Onshore Cable Route

Traffic Management Plan

DCO Requirements 16 (3) and 27 (1)(a)

(Applicable to 5B to 20, 25 to 38, 41 to 49 and 52 to 61)

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Description of Revisions			
Rev	**Page**	**Section**	**Description**
1	All	All	New Document
2	ALL	ALL	Amended in accordance with Consultee comments on Interim Draft and in accordance layout design information
3	ALL	ALL	Amended in accordance with Consultee comments on Final Draft and in accordance with revised layout information

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1. INTRODUCTION AND SCOPE

1.1 Project Overview

1. East Anglia Three Limited (EATL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Business, Energy & Industrial Strategy (DBEIS) on 7 August 2017 for the East Anglia THREE Offshore Windfarm (EA THREE). The DCO granted consent for the development of a 1,200MW offshore windfarm and associated infrastructure.

2. The DCO has now been subject to three non-material variations:

- In March 2019 EATL submitted a non-material change application to DBEIS to amend the consent to increase the maximum generating capacity from 1,200MW to 1,400MW and to limit the maximum number of gravity base foundations to 100. In June 2019 DBEIS authorised the proposed change application and issued an Amendments Order.
- In July 2020 EATL submitted a second non-material change application to DBEIS to amend the parameters of its offshore substations (reducing the number of these to one) and wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). On 15 April 2021 DBEIS authorised this proposed change application and issued an Amendments Order.
- In August 2021 EATL submitted a third non-material change application to DBEIS to amend the consent to remove the maximum generating capacity of 1,400MW and to amend the parameters of its wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). In September 2022 DBEIS authorised the proposed change application and issued an Amendments Order..

3. The onshore construction works associated with EA THREE will have a capacity of 1,400MW and transmission connection of 1,320MW. The construction works will be spread across a 37km corridor between the Suffolk coast at Bawdsey and the converter station at Bramford, passing the northern side of Ipswich. As a result of the strategic approach taken, the cables will be pulled through pre-installed ducts laid during the onshore works for East Anglia ONE Offshore Windfarm (EA ONE), thereby substantially reducing the impacts of connecting to the National Grid (NG) at the same location. The infrastructure to be installed for EA THREE, therefore, comprises:

- The landfall site with one associated transition bay location with two transition bays containing the connection between the offshore and onshore cables;
- Two onshore electrical cables (single core);
- Up to 62 jointing bay locations each with up to two jointing bays;
- One onshore converter station, adjacent to the EA ONE Substation;
- Three cables to link the converter station to the National Grid Bramford Substation;
- Up to three onshore fibre optic cables; and
- Landscaping and tree planting around the onshore converter station location.

4. Since the granting of the DCO, the decision has been made that the electrical connection for EA THREE will comprise a high voltage direct current (HVDC) cable rather than a high voltage alternating current cable and, therefore, the type of substation that will be required is a HVDC converter station. The substation will be referred to here as a 'converter station' and this amended terminology has been agreed with the relevant authorities on 15 October 2020. It has also been determined that only one converter station will be constructed rather than two and that the converter station will be installed in a single construction phase.

5. The EA THREE onshore works commenced development in July 2022, with works at the Converter Station, Paper Mill Lane, Playford Corner and Clappits.

1.2 Purpose and Scope

6. This Traffic Management Plan (TMP) sets out the standards and procedures for managing the impact of traffic during the construction works for the East Anglia THREE onshore cable route, to facilitate safe use of the existing road network. This document has been produced to discharge DCO Requirements 16 (3) and 27 (1) (c) which state:

Highway accesses and improvements
16. (3) *No stage of the connection works may commence until for that stage, a scheme of traffic management measures (in accordance with table 2 of the outline traffic management plan) has been submitted to, and approved by the relevant planning authority in consultation with the relevant highway authority. The scheme must describe whether the proposed measures are to be temporary or permanent*.

Traffic
27. (1) *No stage of the connection works may commence until for that stage the following have been submitted to and approved by the relevant local planning authority in consultation with the relevant highway authority—*
(a) a traffic management plan which must be in accordance with the outline traffic management plan;

7. The scope of this document relates to the TMP associated with the construction of the onshore cable works comprising Work No.s 5B to 61 (see Figure 1 Site Context Plan) as defined in the EA THREE DCO. The Requirement Discharge Documents (RDDs) relating to the construction and installation of cable route infrastructure within the Clappits Works Stage (Work No.s 21 to 24), Playford Corner Works Stage (Work No.s 39 and 40), Paper Mill Lane Works Stage (Work No.s 50 and 51) and Converter Station Stage (Work No.s 62 to 69) have previously been discharged. For the sake of completeness and to provide a suite of comprehensive RDDs for use by the Principal Contractor for the cable route (NKT), the infrastructure and activities that fall within these areas and the associated management measures for these will also be addressed in this document. Nevertheless, this document seeks only to discharge this Requirement with respect to Works No.s 5B to 20, 25-38, 41-49 and 52 -61.

8. The purpose of the TMP is to ensure that the traffic impacts of the development remain within those assessed by the Environmental Statement (ES). This TMP takes account of the route surveys, assessments and route evaluations undertaken and has been developed in accordance with the Outline Traffic Management Plan (Document Reference 8.7 of the DCO application) and Access Management Plan (EA3- GRD-CON-PLN-IBR-000079).

9. The cable works Principal Contractor shall manage all construction traffic in accordance with this Traffic Management Plan, the Access Management Plan (EA3- GRD-CON-PLN-IBR-000079) and the Travel Plan (EA3-LDC-CNS-REP-IBR-000087).

10. The measures contained herein will be adhered to by the Principal Contractor (and thereby all tiers of construction workforce) and implementation and compliance will be monitored by the EATL Construction Management Team. These measures will only be revised with the agreement of the Local Highway Authority (SCC).

11. Mitigation to minimise noise or vibration impacts are set out in the Construction Noise and Vibration Management Plan (EA3-LDC-CNS-REP-IBR-000086). Management of dust emissions and management of Public Rights of Way (PRoW) are set out in the onshore cable works Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084).

12. EATL will work with the SCC to ensure appropriate resourcing is in place to monitor compliance with the provisions of this TMP.

2. ABBREVIATIONS

AADT	Annual Average Daily Traffic
CCS	Consolidated Construction Site
CLO	Community Liaison Officer
DBEIS	Department of Business, Energy and Industrial Strategy
DC	Direct Current
DfT	Department for Transport
DCO	Development Consent Order
DMRB	Design Manual for Roads & Bridges
EA ONE	East Anglia ONE Offshore Windfarm
EA THREE	East Anglia THREE Offshore Windfarm

EATL	East Anglia THREE Limited
ES	Environmental Statement
ESC	East Suffolk Council
ESDAL	Electronic Service Delivery for Abnormal Loads system
HGV	Heavy Goods Vehicle
HVDC	High Voltage Direct Current
LAR	Local Access Route
MSDC	Mid Suffolk District Council
MW	Megawatt
NG	National Grid
PRoW	Public Rights of Way
RFC	Ratio of Flow Capacity
SAR	Strategic Access Route
SCC	Suffolk County Council Local Highway Authority
SLR	Suffolk Lorry Route
TMP	Traffic Management Plan
TCo	Traffic Co-ordinator

3. CONSTRUCTION DETAILS

3.1 Construction Overview

13. The construction works will be undertaken across a 37km corridor between the Suffolk coast at Bawdsey and the Converter Station at Bramford, passing the northern side of Ipswich. The cables are to be installed through pre-installed ducts, laid during the onshore construction works for the EA ONE project. Construction has started on the cable route at three locations where Construction Consolidation Sites (CCS) will be located, at Playford, Paper Mill Lane and Clappits. This next phase of the construction works are expected to begin in Spring 2024 with an expected completion in December 2025. The construction activities within the onshore cable route will be as follows:

- Any minor temporary modifications to the public road network.
- Establish 3 additional CCS (approximate duration of 6 weeks for the establishment of each CCS).
- Establish 29 accesses from the public highway. These may require Section 278 Agreement with the Local Highways Authority (see Appendix 2 Transport Route Assessment of the Traffic Management Plan (EA3-LDC-CNS-REP-IBR-000080) for details).
- Establish up to circa 12.7km of stone haul road to access the jointing bay locations from the access points;
- Install 6.4km of proprietary trackway system to reach, *inter alia,* both ends of each Horizontal Directional Drill (HDD). HDDs will be accessed by proprietary trackway system from the jointing bay hardstandings or access points to allow each HDD to be proved.
- Establish 29 temporary jointing bay compounds (including 2 transition jointing bays) (approximate duration of 2 weeks for each compound).
- Excavation of jointing bay pits to locate the existing ducts at each jointing bay location (approximate duration of 3 weeks for each jointing bay location);
- Construct jointing bays (approximate duration of 3 weeks for each jointing bay).
- Transport of cables to site, from designated port to an off-site cable storage location and on to the jointing bay locations.
- Duct proving along the cable route.
- Pull cables through ducts and undertake jointing (approximate duration of 3 weeks per location).
- Backfill and reinstatement of jointing bays (approximate duration of 2 weeks).
- Remove temporary jointing bay hardstandings / compounds and CCS Compounds, haul roads, trackmatting and access points.

