The Great Grid Upgrade

Sea Link

Preliminary Environmental Information Report

Volume: 2

Part 1 Introduction

Appendix 1.4.C Outline Construction Traffic Management Plan (Kent Onshore Scheme)

Version A

October 2023

nationalgrid

This page is intentionally bank.

Contents

Table of Tables

Sea Link
Document control

Document Properties	
Organisation	AECOM
Author	AECOM
Approved by	AECOM
Title	Preliminary Environmental Information Report Volume: 2 Part 1 Introduction Appendix 1.4.C Outline Construction Traffic Management Plan (Kent Onshore Scheme)
Data Classification	Public

Version History

Date	Version	Status	Description / Changes
24/10/2023	A	FINAL	First draft

1.4.C.1 Introduction

Background and Scope

1.4.C.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East of England and East Anglia. The Project is required to accommodate additional power flows generated from renewable and low carbon energy generation, as well as additional new interconnection with mainland Europe.

1.4.C.1.2 This reinforcement would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400kV overhead line close to Richborough in Kent.

1.4.C.1.3 The Suffolk Onshore Scheme comprises:

- Friston substation and associated overhead line modifications or a connection into and works within the consented Friston substation as consented by Scottish Power Renewables (SPR);
- Underground High Voltage Alternating Current (HVAC) connection from the proposed Friston substation to the proposed Saxmundham Converter Station Site;
- Saxmundham Converter Station; and
- a High Voltage Direct Current (HVDC) underground cable from the proposed Saxmundham Converter Station to the Suffolk landfall.

1.4.C.1.4 The Kent Onshore Scheme comprises:

- HVAC connection, by overhead line, from the existing Richborough to Canterbury 400 kV overhead line to the proposed Minster 400 kV Substation and Minster Converter Station;
- A compound comprising Minster 400 kV Substation and Minster Converter Station; and
- HVDC underground cable from the proposed Minster Converter Station to the Kent landfall in Pegwell Bay.

1.4.C.1.5 This Outline Construction Traffic Management Plan (CTMP) has been prepared for the Kent Onshore Scheme, which is located to the north of Ebbsfleet, of the Proposed Project. This Outline CTMP forms **Volume 2, Appendix 1.4.C** of the Preliminary Environmental Impact Report (PEIR) and is identified as control and management measure GG03 within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

1.4.C.1.6 The purpose of this Outline CTMP is to focus on the management of construction traffic within the vicinity of the Kent Onshore Scheme draft Order Limits along the local highway network during the construction period of the works in order to limit any potential disruptions and implications on the wider transport network.

1.4.C.1.7 This Outline CTMP sets out the proposals to manage construction traffic and staff vehicles during the construction of the Proposed Project, to avoid any adverse impacts on the surrounding networks during the construction phase. It identifies the management of freight traffic i.e. Heavy Goods Vehicles (HGVs), as well as staff vehicles.

1.4.C.1.8 This Outline CTMP has been informed by consultation with Kent County Council (KCC) as the local highway authority. Further details of the discussions and meetings held, as well as meeting minutes etc. are provided as part of **Volume 1, Part 3, Chapter 8, Traffic and Transport**.

Objectives

1.4.C.1.9 The objectives of this Outline CTMP are to set a framework for the Detailed CTMP and to:

- minimise the volume of HGV and staff vehicles associated with the construction phase as far as reasonably practicable;
- maximise the safe and efficient movement of materials and staff required during the construction phase as far as reasonably practicable;
- minimise the restrictions imposed and ensure efficient management of the local Public Rights of Way (PRoW) within the Site during the construction phase;
- minimise the impacts both for the local community and visitors to the area using the road network as far as reasonably practicable; and
- set out the measures to be adhered to by those travelling to and from the Site to reduce the impact of the construction of the Proposed Project.

1.4.C.1.10 This Outline CTMP will be updated for the application for development consent following further consultation. Details of any additional mitigation measures to be included in the design of the Proposed Project for implementation (if required) will be included in an updated version of the Outline CTMP to be prepared for the application for development consent.

1.4.C.1.11 It is anticipated that these measures would be developed into a Detailed CTMP that would be secured through a suitably worded requirement in the Development Consent Order (DCO).

Report Structure

1.4.C.1.12 Following this introduction, this Outline CTMP is structured as follows:

- **Section 1.4.C.2** provides details of the site location, surrounding area and the existing highway network;
- **Section 1.4.C.3** provides details of future baseline conditions during the construction phase;
- **Section 1.4.C.4** covers relevant planning policy and best practice for the construction phase of the Proposed Project;
- **Section 1.4.C.5** summarises the HGV and staff vehicle movements which are expected to be generated by the Proposed Project across the construction period, including during the peak phase;

- **Section 1.4.C.6** provides details of the proposed site accesses for the Proposed Project, including details of layouts, visibility splays and swept paths, as well as routing arrangements and internal site layout considerations including access tracks, compounds and parking;
- **Section 1.4.C.7** summarises the proposed measures to manage the highway network and pedestrian and cycle routes during the construction phase, as well as measures directed at HGVs and staff members, as well as for the management, monitoring and review of the Outline CTMP;
- **Section 1.4.C.8** deals with compliance and enforcement of the Outline CTMP; and
- **Section 1.4.C.9** provides the conclusion to the Outline CTMP.

1.4.C.2 Existing Conditions

Site Location

1.4.C.2.1 The Kent Onshore Scheme is located near to a number of settlements including Ramsgate, Cliffsend, Minster and Sandwich. The works site is accessed via the following routes, as shown on **Volume 3, Part 3, Figure 3.8.1, Traffic and Transport Study Area in Kent**:

- A299 Hengist Way (south of the “Cliffsend Roundabout” and west of the “Lord of the Manor Roundabout”);
- A256 Richborough Way (between the “Sevenscore Roundabout” and the “Ebbsfleet Roundabout”);
- Sandwich Road (between the Ebbsfleet Roundabout and Foads Lane);
- Ebbsfleet Lane; and
- Jutes Lane.

Surrounding Area

1.4.C.2.2 Further to the above, the following parts of the highway network are situated within the surrounding area, as shown on **Volume 3, Part 3, Figure 3.8.1, Traffic and Transport Study Area in Kent**:

- A299 Hengist Way (between the “Cliffsend Roundabout” and the “Monkton Roundabout”);
- A256 Ramsgate Road (south of the “Ebbsfleet Roundabout”);
- Tothill Street, High Street and Marsh Farm Road;
- Ebbsfleet Lane North, Brook Lane and Cottington Road;
- A257, Hills Court Road and Cooper Street Drove;
- The Causeway (Ash Road) and Richborough Road; and
- Whitehouse Drove.

1.4.C.2.3 The following junctions are situated within the surrounding area and have been reviewed within **Volume 1, Part 3, Chapter 8: Traffic and Transport**:

- A299/A253/Willetts Hill (Monkton) Roundabout;
- A299/B2190/Tothill Street (Minster) Roundabout;
- A299/Canterbury Road West (Cliffsend) Roundabout;
- A299/A256/Cottington Link Road (Sevenscore) Roundabout;
- A256/Ramsgate Road/Jutes Lane (Ebbsfleet) Roundabout; and
- Sandwich Road/Ebbsfleet Lane Signalised junction.

1.4.C.2.4 The following walking and cycling routes, identified by local Public Rights of Way (PRoW) reference numbers where appropriate, are situated within the surrounding area. These routes have been reviewed within **Volume 1, Part 3, Chapter 8: Traffic and Transport**:

- TE37 (public footpath);
- TE39 (public footpath);
- TE26 (public footpath);
- EE42 (public footpath);
- TE35 (restricted byway);
- TE36 (restricted byway);
- National Cycle Network (NCN) Route 15;
- King Charles III England Coast Path;
- Contra Trail;
- Viking Coastal Trail; and
- Saxon Shore Way.

1.4.C.2.5 The following PRoW are also situated within the surrounding area, further afield:

- TE32 (public footpath, to the north);
- TE40 (public footpath, to the north);
- TR11 (public footpath, to the north);
- TR32 (public footpath, to the north);
- ES13 (public footpath, to the south);
- EE48B (public footpath, to the south);
- EE43A (restricted byway, to the south);
- EE46 (public footpath, to the south);
- EE48A (public footpath, to the south);
- EE53 (public footpath, to the south);
- EE92 (public footpath, to the south);

- EE92A (public footpath, to the south);
- EE95 (public footpath, to the south);
- EE96 (public footpath, to the south);
- EE469 (public footpath, to the south); and
- EE97A (public footpath, to the south).

Site Accessibility

Strategic highway network

1.4.C.2.6 The A256 runs in a north-south alignment between Dover in the south where it joins the A2 and Cliffsend in the north where it joins the A299 at the Sevenscore Roundabout. As it passes through the study area, the A256 is a dual carriageway with two lanes in each direction and is subject to the national speed limit, reducing to 50mph south of the Ebbsfleet Roundabout (where it connects with Sandwich Road and Jutes Lane). Access to Richborough sub-station is taken from a roundabout on the A256, approximately 400m south of the Ebbsfleet Roundabout.

1.4.C.2.7 The A299 runs in an east-west alignment between Faversham in the west where if joins the M2 and Ramsgate in the east. Within the study area, the A299 is a dual carriageway with two lanes in each direction and is subject to the national speed limit.

Local highway network

1.4.C.2.8 The local highway network includes Sandwich Road, Jutes Lane, Ebbsfleet Lane, Ebbsfleet Lane North and Brook Lane.

1.4.C.2.9 Sandwich Road is a single carriageway road that connects the A256 at Ebbsfleet Roundabout in the south and the A299 at the Lord of the Manor Roundabout in the north and passes through Cliffsend. The speed limit varies along its length but is generally 40mph with a section of national speed limit adjacent to the Pegwell Bay Country Park and a section of 30mph through Cliffsend. There is also a restriction on vehicles over 7.5t (except for access) along the length of Sandwich Road.

1.4.C.2.10 Approximately 200m north of the Ebbsfleet Roundabout is Ebbsfleet Lane with access taken from Sandwich Road via a signalised junction. It is a no-through road which provides access to residential properties and the Stonelees Golf Centre. It is a single carriageway road and has a 7.5t vehicle weight restriction (except for access).

1.4.C.2.11 Jutes Lane can be accessed via the Ebbsfleet Roundabout and runs parallel to the A256 for approximately 800m before reaching Ebbsfleet Farmhouse. It is a single carriageway road with a 40mph speed limit and provides access to the Weatherlees Hill Wastewater Treatment Works.

1.4.C.2.12 Ebbsfleet Lane North and Brook Lane also pass through the study area; whilst they are no-through roads, they provide local access to some residential properties and farmland. Ebbsfleet Lane North forms the southern arm of the crossroad junction with Thorne Hill, Cottington Road and Grinsell Hill. It is a single carriageway road with a 7.5t vehicle weight restriction (except for access). Approximately 500m south of the junction, there is an at-grade railway crossing, immediately south of which is Brook Lane.

1.4.C.2.13 Additional parts of the local highway network to the north of the study area include Cottington Link Road and Cottington Road, Tothill Street, High Street and Marsh Farm Road. Tothill Street forms the southern arm of the Minster Roundabout and runs southwards where it becomes High Street and then Marsh Farm Road which passes through a level crossing. Cottington Link Road provides a link between the A256 and A299 (via the Sevenscore Roundabout) and Cottington Road which runs east-west and passes underneath the A256 and a railway line.

1.4.C.2.14 Additional parts of the local highway network to the south of the study area include the A256/A257/Ash Road roundabout, as well as the A257, Ash Road, Richborough Road, Cooper Street Drove, Hills Court Road and Whitehouse Drove. The A257 runs to the west of the A256 and provides access to Hills Court Road which in turn becomes Cooper Street Drove. Ash Road runs to the east of the A256/A257/Ash Road roundabout and provides access to Richborough Road. Both Richborough Road and Cooper Street Drove provide access to Whitehouse Drove which runs northwards towards the study area.

Other transport modes

1.4.C.2.15 Bus services can be accessed from the bus stops a short distance to the south of the Ebbsfleet Roundabout (within the study area). These serve bus route 45/45A which runs between Ramsgate and Sandwich once per hour Monday – Saturday. The first bus service is available at around 7am and the last service is available at around 6pm.

1.4.C.2.16 The closest railway station to the Proposed Project is Minster, located approximately 2km northwest of the A256 Richborough Way, however there is limited walking/cycling infrastructure to accommodate pedestrians and cyclists between the station and the Proposed Project (e.g. Ebbsfleet Lane North) and the overall route is approximately 3-4km. Minster station is typically served by one train per hour to Ramsgate and one train per hour to London Victoria (via Maidstone East). During the peak hours, there are additional services to London Charing Cross (via Tonbridge).

1.4.C.2.17 Sandwich railway station is located approximately 4.5km south of the study area and can be accessed via walking or cycling along the King Charles III England Coast Path or by using bus route 45/45A. The station is typically served by one train per hour to London St Pancras International and one train per hour to Ramsgate, with additional services to London Charing Cross (via Tonbridge).

1.4.C.2.18 In addition to the above, Thanet Parkway railway station opened in July 2023 and is located approximately 2km northeast of the study area on the western periphery of Cliffsend. It is located between Minster and Ramsgate stations and is served by both mainline and high-speed trains, with several services running to/from London per hour, as well as an hourly service to/from Margate. The station includes a car park, pick-up/drop-off area, cycle storage and bus stops with a forecourt.

