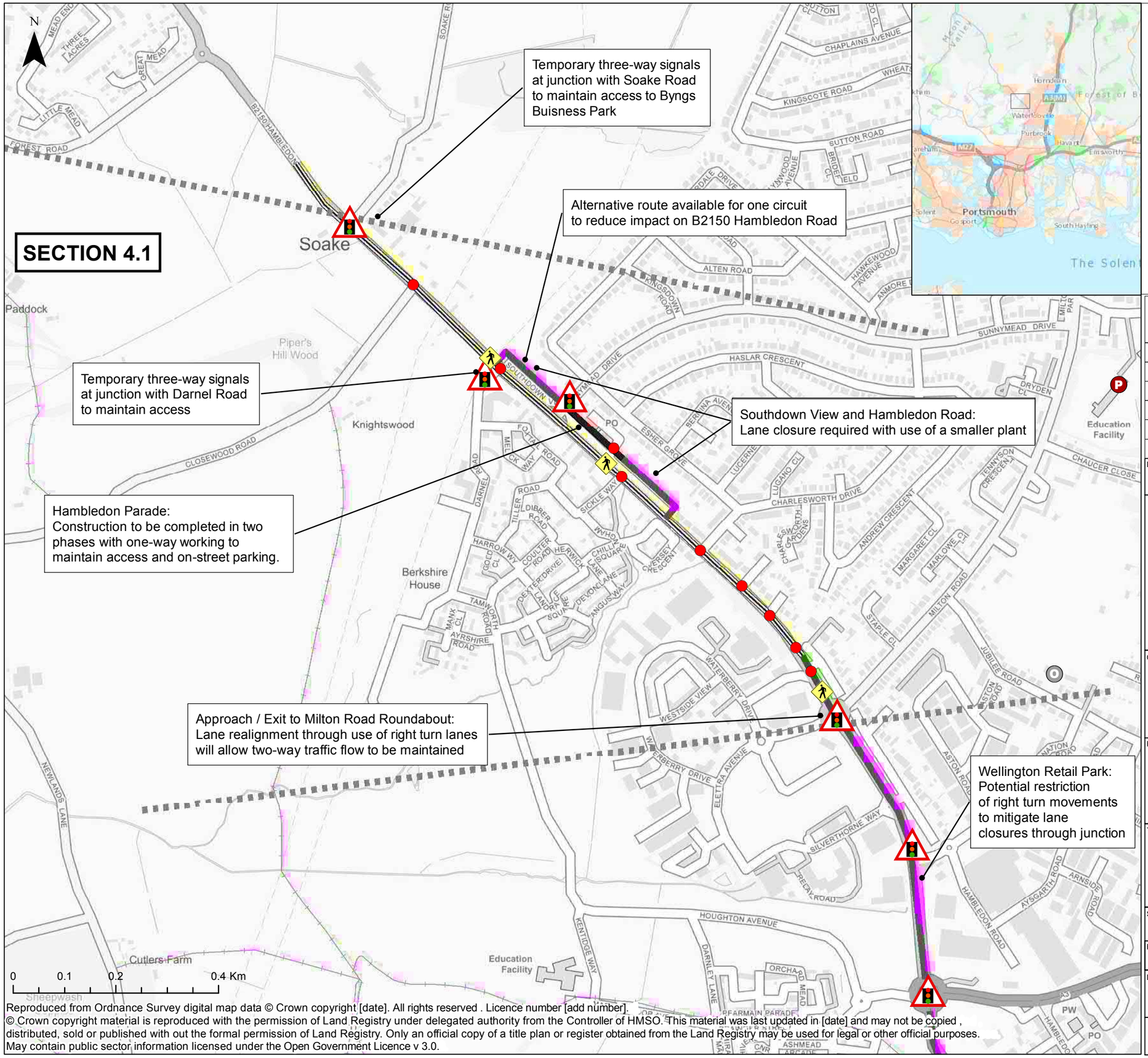

Key

- Section Breaks

Public Rights of Way
- Footpath

Traffic Management
- Temporary One-way Working
- Temporary Shuttle Working
- Temporary Single Lane Closure
- Temporary Lane Realignment
- Contractor preference dependent on exact location of construction zone
- Temporary relocation or suspension of multi-user crossing
- Temporary signals may be required
- Primary School
- Other Educational Facility

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

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TITLE: Framework Traffic Management Proposals - Section 4.1

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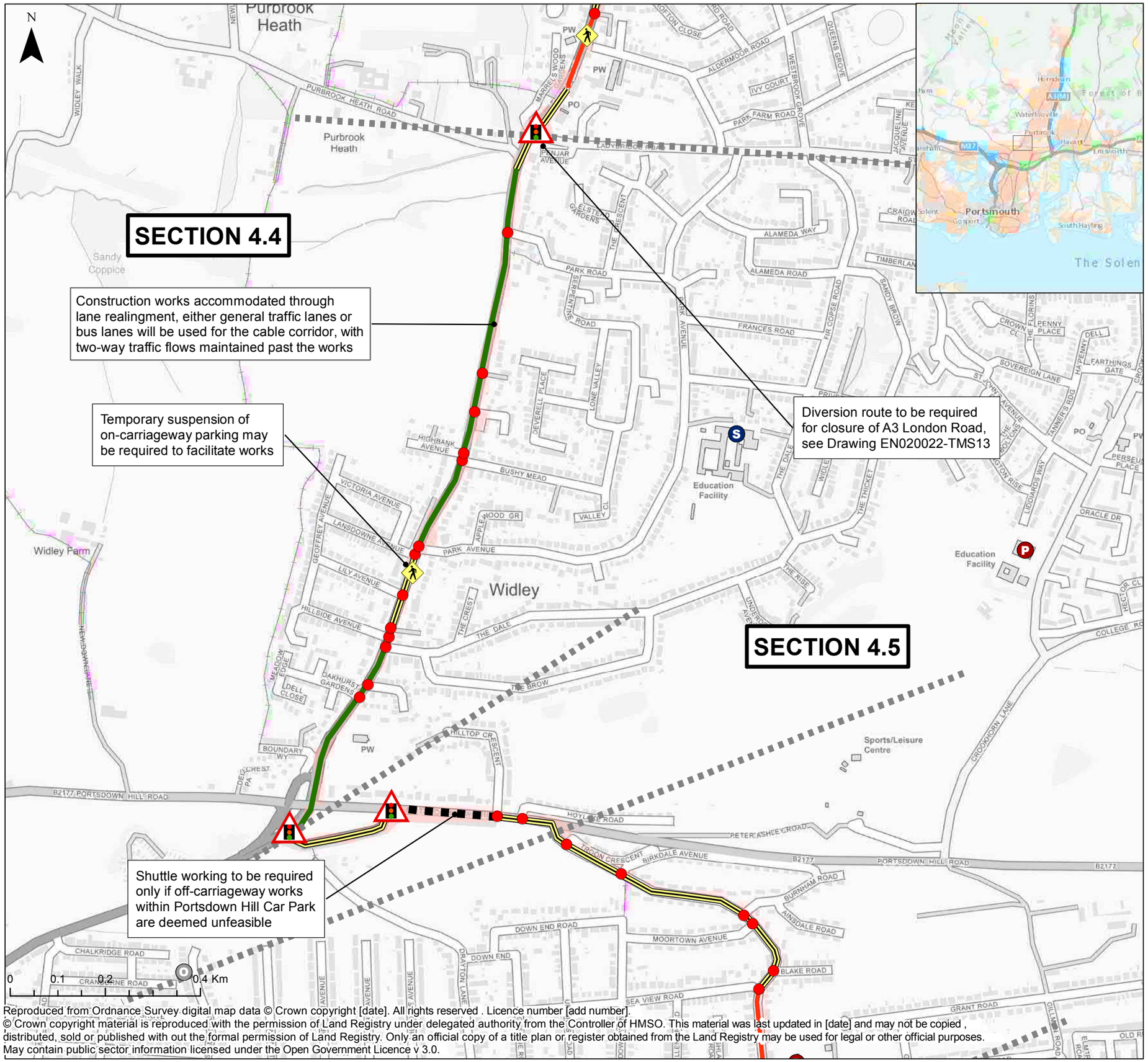