- Reinstate all disturbed land, permanent fences, replacement hedges and vegetation with suitable hedgerow species, during the first appropriate planting season.

14. The layout of the above infrastructure is shown in Figure 1 Site Context Plan. The locations of the soil bunds are currently indicative and may be moved within the previously disturbed areas, following agreement with EATL, the Ecological Clerk of Works (EcoW) and the Archaeological Consultant. Similarly, the stone haul road/ trackway may also be moved laterally within a distance of +/-5m, following agreement with EATL, the ECoW and the Archaeological Consultant. Currently 12.7km of stone haul road and 6.4km of proprietary trackway are proposed, however it may be possible to reduce further the quantity of stone haul road required by using trackway where practicable. The use of trackway is less invasive (being placed directly on the topsoil) and requires fewer HGV movements. EATL commits to consulting MSDC, ESC and SCC (as applicable) with regards to any changes to the layout, should the design change significantly (e.g. changes to: highway access routes including access routes into and along the cable corridor; number of jointing bays; and anything that potentially requires archaeological assessment and mitigation).

15. Circa 8 teams of 5 workers will work in parallel across the cable route, installing the infrastructure at each location.

16. Temporary modification of the existing road networks may be required, such as localized widening, socketing of street signs and temporary moving of street furniture to allow the passage of larger HGVs, as set out in the Access Management Plan (EA3-LDC-CNS-REP-IBR-000079). This will be undertaken prior to construction commencing within relevant sections of the cable corridor route.

3.2 Construction Consolidation Sites (CCS)

17. The installation of the cable will require two 'Primary Construction Consolidation Sites' (PCCS) and four 'Secondary Construction Consolidation Sites' (SCCS), as set out in Table 3-1. All the proposed CCS will be within areas that were previously used for the EA ONE construction works.

Table 3-1 – Construction Consolidation Site Locations

CCS Type	Address	Dimensions (m^2)	Comments
Primary	Paper Mill Lane, Claydon, Ipswich, Suffolk IP6 0AP	3,577	Installed 2022 HGV turning area and parking 1,750m^2
Primary	Top Street, Martlesham, Suffolk IP12	3,572	HGV turning area and parking x 1,400m^2
Secondary	Bullen Lane, Bramford, Ipswich, Suffolk IP8	1,200	
Secondary	Playford Corner, Playford Mount, Ipswich, Suffolk IP6 9DS	581	Installed 2022
Secondary	Clappits, Woodbridge Road, Newbourne, Woodbridge, Suffolk IP12 4PA	1,185	Installed 2022/2023
Secondary	Landfall, Ferry Road, Woodbridge, Suffolk, IP12 3AS	1,200	Installation and use of CCS to be undertaken using Permitted Development Rights

18. As shown in Table 3-1, the dimensions of the CCS will be in accordance with Part 3, Requirement 12(9) of the DCO which limits the size of the PCCS to 3,600m^2 and the SCCS to 1,200m^2.

19. The PCCSs will:

- Provide areas for the storage of materials and equipment;
- House site administration and welfare facilities for the labour resources;
- Form an interchange hub for deliveries of material, equipment and resources; and
- Allow HGVs to park prior to entering the local road network during peak hours.

20. The SCCSs will function as hubs for distribution along the cable route and will include welfare facilities with some limited storage of materials and equipment. SCCS may also include site offices.

21. The Paper Mill Lane PCCS will be the main administrative compound for the onshore works. Top Street PCCS and Landfall SCCS also include designated office space.

22. The CCS will be constructed as follows:

- Mark out the extent of CCS with use of Global Positioning Systems (GPS) Real Time Kinematic (RTK) setting out equipment;
- Set out and install drainage features as required. Any encountered existing field drains will be located, capped or diverted to areas where any outfall can be managed in accordance with the Surface Water and Foul Drainage Management Plan (EA3-LDC-CNS-REP-IBR-000081);
- Erect security fencing around the perimeter of CCS;
- Excess vegetation to be removed from soil and from site prior to soil stripping. Strip topsoil under conditions where the topsoil is within its plastic limit with regards to moisture content to minimise damage to the soils structure and texture and store in designated areas within the same field boundary, all in accordance with BS3882, British Standard Topsoil and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009). The removed vegetation will be either disposed of offsite or used on site for weed suppression in accordance with the correct licence/exemption;
- Excavate to formation level and store any excess material. Topsoil and subsoil storage bunds will be placed in bunds locally separately, the topsoil bund being seeded, if they are to be stored for longer than 6 months. Subsoil bunds will be kept weed free;
- Place imported stone in accordance with the CCS base structure design. Hardstandings will be installed in line with temporary works design assessments and may typically be circa 600mm thick;
- Install prefabricated site offices, meeting room and welfare facilities, where required.

3.3 Accesses, Stone Haul Roads and Trackway

23. Existing accesses and farm tracks will be used where possible (with reinforcement where necessary) to access the jointing bay and HDD locations. Circa 12.7km of 5m wide stone haul road will be installed, in accordance with the permitted 18.05km (as set out in Part 3, paragraph 12(12) of the DCO). In addition, 6.4km of proprietary trackway system will be used to access, *inter alia*, the HDD proving locations. All tracks will, as far as reasonably possible, follow the track bed used for EA ONE.

24. There will be several HGV turning points and passing bays along the stone haul road and trackway. These are to provide HGVs with a safe location to turn round after driving onto the easement from the public highway and to reverse as short a distance as possible to the leading edge of the haul road/trackway construction. Over longer lengths of haul road/trackway further HGV turning points will be constructed allowing the HGV to drive along the haul road/trackway and reverse shorter distances.

25. The routing of the stone haul road/ trackway will be set out using GPS RTK equipment. For trackway, the proprietary trackway matting would be installed directly on the existing topsoil. For stone haul road the construction will be as follows:

- Set out the site tracks with the use of GPS RTK equipment;
- Erect and maintain suitable signage and goal posts where the temporary road runs under overhead lines in accordance with HSE GS6 "Avoiding danger from overhead power lines;
- Set out and install drainage features along the edges of the length of road to be constructed. Any impacted existing field drains will be located, capped or diverted to areas where any outfall can be managed in accordance with the Surface Water and Foul Drainage Management Plan (EA3-LDC-CNS-REP-IBR-000081;
- Clear vegetation, strip topsoil and subsoil material for storage in separate designated stockpiles with suitable signage.
- Topsoil storage bunds will be stored locally and seeded if they are to be stored for longer than 6 months. Subsoil bunds will be kept weed free.;
- Excavate to formation level and store any excess material;
- Test the existing ground conditions to ensure suitability of the temporary works design and bearing capacity for the haul road and hard standing areas;
- Layers of stone and geotextiles/geogrid will then be placed on the cleared surface.

26. Based on the temporary works design and the soil bearing capacity, the 450mm thick stone haul road is likely to include one layer of non-woven geotextile and a layer of Geogrid 30/30 placed on the compacted sub-soil, with a second layer of geogrid 30/30 installed after 300mm of stone is place.

27. Where the stone haul road/trackway crosses over an existing watercourse, a flume will be installed temporarily to allow crossing of the watercourse and the continued flow of the watercourse beneath. When the watercourse is too wide to flume with a single board pipe, a proprietary bridge will be utilised. (See the Watercourse Crossing Method Statement (Appendix 12 of the Onshore Cable Route Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084).

3.4 Jointing Bay Compounds

28. 27 jointing bay compounds will be required, in addition to a compound for the 2 transition jointing bays at landfall. The jointing bay compounds will comprise hard standing to provide a working platform and to accommodate containers, drum trailer movement, parking, and welfare. The jointing bay compounds will have areas up to a maximum of 3,690m² (In accordance with Part 3 Requirement 12(11) which limits the area to 3,740m^2). A typical layout is shown in Figure 2 of the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084).

29. Once the location of the jointing bay compounds has been established (using GPS RTK equipment), the creation of the compound will commence with erection of security fencing, removal of topsoil layer and installation of hard standing areas. The jointing bays (25m x 5m) will then be excavated to a depth of up to 2.5m with adequate slope batter or shoring on all sides of the excavation to prevent the soil from collapse. The existing ducts will be exposed and concrete slabs constructed to provide a level working area. Drainage channels and a sump pit will be included to facilitate drainage and dewatering. Installation and jointing of the cables will then take place before the earth link boxes and fibre optic boxes are installed and the area back filled with subsoil and Cement Bound Sand, as required.

30. Earthing link boxes will be installed within the cable system on every fourth jointing bay. All link boxes will be installed into a link box chamber that will be buried to below plough depth at a minimum of 1.2m, within the jointing bay.

31. To enable the fibre optic cable pulling through the already installed ducts, a pulling chamber will be installed at every jointing bay location. All cable joints, link boxes and pulling chambers will be buried to below plough depth of 1.2m.

3.5 Duct Proving

32. The ducts to be used for EA THREE, which were installed during the EA ONE project construction works, will require cleaning and proving to ensure that they are intact, free of debris and ready for cable installation. Cleaning and proving will be undertaken by using a foam sponge pig, driven under air pressure from jointing bay to jointing bay followed by drawing a brush and mandrill through from jointing bay to jointing bay.