1.4.C.2.19 There are a number of PRoW which pass through the draft Order Limits and could therefore be impacted by the Kent Onshore Scheme including the following, identified by reference number and description:

- TE37 – public footpath (approx. 2900m in length) that follows the Minster to Ramsgate rail line;
- TE39 – public footpath (approx. 1000m in length) that runs along Brooks Lane and across a field to Ebbsfleet Lane;

- TE26 – public footpath (approx. 3300m in length) that runs along the northern bank of the River Stour;
- EE42 – public footpath (approx. 7300m in length) that runs along the southern bank of the River Stour. This also forms part of the long-distance walking route, known as Saxon Shore Way;
- TE35 – restricted byway (approx. 400m in length) that runs between Marsh Farm and TE26 (situated to the west of TE36); and
- TE36 – restricted byway (approx. 400m in length) that runs between Marsh Farm and TE26 (situated to the east of TE35);

1.4.C.2.20 National Cycle Network (NCN) Route 15 runs along the coastline between Sandwich and Whitstable. In the proximity of the study area, it is a traffic-free route running alongside the A256 to the south of Ebbsfleet Roundabout and parallel to Sandwich Road to the north of the Ebbsfleet Roundabout.

1.4.C.2.21 Other recreational/promoted routes include:

- Kings Charles III England Coast Path – a long-distance footpath between Camber, East Sussex and Ramsgate, Kent, forming part of the longest managed coastal path in the world. It follows the coastline in the proximity of the study area. The cable route will traverse the route of the path using a trenchless method as it passes from the sea to land.
- Contra Trail – a short-distance route between Ramsgate and Pegwell Bay. In the proximity of the study area, it follows a circular route around Pegwell Bay Country Park.
- Viking Coastal Trail – a 50km circular route on the Isle of Thanet passing along Cottington Road to the east of the A256 in proximity of the study area.
- Saxon Shore Way – a long-distance footpath between Gravesend and Hastings. In the proximity of the study area, it follows the River Stour.
- Cantii Way – a long distance cycle route that operates as a loop across East Kent. In the vicinity of the study area, the route passes east-west through Minster and meets a coastal section of the route at Pegwell Bay. This route is shared within NCN Route 15 within the draft Order limits itself.

1.4.C.2.22 There are no formal equestrian facilities (i.e. bridleways) within, or in the vicinity of the study area.

1.4.C.3 Future Highway Network

Future Network Changes

1.4.C.3.1 During the construction phase, there are not expected to be any changes to the surrounding highway network within or in close proximity to the Kent Onshore Scheme that should be considered as a result of other projects or schemes. As such, there are no schemes that require consideration during the construction phase beyond those assessed within **Volume 1, Part 3, Chapter 14: Inter-Project Cumulative Effects**.

Cumulative Developments

1.4.C.3.2 As above, the cumulative schemes for consideration have been assessed within **Volume 1, Part 3, Chapter 14, Inter-Project Cumulative Effects**.

1.4.C.4 Best Practice and Policy

Introduction

1.4.C.4.1 This section provides an overview of the best practice guidance and planning policy that is considered to be relevant to the Outline CTMP.

Best Practice

Outline Code of Construction Practice

1.4.C.4.2 The purpose of this document is to set out control and management measures that will be undertaken during construction of the Proposed Project if granted consent. It is designed to support the assessment of preliminary effects in the PEIR and will be developed further to support the future Environmental Impact Assessment (EIA).

National Policy

Overarching National Policy Statement for Energy (NPS EN-1)

1.4.C.4.3 The Overarching NPS for Energy (EN-1) was published in 2011 and provides the basis for decisions regarding nationally significant energy infrastructure. Section 5.13 outlines the planning policy for traffic and transport, including guidance on undertaking relevant parts of the EIA. The most relevant paragraphs for this purpose are set out within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

1.4.C.4.4 The NPS EN-1 is currently under review and an updated draft was published for consultation in September 2021. Again, the most relevant paragraphs for this purpose are set out within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

National Planning Policy Framework (NPPF, 2021)

1.4.C.4.5 The Government's National Planning Policy Framework (NPPF) sets out the Government's planning policies for England. It promotes the use of sustainable transport throughout the UK, safe road design and the efficient and sustainable delivery of goods and supplies. The most relevant paragraphs in the context of transport are set out within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

Constructions Logistics and Community Safety (CLOCS 2022)

1.4.C.4.6 The CLOCS guidance draws upon evolving best practice, standards, policies and codes of practice, providing a standard which planning authorities, developers and contractors can implement and providing a coherent set of guidelines which can be adhered to, with the primary goals of achieving:

- Zero collisions between construction vehicles and the community;
- Improved air quality and reduced emissions;

- Fewer vehicle journeys; and
- Reduced reputational risk.

Local Planning Policy

1.4.C.4.7 The Kent Onshore Scheme (refer to **Volume 3, Part 1, Figure 1.1.3 Kent Onshore Scheme Boundary**) lies within the jurisdiction of Kent County Council. County planning policy which is relevant to this OCTMP are as follows:

- Local Transport Plan 4: Delivering Growth without Gridlock (2016-2031); and
- Freight Action Plan Kent (2017).

1.4.C.4.8 Additional local planning policy documents relevant to traffic and transport matters are as follows:

- Thanet Local Plan (2020);
- Dover District Local Development Framework Core Strategy (2010);
- Thanet District Transport Strategy (2015-2031); and
- Dover Transport Strategy (2017).

1.4.C.4.9 Further details of the above are set out within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

1.4.C.5 Construction Movements

Introduction

1.4.C.5.1 This section provides a summary of the forecast HGV and staff vehicle movements estimated during the construction phase of the Proposed Project within Kent, based on the proposed construction programme.

Construction

1.4.C.5.2 The main construction phase for the Proposed Project is currently predicted to be 5 years between 2026 and 2031, with the construction peak in terms of activity and vehicle movements expected to take place in 2029. The link is due to become operational in 2030 and therefore construction movements from this point onwards are attributed to demobilisation and reinstatement works. The approach taken within this Outline CTMP offers a reasonable worst-case assessment, as this is based on the shorter end of this construction period (50 months), which would generate the highest number of peak hour and daily road trips on the local network.

Vehicle Types

1.4.C.5.3 It is expected that the majority of construction vehicles accessing the Site will fall into the ‘normal’ size category, defined as a vehicle not classed as an abnormal load (i.e. transit vans and HGVs). It is anticipated that the following vehicle types will serve the Proposed Project during the construction phase:

Construction of converter station and substation

- Personnel transport vehicles;
- Welfare vehicles;
- Traffic Management vehicles;
- Tipper lorries;
- Fuel tanker;
- Articulated lorry;
- Concrete mixer lorry;
- Medium low loader; and
- Dumper truck.

1.4.C.5.4 In addition, it is expected that Abnormal Indivisible Loads (AILs)/ abnormal vehicles will be required by the Proposed Project. A Transformer delivery specialist low loader would be required to deliver the transformer to site.

Construction of HVDC cable route works

- Personnel transport vehicles;
- Welfare vehicles;
- Traffic Management vehicles;
- Tipper lorries;
- Fuel tanker;
- CBS/Concrete mixer;
- Articulated lorry;
- Dumper;
- Medium low loader;
- Tractor trailer;
- Cable drum installation side facing trailer; and
- Cable drum installation rear facing trailer.

Construction of overhead line and associated works

- Personnel transport vehicles;
- Welfare vehicles;
- Traffic Management vehicles;
- Tipper lorries;
- Fuel tanker;
- Articulated lorries;

- Dumper truck;
- Concrete mixer lorry; and
- Medium low loader.

1.4.C.5.5 With reference to mitigation, the measure GG13 identified within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, requires that vehicles will be correctly maintained and operated in accordance with the manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. In addition, plant and vehicles will conform to relevant applicable standards for the vehicle type.

1.4.C.5.6 Mitigation measure TT01 identified within **Volume 2, Appendix 1.4.A: Outline CoCP** and **Volume 1, Part 3, Chapter 8: Traffic and Transport**, relates to the measures set out within this CTMP to reduce route and journey mileage to and from, as well as around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions. This also relates to providing suitable control for the means of access and egress to the public highway and set out measures for the maintenance and upkeep of the public highway. This CTMP also identifies access for emergency vehicles and sets out measures to reduce safety risks through construction vehicle and driver quality standards and measures to manage abnormal loads.

Construction Vehicle Movements

Peak construction (2029)

1.4.C.5.7 The peak daily number of HGVs, LGVs and construction staff required for the Proposed Project are identified below, during the peak construction phase (2029)[1].

1.4.C.5.8 There is expected to be a daily peak of 292 construction workers associated with the Proposed Project (which is a maximum daily figure). All 292 construction workers will travel to/from the Proposed Project at the start and end of the working day. An average vehicle occupancy factor of 1.5 construction workers per vehicle has been adopted for the site-based construction staff, which is considered to be reasonable, yet robust, given that a formal Car Share Scheme will be implemented to match potential car sharers. However, in order to provide a worst-case assessment, it has been assumed that office-based/ supervision/ management staff during the construction phase would travel by single occupancy vehicle.

1.4.C.5.9 Although the Kent Onshore Scheme is located near to a number of settlements including Ramsgate, Cliffsend, Minster and Sandwich, the majority of staff (associated with each phase) are expected to travel by vehicle as opposed to on foot, by bicycle or by public transport for logistical reasons e.g. due to travel distance or the requirement to carry equipment. Therefore, to provide a worst-case assessment in terms of road trips, it has been assumed that all construction workers would travel by vehicle to/from the Proposed Project.

[1] It should be noted that the forecast numbers below include consideration of daily variation and peak daily movements to provide a robust assessment.

1.4.C.5.10 In addition to the above, there will be a daily peak of 98 LGVs and 122 HGVs associated with the Proposed Project. All construction vehicles are expected to use the proposed main site access on the A256 (named K-BM02) during the peak construction phase (2029). Therefore, all of the above trips have been distributed to/from K-BM02 to focus the assessment on this part of the network. However, for completeness, additional trips have also been allocated to Ebbsfleet Lane (named K-BM01) and Jutes Lane (named K-BM03) based on the respective access peaks (in terms of vehicle activity), to allow these parts of the network to also be assessed.

A256 (K-BM02)

1.4.C.5.11 The following trips have been distributed to/from the proposed main site access on the A256 (K-BM02):

- 122 HGV deliveries (244 movements per day);
- 98 LGVs including office-based/supervision/management construction staff (196 movements per day); and
- 292 site-based construction staff (persons) with the forecast number of staff vehicles identified below.

1.4.C.5.12 In terms of construction staff vehicles, the following has been assumed:

- Office-based/supervision/management construction staff to travel in single occupancy vehicles (included in the LGV movements above); and
- Site-based construction staff to travel by private vehicle with an average occupancy of 1.5 staff per vehicle (supported by a formal Car Share Scheme to match potential car sharers) resulting in 195 staff vehicles (390 daily movements). This represents a lower factor than originally proposed (following feedback from KCC), resulting in a more robust assessment.

1.4.C.5.13 The described mode share is considered to provide a worst-case assessment in terms of the number of construction staff vehicles forecast. A daily profile of overall construction vehicle movements (arrivals and departures) for the Proposed Project during the peak construction phase (i.e. associated with K-BM02 on the A256) is presented in the Table 1.4.C.1.

Table 1.4.C.1: Forecast peak daily and hourly construction vehicle movements (K-BM02, 2029)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	195	0	10	8	0	0	205	8	213
08:00-09:00	0	0	10	10	15	11	25	21	46
09:00-10:00	0	0	8	10	15	15	23	25	48
10:00-11:00	0	0	7	8	11	15	18	23	41
11:00-12:00	0	0	7	7	10	11	17	18	35

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
12:00-13:00	0	0	7	7	10	10	17	17	34
13:00-14:00	0	0	7	7	10	10	17	17	34
14:00-15:00	0	0	7	7	10	10	17	17	34
15:00-16:00	0	0	7	7	15	10	22	17	39
16:00-17:00	0	0	10	7	15	15	25	22	47
17:00-18:00	0	0	10	10	11	15	21	25	46
18:00-19:00	0	195	8	10	0	0	8	205	213
Total	**195**	**195**	**98**	**98**	**122**	**122**	**415**	**415**	**830**

Ebbsfleet Lane (K-BM01)

1.4.C.5.14 The trip generation for the proposed site access on Ebbsfleet Lane (K-BM01) during the peak period for that access (2028) is shown in Table 1.4.C.2. These trips are expected to take place prior to the peak construction phase (2029). The same assumptions have been adopted above in terms of construction staff vehicles and travel patterns throughout the day.

Table 1.4.C.2: Forecast peak daily and hourly construction vehicle movements for Ebbsfleet Lane (K-BM01, 2028)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	53	0	4	3	0	0	57	3	60
08:00-09:00	0	0	3	4	5	5	8	9	17
09:00-10:00	0	0	3	3	5	5	8	8	16
10:00-11:00	0	0	3	3	5	5	8	8	16
11:00-12:00	0	0	3	3	5	5	8	8	16
12:00-13:00	0	0	3	3	4	4	7	7	14
13:00-14:00	0	0	3	3	5	5	8	8	16
14:00-15:00	0	0	3	3	5	5	8	8	16
15:00-16:00	0	0	3	3	4	4	7	7	14

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
16:00-17:00	0	0	3	3	3	3	6	6	12
17:00-18:00	0	0	4	3	1	1	5	4	9
18:00-19:00	0	53	3	4	0	0	3	57	60
Total	53	53	38	38	42	42	133	133	267

1.4.C.5.15 The trips presented in Table 1.4.C.2 have only been used to inform the assessment of Sandwich Road, the Sandwich Road/Ebbsfleet Lane junction and Ebbsfleet Lane (K-BM01) within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, given that the assessment of the remainder of the network (except Jutes Lane) has been based on the peak construction phase as presented earlier.

Jutes Lane (K-BM03)

1.4.C.5.16 The trip generation for the proposed site access on Jutes Lane (K-BM03) during the peak period for that access (2027) is shown in Table 1.4.C.3. These trips are expected to take place prior to the peak construction phase (2029). The same assumptions have been adopted above in terms of construction staff vehicles and travel patterns throughout the day.