AQUIND Interconnector

Section Breaks

Order Limits

School Type

Primary School

Secondary School

Other Educational Facility

Contractor preference dependent on exact location of construction zone

Temporary relocation or suspension of multi-user crossing

Temporary signals may be required

Traffic Management

TM required if off-carriageway routes are considered unsuitable by the contractor

Temporary Road Closure

Temporary Shuttle Working

Temporary Lane Realingment

Public Rights of Way

Footpath

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PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 4.4 / 4.5

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Temporary road closures may be required on Farlington Avenue to facilitate construction works. If required this will impact 10 - 15 properties at a time.

Existing waiting restrictions will be suspended during road closure to allow on-street parking.

Diversion routes for this road closure can be seen in drawing EN020022-TMS12.

Temporary road closure may be required on Evelegh Road if Cable Corridor uses Portsmouth Water Land.

The diversion route for this closure can be seen in EN020022-TMS12

SECTION 5.1

SECTION 5.2

Single lane closures required through Havant Road / Farlington Avenue / A2030 Eastern Road traffic signal junction

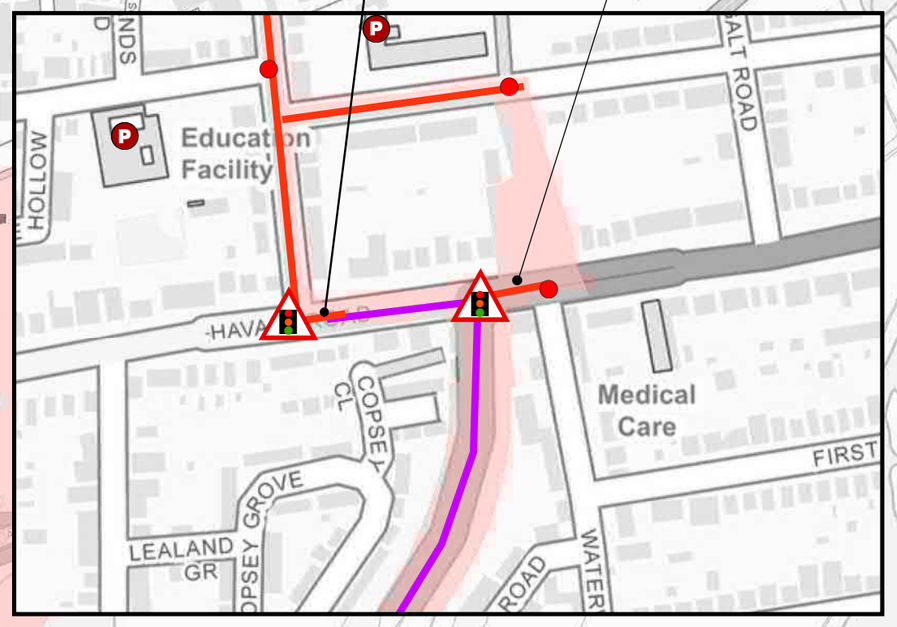
Temporary road closures may be required at the junctions of Farlington Avenue / Havant Road and the junction of A2030 Eastern Road / Havant Road.

Each of the road closures will be undertaken during the weekend

Diversion routes for these road closures can be seen in drawing EN020022-TMS13 and EN020022-TMS14

Single lane closure to be required only if off-carriageway works through Zetlands Fields are deemed unfeasible

SECTION 6



0 0.1 0.2 0.4 Km

AQUIND Interconnector
- Order Limits
- Section Breaks

Traffic Management

- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Road Closure
- Temporary Shuttle Working
- Temporary Single Lane Closure
- Temporary Lane Realignment

Temporary signals may be required

Contractor preference dependent on exact location of construction zone

School Type
- Primary School
- Secondary School

Public Rights of Way
- BOAT
- Bridleway
- Footpath
- Restricted Byway

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PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 5.1 / 5.2 / 6

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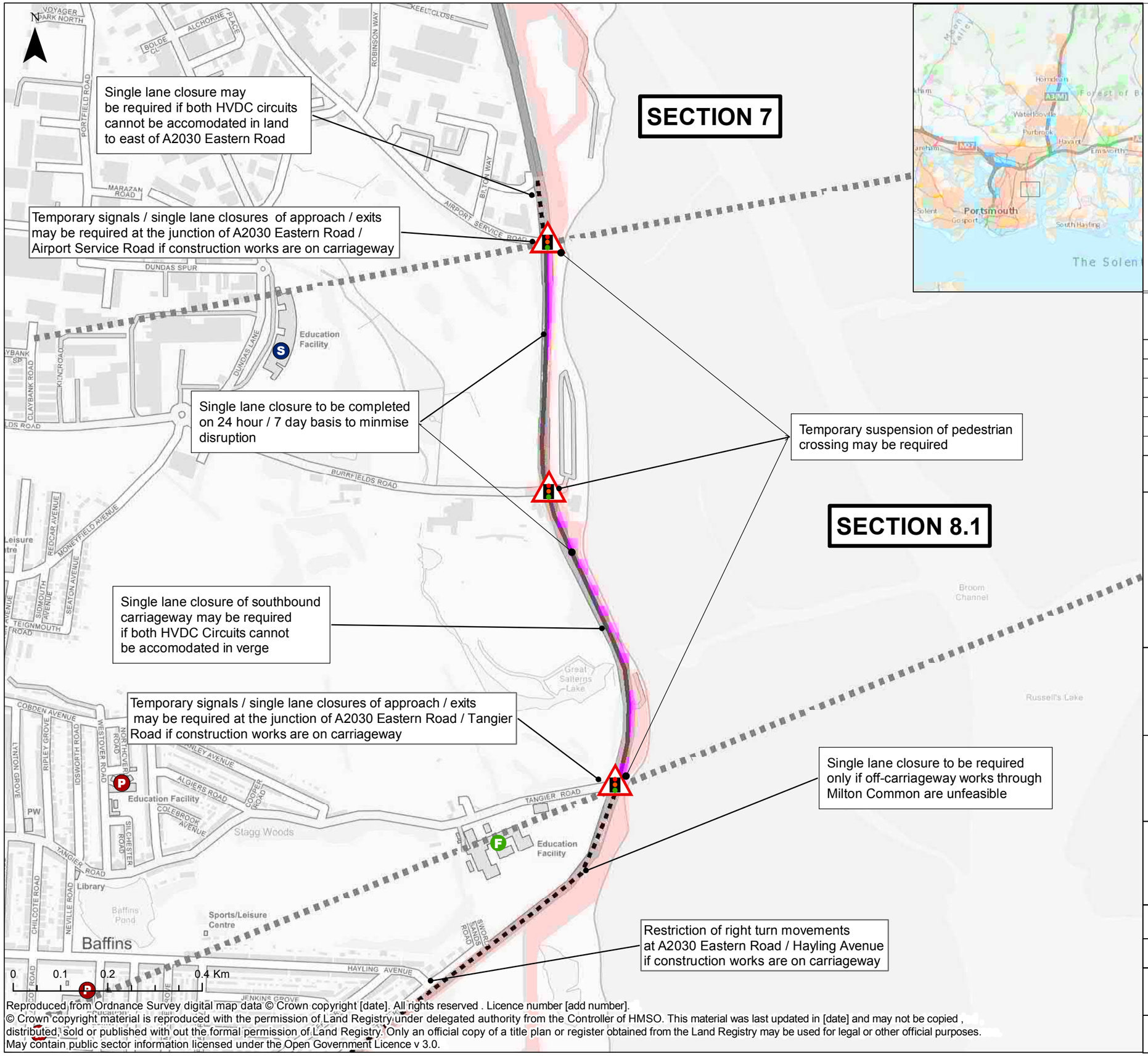