33. Each set of HDD ducts will also require proving. A larger diameter duct was installed at the HDD locations than is used along the rest of the cable route. Therefore, an excavation (2m x 3m x 1.5m) will be made at each end of each of the HDD locations at the duct diameter transition location. The transition coupler will be removed before cleaning and proving the HDD ducts as described above.

34. The construction of the two transition jointing bays within the transition bay compound is addressed in the Landfall Method Statement (EA3-LDC-CNS-REP-IBR 000078) (Reference to jointing bays in the remainder of this document also includes transition bays). These works will use the adjacent SCCS, located off Ferry Road, Bawdsey.

3.6 Cable Pull-through

35. The HVDC cable wound drums will be transported from the docks to the cable drum storage location located in Kesgrave close to Ipswich. Cable drums will then be transported directly to the jointing bay compounds. Cable lengths are dependent on the distance between the jointing bays and are typically between 750m and 1950m in length. Before cable installation commences the cable ducts and communications ducts will be given a final clean through and proved by pulling through a sponge, brush and mandrill.

36. Installation of the cables into the ducts will begin with a cable pulling system being installed into the jointing bay. A steel bond and winching system with free spinning rollers will be installed along the bottom of the jointing bay. The cable will then be drawn off the lorry mounted cable drum using HGV hydraulic assist and cable winch & winch wire.

37. Pulling calculations have confirmed that mechanical cable pushers will be required to assist the cable pull in operation on several of the longer pull locations, where cable pushers will be installed within the jointing bay. A dynamometer will ensure the maximum calculated pulling tension of the cables is not exceeded. Tension on the cable will be reduced using a biodegradable water-based lubricant, for example, "Lubtec-HD" (as used on EA ONE). Once both HVDC cables have been installed, the cable will then be jointed within the jointing bay and tested before moving onto the next pair of cables along the route. This process will be repeated for each of the twenty-eight sections.

38. The pre-installed DTS fibre optic ducting will be proven by blowing a gauging steel ball bearing through the ducting joint bay to joint bay. The Communication fibre ducts will be proven by blowing a sponge pig through prior to installing the fibre optic cable. Fibre optic cables will then be blown through the ducted system from jointing bay to jointing bay. The blowing of fibre optic cables requires a highspeed air flow combined with a mechanical pusher.

39. It is expected that pulling and jointing operations at each joining bay would take approximately 2.5 weeks, typically spread over a three-to-four-week period, with a typically eight-person team installing the cables and a three-person jointing team.

3.7 Reinstatement

40. The jointing bay compounds, CCSs, accesses and stone haul roads will be reinstated and restored with the stored topsoil and subsoil in accordance with BS3882, British Standard Topsoil and the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009). Reinstatement will only take place under conditions where the topsoil is within its plastic limit with regards to moisture content to minimise damage to the soil's structure and texture. If necessary, the subsoil will be 'ripped' under friable conditions prior to placement if compaction had occurred. Topsoil may also require ripping if compacted following the removal of the trackway. Topsoil will be spread in such a way as to ensure that it does not become compacted. Pasture and arable land will be reseeded as required, fences reinstated, and suitable hedgerow species replanted during the first appropriate planting season in accordance with the Landscape Management Pan (EA3-LDC-CNS-REP-IBR-000077).

3.8 Temporary Infrastructure Access Locations

41. Table 3-2 presents the location and access details of each of the temporary construction works for the onshore cable route (i.e. CCS and jointing bays).

Table 3-2 Temporary Infrastructure Access Locations

Access ID	Easting	Northing	Address	Used on EA ONE?	Cable Infrastructure to be accessed
AP01 – Converter Station (not a named DCO access)	609869	246238	EA THREE Converter Station, Bullen Lane, Bramford, Mid Suffolk, Suffolk, England, IP8 4JH	No – however not an access from the public highway	• The western side of HDD21.
AP02 - Bullen Lane (not a named DCO access)	610571	246219	Bullen Lane, Bramford, Mid Suffolk, Suffolk, England, IP8 4JH	Yes – AX-01	• Bullen Lane SCCS; • The eastern side of HDD21 • Both sides of HDD1; and • Jointing Bay JB1/2.
AP03 - Somersham Road (South) (not a named DCO access)	611310	247810	Somersham Road, Bramford, Mid Suffolk, Suffolk, England, IP8 4JR	No	• Jointing Bay (JB2/3).

Access ID	Easting	Northing	Address	Used on EA ONE?	Cable Infrastructure to be accessed
AP04 – Somersham Road (East) (not a named DCO access)	611304	247828	Somersham Road, Bramford, Mid Suffolk, Suffolk, England, IP8 4JR	No – however is an existing access	• The western side of HDD2.
AP05 - Somersham Road (North) (AK)	611089	248004	Somersham Road, Bramford, Mid Suffolk, Suffolk, England, IP8 4JR	No – however is an existing access	• The eastern side of HDD2.
AP07[1] -Bramford Road (South) (AI)	612070	248974	Bramford Road, Little Blakenham, Mid Suffolk, Suffolk, England, IP8 4JX	Yes – AX02 and has planning permission to remain in situ	• The western side of HDD19.
AP08 Bramford Road (North) (AH)	612102	249044	Bramford Road, Little Blakenham, Mid Suffolk, Suffolk, England, IP8 4JU	Yes – AX-03 and has planning permission to remain in situ	• The eastern side of HDD19 and the western side of HDD4; and • Jointing Bay JB3/4.
AP09 Paper Mill Lane (not a named DCO access)	612821	248970	Paper Mill Lane, Claydon, Mid Suffolk, Suffolk, England, IP8 4DE	Yes – AX-05 and has planning permission to remain partially in situ and fully reinstated in 2022	• Paper Mill Lane PCCS; and • The eastern side of HDD4 and the western side of HDD5.
AP10 – Old Ipswich Road (AE)	613318	249098	Old Ipswich Road, Claydon, Mid Suffolk, Suffolk, England, IP6 0AE	Yes – AX06 and has planning permission to remain in situ	• Jointing Bay JB4/5; and • The eastern side of HDD5.
AP11 Henley Road West (AD)	616126	249058	Henley Road, Akenham, Mid Suffolk, Suffolk, England, IP6 0HJ	No	• Jointing Bay JB5/6.
AP12 - Henley Road East (AD)	616137	249062	Henley Road, Akenham, Mid Suffolk, Suffolk, England, IP6 0HJ	No	• Three Jointing Bays (JB6/7, JB7/8 and JB8/9); and • The western and eastern sides of HDD6.
AP14- Grundisburgh Road (North) (AA)	619919	248760	Grundisburgh Road, Tuddenham St Martin, East Suffolk, Suffolk, England, IP6 9DE	No – however is an existing access	• Jointing Bay JB9/10; and • The western side of HDD20.

[1] AP06 and AP13 are not being used

Access ID	Easting	Northing	Address	Used on EA ONE?	Cable Infrastructure to be accessed
AP15 - Grundisburgh Road (South) (Z)	619992	248740	Grundisburgh Road, Tuddenham St Martin, East Suffolk, Suffolk, England, IP6 9DE	No – however is an existing access	• The eastern side of HDD20.
AP16 – Bealings Road (X)	621518	248681	Bealings Road, Playford, East Suffolk, Suffolk, England, IP6 9DL	Yes – AX08 – was fully reinstated in 2022	• Playford Corner SCCS; and • Two Jointing Bays (JB10/11 and JB11/12).
AP17 (V) - Lodge Road	623730	248396	Lodge Road, Great Bealings, East Suffolk, Suffolk, England, IP13 6NL	Yes – AX09	• Jointing Bay JB12/13; and • The western and eastern sides of HDD7.
AP18 - Seckford Hall Road (U)	624532	248505	Seckford Hall Road, Great Bealings, East Suffolk, Suffolk, England, IP13 6NR	Yes – AX10 – and is an existing access	• Jointing Bay JB13/14.
AP19 - Top Street (S)	625342	247801	Top Street, Martlesham, East Suffolk, Suffolk, England, IP12 4RD	Yes – AX-11 – and is an existing access	• Top Street PCCS; and • Jointing Bay JB14/15 A&B. • The western and eastern sides of HDD8.
AP20 - Sandy Lane East (Q)	626133	247899	Sandy Lane, Martlesham, East Suffolk, Suffolk, England, IP12 4DW	Yes – AX12	• Jointing Bay JB15/16; and • The eastern side of HDD10.
AP21 - Sandy Lane West (R)	625969	247765	Sandy Lane, Martlesham, East Suffolk, Suffolk, England, IP12 4SA	Yes – as a haul road exit point	• The eastern side of HDD9 and the western side of HDD10.
AP22 - Waldringfield Road (North) (not a named DCO access)	626303	246347	Waldringfield Road, Waldringfield Heath, Waldringfield, East Suffolk, Suffolk, England, IP12 4PJ	Yes – AX13	• Jointing Bay JB16/17; and • The eastern side of HDD11.
AP23 - Waldringfield Road (Cross Farm) (N)	626729	245986	Waldringfield Road, Waldringfield Heath, Waldringfield, East Suffolk, Suffolk, England, IP12 4PJ	No	• Jointing Bay JB 17/18; and • Both sides of HDD12 and HDD13.
AP24 - Waldringfield Road (South) (not a named DCO access)	627132	245568	Waldringfield Road, Waldringfield Heath, Waldringfield, East Suffolk, Suffolk, England, IP12 4PJ	No	• Jointing Bay JB18/19.