Table 1.4.C.3: Forecast peak daily and hourly construction vehicle movements for Jutes Lane (K-BM03, 2027)

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
07:00-08:00	28	0	2	1	0	0	30	1	31
08:00-09:00	0	0	2	2	1	1	3	3	6
09:00-10:00	0	0	2	2	1	1	3	3	6
10:00-11:00	0	0	2	2	1	1	3	3	6
11:00-12:00	0	0	1	2	1	1	2	3	5
12:00-13:00	0	0	2	1	0	0	2	1	3
13:00-14:00	0	0	1	2	1	1	2	3	5
14:00-15:00	0	0	2	1	0	0	2	1	3
15:00-16:00	0	0	1	2	0	0	1	2	3
16:00-17:00	0	0	2	1	0	0	2	1	3

Time	Staff		LGVs		HGVs		Total vehicles		
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Total
17:00-18:00	0	0	2	2	0	0	2	2	4
18:00-19:00	0	28	1	2	0	0	1	30	31
Total	28	28	20	20	5	5	53	53	106

1.4.C.5.17 The trips presented in the Table 1.4.C.3 have only been used to inform the assessment of Jutes Lane (K-BM03) within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, given that the assessment of the remainder of the network (except Ebbsfleet Lane) has been based on the peak construction phase as presented earlier.

Forecast trip distribution

1.4.C.5.18 The forecast trip distribution in terms of trips entering/exiting the study area based on their expected points of origin when arriving to the Proposed Project (and conversely points of destination when departing) is set out in the Table 1.4.C.4.

Table 1.4.C.4: Forecast peak daily and hourly construction vehicle movements

Point of entry/exit	Staff	LGVs	HGVs
A299 (West)	60%	80%	80%
A299 (East)	15%	10%	10%
A256 (South)	25%	10%	10%
Total	**100%**	**100%**	**100%**

1.4.C.5.19 The above distribution has been informed by feedback received from KCC Highways following the KCC Highways Scoping Meeting in April 2023.

1.4.C.5.20 The staff distribution has been based on 2021 Census data (TS060 – Industry dataset) to identify the number of existing residents living within a 60-minute catchment of the site who also work in the construction industry. A ‘distance decay’ approach has then been used to inform the trip distribution based on their proximity to the Proposed Project. Further details of the methodology and calculations are held in **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

1.4.C.5.21 In terms of the HGV and LGV trip distributions, the majority of trips are expected to enter/exit the study area via the A299 (west) as this part of the highway network ultimately serves the majority of Kent and routes to/from London and further afield. The routes via the A299 (east) and A256 (south) are more limited in terms of the areas which they serve and include local areas such as Ramsgate to the east and Dover to the south. The HGV routing plan is held in **Volume 3, Part 3, Figure 3.8.2, HGV Routing Plan**.

1.4.C.5.22 In terms of trip distribution, all construction vehicles are expected to use the proposed main site access on the A256 (K-BM02) during the peak construction phase (2029), with all trips associated with the proposed accesses on Ebbsfleet Lane (K-BM01) and Jutes Lane (K-BM03) taking place earlier in the programme, representing less than 10% of construction vehicle trips across the whole programme. Therefore to provide a worst-case assessment, all trips have been distributed to/from K-BM02 to focus the assessment (within **Volume 1, Part 3, Chapter 8: Traffic and Transport**) on this part of the network, as agreed with KCC Highways. Nonetheless, an assessment of the local highway network serving Ebbsfleet Lane (K-BM01) and Jutes Lane (K-BM03) has also been carried out based on the peak trips identified for those access points above.

1.4.C.5.23 The proposed main site access (K-BM02) is situated on the northbound side of the A256 dual carriageway, requiring all vehicles (except AILs – see Section 1.4.C.6) to turn left in/left out of the access. Therefore, the majority of arrivals from the north would require vehicles to U-turn at the Ebbsfleet Roundabout to the south. In addition, the majority of departures to the south would require vehicles to U-turn at the Sevenscore Roundabout to the north. This has been considered as part of the trip distribution.

1.4.C.5.24 The adopted distribution of construction vehicle trips across the highway network are illustrated on the traffic flow diagrams held in **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

Plant Requirements

1.4.C.5.25 The typical plant requirements for the construction of the converter station, substation, HVDC cable and overhead line HVAC works, during the construction period are listed below (note, this is not an exhaustive list):

- Roller;
- Excavator;
- Tele handler;
- Piling rig;
- Small crane;
- Medium crane;
- Large crane;
- Pull-in winch (and associated equipment); and
- Horizontal Directional Drill (HDD).

1.4.C.5.26 The above are expected to be sourced locally where possible and will be delivered to the Site either by individually driven (larger units) and/ or by plant haulage.

1.4.C.5.27 Vehicle swept paths have been carried out for a cable drum transporter (25.44m in length) for the relevant proposed construction access points across the Site. Swept paths have also been carried out for a 16.4m length articulated lorry, and a Dennis Sabre Fire Tender, at 7.7m length. These swept paths (provided in **Annex A**) demonstrate that all construction vehicles will be able to access the site without overrunning any kerb lines.

Abnormal Vehicles

1.4.C.5.28 The following abnormal vehicles are expected during the construction phase of the Proposed Project to transport AILs (with further details set out within Section 1.4.C.6 of this Outline CTMP):

- A 74.72m length vehicle to deliver the transformer to the site access on the A256 (arrival only, as the vehicle would be dissembled prior to egress); and
- Several 25.44m length vehicles to transport cable drums to/ from site via the A256 and Ebbsfleet Lane North access points (arrivals and departures).

1.4.C.5.29 The largest Abnormal Indivisible Loads (AIL) vehicle referred to above is the AL50 Girder 12 Axial (with trailer). This, as well as the 25.44m AIL vehicle has been tracked using swept path analysis and the outputs are held in **Annex A**.

1.4.C.5.30 A specialised haulage service will be employed to allow these components to be transported with the necessary escort, permits and traffic management, with the applicant consulting the relevant highways authorities to ensure the correct permits are obtained. The police will also be given advanced notification of these journeys under the Road Vehicle Authorisation of Special Types Order 2003.

1.4.C.5.31 The abnormal vehicles will be required to follow the abnormal vehicle routing strategy (see **Volume 3, Part 3, Figure 3.8.3, Abnormal Load Routing Plan**) when travelling to/ from the Site. A number of highway improvements will be required to accommodate the abnormal vehicle movements. Further details of these abnormal loads are set out within Section 1.4.C.6 of this Outline CTMP.

1.4.C.6 Site Access, Layout and Routing

Introduction

1.4.C.6.1 Construction traffic is expected to arrive at the Site from the A299 to the north and the A256 to the south, as well as via a selection of minor connecting roads, see access drawing (SEAL-MMD-SEAL-ENG-DWG-0253) and **Volume 3, Part 1, Figure 1.4.20, Traffic Routes during Construction and Operation**, **and Part 3, Figures 3.8.2 HGV Routing Plan and 3.8.3 Abnormal Load Routing Plan**.

Vehicle Routing

1.4.C.6.2 Construction vehicles (LGVs and HGVs) will use the following types of routes when travelling to/from the Proposed Project.

1.4.C.6.3 **Public highway routes (primary) access routes:** These are generally considered to provide suitable access routes to the works for all vehicles for the duration of the Proposed Project. The majority will be A roads, most notably the A299 and A256, however other lower category routes are expected to be used where the size/geometry of these roads is considered to be suitable.

1.4.C.6.4 **Mobilisation and trenchless works routes:** These are temporary access routes for HGVs, or other construction vehicles/plant, to access the construction corridor to construct site access junctions, the temporary haul road (and to demobilise the same), and to access areas that are between watercourse crossings where advanced works may be required from both sides of a watercourse prior to installing a haul road crossing. These routes are also expected to provide access to the sites for light vehicles for the duration of the construction works. The routes are generally minor roads (predominantly rural lanes), and many are subject to the constraints typically associated with constrained highway geometry and weight/height restrictions. It is expected that appropriately sized vehicles would be used to reach the site.

1.4.C.6.5 **Permanent access routes:** Permanent access routes would be established to allow for future maintenance of the substation, the converter station, and the buried HVDC cable. In order to facilitate future replacement of the transformer, permanent access routes to the substation and converter station would need to account for AIL transformer and pick-up truck access.

1.4.C.6.6 **Permanent field access routes:** Access to the cable routes would come in the form of permanent field access routes, whereby an agreement with the relevant landowner is established to allow for access to the former construction swathe in each field that the cable passes through, following existing tracks and field entrances where possible. All field access routes have been designed to accommodate a 16.5m artic lorry, in the event that these vehicles are required for more significant repairs along the cable alignment.

1.4.C.6.7 **AIL route for transformer and cable deliveries:** Routes identified as AIL transformer routes may also be used as AIL cable delivery routes due to the less onerous vehicular swept paths. Due to the anticipated swept paths, both the transformer AIL vehicle and cable drum delivery AIL vehicle will need to travel southbound on the A256 on the northbound carriageway, and as such it will be necessary to close the road for the duration of this manoeuvre. This would require a Temporary Traffic Regulation Order / Notice from the Highway Authority.

1.4.C.6.8 **Cable drum AIL access routes:** Routes marked as Cable Drum AIL Access indicate AIL routes only to be used by the cable drum delivery vehicle and not the transformer AIL. This may be due to differing site entry requirements, or geometry of the route. Smaller construction vehicles would also be expected to use the Cable Drum AIL access routes.

Permanent Minster Converter Station and Minster Substation Access

1.4.C.6.9 The Minster Converter Station and Minster Substation will require a permanent access for cars/van, rigid lorries, and low loaders whilst also providing provision for an AIL. The permanent access road would likely be finished with a bound surface material. AIL access would be infrequent and would only be required in the event of a transformer unit needing replacement during the operational phase. For this reason, it is currently anticipated that any areas where the road would require widening for the AIL would include an appropriate sufficient width for this to take place.

1.4.C.6.10 Two options for providing permanent access to the Minster Converter Station and Minster Substation have been identified. The first option provides access to the Converter Station from Jutes Lane (K-BM03), following the HVDC cable route and then existing field boundaries before passing along the south side of the Minster Converter Station and Minster Substation.

1.4.C.6.11 The second option would utilise a new access point off the A256, North of Jutes Lane, at access K-BM02.

Construction Access

Proposed access arrangements

1.4.C.6.12 The Kent Onshore Scheme will be accessed via the following three access points during the construction phase (as shown on **Volume 3, Part 3, Figure 3.8.2 HGV Routing Plan**):

- **A256 Northbound Carriageway (K-BM02)**: Main access during both construction (for mobilisation/trenchless work and the haul road to the west of the A256) and operation (permanent access/field access) – to be used throughout the construction programme (5 years);
- **Ebbsfleet Lane (K-BM01)**: Access during both construction (for the haul road, compound, storage of materials and, HDD location to the east of the A256) and operation (permanent field access) – to be used for approximately 18 months during construction (prior to 2029 peak); and
- **Jutes Lane (K-BM03)**: Secondary access (alternative to the main A256 access) during both construction (mobilisation/trenchless work) and operation (permanent access), alternative to A256 access – to be used for approximately 3 months during construction (prior to 2029 peak).

Access considerations

1.4.C.6.13 Factors including overall distance of access route, geometry, anticipated traffic management measures, vegetation clearance and other general constraints to access have been considered for all routes. Below is an overview of the key considerations regarding sections of the route.

1.4.C.6.14 Where possible, routes including level crossings have been avoided. Where this is not possible, use of railway crossings have been limited to smaller construction vehicle movements only where possible.

1.4.C.6.15 For the purposes of clarity in this review, the project area has been split into three sections:

- Section 1: construction site area east of the A256;
- Section 2: construction site area west of the A256 and east of the railway line; and
- Section 3: construction site area west of the railway.

1.4.C.6.16 These sections are shown in **Annex B**. Each construction area section requires different vehicle access points.

Constraints to access

1.4.C.6.17 Constraints to access have been identified using a combination of aerial imagery, street view tools and National Highways' website portal ESDAL (Electronic Service Delivery for Abnormal Loads).

1.4.C.6.18 The ESDAL tool reported five structures that would be crossed by the AIL access routes.

1.4.C.6.19 Use of street view tools has not identified any signed weight restrictions on these structures. Further review with the asset owners, including Kent County Council, will be required at the next stage of the design to determine whether these structures are suitable for AIL loading, and whether further assessment or strengthening is required.

1.4.C.6.20 Once AIL movements have been finalised, a Special Order request should be submitted at least 10 weeks before the scheduled move. Five days clear notice should also be given to the Police and to Road and Bridge Authorities.

Access layouts

1.4.C.6.21 The proposed access junctions will be designed in accordance with the Design Manual for Roads and Bridges (DMRB), specifically Volume 6, Section 2, CD123 (Geometric Design of Priority Junctions). The latest revision was published by Highways England (now National Highways) in 2019. The access points are expected to be managed using a combination of temporary and permanent traffic management systems.

1.4.C.6.22 The construction makeup of these access points would likely consist of typical highway construction materials or reinforced concrete slabs poured in-situ. In either case, further details would need to be determined by the contractor at a later design stage and agreed with the local highway authority.

1.4.C.6.23 A typical access arrangement has been prepared, for which it is currently envisaged that this type of arrangement could be used for the majority of the proposed access junctions. The typical arrangement is included within **Annex A**.

Visibility splays

1.4.C.6.24 The Design Manual for Roads and Bridges (DMRB) Volume 6, Section 1, CD 109 (Highway Link Design) identifies desirable minimum Sight Stopping Distances (SSDs) based on the design speed of the carriageway. The latest revision was published by Highways England (now National Highways) in 2020. The desirable minimum speed values are adopted within DMRB CD 123 (Geometric design of at-grade priority and signal-controlled junctions) in order to determine the visibility requirements (the 'y' distance) at priority junctions, measured along the edge of the major road carriageway from the centreline of the minor arm at the junction. These requirements are shown in Table 1.4.C.5 below.