AQUIND Interconnector
- Section Breaks
- Order Limits

Temporary signals may be required

Traffic Management

- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Single Lane Closure

School Type
- P Primary
- S Secondary
- F Further Education

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

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TITLE: Framework Traffic Management Proposals - Section 7 / 8.1

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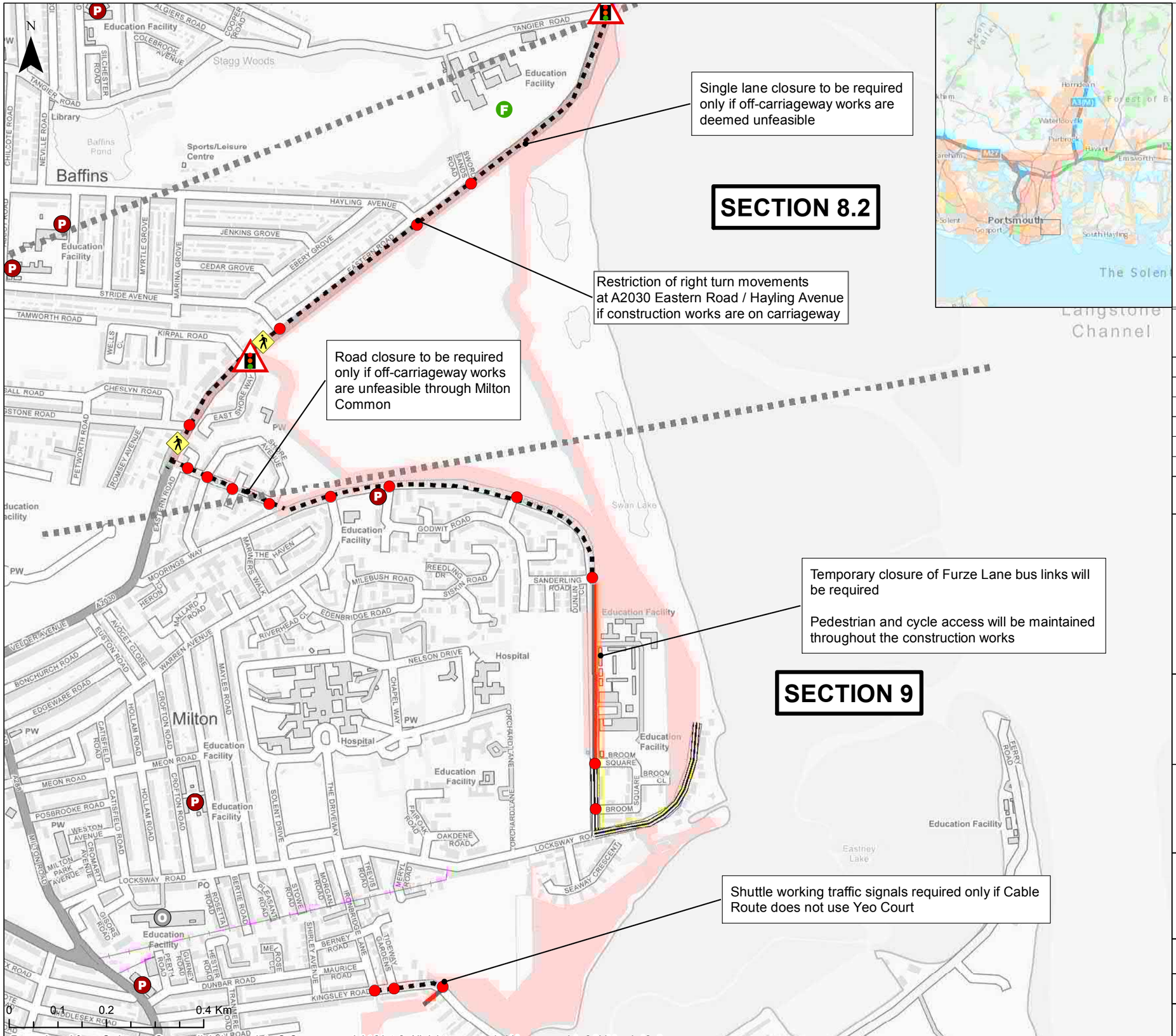

AQUIND Interconnector
- Section Breaks
- Order Limits

Traffic Management

- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Road Closure
- Temporary Shuttle Working
- Temporary Single Lane Closure

Public Rights of Way
- Footpath

- Contractor preference dependent on exact location of construction zone
- Temporary relocation or suspension of multi-user crossing
- Temporary signals may be required

School Type
- Primary School
- Other Educational Facility
- Further Education

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PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 8.2 / 9