Access ID	Easting	Northing	Address	Used on EA ONE?	Cable Infrastructure to be accessed
AP25 - Ipswich Road (not a named DCO access)	627466	244836	Ipswich Road, Waldringfield Heath, Waldringfield, East Suffolk, Suffolk, England, IP12 4QU	No	• Jointing Bay JB19/20.
AP26 – Woodbridge Road/Clappits (H)	627267	243776	Woodbridge Road, Newbourne, East Suffolk, Suffolk, England, IP12 4PA	Yes – AX14 was fully reinstated in 2023	• Clappits SCCS; • Two Jointing Bays (JB20/21 and JB21/22); and • The western side of HDD14.
AP27 – Park Lane (not a named DCO access)	628215	240399	Park Lane, Kirton, East Suffolk, Suffolk, England, IP10 0QB	No	• Two Jointing Bays (JB 22/23 and JB 23/2); and • The eastern side of HDD14 and both sides of HDD15.
AP28 Falkenham Rd (D)	629387	239004	St Ethelbert, Lower Falkenham Road, Lower Falkenham, Falkenham, East Suffolk, Suffolk, England, IP10 0QY	Yes – existing access used to access the Deben Re-drill site	• Jointing Bay JB 24/25; and • The western side of HDD16.
AP29 – Shottisham Road (C)	632046	241323	Alderton, East Suffolk, Suffolk, England, IP12 3AG	Yes – AX-18, – and is an existing access	• Two Jointing Bays (JB25/26 and JB 26/27); and • The western side of HDD17.
AP30 - Ferry Road (South) (B)	634499	239042	RAF Bawdsey Substation, Ferry Road, Bawdsey, East Suffolk, Suffolk, England, IP12 3AT	No - an existing access that requires upgrading	• Jointing Bays JB 27/28; and • The eastern side of HDD17
AP31 – Ferry Road (North/Landfall) (A)	634712	239301	Ferry Road, Bawdsey, East Suffolk, Suffolk, England, IP12 3AT	Yes – AX-19 and has remained in situ	• Two Transition Jointing Bays (TJB-1 28/29 and TJB-2 28/29).

3.9 Construction Traffic

3.9.1 HGV Movements

42. Chapter 27 Traffic and Transport of the ES for the East Anglia THREE project has assessed the environmental impact of traffic on the routes within the onshore highway study area across a range of effects, namely:

- Pedestrian amenity;
- Severance;
- Road safety; and
- Driver delay.

43. The assessment was predicated on a TMP being implemented as embedded mitigation that would manage the daily delivery profiles and control movements and routeing. The ES included peak hour assessments (i.e. between 08:00-09:00 and 17:00-18:00) and gives details of the maximum peak hour HGV movements. The overall assessment concluded that appropriate TMP measures would ensure that the environmental impacts would not be 'significant', including with respect to driver delay, i.e. congestion on the highway network and junctions in proximity to the cable route.

44. Following further design works by the selected Cable Route Principal Contractor, an updated transport assessment with the scope set out in paragraph 47 has been undertaken to confirm the maximum daily vehicle movements along the key access routes identified. This is included here as Appendix 1 i.e. the East Anglia THREE Onshore Cable Route Works Traffic and Transport Technical Note (Traffic and Transport Technical Note). The Traffic and Transport Technical Note provides an overview of the changes to the vehicle numbers associated with the onshore cable route works and also the converter station works in order to consider all project-related traffic on the road network.

45. The Traffic and Transport Technical Note sets out the following:

- A summary of the assessment assumptions and requirements for EA THREE as identified in the ES for the DCO submission;
- A comparison of the ES and NKT vehicle movements associated with the cable installation works at the sensitive junctions on the highway network that are likely to be used by traffic associated with these works, using a lower car occupancy for the NKT data than presented in the ES, for a robust assessment;
- Junction capacity assessments of the existing layouts of the sensitive junctions forecast to experience an increase of 30 two-way vehicle movements or more in the evening peak hour associated with the cable installation works (the anticipated maximum traffic flows where there would be construction activities at a number of work locations at the same time) and the converter station construction (average vehicle movements as the peak periods for the cable installation works and converter station would not occur at the same time). The junctions identified for assessment were Junction 1: Claydon Interchange, Junction 5: Roundabout junction of the A12 and A1214, Junction 6: Roundabout junction of the A12 and Newbourne Road and Junction 11: Roundabout junction of the A12 and the B1438);
- The modelling shows the additional vehicle movements do not have a significant impact on the operation of the junctions compared to the base year 2024 plus committed development scenario as summarised below:
    - Junction 1 - all arms within capacity;
    - Junction 5 - all arms within capacity;
    - Junction 6 - both A12 arms well above capacity in 2024 base + committed and with development. Development increases queue length only 1% (A12 north) and 32% (A12 south); however, an improvement scheme is proposed at the junction;
    - Junction 11 - B1438 and A12 south Ratio of Flow Capacity (RFC) both exceed 1.0. Queues increase by 47% and 61% respectively; however, this is less than in the morning peak without any development traffic; and
- An update of road safety analysis at key junctions and routes the highway network that are likely to be used by traffic associated with the cable installation works. This indicates there are no road safety issues that would be exacerbated by an increase in traffic flows and that no changes to the measures proposed in this Traffic Management Plan are required.

46. The maximum daily and evening peak vehicle movements for the two scenarios where there would be construction activities at a number of work locations at the same time, as assessed in Appendix 1 are summarised in Table 3-3. This is based on a car occupancy of 1.5, which has been identified from lessons learnt from the East Anglia TWO and East Anglia ONE North Offshore Windfarm Environmental Statements and DCO Examinations, advice from SCC and through discussions with NKT and the Principal Contractor for the Converter Station (Siemens Energy), who have suggested that a 2.5 car occupancy is unlikely to be achievable.

Table 3-3 Expected HGV movements

Scenario (Access points)	Employees		Vehicle movements		HGV movements	
	Number					
	Daily	PM Peak	Daily	PM Peak	Daily	PM Peak
1 (28, 29 and 30)	300	60	200	40	360	30
2 (2, 3 and 31)	230	48	153	32	440	20

47. A Construction Access Route Assessment (EA1-CON-E-SPR-001370-0) was undertaken prior to the construction of the EA ONE onshore electrical connection to evaluate the Local Access Routes of the construction road network, which do not form part of the Suffolk Lorry Route Network. The assessment included:

- An on-site engineering survey;
- An assessment and route evaluation of the construction access routes for the delivery of equipment, construction plant, materials; and
- The construction workforce along the Local Access Routes.

48. The assessment determined that the local access roads identified presented viable and safe routes for use by the EA ONE construction traffic over the duration of the onshore construction works, subject to the implementation of mitigating measures and temporary road improvements.

49. A further route assessment has been undertaken for the Onshore Cable Works by Fairhursts on behalf of NKT and is included as Appendix 2 (NKT UK, EA3 HVDC Route, Main Works Transport Route Assessment, May 2023). The route assessment considered safe access arrangements, the use of passing bays and the requirements for advance warning signage, together with any weight restrictions, and any obstructions which may compromise the transportation of equipment. This confirms the suitability of the routing to be used for the Onshore Cable Works and the main road network (i.e. the Suffolk Lorry Route Network) such that no highway improvements are required, other than the need for trimming of overhanging branches at 30 locations and for one passing bay on Ferry Road (B1083). Full details of these road improvements are provided in Section 9.

3.9.2 Abnormal Load Movements

50. The installation of the cables for EA THREE will require the delivery of 56 cable drums. Due to their weight (likely to be in excess of 50 tonnes), these deliveries will comprise Abnormal Indivisible Loads (AIL) (either Category 2 or Category 3). These will be delivered via specialist means and offloaded for example by the use of a mobile crane (see Sections 6.3 for details of abnormal load transport procedures).

51. Timing and notice periods for abnormal load deliveries will be agreed with SCC and Highways England in reasonable time (i.e. 6 months). The Principal Contractor will also confirm with Suffolk Highways Structures Team that the structures along the routes to be used have not deteriorated and are suitable for the proposed loads. Delivery of AIL will be undertaken in consultation with Suffolk Constabulary and SCC Highways. Post construction surveys of the public roads and follow up reinstatement will be undertaken and agreed with SCC to ensure that any damage is remediated.

4. TRAFFIC MANAGEMENT PLAN GOVERNANCE

52. Prior to the commencement of construction, a Traffic Co-ordinator (TCo) will be appointed by the Principal Contractor for the onshore cable route. EATL Construction Team will have ultimate responsibility for overseeing that Principal Contractors management of the works are in accordance with the RDDs. The TCo's key responsibilities will include:

- Managing the implementation of and compliance with the TMP, Access Management Plan and Travel Plan;
- Reporting on a quarterly basis to ESC, MSDC and SCC with respect to these plans and their monitoring targets; and
- Acting as a point of contact for construction workers and sub-contractors.