Table 1.4.C.5: Desirable minimum SSDs based on design speed

Design speed (kph)	SSD ('Y' distance)
50	70m
60	90m

70	120m
85	160m
100	215m
120	295m

1.4.C.6.25 The minimum distance from which the visibility splays are measured at simple priority junctions is at a 2.4m setback (the 'x' distance) from the give-way line.

1.4.C.6.26 The 'Desirable Minimum' SSDs in the DMRB are based on a driver perception/ reaction time of two seconds and a deceleration rate of 0.25g (2.45 m/s^2). The 'Absolute Minimum' (one step below Desirable Minimum) SSD values use the same reaction time and a deceleration rate of 0.375g (3.68 m/s^2).

1.4.C.6.27 At this stage, access designs remain indicative of typical requirements for each access location, with final details including visibility requirements to be reviewed and agreed with the Local Highways Authority.

Abnormal Vehicles

1.4.C.6.28 Constraints to access have been identified using a combination of aerial imagery, street view tools and National Highways' website portal ESDAL (Electronic Service Delivery for Abnormal Loads), which is located at https://gov.uk/esdal-abnormal-load-notification (as accessed 03/08/2023).

1.4.C.6.29 The ESDAL tool reported five structures that would be crossed by the AIL access routes.

1.4.C.6.30 Use of street view tools has not identified any signed weight restrictions on these structures. Further review with the asset owners, including Kent County Council, will be required at the next stage of the design to determine whether these structures are suitable for AIL loading, and whether further assessment or strengthening is required.

1.4.C.6.31 Along the proposed AIL vehicle route there are several access constraints. The location and extents of these constraints are shown in Table 1.4.C.6 below. It is expected that the contractor will review all access constraints in more detail at a later stage and carry out any additional assessments where necessary.

Table 1.4.C.6: Locations of access constraints for proposed AIL routes

Ref.	Location	Constraint
AC1	Monkton Roundabout	Tight geometry – street furniture removal may be required
AC2	A299 Roundabout	Transformer delivery AILs only access from west
AC3	A299/Canterbury Road West Roundabout	Tight geometry – street furniture removal may be required

AC4	A299/A256 Roundabout	Tight geometry – street furniture removal may be required
AC5	Ramsgate Road Roundabout	Tight geometry – signpost and bollard removal for AILs
AC6	Ebbsfleet Lane/Ramsgate Road junction	Tight geometry - street furniture removal including traffic signals, bollards (illuminated and non-illuminated) and pedestrian guardrail
AC7	Lord of the Manor Roundabout	Tight geometry - street furniture removal including signals and signs may be required
AC8	Royal Harbour Approach/A255 Roundabout	Tight geometry – street furniture removal including gate may be required
AC9	Royal Harbour Approach Tunnel	Clearances will need to be confirmed/agreed once final load dimensions and vehicles are confirmed.
AC10	Port of Ramsgate	Clearance of route to be agreed with Port including removal of temporary concrete and stone barriers

Vehicle Swept Paths

1.4.C.6.32 As part of the initial determination of access routes and access junction design, swept paths have been carried out for four different vehicle types. These comprise three construction vehicles and one emergency vehicle as detailed below and shown in **Annex A**.

1.4.C.6.33 The swept paths provide indicative road and access dimensions required to safely transport vehicles and equipment throughout the project site and the surrounding area.

1.4.C.6.34 In case of emergency, it would be necessary for an emergency vehicle (Dennis Sabre Fire Tender) to access the project site from any given access. As such, each access has been designed to accommodate this vehicle for both entry and exit.

Construction Compounds and Access Tracks

1.4.C.6.35 As described in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project** and as shown on **Volume 3, Part 1, Figure 1.4.18, Kent Construction Compound**, the construction compounds will be located near the A256, with larger compounds located further west and which will be accessible via the construction haul road.

1.4.C.6.36 At this stage of the design, it is anticipated that the construction haul road would be 7m wide. The haul road is expected to be constructed of unbound stone, potentially with a geogrid reinforcement or ground stabilisation (subject to detailed design and agreement). It is expected that sections of haul road between public highways and the primary construction compounds would have a bound surface for ease of trafficking by heavier vehicles together with wheel washing facilities and regular road sweeping to reduce mud and debris brought onto the public highway.

Car and Cycle Parking

1.4.C.6.37 During the construction phase of the works, a typical converter station compound would include a total of 40 car parking bays, 6 minibus bays and 10 HGV parking bays. The typical HVDC/HVAC Main Construction Compound would accommodate the same number of car and minibus bays, without HGV parking bays. The provision of cycle parking spaces is to be confirmed, although it is considered there will be sufficient capacity within the compound layouts to include a suitable amount of cycle parking.

1.4.C.6.38 Construction workers arriving on site will be transported around the works site via minibus. The usage of the car parks will be monitored and the potential to introduce additional parking will be explored during peak construction if required, to ensure that parking does not occur outside of the works site.

1.4.C.7 Management and Mitigation

Introduction

1.4.C.7.1 This section of the Outline CTMP outlines the construction traffic management measures that will be implemented in support of the Proposed Project, to avoid any adverse impacts on the surrounding networks during the construction phase.

Highway Network

Highway safety

1.4.C.7.2 A review of the most recently available Personal Injury Accident (PIA) data obtained from CrashMap for the highway network within the agreed study area is set out within **Volume 1, Part 3, Chapter 8: Traffic and Transport**.

1.4.C.7.3 The review shows that there are several locations where more than five PIAs were recorded within the five-year period, which may suggest that these locations are more sensitive to an increase in traffic from a highway safety perspective. There are also several locations which appear to have a good safety record with two or fewer PIAs within the five-year period, which suggest that these locations may be less sensitive to an increase in traffic from a highway safety perspective. In terms of PIAs involving goods vehicles, there is only one location (Monkton Roundabout) where more than five PIAs were recorded within the five-year period.

1.4.C.7.4 Upon further review within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, the majority of the highway network was found to have a lower collision rate than the national average for the comparable road type and may therefore be less sensitive to a change in traffic flow/type, particularly the A299 Hengist Way (between the Monkton and Minster Roundabouts), the A256 Richborough Way (between the Sevenscore and Ebbsfleet Roundabouts) and Sandwich Road (between Ebbsfleet Roundabout and Foads Lane). No PIAs were recorded on Ebbsfleet Lane or Jutes Lane. The A299 Hengist Way (between the Minster and Cliffsend Roundabouts) and the A256 Ramsgate Road (south of the Ebbsfleet Roundabout, within study area) have comparable collision rates with the national average.

1.4.C.7.5 With reference to road safety measures identified as GG12 within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, appropriate site layout and housekeeping measures will be implemented by the contractor(s) at all construction sites. This will include, but not be limited to:

- managing staff/vehicles entering or leaving site, especially at the beginning and end of the working day; and
- managing potential off-site contractor and visitor parking.

Highway improvements

1.4.C.7.6 The following highway improvements will be required to accommodate construction vehicles travelling to/ from the works site:

- Cottington Lane: vegetation clearance and widening of lane.
- new access point from A256: expected to be a left-in / left-out junction with acceleration and deceleration lanes.
- Jutes Lane: Localised upgrades to carriageway and street furniture. The changes would be required to the existing track and cycleway that follows the west side of the A256.
- Cooper Street Drove: Vegetation clearance to provide suitable levels of forward visibility along its route.
- Whitehouse Drove: Existing farm track to be upgraded to provide a temporary haul road access to the area of the site south of the River Stour.

1.4.C.7.7 The draft Order Limits include the areas required to accommodate the above improvements where required. The proposed extent of any carriageway works to be delivered in support of the Proposed Project is to be agreed with KCC Highways.

Localised Traffic Management Measures

1.4.C.7.8 Temporary Traffic Management (TTM) measures will be required to accommodate the construction of each of the access points, which could entail temporary traffic lights or stop/go signage, lane closures and diversions, and restrictions to pedestrian access and car parking. In addition, Cooper Street Drove would require traffic management, and traffic travelling through Richborough where routes are narrow and there are two level crossings.

Stage 1 Road Safety Audit

1.4.C.7.9 A Stage 1 Road Safety Audit (RSA) will be carried out as part of the application for development consent as requested by KCC:

- Preliminary design of the proposed site access points and crossovers for the Proposed Project; and
- Preliminary design of the proposed highway improvements as identified above.

1.4.C.7.10 The highway improvements will be secured by the DCO, and further details of the works required to deliver the improvements will be provide in the Detailed CTMP.

Pedestrian and Cycle Routes

1.4.C.7.11 Access to all existing PRoW will be retained during the construction phase, with a limited number of temporary PRoW diversions around the works areas to bypass any temporarily closed sections when the cabling is installed for example. All PRoW within the draft Order Limits will be physically separated from construction routes and works.

1.4.C.7.12 A temporary diversion would be required for PRoW TE39 during the construction and decommissioning of the Proposed Project.

1.4.C.7.13 In addition there may be a need for the permanent diversion of either PRoW TE26 or PRoW EE42, depending on which of the three options for the proposed overhead lines and pylons is taken forward. Option 1 requires the temporary and permanent diversion of PRoW EE42. Options 2 and 3 require the temporary and permanent diversion of PRoW TE26.

1.4.C.7.14 As a result, the following additional mitigation has been identified:

- TTAM01: Further consultation will be held with KCC Highways and PRoW Officers at ES stage, to identify appropriate mitigation for any permanent PRoW diversions (e.g. TE26 and EE42) should these be required to accommodate the overhead lines and pylons to the north and south of the River Stour once a preferred option has been selected; and
- TTAM02: An Outline PRoW Management Plan will be prepared at ES stage to identify the management and mitigation measures to be implemented to avoid any significant effects on PRoW (e.g. as a result of any diversions or closures) during all phases of the Proposed Project.

1.4.C.7.15 Further details of the anticipated interactions between construction works/ routes and how the existing PRoW will be managed during the construction phase will be set out within the **Outline PRoW Management Plan** to be prepared at ES stage.

Management Measures and Controls

Introduction

1.4.C.7.16 The following measures will be implemented to manage HGV deliveries to the works site and further details are set out under separate headings below:

- Road condition surveys;
- Delivery management system;
- Traffic management and monitoring;
- Suitable HGV routes – avoiding any unsuitable routes;
- HGV timing restrictions;
- Banksmen and site management;
- Communications strategy;
- Appropriate site access arrangements;
- Necessary escort, permits and traffic management for AILs; and
- Measures to minimise/safely manage interactions with pedestrians and cyclists.

Road condition surveys

1.4.C.7.17 Road condition surveys will be carried out pre-construction, during construction and post-construction, to identify any defects that arise to highways assets/verges during the construction phase of the Proposed Project for re-instatement. At this stage, it is proposed to carry out road condition surveys in the vicinity of the proposed access points on the A256, Jutes Lane and Ebbsfleet Lane. Further discussions will be held with KCC Highways to identify any additional locations where road condition surveys may be required within the draft Order Limits.

Delivery Management System

1.4.C.7.18 A Delivery Management System (DMS) will be implemented to control bookings of HGV deliveries from the start of the construction period. This will be used to regulate the arrival times of HGVs via timed delivery slots, as well as to monitor compliance of HGV routing which will be communicated to all suppliers. In addition, measures will be in place to ensure no queuing back from accesses onto the surrounding road network occurs.

Traffic Management and Monitoring

1.4.C.7.19 A Traffic Management and Monitoring System (TMMS) will be developed to provide details of the technologies and other means employed to monitor HGV movements to/ from the site e.g. Global Positioning System (GPS) and Automatic Number Plate Recognition (ANPR). This will enable the Applicant to monitor the following:

- Compliance with the HGV routes;
- Compliance with the number of HGV limits in terms of number of deliveries arriving and departing at any one time and over the course of the day; and
- Compliance with the timing restrictions.
- In addition, the TMMS will also record all LGVs which enter and exit the Site, to allow all vehicles to be monitored. In the instance that a complaint has been made in relation to inappropriate routes being used, then this will be cross-referenced with the TMMS to allow appropriate actions to then be taken.

1.4.C.7.20 With reference to mitigation measure TT02 identified within the **Volume 1, Part 3, Chapter 8, Traffic and Transport**, the contractor(s) will implement a monitoring and reporting system to check compliance with the measures set out within this CTMP. This will include the need for a GPS tracking system to be fitted to Heavy Goods Vehicles to check for compliance with authorised construction routes. The contractor(s) will also be expected to monitor the number of construction vehicles between the site and the strategic road network. Deviations from the authorised routes or changes to traffic levels that are higher than the assumptions set out within this CTMP will require discussion of the need for additional mitigation measures with highways authorities.

1.4.C.7.21 The precise form of TMMS would be determined following the appointment of a contractor and will include a summary of the contractual requirements which those visiting the Site will have to adhere to, along with the measures to be taken for non-compliance.

HGV routes

1.4.C.7.22 HGVs will be required to comply with the proposed routing strategy. Routing strategies for both HGVs and abnormal vehicles will be defined. In the case of exceptional circumstances where the proposed routing to the Site is compromised due to an incident or road closure for example, then it is considered acceptable for HGVs to be redirected via an alternative route or to deliver outside of the established scheduling if required.

HGV timing restrictions

1.4.C.7.23 To reduce the potential impact of HGV deliveries, the arrival and departure times will be managed to minimise the number of HGVs travelling to the Site during the network peak hours for the local highway network; identified within **Volume 1, Part 3, Chapter 8: Traffic and Transport**. For example, HGVs could be delayed in the afternoon to avoid being released from the Site during the PM peak hour.