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EN020022	SG	SG	13/11/2019

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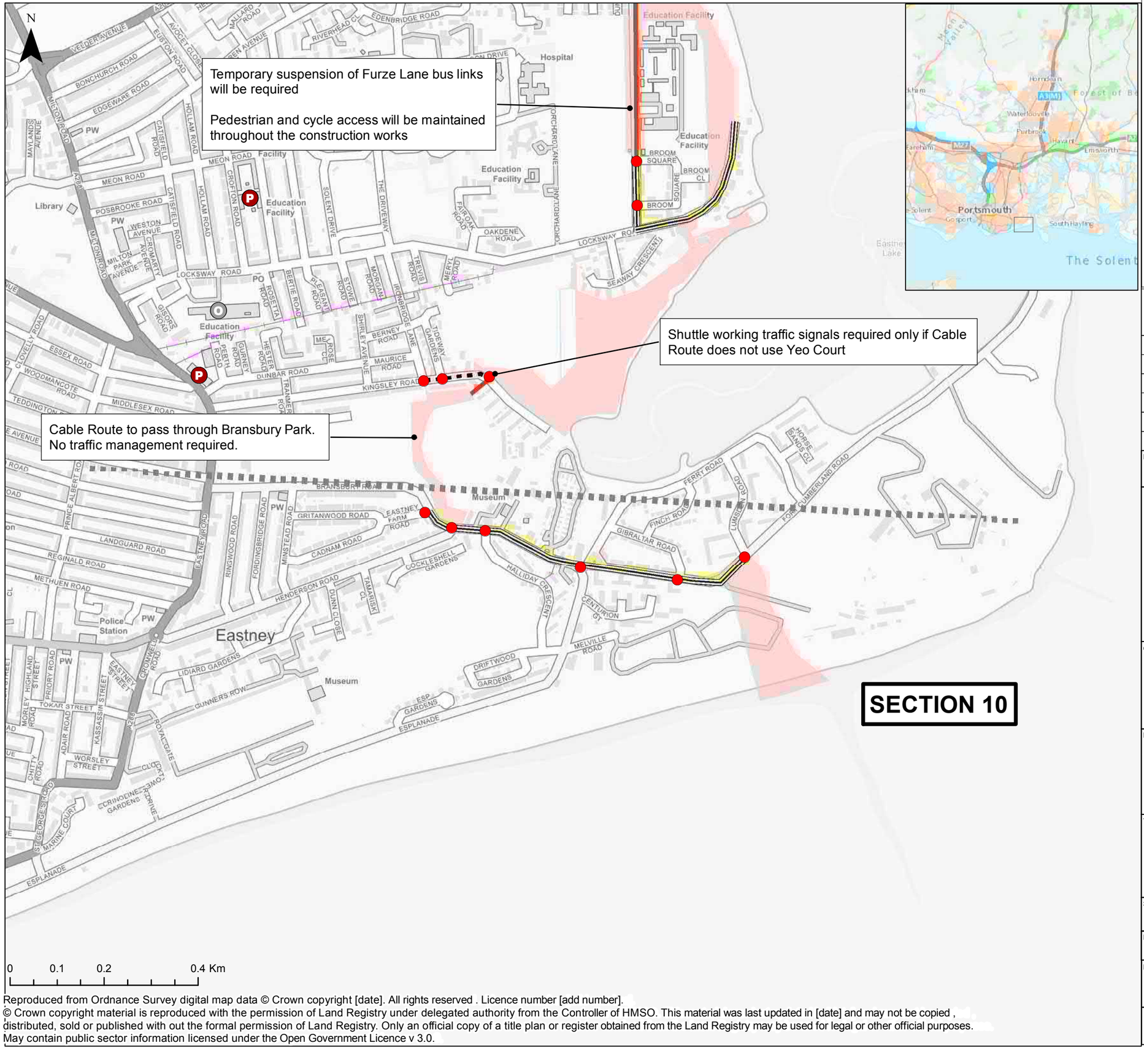

AQUIND Interconnector

- Section Breaks
- Order Limits
- Contractor preference dependent on exact location of construction zone

Public Rights of Way
- Footpath

Traffic Management
- TM required if off-carriageway routes are considered unsuitable by the contractor
- Temporary Road Closure
- Temporary Shuttle Working

School Type
- Primary School
- Other Educational Facility
- Further Education

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

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PROJECT: AQUIND Interconnector

TITLE: Framework Traffic Management Proposals - Section 10

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EN020022	SG	SG	13/11/2019

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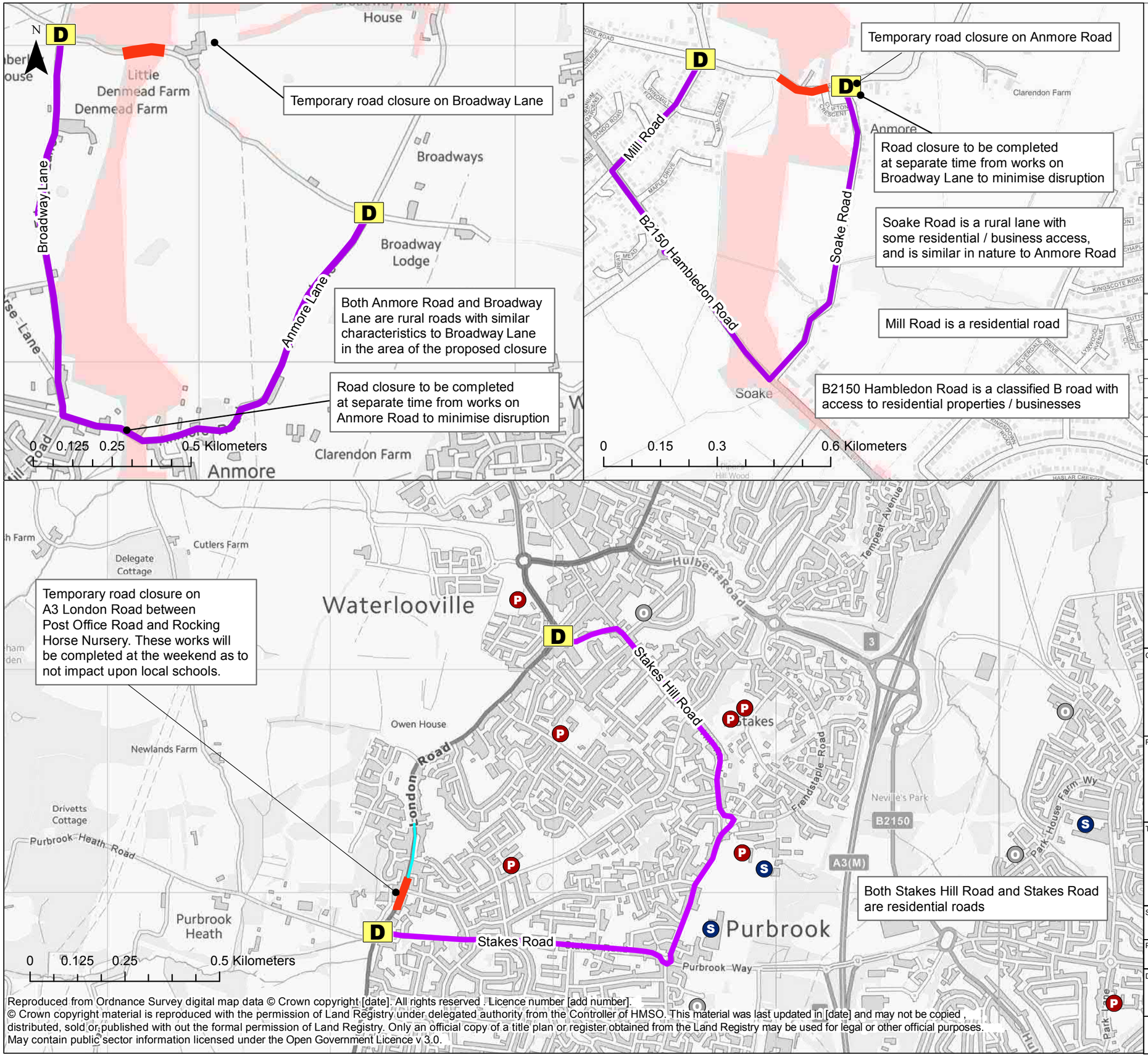
Appendix 2 – FTMS Diversion Drawings



AQUIND Interconnector

- Order Limits
- D — Diversion signage to be implemented
- Temporary Road Closure
- Diversion Route

School Type

- P — Primary
- S — Secondary
- F — Further Education
- Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

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CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Outline Diversion Route Proposals - Broadway Lane, Anmore Road and A3 London Road