53. The TCo will liaise with the Converter Station TCo with respect to the works using the common access from Bullen Lane and will hold a meeting with SCC to confirm responsibilities. The Converter Station Principal Contractor will, however, be responsible for traffic management for vehicles using the converter station access from Bullen Lane. The TCos will report to a senior member of the SPR Construction Management Team and will liaise closely with one another to enable a co-ordinated approach to access management measures.

54. Contact details for the TCo (and any subsequent personnel changes) will be submitted to stakeholders for their records prior to commencement of construction.

5. LOCAL COMMUNITY LIAISON

55. EATL is committed to providing clear communication to local residents and will manage public relations with local residents and businesses that will be affected by construction traffic. Proactive community liaison will be maintained, keeping local residents informed of the type and timing of works involved, the transport routes associated with the works, the hours of likely construction traffic movements and key traffic management measures. As outlined in the Code of Construction Practice (EA3--LDC-CNS-REP-IBR-000084), a combination of communication mechanisms such as posters, notices, exhibitions, letters, newsletters, website updates and parish council meetings will be employed to keep local residents and businesses informed.

56. A designated EA THREE Community Liaison Officer (CLO) will manage and respond to any public concerns, queries or complaints in a professional and diligent manner as set out in the Community Liaison and Public Relations Procedure contained within the Code of Construction Practice (EA3--LDC-CNS-REP-IBR-000084). The Complaints Procedure will be publicised and complaints will be directed to the EATL Community Liaison Officer. All enquiries will be logged, investigated and rectifying actions taken when deemed appropriate. Enquiries will be dealt with in an expedient and courteous manner. Details of complaints will be reported to Mid Suffolk District Council (MSDC), East Suffolk Council (ESC) and SCC within 48 hours.

57. The CLO will liaise with parish councils to identify any local activities that may overlap with the construction works. EATL's Land Team will also speak to landowners regarding the timing of harvest and agricultural activity.

58. Parish Councils, Town Councils, District Councillors and County Councillors including Ward Members and Portfolio Holders, in the area and the local liaison group will be contacted (in writing) in advance of the proposed works and ahead of key milestones in order to advise them of the ongoing works. The information provided will include a timetable of works, a schedule of working hours, the extent of the works, and a contact name, address and telephone number in case of complaint or query.

59. All transport related to the construction of the EA THREE cable will be registered and issued with a unique vehicle identification code, as set out in Appendix 3. This will be included on an identification sticker/board that will be placed in a prominent position on the vehicle to enable the site management team and members of the public to identify the vehicle and its association to EA THREE. This will be monitored by the TCo (see Section 4). SPR construction vehicles will have a defined identification livery so that they are immediately identifiable to construction staff and third parties.

6. TRAFFIC MANAGEMENT MEASURES

6.1 General Principles

60. Where consented, existing points of access situated close to each jointing bay or HDD proving location will be utilised. Where a consented route/track is not available, a temporary haul road is proposed to access the jointing bays. The use of trackway is proposed to access the HDD proving locations. This strategy has resulted in a reduction in the amount of temporary haul road required from approximately 35km for East Anglia ONE to 12.7km i.e. less than 18.05km for the proposed East Anglia THREE project (now set as the maximum length of the haul road by Part 3, paragraph 12(12) of the DCO). Noting that the transport of stone for temporary haul roads is one of the largest traffic generators for the project (approximately 600 two-way HGV movements to install and remove a kilometre of haul road) this strategy serves to significantly reduce the daily demand for HGV traffic.

61. The traffic management strategy is predicated on using the most efficient payload vehicle for delivery of materials (e.g. 20 tonne payload for stone deliveries) and therefore negates the need to downsize to smaller vehicles and double handle materials, minimising potential HGV movements on the highway network.

62. During consultation, the public expressed concerns with regard to highway improvements, fearing large over designed solutions which would look out of character with the surrounding landscape causing irrevocable environmental impacts. With this in mind, all highway solutions have taken a sensitive approach and hard engineering methods have been minimised to reduce impact on the surrounding environment.

63. There are no schools in close proximity to the cable construction works HGV route and therefore measures to minimise impacts with regards to these are not proposed. In addition, no full road closures are anticipated with respect to the cable route construction works. Should it be identified that a road closure may be of less disruption or a safer option to public and workforce, then installation and timescales will be agreed with SCC Highways Authority (Network Assurance) and installed in line with the Traffic Noticing Requirements. The need for lane and road closures during construction of 16 access point bellmouths is set out in Table 8-1 of the Access Management Plan (EA3-LDC-CNS-REP-IBR-000079).

64. Compliance with the following measures will be subject to monitoring and enforcement measures set out in Section 8.

6.2 HGV Route Assessment

65. The updated Transport Route Assessment (Appendix 2) has examined the appropriateness, viability and justification for the use of the existing transport networks available, to ensure any impact of the additional delivery and transport movements of the construction works for the onshore electrical connection are minimised to an acceptable level. The outcome of these assessments established construction routes that will adequately provide the requirements of the construction logistics which is based as far as reasonably practical upon the published Suffolk Lorry Route Network, thereby minimising the use of publicly maintained local access roads as far as possible. The updated Transport Route Assessment confirms that the existing SCC Lorry Route Network adequately provides for the construction activities required.

66. The ES identified 37 points of access for the construction of the onshore cable route. Following design of the jointing bay and HDD proving locations, the total number of accesses required is 29 in order to access the entire cable route including two PCCS, four S CCS, 29 jointing bay locations and the HDD proving locations.

67. The suitability of the public highway to serve these access points has been reconsidered in accordance with the route hierarchy, as set out in Table 6-1 and shown in the Outline TMP or as otherwise subsequently agreed with SCC Highways.

Table 6-1 Route Hierarchy

Route Definition	Description
HGV Strategic Route	As per the Suffolk Lorry Route Network (SLRN) (http://www.suffolk.gov.uk/roads-and-transport/lorry-management)
HGV Distributor Route	In general follows the routes identified as Zone distributor routes or specific location HGV routes in the SLRN. Also includes routes not identified in the SLRN but which have acceptable geometry to accommodate HGV traffic. These are: • A1214; • Newbourne Road/ Ipswich Road (part), Waldringfield Road; • Paper Mill Lane; and • Trimley Road, Kirton
HGV Local Route	Defined as routes typically close to the onshore cable route access point having constrained geometry which requires detailed assessment and potential mitigation measures to accommodate HGV traffic. Following discussions with SCC the B1079 Grundisburgh Road (a SLRN local HGV route) has also been included in this category recognising carriageway 'pinch-point' between Grundisburgh and Woodbridge.

69. The detailed route assessment has concentrated on the HGV local routes, noting the route hierarchy exercise identified distributor and strategic routes capable of accommodating the project HGV demand without additional measures.

70. To accommodate the forecast HGV demand on the local HGV routes a series of measures has been developed with the least intrusive measures preferred and 'hard engineering' solutions only pursued where traffic conditions dictate an absolute requirement. A route by route assessment basis has established that only one new passing place will be required (see Section 7.1), without the need for any other highway widening. Pilot vehicles for HGV traffic will be used as required. In all cases:

- Temporary speed limits will be imposed in the vicinity of all access points; and
- Temporary direction and warning signs to advise of construction vehicles will be provided in accordance with the Traffic Signs Manual, Chapter 8, Traffic safety measures and Signs for Road Works and Temporary solutions, Parts 1 and 2, commonly referred to as Chapter 8.

71. A detailed survey of all the local HGV routes has been undertaken using vehicle path analysis augmented by site observations. Table 6-2 details each local route and the measures proposed.

Table 6-2 Traffic Management Measures

Access Route	Routing Directions	Traffic Management
Access to AP01 and AP02 (Bullen Lane)	Access Points AP-01 and AP-02 will be accessed from Paper Mill Lane PCCS. Exit the PCCS right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road, which merges into Loraine Way, for 2.2 miles. Take the right turn filter lane and turn into Bullen Lane. Continue along Bullen Lane for 1.2 miles. AP-02 is located on the right hand side and AP01 is accessed via the EA ONE Substation access road 0.23 miles on right.	The width of Bramford Road is suitable for the majority of vehicles to safely pass each other. Bullen Lane itself is narrower but there are passing places affording the passage of two vehicles with care. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. The junction of Loraine Way and Bullen Lane was improved as part of the EA ONE construction works (see Section 7.1) No weight restrictions have been identified for this access route.
Access to AP-03, AP-04 and AP-05 (Somersham Road)	AP-03, AP-04 and AP-05 will be accessed from Paper Mill Lane PCCS. Exit the PCCS right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road, which merges into Loraine Way, for 1.7 Miles. Take the right turn at the junction signposted Somersham and Lt. Blakenham, onto Somersham Road. Continue along Somersham Road for 0.5 Miles. AP-03 is located on the left hand side of Somersham Road. AP-04 is opposite AP-03 and provides access to the Agri-Hire premises. AP-05 is a further 0.7 miles ahead, located on the right hand side of Somersham Road, and provides access to the Palmer Group premises.	The width of Bramford Road, Loraine Way and Somersham Road are suitable for the majority of vehicles to safely pass each other. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.