1.4.C.7.24 The timing restrictions, considered likely to be implemented at this stage are:

- Limiting arrivals or departures on a weekday between 8am-9am and 5pm-6pm;
- No arrivals or departures on a Saturday before 8am or after 5pm; and
- No arrivals or departures on Sundays or public holidays.

1.4.C.7.25 The restrictions imposed on deliveries by HGVs will be set out within the DMS and TMMS.

Banksmen and site management

1.4.C.7.26 Suitably qualified banksmen will be positioned at the proposed site accesses, and at internal crossing points when required, to allow vehicle arrivals and departures, as well as internal vehicle movements to be safely controlled during the construction period. This includes the internal access routes and any road/rail/pedestrian/cycle crossing points within the Site. Visibility will be maximised between construction vehicles and other users at the crossing points (through hedgerow clearance for example), and advanced signage will be provided to warn users of the potential presence of construction vehicles and crossing points. Construction vehicle movements will be controlled by gates at any crossing points, with the default position that construction routes would be gated off to provide priority to other users.

1.4.C.7.27 Further details are contained within **Volume 2, Part 1, Appendix 1.4.D: Crossings Schedule**.

Communication strategy

1.4.C.7.28 A Communications Strategy will be developed by the Applicant to ensure that the measures contained within the Detailed CTMP are communicated to the workforce. This would include an information pack setting outing the contractual requirements which will be provided to the applicants. Furthermore, regular meetings will be held with contractors to discuss HGV management and to address any issues associated with travel to / from the Site as well as to relay information including any restrictions and requirements which should be followed.

Site access arrangements

1.4.C.7.29 The site access layouts have been designed to accommodate HGVs as shown by the vehicle swept paths in **Annex A**. A hardstanding surface will be provided at the proposed accesses to ensure the weight of the HGVs can be accommodated. In addition, wheel washing facilities will be provided at each main compound access (i.e. those which will accommodate HGV movements) to minimise mud from being trafficked onto the highway.

1.4.C.7.30 Vegetation clearance will be carried out at the proposed site accesses, where required, in order to achieve appropriate levels of visibility, subject to agreement with the local highway authorities.

Abnormal vehicles

1.4.C.7.31 As set out previously, a specialised haulage service will be employed to allow AILs to be transported, with the necessary escort, permits and traffic management in place. The relevant contractor will consult with the relevant highways authorities to ensure the correct permits are obtained. The police will also be given advanced notification under the Road Vehicle Authorisation of Special Types Order 2003.

Pedestrians and cyclists

1.4.C.7.32 The **Outline PRoW Management Plan** (to be prepared for the application for development consent) will set out the management and mitigation measures to be implemented during all phases of the Proposed Project to minimise the traffic impacts of the Proposed Project on pedestrians and cyclists. All pedestrian and cycle routes will be maintained and remain unobstructed at all times when in use, to ensure the continued safe passage of the public including when using the PRoW through the Site and at crossing points. The measures will be secured through a requirement of the DCO, primarily by this document, as well as via the CoCP.

1.4.C.7.33 With reference to mitigation measure TT03, identified within **Volume 1, Part 3, Chapter 8: Traffic and Transport**, all designated Public Rights of Way (PRoW) will be identified, and any potential temporary closures applied for/detailed in the application for development consent. All designated PRoW crossing the working area will be managed with access only closed for short periods while construction activities occur. Any required temporary diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion and a contact number for any concerns.

Staff Vehicle Measures and Controls

1.4.C.7.34 Staff movements will be managed through the implementation of the following measures:

- Limited car parking;
- Car sharing;
- Staff arrival and departure times; and
- Minibus service transferring staff across the Site.

Limited car parking

1.4.C.7.35 The proposed car parking spaces will be situated within the construction compounds. The capacity of the car parks will be limited to accommodate the expected parking demand of construction staff during the peak period, with additional parking available for minibuses. The usage of the car park will be monitored and the potential to introduce additional parking will be explored during peak construction if required.

Car sharing

1.4.C.7.36 To reduce the potential impact of vehicles associated with local staff during the construction period, the Applicant will implement measures to encourage car sharing to reduce the number of vehicles travelling to/ from the Site each day. The benefits of car sharing will be promoted to encourage multi-occupancy vehicle use, such as reduced fuel costs and ease of parking with guaranteed spaces for those car-sharing within the compounds. A Car Share Scheme will be implemented to match potential sharers and to help staff identify any colleagues who could potentially be collected along their route to/ from the Site. The limited car parking and the use of the minibus service will encourage staff to travel together.

Staff arrivals and departures

1.4.C.7.37 The proposed working hours of staff are set out below:

- Monday to Friday (7am-7pm);
- Saturday (7am-5pm); and
- No work on Sundays or Bank Holidays aside from exceptions for trenchless crossings.

1.4.C.7.38 The network peak hours for the local highway network will be established from traffic surveys which will be carried out in support of the ES. Construction workers will be expected to arrive in the hour before the start of their shift and to depart in the hour after the end of their shift. Based on the above, all staff are expected to avoid the network peak hours. The proposed working hours are therefore designed to minimise additional trips at the busiest times in terms of trips on the surrounding highway network. In the instance that any on-site works are conducted outside of the above working hours, then these will comply with the any restrictions agreed with the relevant planning/ highway authorities.

1.4.C.7.39 To minimise additional vehicle trips on local roads, construction staff will be directed to take routes to the Site by using the main routes to the site, in particular via the A256.

Management Structure

1.4.C.7.40 The overall management and implementation of this Outline CTMP and the Detailed CTMP will be the responsibility of the Applicant.

1.4.C.7.41 A Transport Co-ordinator will be appointed by the Applicant to implement, manage and develop the Detailed CTMP at the appropriate time/ stage. The Detailed CTMP will include the following information:

- specifics of any carriageway widening or improvement works if required;
- specifics of the design of TTM measures;

- details of the works to accesses, to accommodate the swept paths and to include provision of visibility splays;
- further details in respect of the design and management measures required to accommodate AILs; and
- information on sanctions for breaches of the routing strategies.

1.4.C.7.42 The Transport Co-ordinator who takes responsibility for implementing the CTMP will:

- implement and monitor the CTMP to identify successful measures and areas for improvement;
- promote the CTMP to all staff and contractors travelling to and from the Site to ensure compliance with its contents;
- liaise as appropriate with local transport and traffic groups, local planning authorities and local highway authorities and National Highways;
- monitor data relating to HGV routes, timing of HGV arrivals and departures and compliance with the DMS/ TMMS;
- manage the Car Share Scheme; and
- discuss any issues with relevant parties and identify any amendments to the CTMP (including measures) to ensure compliance is maintained.

Monitoring and Review

Heavy Goods Vehicles

1.4.C.7.43 The Detailed CTMP will be monitored and revised to ensure that contractors are complying with the document. This process will be led by the Transport Co-ordinator.

1.4.C.7.44 The Transport Co-ordinator will monitor data relating to HGV routes, timing of HGV arrivals and departures and compliance with the DMS/ TMMS. The results of the data monitoring will be reported to identify any issues which need to be resolved and any additional measures which should be implemented to prevent these from arising again. The reports will be shared with the Applicant, local authority and the highway authority (i.e. KCC Highways).

Staff vehicles

1.4.C.7.45 A Car Share Scheme will be implemented and managed by the Transport Co-ordinator, to match potential car sharers and to help staff identify any colleagues who could potentially be collected along their route to/from the Site. The car share database will be available to staff that have signed up, to allow them to identify their own potential matches. Car sharing staff will be allocated spaces within the construction compounds so that they are guaranteed a parking space upon arrival.

1.4.C.7.46 Construction staff vehicles will be monitored when entering and exiting the Site. This monitoring will determine whether any additional measures should be explored to minimise staff trips on the local highway network.

1.4.C.7.47 Construction staff will be directed to available parking bays upon arrival to assist them to park in a timely manner. Given the working patterns identified, it is expected that the car parks will be managed between 6am-9am and 5pm-8pm, when the majority of staff are expected to arrive and depart. Appropriate signage will be provided to clearly identify the entry and exit points to the car parks. It should be noted that the usage of the car park will be monitored and that the potential to introduce additional parking will be explored during peak construction if required.

Additional monitoring

1.4.C.7.48 The following monitoring will also be carried out during the construction phase of the Proposed Project, and secured as part of the Detailed CTMP:

- Construction vehicles (HGVs) will be monitored to ensure HGV drivers are adhering to the proposed routing strategy; and
- Road safety will be monitored within the Site including at the proposed access points and at the internal PRoW crossing points.

1.4.C.8 Compliance and Enforcement

Introduction

1.4.C.8.1 This section of the Outline CTMP provides a summary of the mechanisms that will be implemented to maximise compliance with the CTMP.

Best Practice

1.4.C.8.2 The Applicant will use internal management procedures to maximise compliance and its enforcement with the requirements of this Outline CTMP and subsequent Detailed CTMP, including:

- Contractor kick-off meetings: contractors will be reminded of the Applicant's standards and expectations as set out in contract documentation.
- Site induction: drivers will be briefed on the aims and objectives of the CTMP, including the booking system, designated routes and expected driver behaviour. A copy of the CTMP will be provided to each contractor to provide details of how the site will be managed as well as the rules and regulations.
- Reporting: incidences of non-compliance will be investigated by the Transport Co-ordinator and recorded as part of the management of the CTMP. Reports from each incident will be raised and shared with the relevant contractor. The CTMP will be updated where necessary to resolve any ongoing issues.

Contractual Conditions

1.4.C.8.3 Each contractor will be provided with a contract setting out their contractual requirements in terms of compliance with the Detailed CTMP upon appointment. A copy of the CTMP will be provided along with details of the proposed routing strategy for HGVs to ensure that this route is followed.

Information Packs and Communications

1.4.C.8.4 Information packs will be provided to all contractors once they have been confirmed. The information pack will form part of the agreement between the Applicant and the designated contractors. The information pack will include details of the following:

- Code of practice;
- Details of the Transport Co-ordinator;
- Delivery routing restrictions;
- Worker routing;
- Emergency procedures;
- Non-compliance guidance; and
- Compliant procedures.

Enforcement

1.4.C.8.5 The Applicant will take all reasonable steps to avoid any breach of the CTMP through the implementation of the management measures. However, should any breaches occur, then enforcement procedures will be followed:

- The Transport Co-ordinator will notify the Applicant of any breaches of the CTMP arrangements as and when they occur.
- The Applicant will issue a warning letter to the relevant contractor outlining what action would be taken in the event of any further non-compliance (in general terms).
- The Applicant will report the details of the response to the Transport Co-ordinator as part of the monitoring report. The monitoring report will be made available to the relevant local planning authorities and relevant highway authorities at their request to ensure compliance and to demonstrate that action is being taken where necessary.

1.4.C.8.6 Further detail on the sanctions which could be applied will be included within the Detailed CTMP.

1.4.C.9 Conclusion

1.4.C.9.1 The purpose of this Outline CTMP is to focus on the management of construction traffic along the local highway network within the vicinity of the Site during the construction period of the works, in order to limit any potential disruptions and implications on the wider transport network. The **Outline PRoW Management Plan** to be produced at the Environmental Statement (ES) stage, will identify PRoW to be potentially affected by the proposals and will set out measures to mitigate any impacts.

1.4.C.9.2 This Outline CTMP sets out the proposals to manage construction traffic and staff vehicles during the construction of the Proposed Project. It identifies the management of freight traffic i.e. Heavy Goods Vehicles (HGVs), as well as construction staff vehicles.

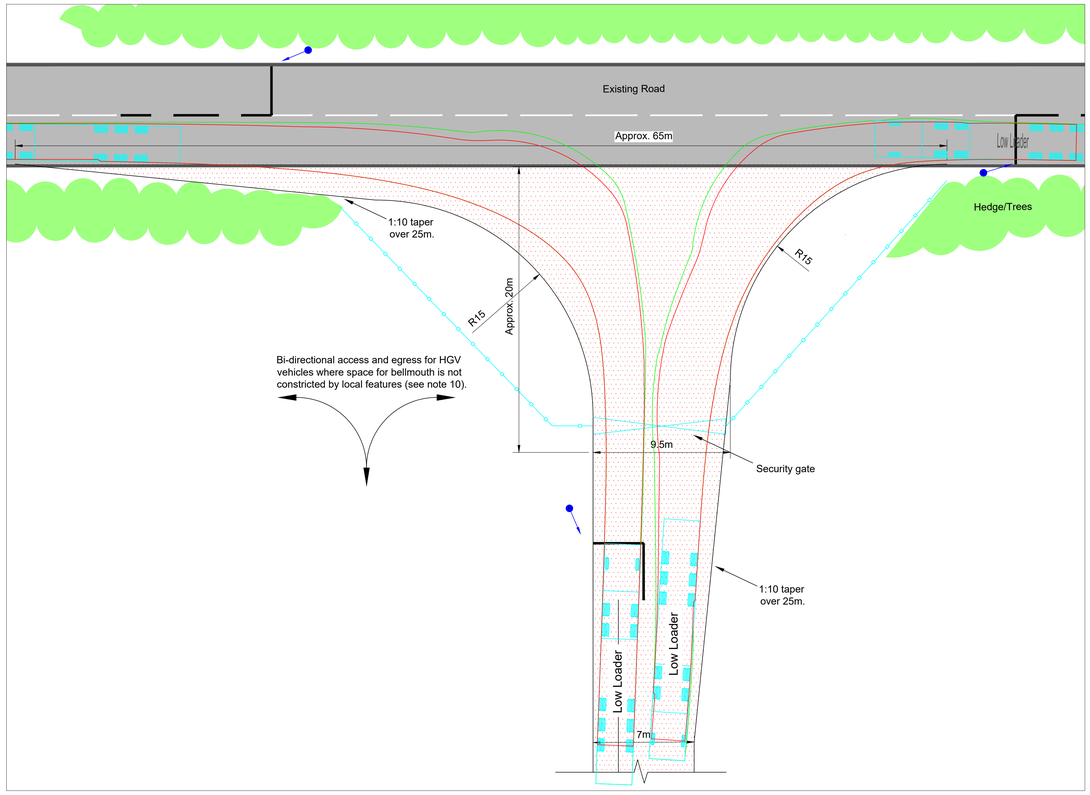
1.4.C.9.3 It should be noted that as this is a framework document, certain details will remain to be developed as the Proposed Project progresses into detailed design. The full details of all measures may not be available until after consent for the Proposed Project has been granted and will be provided within the Detailed CTMP as necessary.