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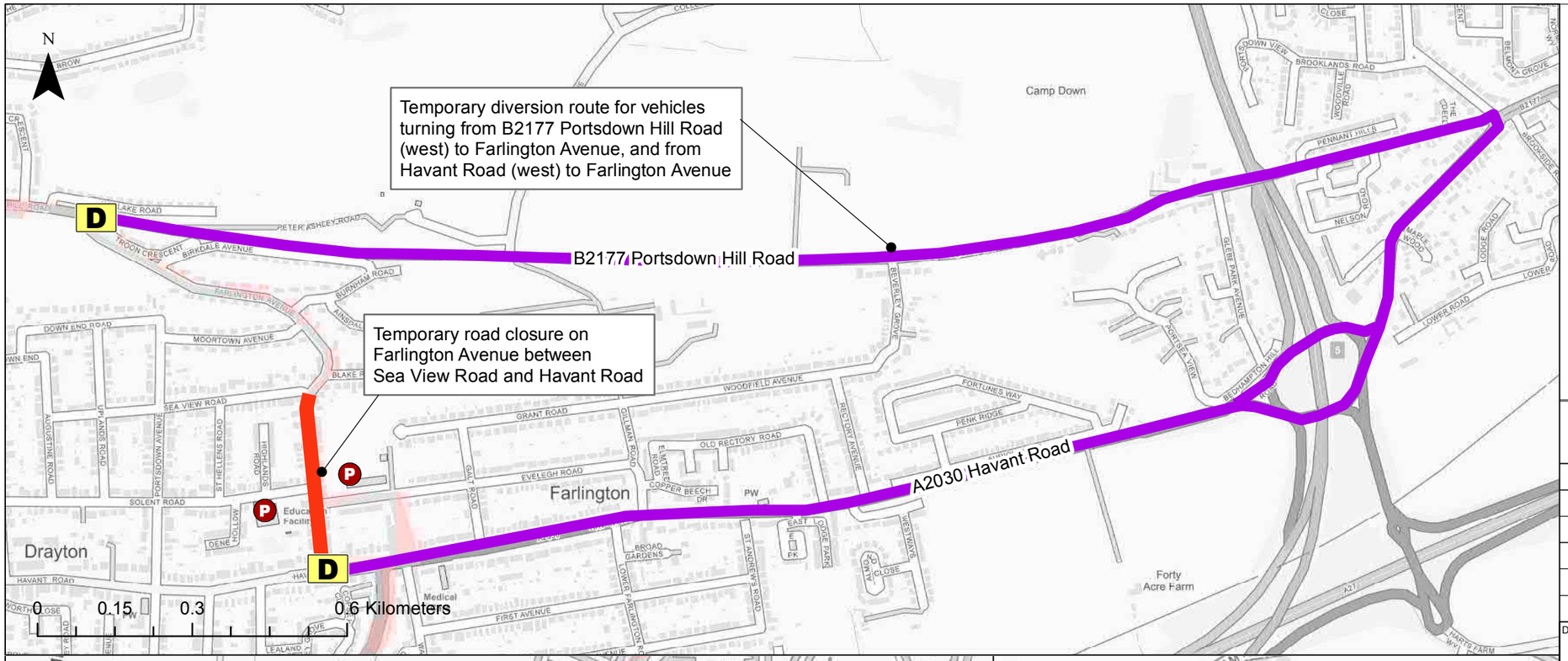

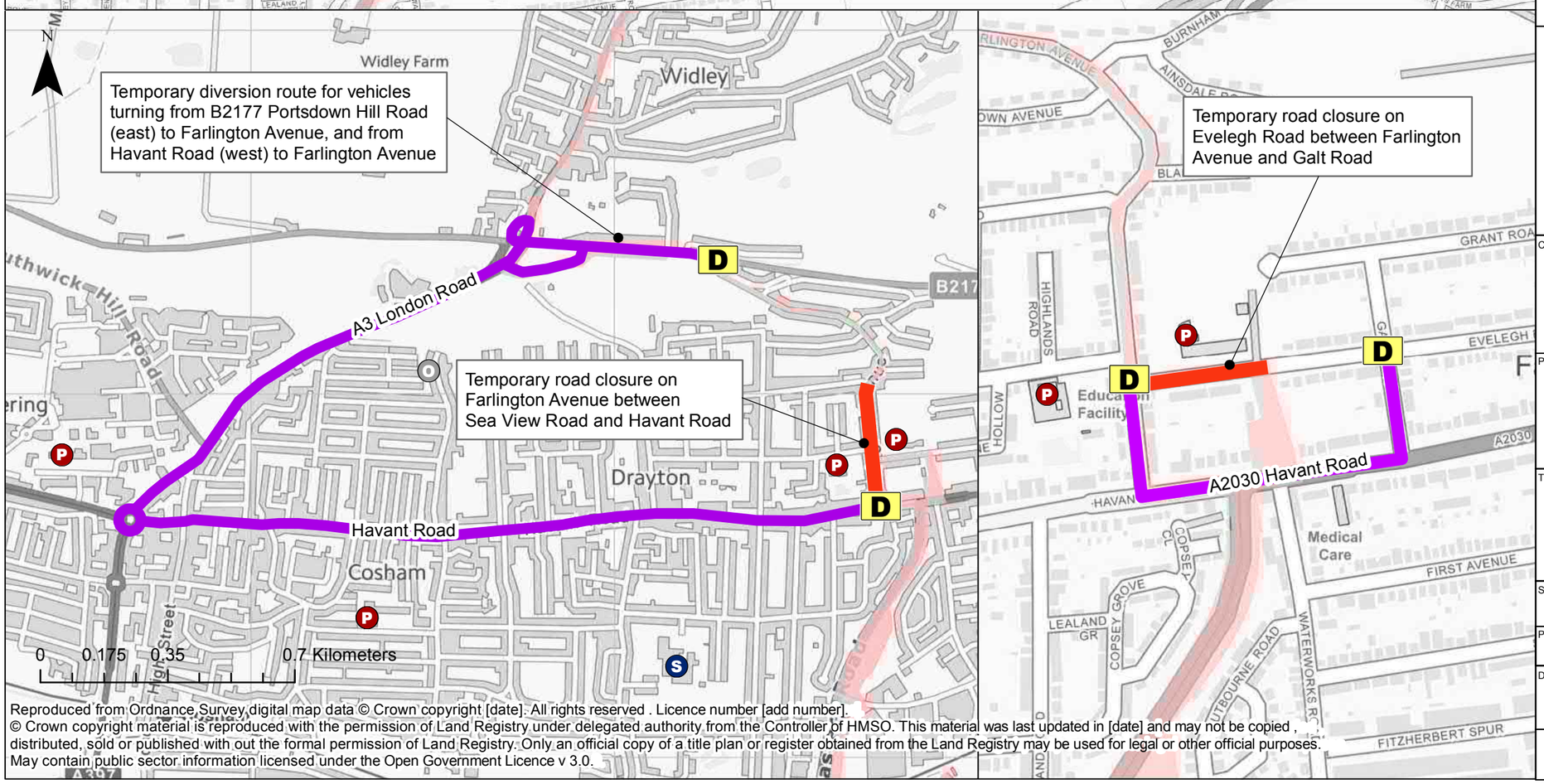

AQUIND Interconnector

Order Limit

D Diversion signage to be implemented

Temporary Road Closure

Diversion Route

School Type

P Primary

S Secondary

F Further Education

O Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

WSP House, 70 Chancery Lane, London, WC2A 1AF, UK,
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CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Outline Diversion Route Proposals - Farlington Avenue and Evelegh Road