Access Route	Routing Directions	Traffic Management
Access to AP-06, AP-07 & AP-08 (Bramford Road)	AP-06, AP-07 and AP-08 will be accessed from Paper Mill Lane PCCS. Exit the PCCS right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road for 0.6 Miles. AP-08 is located on the left hand side. AP-07 is a further 100yds ahead, on the right hand side of Bramford Road, with AP-06 being a further 380yds ahead, on the right hand side of Bramford Road.	The width of Bramford Road is suitable for the majority of vehicles to safely pass each other. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.
Access to AP-09 (Paper Mill Lane)	Paper Mill Lane is accessed off the roundabout at junction 52 of the A14 Trunk Road. AP-09 is approximately 530m south of the A14, along Paper Mill Lane.	The width of carriageway on Paper Mill Lane is suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.
Access to AP-10 (Old Ipswich Road)	AP-10 will be accessed from Paper Mill Lane CCS. Exit the PCCS right onto Paper Mill Lane. At the roundabout, take the third exit signposted Claydon and Hill View Business Park. Continue towards Claydon for 250yds. Take the next junction left, signposted Hill View Business Park, onto Old Ipswich Road. Continue on Old Ipswich Road for 750yds. AP-10 is located on the left hand side.	Old Ipswich Road is suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route
Access to AP-11 and AP-12 (Henley Road)	Both AP-11 and AP-12 on Henley Road can be accessed from Paper Mill Lane PCCS and Top Street PCCS. Traffic accessing AP-11 and AP-12 from Paper Mill Lane CCS would approach from the south. From Paper Mill Lane PCCS, head north towards the roundabout on the A14. Take the exit south onto the A14 and continue south to the roundabout at junction 55. Take the slip road then first exit left onto the A1214. Continue along the A1214 (London Road), for 2.2 miles.	Henley Road, and the proposed access routes to AP-11 and AP-12 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route

Access Route	Routing Directions	Traffic Management
	Take the junction left, signposted Woodbridge A1214, onto Yarmouth Road. Continue along Yarmouth Road for 700yds until you reach a signal controlled junction. Continue straight-ahead onto Chevallier Street. Continue a further 300yds until you reach the double mini-roundabout. Continue straight over and onto Valley Road. Continue along Valley Road for 0.7 miles. Take a left turn at the junction signposted Henley, onto Henley Road. AP-11 and AP-12 are located 2 miles north along Henley Road. AP-11 is on the right hand side, with AP-12 on the left. Traffic accessing AP-11 and AP-12 from Top Street PCCS would approach from the north. From Top Street PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exit left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 2.5 miles. Remain on the B1079 and bear right towards Debenham, Otley and Burgh, on the B1079. Continue for 2.7 miles then take the next junction left signposted Needham Market B1078. Continue along the B1078 for 2 miles then on approach to the right turn bend, take the left junction signposted Henley and onto Ashbocking Road. Continue for 1.8 Miles to the junction with Henley Road. Turn left onto Henley Road and AP-11 and AP-12 are located 1.5 miles south. AP-11 is on the left hand side, with AP-12 on the right.	

Access Route	Routing Directions	Traffic Management
Access to AP-14 and 15 (Grundisburgh Road)	From Top Street PCCS D, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roandabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exit left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 2.5 miles. Take the next junction left, signposted Tuddenham, Grundisburgh Village. Continue on Woodbridge Road, which merges into The Street, Rose Hill, Ipswich Road and Grundisburgh Road, for 2.7 miles. AP-15 is located on the southern side of Grundisburgh Road with AP-15 a further 80 yards along on the right hand side.	The proposed access routes to AP-14 and AP-15 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. There are several low level tree branches along the route south of Grundisburgh Village, which will require to be trimmed to facilitate transport of the cable drums. On street parking within Grundisburgh Village may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. No weight restrictions have been identified for this access route.
Access to AP-16 (Bealings Road, Playford Corner)	From Top Street PCCS D, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exit left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 2.5 miles. Take the next junction left, signposted Tuddenham, Grundisburgh Village. Continue on Woodbridge Road, which merges into The Street, Rose Hill, Ipswich Road and Grundisburgh Road, for 2.5 miles. Take the next junction left, signposted Great Bealings, Hasketon and Woodbridge. Continue along Beaings Road for 1 Mile. AP-16 is located on the south side of Bealings Road.	The proposed access routes to AP-16 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. There are several low level tree branches along the route south of Grundisburgh Village, which will require to be trimmed to facilitate transport of the cable drums. On street parking within Grundisburgh Village may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. No weight restrictions have been identified for this access route.
Access to AP-17 (Lodge Road)	From Top Street PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exist left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 0.5 miles. Take the next junction left onto an unnamed road and continue for 0.65 miles. Bear left at	The proposed access along Lodge Road is very narrow. Passing places were installed during the EA ONE project, and these remain in place and will be utilised for construction traffic movements during the onshore cable works for EA THREE. No weight restrictions have been identified for this access route

Access Route	Routing Directions	Traffic Management
	the fork in the road, onto Lodge Road. AP-17 is located a further 530yds on the left hand side.	
Access to AP-18 (Seckford Hall Road)	From Top Street PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north 450yds. Take the next junction left onto Seckford Hall Road. AP-18 is located a further 0.7 miles ahead, on the left hand side.	The proposed access along Seckford Hall Road is relatively narrow. Passing places were installed during the EA ONE project, and these remain in place and will be utilised for construction traffic movements during the onshore cable works for EA THREE. No weight restrictions have been identified for this access route.
Access to AP-19 (Top Street)	Access to AP-19 is taken off the A12. At the roundabout on the A12, take the exit signposted Woodbridge. Continue for 200yds until you reach another roundabout. Take the second exit signposted Martlesham and Little Bealings. Continue along Top Street for another 300yds and AP-19 (CCS D) is located on the right hand side at the mini-roundabout.	The width of carriageway is suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.
Access to AP-20 and AP-21 (Sandy Lane)	From Top Street PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbridge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, take a right, signposted Woodbridge (Town centre only), and onto Melton Road. Continue on Melton Road, which merges into The Thoroughfare. Continue for 200yds then bear left onto Lime Kiln Quay Road, which merges into Quayside. At the signal controlled junction go straight ahead. Continue over the Zebra Crossing onto Station Road. Continue for another 500yds where Station road merges into	The proposed access routes to AP-20 and AP-21 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. On street parking at the northern end of Sandy Lane may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. No weight restrictions have been identified for this access route.

Access Route	Routing Directions	Traffic Management
	Cumberland Street. Continue for 200yds and at the mini-roundabout, continue straight ahead onto the B1438 Ipswich Road. Continue for anther 600yds, then take the next junction on the left, onto Sandy Lane.AP-20 is located a further 600yds ahead, on the south side of Sandy Lane. AP-21 is located a further 250yds south from AP-20, on the right hand side.	
Access to AP-22 to AP-24 incl (Waldringfield Road)	From Top Street PCCS, head south for 700yds. Take the junction left signposted Waldringfield. Continue along School Lane for 650yds where School Lane merges into Waldringfield Road. Continue for another 800yds. At the junction of Waldringfield Road and Newbourne Road, take the left junction onto Waldringfield Road. AP-22 is located a further 430yds on the left hand side. AP-23is a further 600yds ahead, on the left hand side, with AP-24 a further 675yds ahead on the left hand side.	The proposed access routes to AP-22, AP-23 and AP-24 are along relatively narrow roads leading up to AP-22, however the roads are enhanced by numerous passing places which were constructed during the EA ONE project, and remain in place. From AP-22 to AP-24, Waldringfield Road becomes very narrow. There are however several informal passing places which can be utilised. In addition, the road channels have been covered by compacted silt which has reduced the width of running surface. It is recommended that some enabling works are undertaken along Waldringfield Road, between AP-22 and AP-24, to clear the road channels and expose the wider running surface. The route also has several low level tree branches which should be trimmed back as part of any enabling works. No weight restrictions have been identified for this access route.
Access to AP-25 (Ipswich Road)	AP-25 will be accessed from Top Street PCCS. From the PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 3.2 Miles. At the roundabout, take the first exit signposted Bucklesham, Brightwell, Newbourne and Waldringfield. Continue east along Newbourne Road for approximately 820yds at which point the road sweeps left into Ipswich Road. Continue along Ipswich Road for approximately 1.4 Miles. AP-25 is located on the right hand side of Ipswich Road.	Ipswich Road, and the proposed access routes to AP-25 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.

Access Route	Routing Directions	Traffic Management
Access to AP-26 (Woodbridge Road)	AP-26 will be accessed from Top Street PCCS. From the PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 3.2 Miles. At the roundabout, take the first exit signposted Bucklesham, Brightwell, Newbourne and Waldringfield. Continue east along Newbourne Road for approximately 820yds at which point the road sweeps left into Ipswich Road. Continue along Ipswich Road for approximately 1 Mile. Take the next junction Right, signposted Newbourne and Felixstowe, onto Newbourne Road. Head south along Newbourne Road for 0.7 Miles, which merges into Woodbridge Road. AP-26 is located on the left hand side, just past the entrance to Clappits.	Woodbridge Road/Newbourne Road, leading up to AP-26 are relatively narrow, however the passing places which were installed during the EA ONE project remain in place. The remaining access routes leading up to Woodbridge Road/Newbourne Road are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point. No weight restrictions have been identified for this access route.
Access to AP-27 (Park Lane)	AP-27 will be accessed from Top Street PCCS. From the PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 5 Miles. At the roundabout, take the second exit signposted Felixstowe, onto the slip road of the A14. Continue along the A14 for 2 Miles and take the next junction on the left signposted Kirton. Continue along Innocence Lane and take a right turn at the Y-Junction, which continues as Innocence Lane. Continue east for another 1 Mile. At the staggered junction, turn left onto Trimley Road. Continue north for 0.4 Miles where Trimley Road merges into Bucklesham Road and carry on for another 350yds. Take the next junction on the right into Park Lane, signposted Kirton Lodge. AP-27 is a further 740yds along Park Lane, on the left hand side.	Park Lane, and the proposed access routes to AP-27 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places, up to the junction with Park Lane. Park Lane itself is slightly narrower, however there are numerous passing places available along with passing places installed as part of the EA ONE project, which remain in place. No weight restrictions have been identified for this access route.