This page is intentionally left blank

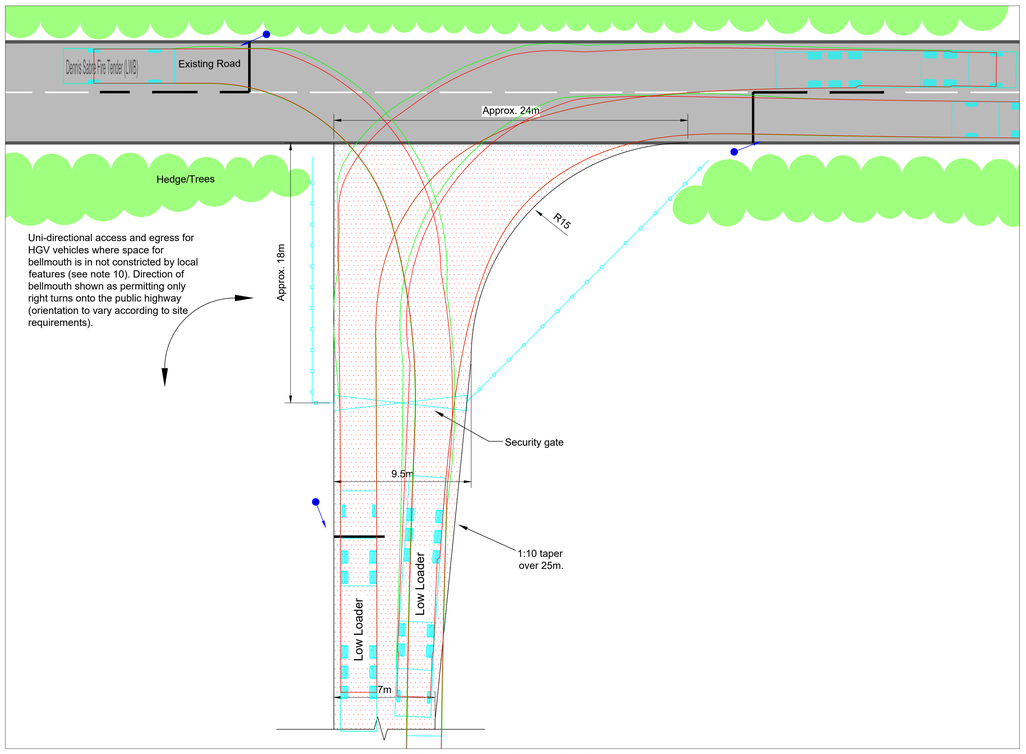
ANNEX A – Typical Access Arrangement with Vehicle Swept Paths

This page is intentionally left blank

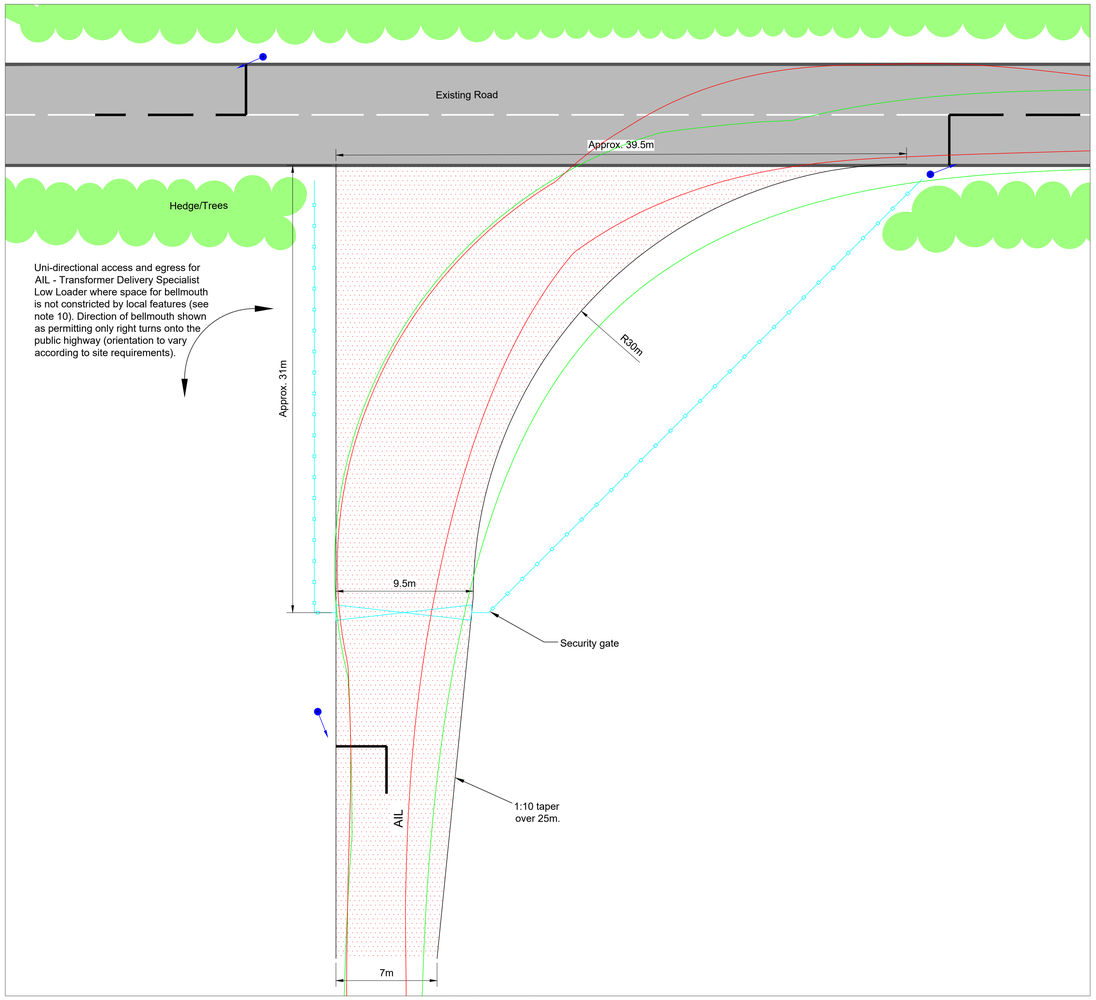
THE NATIONAL GRID (SEA LINK) ORDER
STANDARD DETAIL DRAWING
BELLMOUTH TYPICAL ARRANGEMENT DETAILS
SHEET 1 OF 1



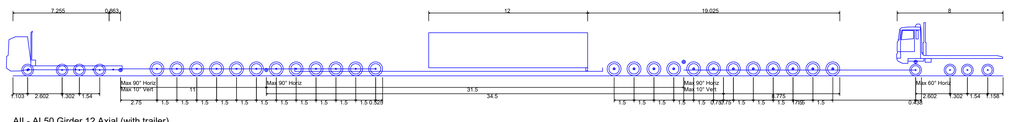
Type 1 Bellmouth - Bi-Directional (HGV and Cable Drum Delivery Vehicle)
1:150



Type 2 Bellmouth - Uni-Directional (HGV and Cable Drum Delivery Vehicle)
1:150

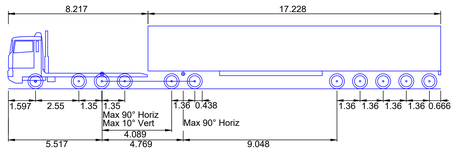


Type 3 Bellmouth - Uni-Directional (AIL)
1:150



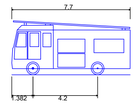
AIL- AL50 Girder 12 Axial (with trailer)

Overall Length	74.720m
Overall Width	5.336m
Overall Body Height	4.020m
Min Body Ground Clearance	0.337m
Max Track Width	3.000m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.550m



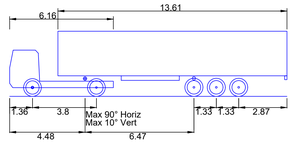
CABLE DRUM DELIVERY VEHICLE 25.44m

Overall Length	25.440m
Overall Width	4.500m
Overall Body Height	3.695m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	14.500m



Dennis Sabre Fire Tender (LWB)

Overall Length	7.700m
Overall Width	2.430m
Overall Body Height	3.512m
Min Body Ground Clearance	0.397m
Track Width	2.380m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	7.400m



DESIGN ARTICULATED VEHICLE (2016)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

Autotrack Model
NTS

1:150 0 10m 15m

Legend

- Hedges/Trees (See Note 8)
- Temporary 3 or 4 Way Traffic Lights (See Note 6)
- Security Gate (See Note 7)
- Access Track and Bellmouth
- Security Fence (See Note 7)
- Stop Line (See Note 6)

Notes

1. This drawing is scaled at paper size A0, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.
2. All dimensions are in meters unless specified otherwise.
3. Do not scale any items or information from this drawing.
4. Typical bellmouth arrangements are shown for indicative purpose only. Dimensions and design may vary depending on site and installation conditions.
5. Construction swathe and bellmouth sizes may vary according to site conditions.
6. Traffic signals and associated stop lines may not be necessary. Details and requirements to be agreed with the local highway authority.
7. Alignment/specification of fencing and gates subject to site conditions and contractor/stakeholder requirements.
8. Vegetation clearance and groundworks maybe required to facilitate necessary sight distances.
9. Bellmouth surfacing and interface with existing highway to be agreed with local highway authority.
10. Type 1 and 2 Bellmouths have been designed to accommodate low loader and Cable Drum Delivery vehicles. However, it is assumed that Cable Drum Delivery vehicle's movements will be managed such that Bellmouths are clear of other vehicles.
11. While construction vehicles will be restricted to certain manoeuvres, all bellmouths have been designed to allow emergency access such as fire engines to access/exit from all directions.

Sheet X Centroid Coordinate: Sheet Y Centroid Coordinate:

Issue	Date	Remarks	Drawn	Checked	Approved
P02	03/03/2022	Updated vehicles	AG	EVI	JW
P01	10/11/2022	First Issue	EA	EVI	JW

Title

THE NATIONAL GRID
(SEA LINK) ORDER
STANDARD DETAIL DRAWING
BELLMOUTH TYPICAL ARRANGEMENT DETAILS
SHEET 1 OF 1

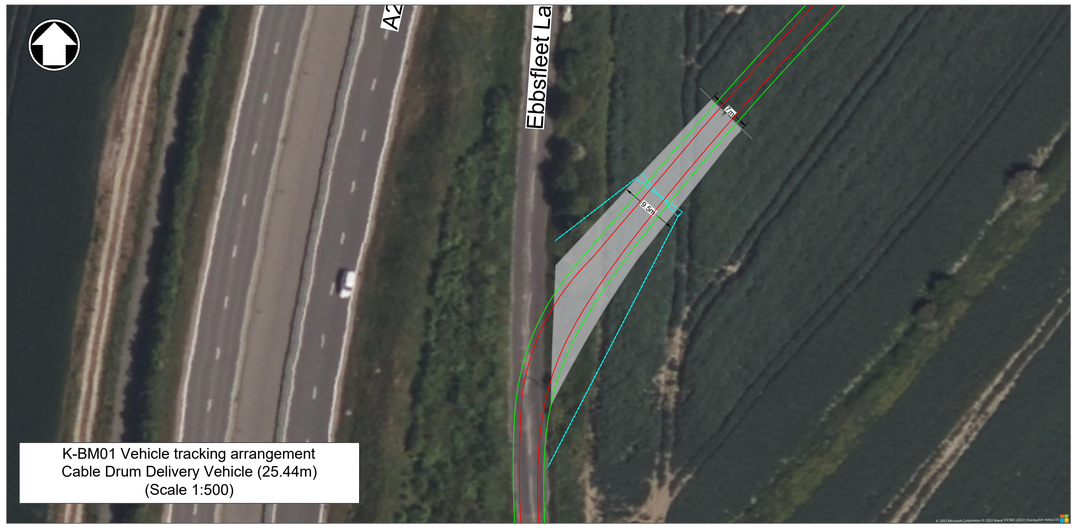
nationalgrid

Application Number
-

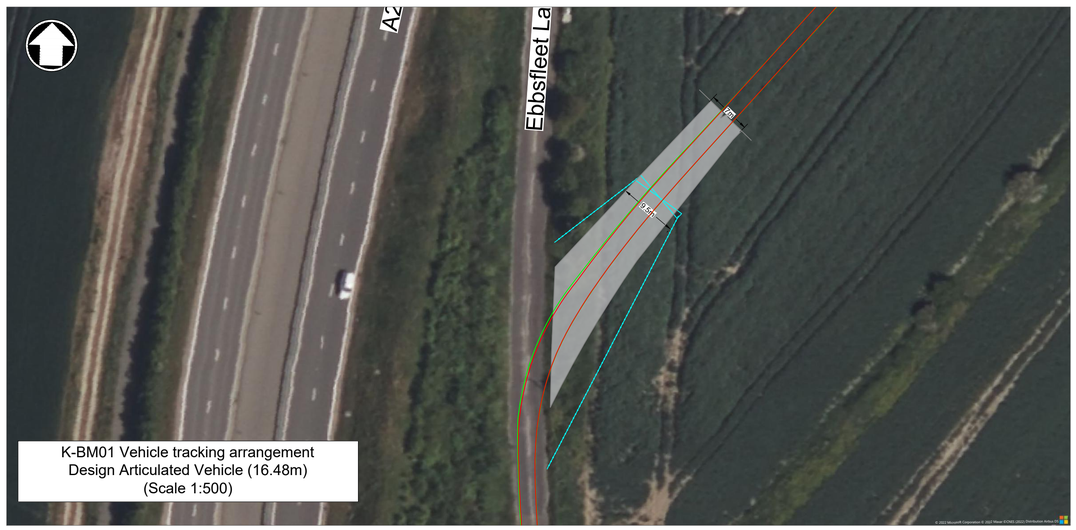
National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0198