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EN020022	SG	SG	13/11/2019

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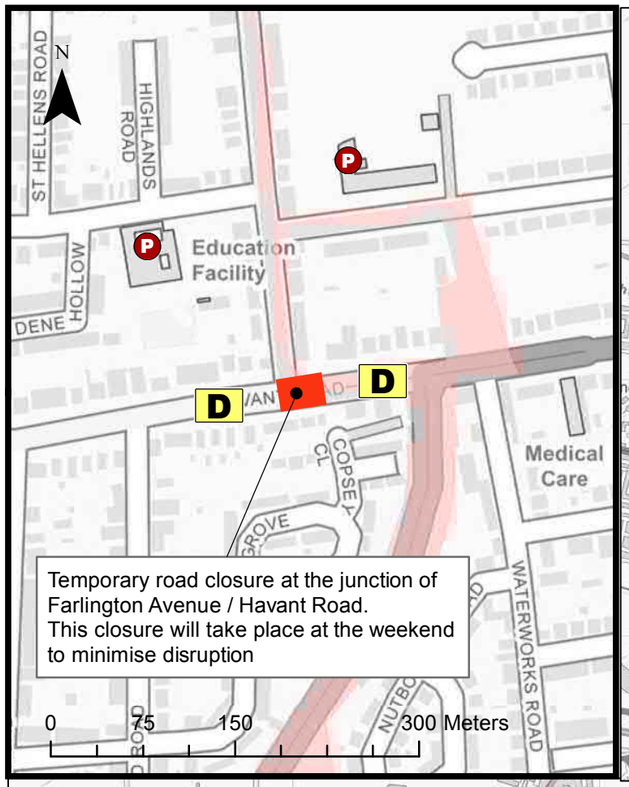