Access Route	Routing Directions	Traffic Management
Access to AP-28 (Falkenham Road)	AP-28 will be accessed from Top Street CCS. From the PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 5 Miles. At the roundabout, take the second exit signposted Felixstowe, onto the slip road of the A14. Continue along the A14 for 2 Miles and take the next junction on the left signposted Kirton. Continue along Innocence Lane and take a right turn at the Y-Junction, which continues as Innocence Lane. Continue east for another 1 Mile. At the staggered junction, turn right onto Trimley Road, then sharp left onto Back Road. Continue along Back Road for 900yds to the junction with Falkenham Road. Turn right at the junction onto Falkenham Road. AP-28 is located a further 0.65 Miles ahead, on the left hand side, just before the red telephone box.	Falkenham Road, and the proposed access routes to AP-28 are suitable for the majority of vehicles to pass each other safely, using the numerous existing passing places, which are supplemented by various informal passing places. On street parking at the eastern end of Back Road may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. No weight restrictions have been identified for this access route.
Access to AP-29 (Shottisham Road)	From Top Street PCCS, exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbridge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, go straight ahead onto Wilford Bridge Road and continue for 0.8 Miles. At the next roundabout, take the second exit signposted Bawdsey and Hollesley B1083. Continue south for 4 Miles, towards Shottisham. At the T-Junction, turn right, signposted Bawdsey, Alderton B1083. Continue south on Woodbridge Road for 2.7 Miles towards Alderton. At the point where Woodbridge Road turns sharp left, take the junction to the right onto Shottisham Road. AP-29 is located a further 1.5 Miles along, on the left hand side.	On-street parking at the northern end of The Street, in Alderton, may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. SCC Highways has confirmed that there is no weight restriction at Shottisham Bridge.

Access Route	Routing Directions	Traffic Management
Access to AP-30 and AP-31 (Ferry Road)	From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbridge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, go straight ahead onto Wilford Bridge Road and continue for 0.8 Miles. At the next roundabout, take the second exit signposted Bawdsey and Hollesley B1083. Continue south for 4 Miles, towards Shottisham. At the T-Junction, turn right, signposted Bawdsey, Alderton B1083. Continue south on Woodbridge Road for 2.7 Miles towards Alderton. Woodbridge Road sweeps left towards Alderton. Continue for 150yds, where Woodbridge Road sweeps right, and merges into The Street. Continue south along The Street for 1.3 Miles. The Street then sweeps right and onto Ferry Road. AP-31 is a further 700yds ahead, on the left hand side. AP-30 is a further 300yds on from AP-31, and is located on the right hand side.	On-street parking at the northern end of The Street, in Alderton, may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly. SCC Highways has confirmed that there is no weight restriction at Shottisham Bridge.

6.3 Abnormal Load Route Assessment

72. A detailed abnormal load route study will be undertaken by the Principal Contractor for agreement with SCC Highway Authority and the police to ensure the proposed AIL routes are suitable and to minimise the need for highway improvements. Deliveries of the 56 AIL will be scheduled to minimise delay on the highway network such that driver delay effects associated with AILs are not likely to be significant. The 56 cable drum AILs will, however, comprise low loaders that will travel at speeds of approximately 40-50mph on the A14 and 30mph on the local road network. Driver delay is not, therefore anticipated.

73. An appraisal of the existing Local Road Network necessary to accommodate construction related traffic will be undertaken to identify where road improvements will be required to facilitate the works. The route appraisals (through on-site visual inspection, desk-top studies and swept path analyses) will take into consideration such features pertinent to the geometry and safety of the proposed route for the size of vehicle proposed. These include:

- Road width;
- Traffic volume and capacity;
- Visibility along route;
- Extent of hedgerows and trees along verges;
- Any street furniture or other physical features that may need temporarily removing;
- Level of route in relation to adjacent land;
- Verges and extent of Public Highway;
- Third party land requirement; and
- Pedestrian and non-motorised traffic flow.

74. The traffic appraisal will identify temporary highways improvement measures to the existing highway networks to accommodate the AIL associated with the onshore cable works. The TCo would be required to liaise with the relevant highway authorities to agree the design of any necessary improvements.

75. The movement of abnormal loads will be outside of the restrictions (routes and times) contained within this TMP with respect to HGVs and will be subject to separate agreement with the relevant highway authorities and police through the Electronic Service Delivery for Abnormal Loads (ESDAL) system. The TCo will notify stakeholders through ESDAL and agree appropriate timings, routes and asset protection measures (with the relevant highway authorities, police and Network Rail) appropriate to the type of load.

76. The timings and notice periods for all AIL deliveries will be agreed with SCC Highway Authority in advance in reasonable time and will be scheduled outside peak hours on the highway network. MSDC and ESC will also be notified of the timings of the AIL deliveries. Abnormal loads are not thought to be necessary for movements between PCCS and SCCSs.

77. Pre and post AIL movement condition surveys and follow up reinstatement will be undertaken to ensure that any damage is remediated.

78. The following measures shall be implemented with respect to any necessary highways improvements:

a. No works that would affect the public highway or PRoW shall be commenced until all traffic safety measures required are fully operational and to the satisfaction of SCC.
b. All works within public highway will be the subject of traffic notifications. All timescales and street works applications will be in agreement with SCC Highway Authority street works department.
c. Where determined from pre-construction surveys, the public road network will be reinforced to a standard to allow safe passage for the general public and construction traffic for the full term of the construction period.
d. Measures will be implemented to ensure safe access and egress at all times for pedestrian and non-motorised modes of transport upon all public highways and PRoW affected or impacted by construction traffic.
e. All temporary traffic management measures to be undertaken in accordance with the Department for Transport's (DFT's) Chapter 8: Traffic Safety Measures and Signs for road works and temporary situations parts 1 and 2 (DfT, 2009a and DfT, 2009b), commonly referred to as Chapter 8.

6.4 Routeing

79. The following measures will be implemented with respect to HGV deliveries (abnormal load movements will be agreed separately with SCC Highways and Suffolk Constabulary):

a. All contractors will be contractually required to comply with the Cable Works HGV route as assessed and agreed with SCC through this TMP.
b. For the cable works, all HGV deliveries will be made to the PCCSs with onward transfer to access points and SCCSs using vehicles suited to the local network (Paper Mill Lane PCCS will transfer on Bullen Lane SCCS). Top Street PCCS will transfer on to Playford Corner SCCS, Clappits SCCS and Landfall SCCS. There will also be transfer of materials between the two Primary CCS.
c. The delivery routes will be communicated by the TCo to all companies and/or drivers involved in the transport of materials and plant to and from site by HGV construction vehicle.
d. Appropriate signage will be installed to direct suppliers and contractor's vehicles along the required route. Information signs will also be erected which will include a telephone number for the public to report concerns.
e. No construction HGVs are to be routed through: Coddenham; and Sproughton; to the south of Sandy Lane (south of Woodbridge) under the railway bridge; Westerfield (i.e. along Lower Road and Church Lane) or be permitted south of the entrance to Paper Mill lane CCS on Paper Mill Lane. Appropriate prohibition signs will be installed at strategic locations to prevent construction vehicles entering these areas.
f. Where construction access routes use roads that are part of named cycle routes or existing tracks which are also PRoW, additional safe working practices will be implemented. These will include tool box talks for site personnel on how to drive appropriately in these areas, early warning signage alerting construction workers to the presence of a Public Right of Way and warning signage for members of the public to be aware of construction traffic.
g. Where possible the contractor will use local suppliers to reduce the distance travelled on the wider highway network.
h. Compliance with the defined Cable Works HGV routes will involve a vehicle registration system and log. This information will be recorded by the TCo and included in the quarterly reporting to SCC.
i. All HGV deliveries to the CCS will be of a size and appropriate weight to accord with the hierarchal structure of the SCC Lorry Route Network for Strategic, Zone Distributor and Local Access lorry routes.
j. Time restrictions will be placed on the transfer of materials and plant between all PCCS and SCCSs in order to avoid the busiest peak traffic hours (08:00-09:00 and 17:00-18:00).
k. The Principal Contractor will establish a line of communication with SCC's Emergency Planning Officer and Traffic Manager. If notified of a major incident obstructing the highway the TCo would liaise directly with suppliers to suspend HGV deliveries along affected routes. The TCo will also liaise with SCC to identify and assess alternative temporary access arrangements, if required.
l. The TCo will be aware of major events on the highway (e.g. bike races, parades, etc) and around public holidays and be responsible for managing traffic demand during such times. The TCo will liaise with local stakeholders to understand when major events may occur. A stockpile of materials, in advance of major events, will enable advanced planning to ensure there are limited HGV movements during planned major events whilst not impacting upon the construction programme.
m. Consideration will be given to the need for additional traffic measures at particular pinch points where HGVs cannot pass in opposing directions, if such scenarios arise.
n. Consideration will be given to the size of vehicles appropriate to each section of the access routes.