Scale	Sheet Size	Sheet	Issue
AS SHOWN	A0	SHEET 1 OF 1	P02

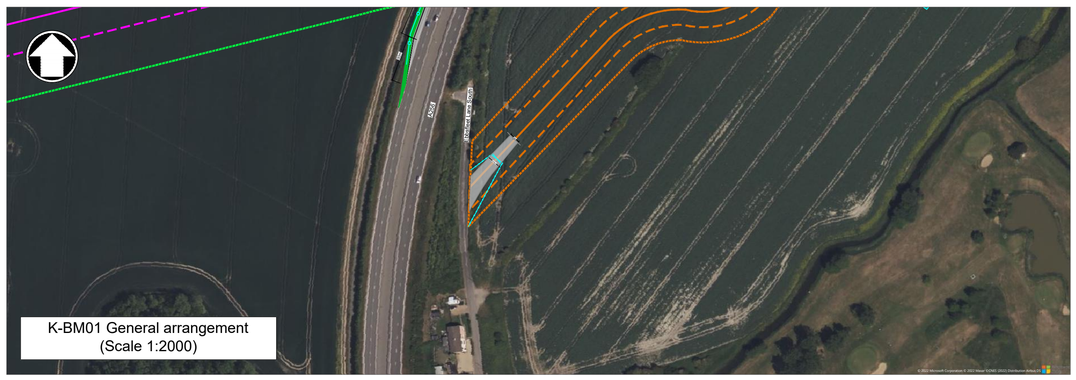
THE NATIONAL GRID (SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION , SHEET OF
XXXX COUNCIL



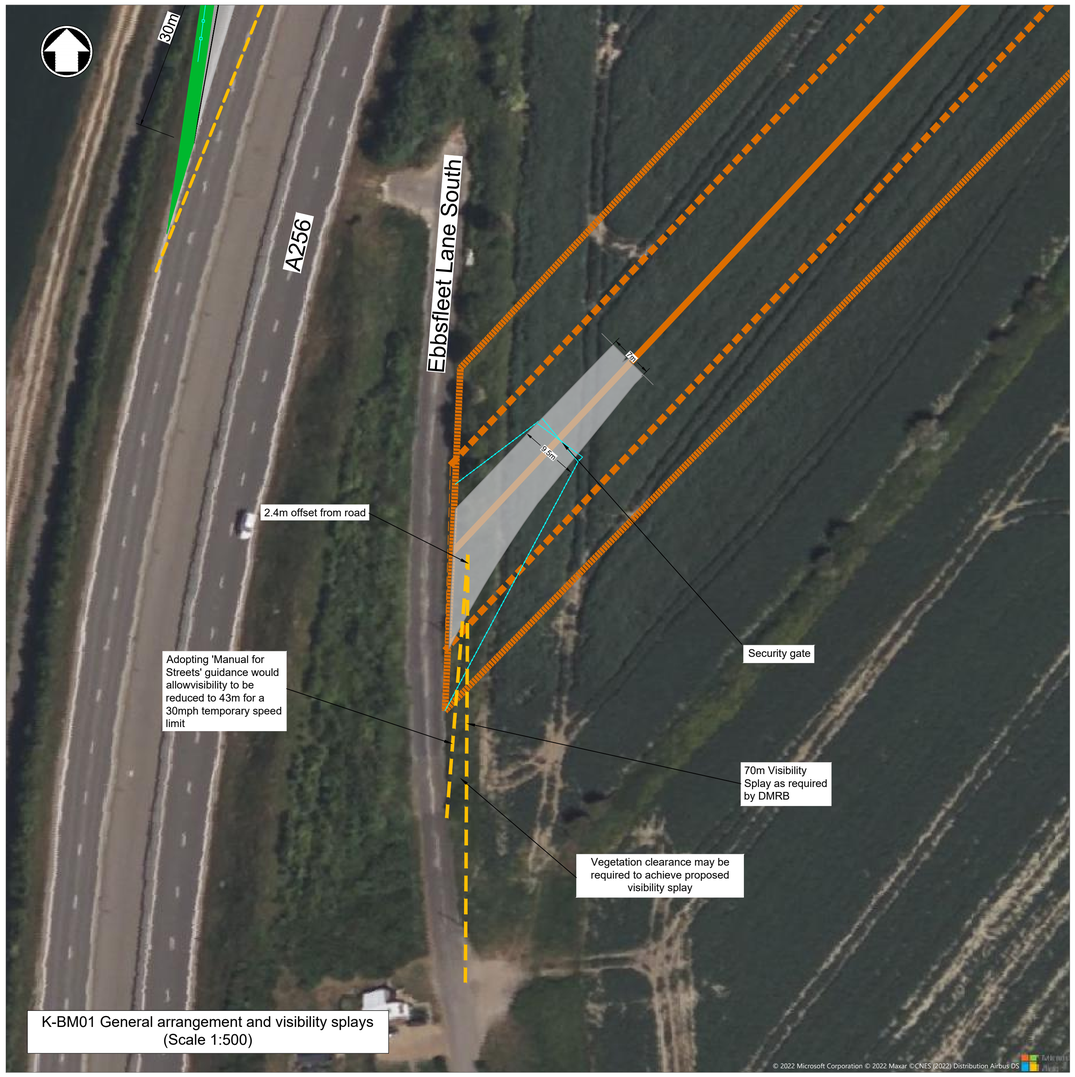
K-BM01 Vehicle tracking arrangement
Cable Drum Delivery Vehicle (25.44m)
(Scale 1:500)



K-BM01 Vehicle tracking arrangement
Design Articulated Vehicle (16.48m)
(Scale 1:500)

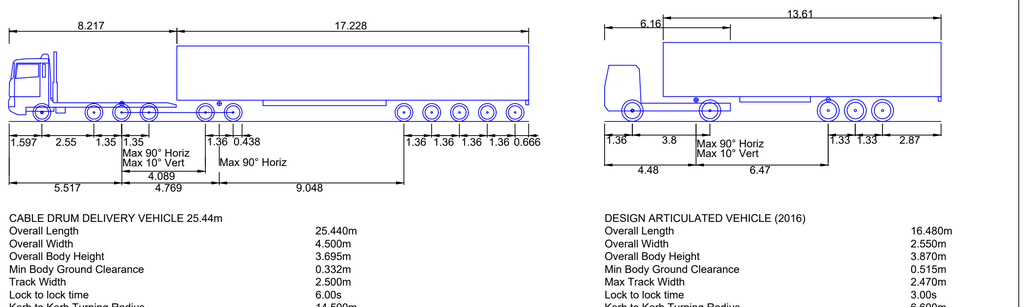


K-BM01 General arrangement
(Scale 1:2000)



K-BM01 General arrangement and visibility splays
(Scale 1:500)

Vehicle Diagram



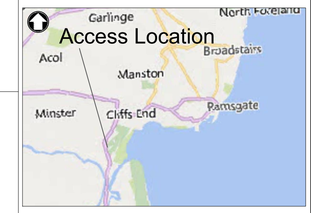
CABLE DRUM DELIVERY VEHICLE 25.44m	
Overall Length	25.440m
Overall Width	4.500m
Overall Body Height	3.695m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	14.500m

DESIGN ARTICULATED VEHICLE (2016)	
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

Note: Not to scale

SCALE BARS (METRES)
1:500 0 25m 50m
1:2000 0 100m 200m

SITE MAP



Legend

- Bellmouth General Arrangement
- Security Gate
- New Fence
- Highway Visibility Splay (see note 10)
- HVDC Cable Alignment
- Indicative HVDC Construction Swathe
- Cable Limit of Deviation
- Haul Road Alignment
- Haul Road Construction Swathe
- Haul Road Limit of Deviation

Notes

1. This drawing is for development purposes only and should not be used for construction.
2. All dimensions are in meters unless otherwise stated.
3. Do not scale any items of information from this drawing.
4. Proposed arrangements shown for indicative purposes only. Dimensions and design may vary following completion of site surveys and the detailed design.
5. Drawing scaled at paper size A1.
6. Alignment/specification of fencing and gates subject to site conditions and contractor requirements.
7. Vegetation clearance and groundwork may be required to facilitate any necessary sight distances.
8. The vehicles used in this drawing are indicative of those expected to be using this construction access. Actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor.
9. Where required by the local highways authority, the proposed junction will be controlled by traffic signals designed and installed in accordance with Chapter 6 of the Traffic Signs Manual. Appropriate warning signage will be used where necessary.
10. Visibility splays shown on the drawing indicate the proposed visibility on site based on Stopping Site Distance (SDD) as per CD 109 of the DMRB.
11. The road currently has a 40mph speed limit requiring a SSD of 120m. As required visibility is not available, a temporary 30mph speed limit is recommended. Some vegetation clearance may be required.
12. Cable deliveries are expected to require use of additional lanes and will require traffic control measures.
13. For construction of the bellmouth it is anticipated that the end of Ebbsfleet Lane would be closed off.
14. Vehicles considered for the swept path analysis do not incorporate rear axles steering.

Issue	Date	Remarks	Drawn	Checked	Approved
P02	17/03/2023	Second Issue	AG	EVI	JW
P01	21/10/2022	First Issue	LS	EVI	JW

Title

THE NATIONAL GRID
(SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION, SHEET OF
XXXX COUNCIL
Typical Bellmouth Construction Access Arrangement
K-BM01

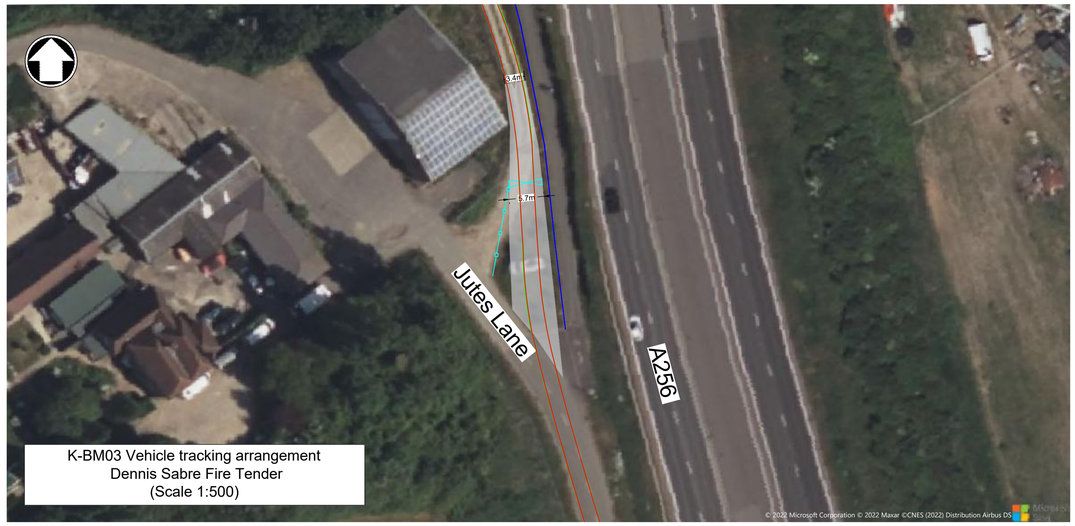
nationalgrid

Application Number
-

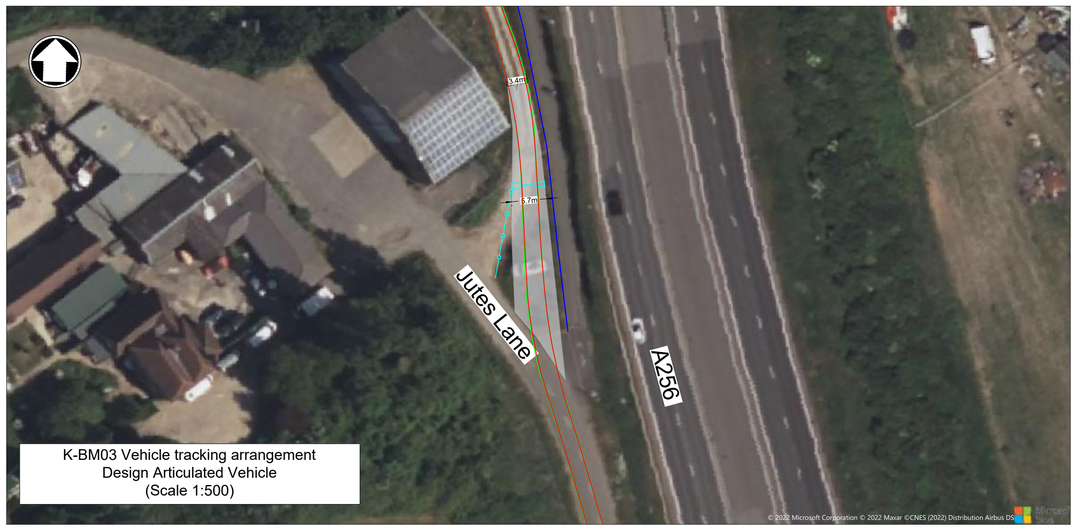
National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0381

Scale	Sheet Size	Sheet	Issue
-	A1	SHEET 1 OF 1	P02

THE NATIONAL GRID (SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION , SHEET OF
XXXX COUNCIL



K-BM03 Vehicle tracking arrangement
Dennis Sabre Fire Tender
(Scale 1:500)