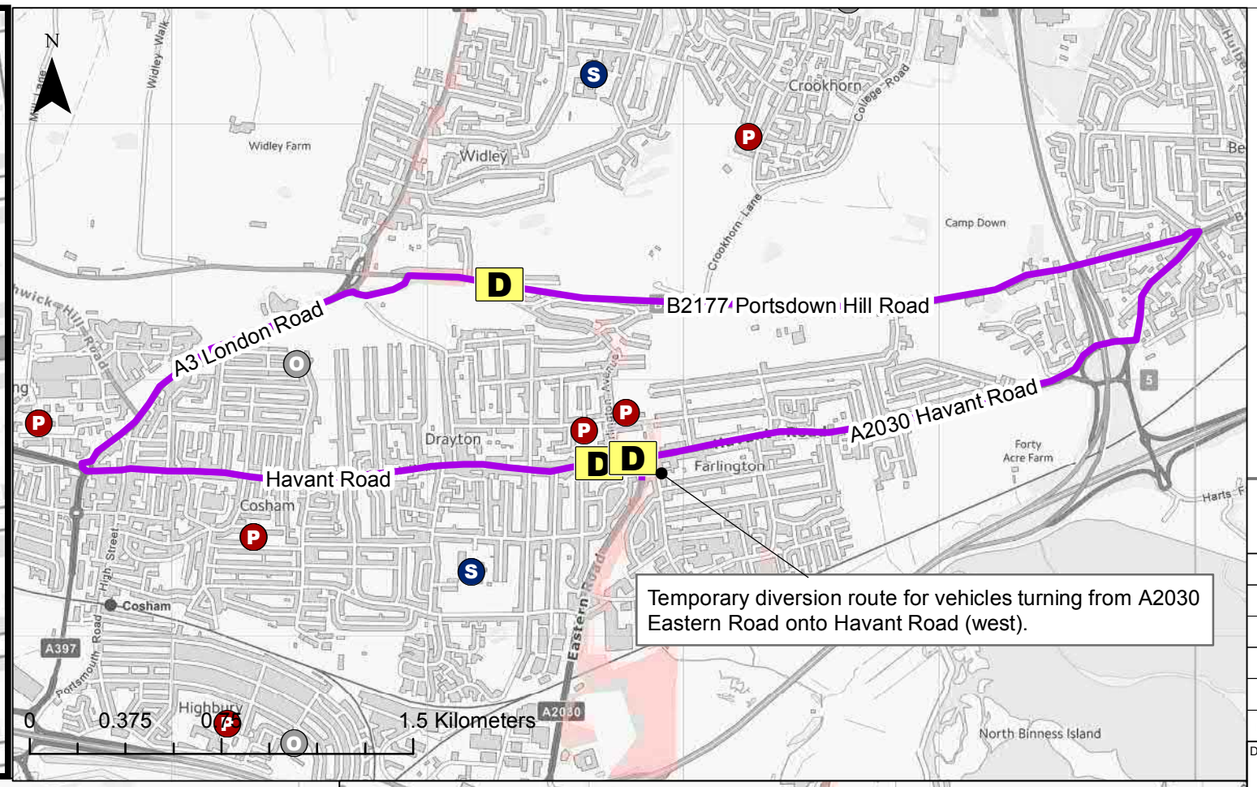

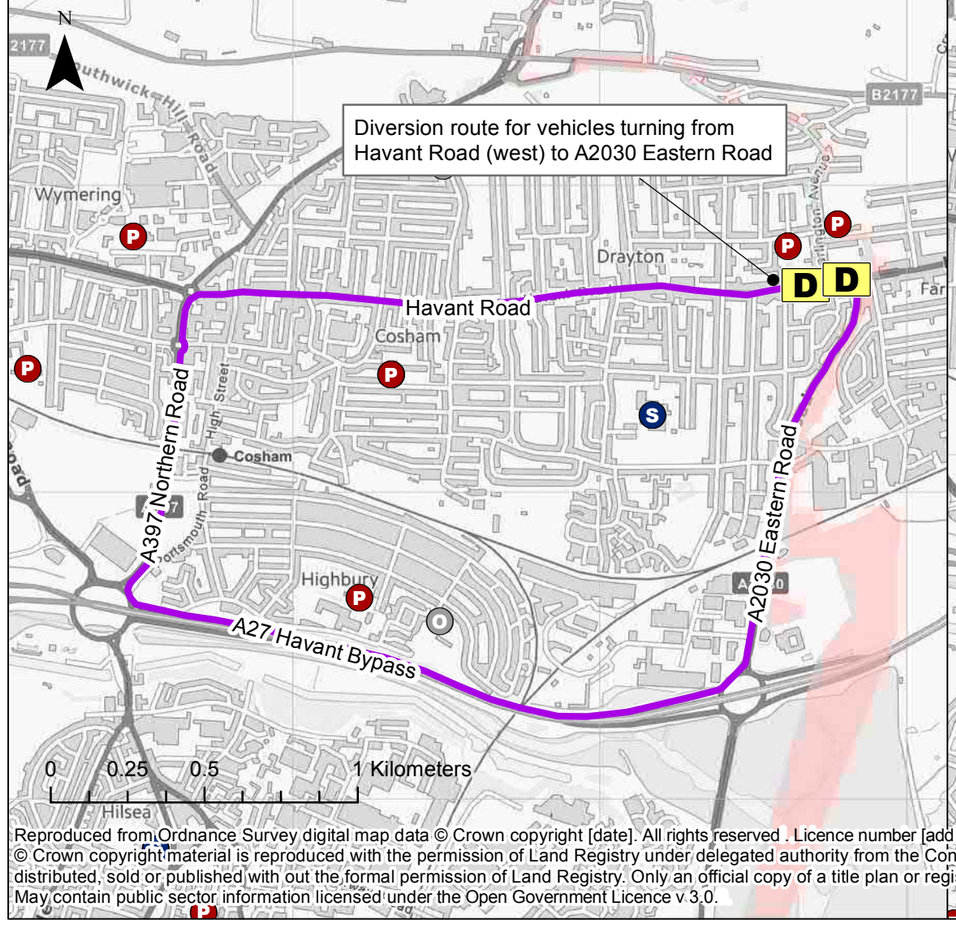

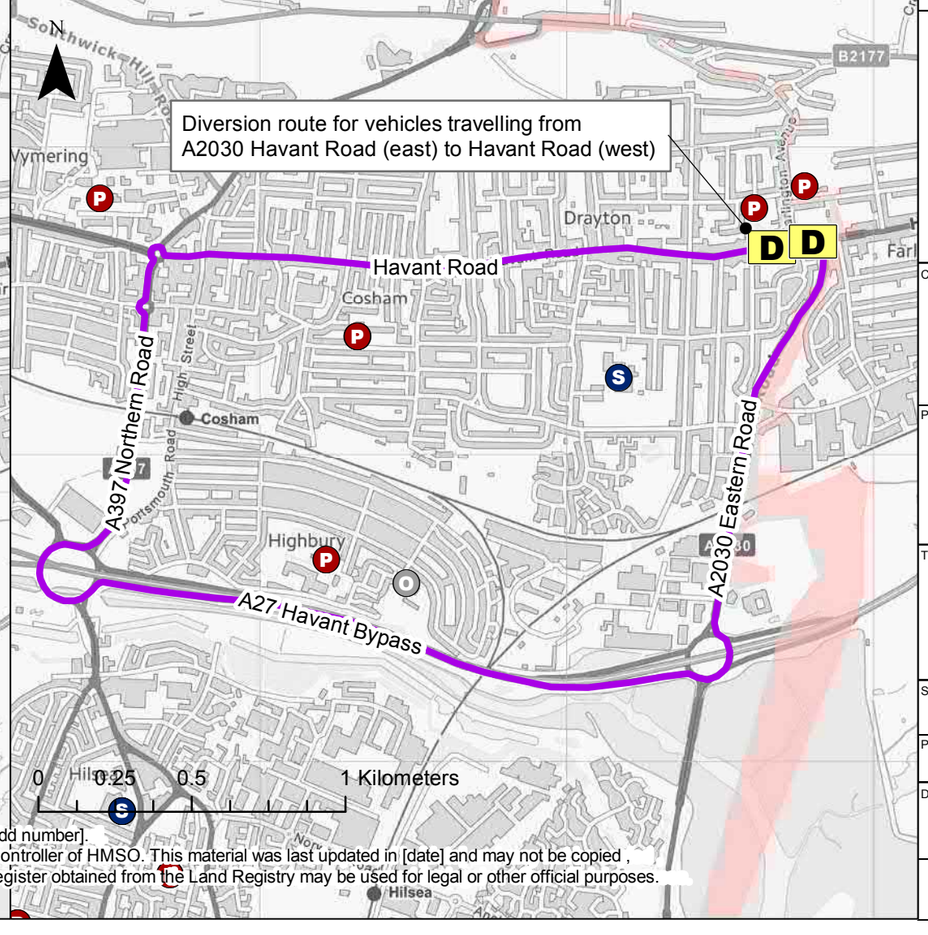

AQUIND Interconnector

- Order Limits
- D Diversion signage to be implemented
- Temporary Road Closure
- Diversion Route

School Type

- P Primary
- S Secondary
- O Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

DRAWING STATUS: FINAL

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CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Outline Diversion Route Proposals - Farlington Avenue / Havant Road Closure

SCALE AT A3	CHECKED:		APPROVED:
1:24,000	CW		CW
PROJECT NO:	DESIGNED:	DRAWN:	DATE:
EN020022	SG	SG	13/11/2019

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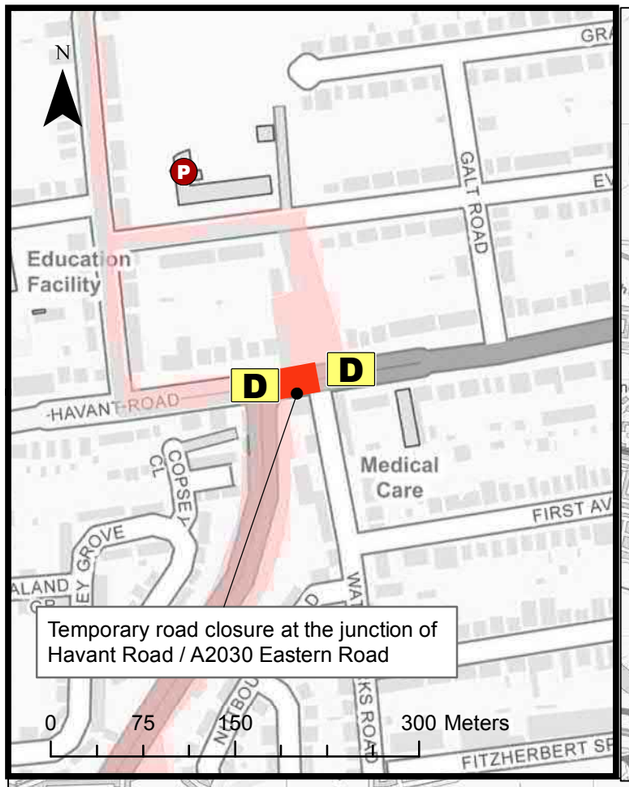

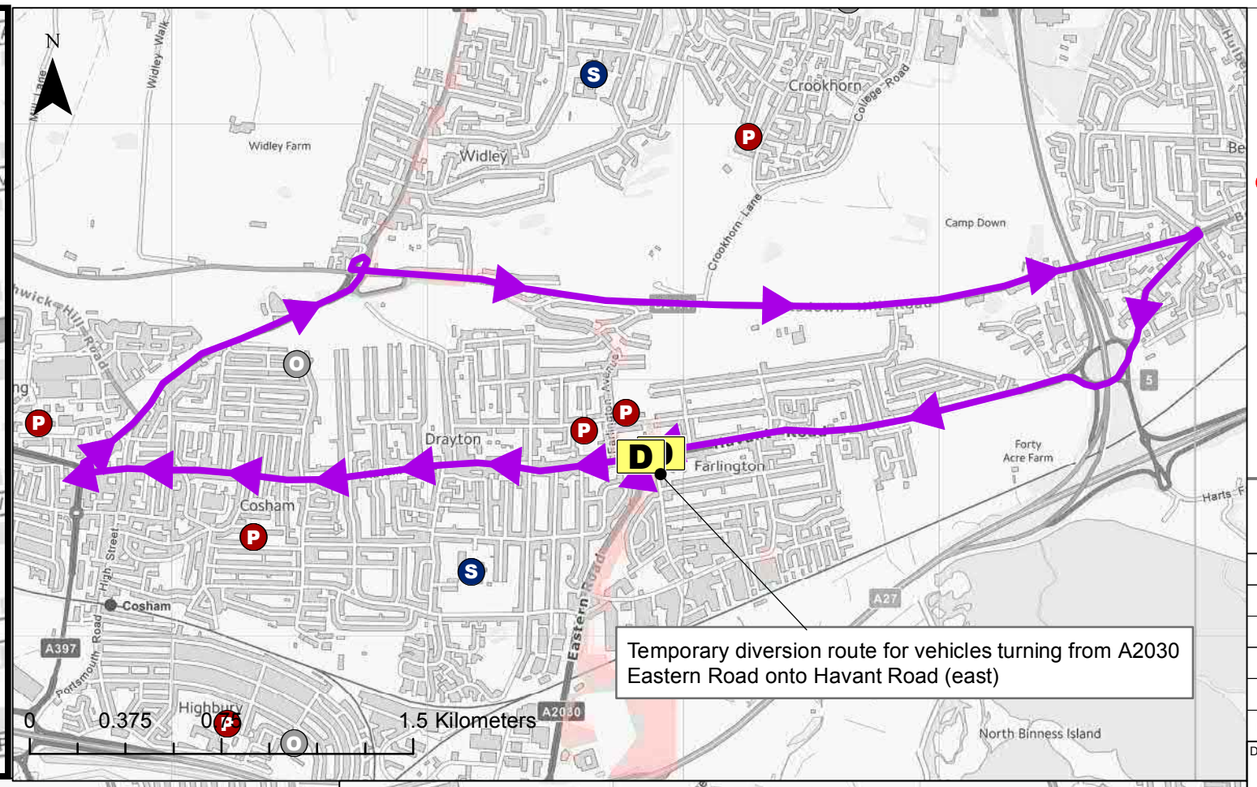

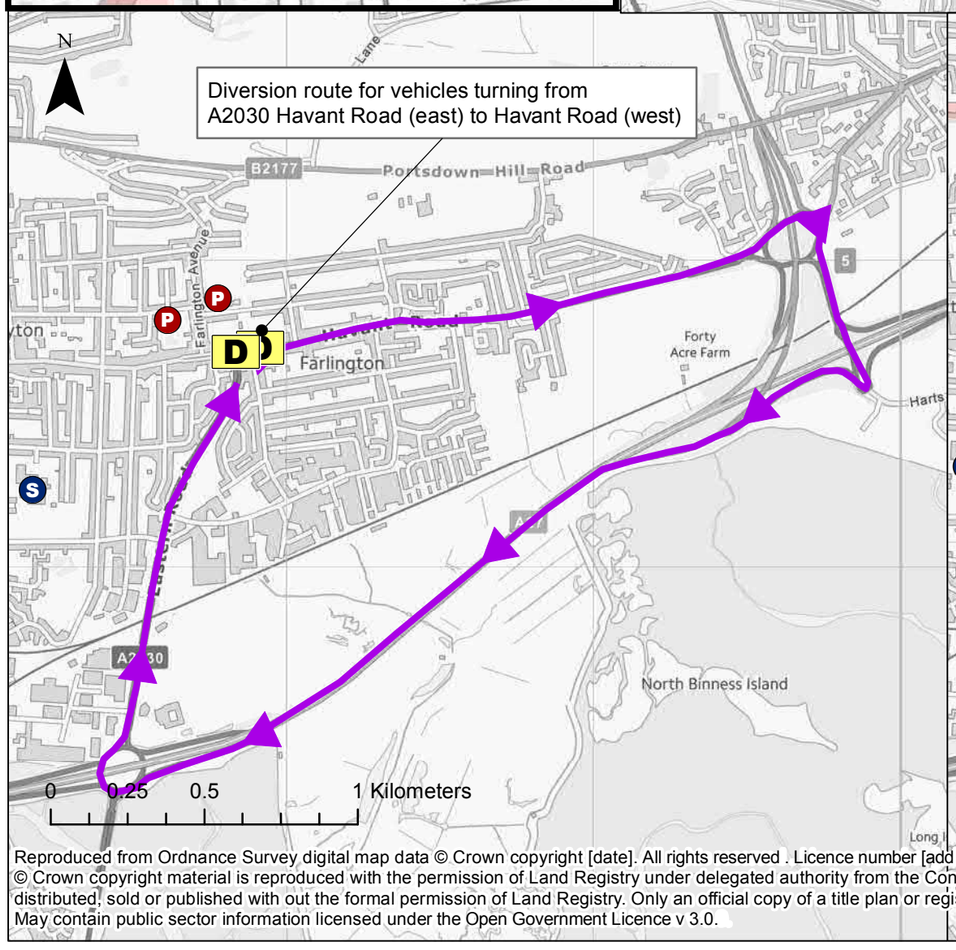

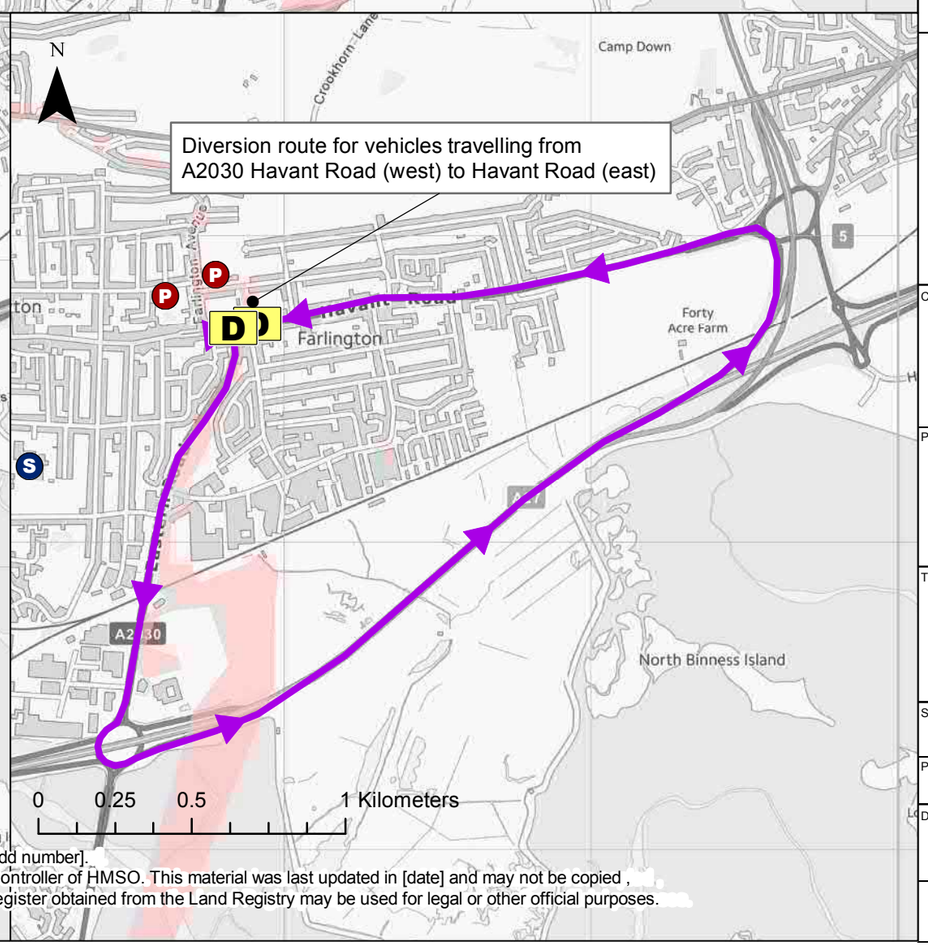

AQUIND Interconnector

Order Limits

D Diversion signage to be implemented

Temporary Road Closure

Diversion Routes

School Type

P Primary

S Secondary

Other Educational Facility

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(i)

REV	DATE	BY	DESCRIPTION	CHK	APP
01	13/11/2019	SG	FIRST ISSUE	CW	CW

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PROJECT: AQUIND Interconnector

TITLE: Outline Diversion Route Proposals - A2030 Eastern Road / Havant Road Closure

SCALE AT A3	CHECKED:		APPROVED:
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PROJECT NO: EN020022	DESIGNED: SG	DRAWN: SG	DATE: 13/11/2019

DRAWING NO: EN020022-ESAPPENDIX-22.1.G.13 REV.NO. 01