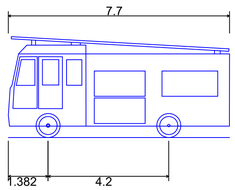


K-BM03 Vehicle tracking arrangement
Design Articulated Vehicle
(Scale 1:500)

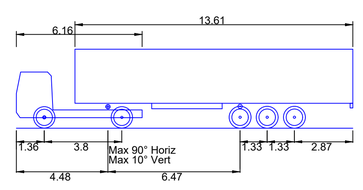
K-BM03 General arrangement
(Scale 1:2000)

K-BM03 General arrangement and visibility splays
(Scale 1:500)

Vehicle Diagram



Dennis Sabre Fire Tender (LWB)	
Overall Length	7.700m
Overall Width	2.430m
Overall Body Height	3.512m
Min Body Ground Clearance	0.397m
Track Width	2.380m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	7.400m



DESIGN ARTICULATED VEHICLE (2016)	
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

SCALE BARS (METRES)

1:500 — 0 — 25m — 50m

1:2000 — 0 — 100m — 200m

SITE MAP

Legend

- Proposed Bellmouth General Arrangement
- Security Gate
- New Fence
- Highway Visibility Splay (see note 10)
- Existing Cycle Route Fence

Notes

1. This drawing is for development purposes only and should not be used for construction.
2. All dimensions are in meters unless otherwise stated.
3. Do not scale any items of information from this drawing.
4. Proposed arrangements shown for indicative purposes only. Dimensions and design may vary following completion of site surveys and the detailed design.
5. Drawing scaled at paper size A1.
6. Alignment/specification of fencing and gates subject to site conditions and contractor requirements.
7. Vegetation clearance and groundwork may be required to facilitate any necessary sight distances.
8. The vehicles used in this drawing are indicative of those expected to be using this construction access. Actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor.
9. Where required by the local highways authority, the proposed junction will be controlled by traffic signals designed and installed in accordance with Chapter 6 of the Traffic Signs Manual. Appropriate warning signage will be used where necessary.
10. Visibility splays shown on the drawing indicate the proposed visibility on site based on Stopping Sight Distance (SSD) as per CD 109 of the DMRB.
11. The road currently has a 40mph speed limit requiring a SSD of 120m, which is currently achievable south of the proposed bellmouth.
12. For construction of the bellmouths it is anticipated that temporary traffic signals will be installed with alternate lane closures.
13. Fence lines to tie into existing fenceline, Hedgerow or wall where appropriate.
14. Vehicles considered for the swept path analysis do not incorporate rear axles steering.

Issue	Date	Remarks	Drawn	Checked	Approved
P02	15/03/2023	Second Issue	AG	EVI	JW
P01	24/10/2022	First Issue	LS	EVI	JW

Title

THE NATIONAL GRID
(SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION, SHEET OF
XXXX COUNCIL
Typical Bellmouth Construction Access Arrangement
K-BM03

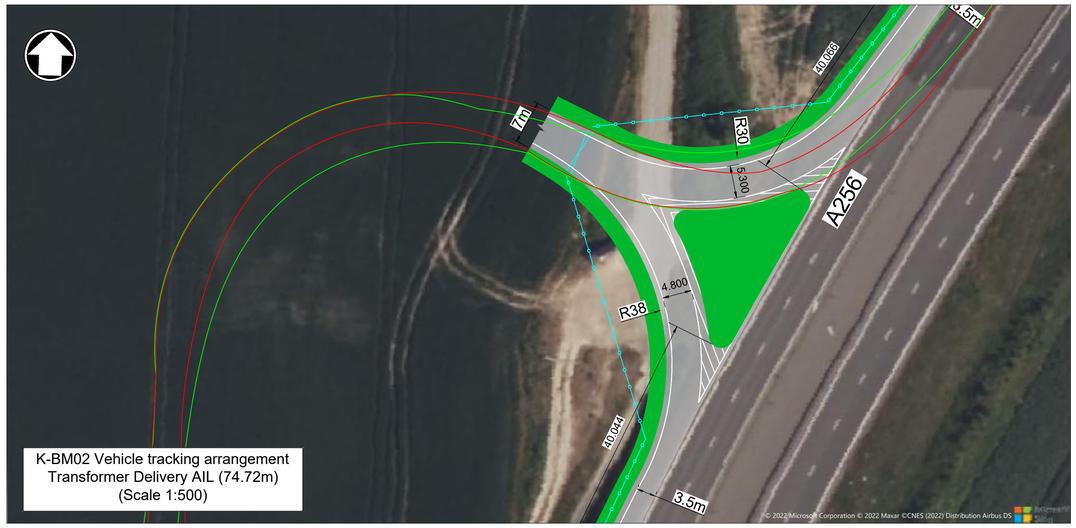
nationalgrid

Application Number
-

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0382

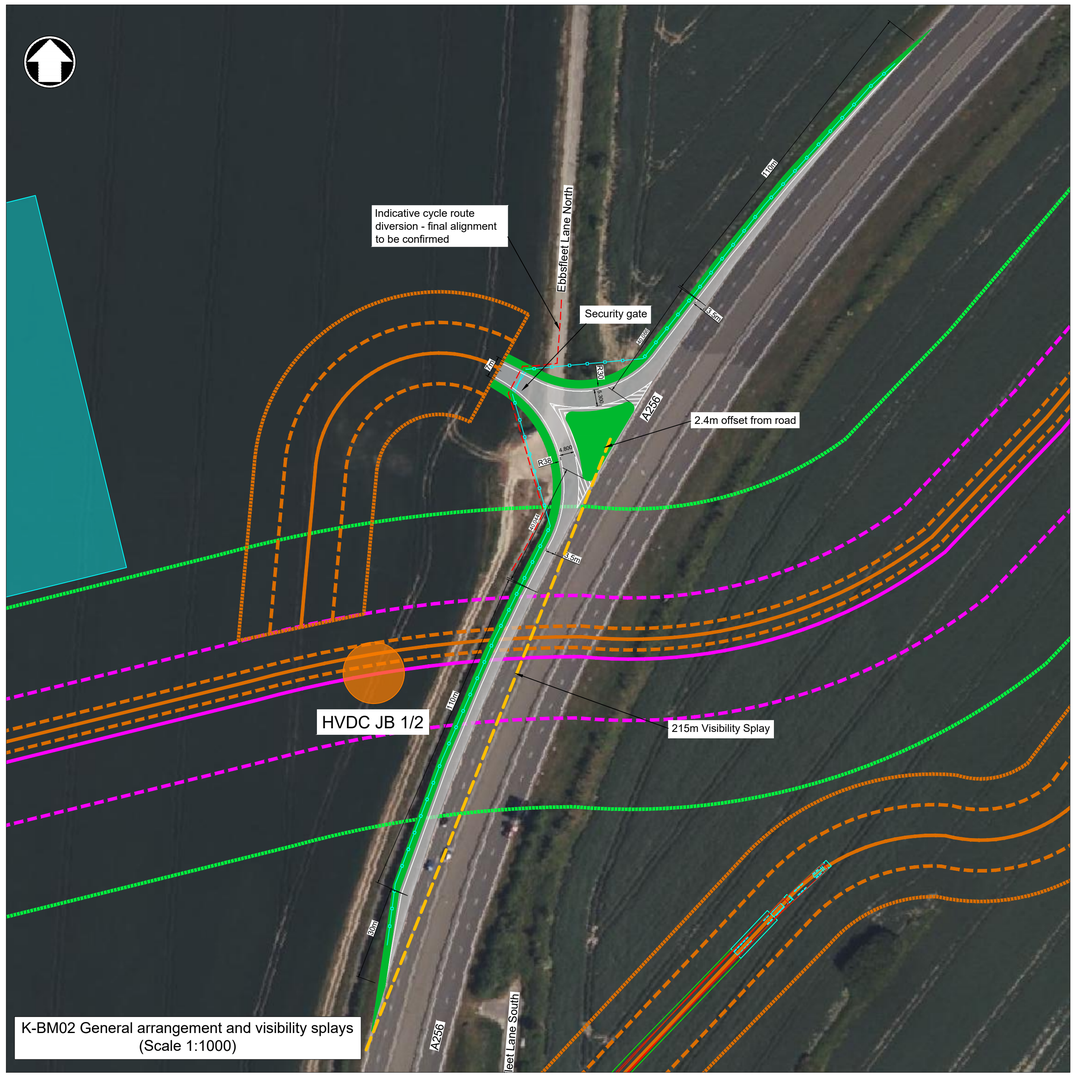
Scale	Sheet Size	Sheet	Issue
As shown	A1	SHEET 1 OF 1	P02

THE NATIONAL GRID (SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION , SHEET OF
XXXX COUNCIL



K-BM02 Vehicle tracking arrangement
Transformer Delivery AIL (74.72m)
(Scale 1:500)

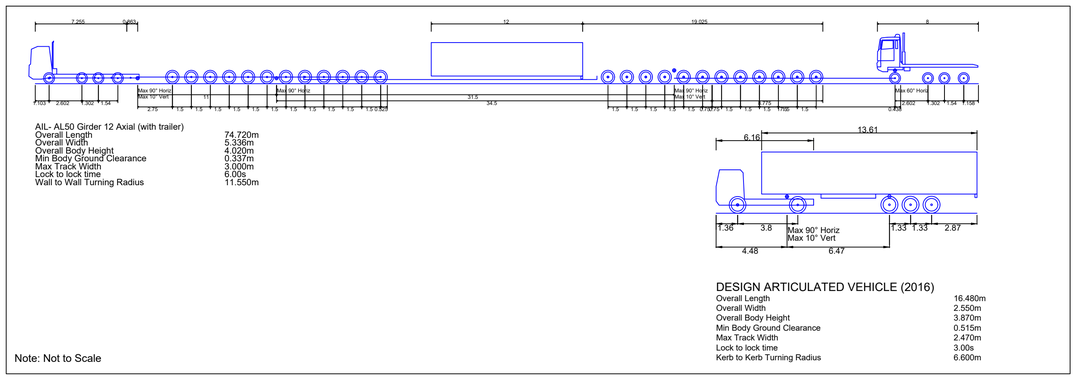
K-BM02 Vehicle tracking arrangement
Design Articulated vehicle (16.48m)
(Scale 1:500)



K-BM02 General arrangement and visibility splays
(Scale 1:1000)

K-BM02 General arrangement
(Scale 1:2000)

Vehicle Diagram



AIL- AL50 Girder 12 Axial (with trailer)

Overall Length	74.720m
Overall Width	5.336m
Overall Body Height	4.020m
Min Body Ground Clearance	0.337m
Max Track Width	3.000m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.550m

DESIGN ARTICULATED VEHICLE (2016)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

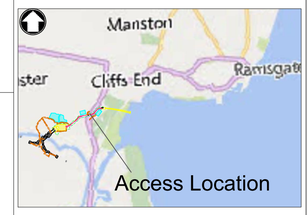
Note: Not to Scale

SCALE BARS (METRES)

1:500 0 25m 50m

1:2000 0 100m 200m

SITE MAP



Legend

- Proposed Bellmouth General Arrangement
- Security Gate
- New Fence
- Highway Visibility Splay (see note 10)
- HVDC Cable Alignment
- Indicative HVDC Construction Swathe
- Cable Limit of Deviation
- Cable Joint Bay
- Indicative Construction Compound
- Haul Road Alignment
- Haul Road Construction Swathe
- Haul Road Limit of Deviation
- Proposed Traffic Island and Grass Verge
- Indicative Cycle Route Diversion

Notes

1. This drawing is for development purposes only and should not be used for construction.
2. All dimensions are in meters unless otherwise stated.
3. Do not scale any items of information from this drawing.
4. Proposed arrangements shown for indicative purposes only. Dimensions and design may vary following completion of site surveys and the detailed design.
5. Drawing scaled at paper size A1.
6. Alignment/specification of fencing and gates subject to site conditions and contractor requirements. Proposed fences to tie into existing fences/hedgerows.
7. Vegetation clearance and groundwork may be required to facilitate any necessary sight distances.
8. The vehicles used in this drawing are indicative of those expected to be using this construction access. Actual turning radii and vehicle track will depend on the precise vehicles used by the works contractor.
9. Not used.
10. Visibility splays shown on the drawing indicate the visibility currently available on site based on Stopping Site Distance (SSD) as per CD 109 of the DMRB.
11. The road currently has a 70mph speed limit requiring a SSD of 215m which is currently available on site. Some vegetation clearance may be required.
12. Cable deliveries are expected to require use of additional lanes and will require traffic control measures.
13. For construction of the bellmouth it is anticipated that a lane closure or contraflow will be required.
14. Vehicles considered for the swept path analysis do not incorporate rear axles steering.
15. AIL movements will be agreed and coordinated with the relevant authorities, it is anticipated that delivery of the transformer would require the temporary closure and contraflow of the A256 to enable access south along the northbound carriageway.

Issue	Date	Remarks	Drawn	Checked	Approved
P02	17/03/2023	Second Issue	AG	EVI	JW
P01	24/10/2022	First Issue	LS	EVI	JW

Title

THE NATIONAL GRID
(SEALINK) ORDER
XXXXXXXXXXX
(REGULATION XXXX)
SECTION, SHEET OF
XXXX COUNCIL
Typical Bellmouth Construction Access Arrangement
K-BM02

nationalgrid

Application Number
-

National Grid Drawing Reference
SEAL-MMD-SEAL-ENG-DWG-0383

Scale	Sheet Size	Sheet	Issue
As shown	A1	SHEET 1 OF 1	P02

ANNEX B – Construction Site Area Sections

This page is intentionally left blank


SECTION 1
SECTION 2
SECTION 3

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com