80. Access routes will be designated for deliveries to each of the CCSs (see Section 6.2), ensuring that only those roads adequate to carry construction traffic are used for that purpose. Appropriate signage will be installed to direct suppliers and contractor's vehicles along the designated routes. This is to minimise the impact of deliveries on local residents and also minimise the risk of construction traffic missing vital junctions and not being able to turn round easily in the downstream road network. A review of signage locations will be undertaken with SCC Highways to ensure their suitability. Signage locations will be continually reviewed and agreed with SCC Highways during the entire construction phase.

81. A Construction Phase Traffic Management Plan will be produced in line with this TMP which will detail the requirements of all construction traffic. The Construction Phase Traffic Management Plan will detail all on site and off site traffic movements and management conditions for all traffic, plant and personnel associated with the project

82. Table 6-2 details the designated traffic routes to be used to reach each access point in accordance with the designated Construction Access Routes presented in Appendix 2.

6.5 Crossing Points

83. Use of pre-installed ducts, installed during the construction works for EA ONE, limits the impacts of the cable installation works upon these routes. As there is no open trenching required along the onshore cable route, crossings will only be required where an access track or haul road crosses a feature. Sections 6.5.1 to 6.5.2 detail how public road and private tracks will be managed from a traffic perspective. A separate PRoW Management Plan has been prepared as Appendix 9 of the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000082) and details how interactions between PRoW and the cable route construction works will be managed.

6.5.1 Public Roads

84. A Public Road Crossing Schedule is presented in Table 6-4 which identifies each proposed road crossing and any site-specific traffic management at each location. All of the crossing points were utilised during the EA ONE construction phase and subsequently removed with the land reinstated. CP-05 on Paper Mill Lane was however previously an access point on EA ONE. These crossing points will be reinstated to the same standard as the EA ONE installation.

85. There is no permitted site access at any Crossing Point of a public road.

86. At each location, the following traffic management measures will be in place:

- Double width gates on either side of carriageway;
- Crossing the public highway will be controlled by a Vehicle Marshall;
- Construction traffic to give way to public traffic;
- Installation of construction traffic crossing warning signs on public highway; and
- Warning signage will be placed within the stone haul road/trackway on approach to any public road crossing.

87. Road closures will apply to crossings where the safe two-way passage of traffic is not possible, as indicated in Table 6-3. Where continued access across the road is required then this will be maintained via appropriate traffic management controls and signage.

88. All works located within public land will be subject to street works notifications, temporary traffic regulation orders and applicable traffic management systems to be reviewed and agreed with SCC Highway Authority.

Table 6-3 Public Road Crossing Schedule

Ref No.	Crossing Location	Easting	Northing	Location Notes
CP-05	Paper Mill Lane	612804	248968	60mph 6.2m wide
CP-12	Cockfield Hall Lane	617411	249098	60mph 3.0m wide
CP-14	Witnesham Road	617689	248874	60mph 5.6m wide
CP-17	Butts Road	621332	248572	30mph 3.3m wide
CP-18	Church Road	621780	248438	60 mph 5.5m wide
CP-22	Lodge Road	623204	248248	30mph 4.0m wide
CP-31	Waldringfield Road	626615	246089	60mph 3.1m wide
CP-36	The Street	627833	243223	60 mph 2.9m wide
CP-40	Park Lane	628220	240398	60mph 2.9m wide

6.5.2 Private Tracks

89. A Private Track Schedule is presented in Table 6-4 which identifies the proposed private track crossings/usage and site-specific traffic management. The methodology for crossing private tracks will be a localised temporary daily closure at appropriate times, allowing access for residents and emergency services. Where continued access across the track is required then this will be maintained via appropriate traffic management controls and signage.

90. At each location, the following traffic management measures will be in place:

- Construction traffic to give way to public traffic.
- Installation of construction traffic crossing warning signs.
- Reduced haul road speed limit at track crossing point.

91. All works on private tracks will be in agreement with land owners.

Table 6-4 Private Tracks Crossing Schedule

Ref No.	Crossing Location	Easting	Northing	Location Notes
CP01	Track to Bullen Hall Farm off Bullen Lane (S61 to S62 on DCO Works Plan)	610257	246333	Crossed by trackway to HDD21E
CP04	Track/public footpath (PROW3) leading south from Somersham Road (S57 to S58 on DCO Works Plan)	611271	247753	Crossed by haul road to reach Jointing Bay JB2/3
CP06	Track/public footpath (PRoW4) - to the north of Hill View Business Park, linking Ipswich Road to Claydon. (S53 to S54 on the DCO Works Plan)	613640	249125	Crossed by haul road to reach Jointing Bay JB4/5
CP24	Track/public footpath (PRoW18) -- linking Seckford Hall Road to Cherry Tree Farm (includes S45 to S46 on DCO Works Plan)	624574	248367	Used to access Jointing Bay 13/14
CP26	Track/public footpath (PRoW19) passing under the A12 (Part of S39 to S40 on DCO Works Plan)	624925	247791	Used to access HDD8E and HDD8W
CP28	Track/ public footpath (PRoW24) to the east of Church Lane, which runs eastwards from Martlesham Hall (S33 to S34 on DCO Works Plan)	626491	246810	Crossed by trackway to HDD11E
CP29	Track/public footpath (PRoW25) to the north of Waldringfield Road (S31 to S32 on the DCO Works Plan)	626481	246641	Crossed by haul road to Jointing Bay JB16/17 and on to HDD11E
CP30	Track/public footpath (PRoW26) to the north of Waldringfield Road (S29 to S30 on the DCO Works Plan)	626310	246539	Crossed by haul road to Jointing Bay JB16/17 and on to HDD11E
CP32	Track to Cross Farm from Waldringfield Road (S23-S24 on DCO Works Plan)	627439	245428	Crossed by haul road to Jointing Bay JB18/19
CP34	Track/public footpath (PROW30) running west from Mill Road to link to Newbourne Road/Woodbridge Road. (S17 to S18 on DCO Works Plan)	627723	243648	Crossed by haul road to Jointing Bay JB21/22 and on to HDD14W

Ref No.	Crossing Location	Easting	Northing	Location Notes
CP37	Track/public footpath (PRoW32) between Ranglins Wood and Ivy Cottages/Hemley House (S15 to S16 on DCO Works Plan)	628042	242359	Crossed by haul road to Jointing Bay JB21/22 and on to HDD14W
CP39	Track from Park Lane to Lodge Farm (S13 to S14 on DCO Works Plan)	628070	240820	Crossed by haul road to Jointing Bay JB22/23 and on to HDD14E
CP42	Track/bridleway (PRoW 35) running south from Corporation Farm via Drunkards Lane to Falkenham Road. (S11 to S12 on DCO Works Plan)	628587	239983	Crossed by haul road to Jointing Bay JB23/24 and on to HDD14E and HDD14W
CP44	Track/public footpath (PRoW 37a&b) from Falkenham to the Deben (S3 to S4 on DCO Works Plan)	629755	239463	Used by the haul road to JB24/25 and on to HDD16W
CP45	Track between Somersham Road and Bramford Road /Lower Dairy Farm (S55 to S56 on DCO Works Plan)	611391	247991	Used to access HDD2E
CP46	Track leading south from Grundisburgh Road (Part of S49 to S50 on DCO Works Plan)	620003	248589	Used to access HDD20E from Access Point AP15
CP47	Access point to unsurfaced track leading south from Sandy Lane (S35 on DCO Works Plan)	626137	247890	Uses same access as Access Point 20 which will lead to Jointing Bay JB 15/16 and HDD10E
CP48	Track from Waldringfield Road leading northeast ward (S27 to S28 on DCO Works Plan)	626821	246027	Used to access Jointing Bay 17/18 and HDD12E/W and HDD13E/W from Access Point AP23
CP49	Track leading northeast from Ferry Road (includes S1 to S2 on DCO Works Plan)	634484	239050	Used as part of haul road from Access Point AP30 to Jointing Bay 27/28 and HDD17E

6.6 Delivery Times

92. To control delivery times and routes to the proposed East Anglia THREE project, all HGV traffic will be required to first report to either Paper Mill Lane PCCS or Top Street PCCS before then transferring to their respective points of access. Once HGVs have made their deliveries they would then return to the original origin of their journey rather than back to the PCCSs.

93. HGVs would be permitted to arrive at the PCCSs between 8am and 6pm. To manage the impact of deliveries from the Primary CCSs to the points of access (and back from the points of access to their original origin) deliveries would be scheduled to avoid network peak hours (8am to 9am and 5pm to 6pm).

94. Table 6-5 summarises the times at which deliveries will be permitted, the table also includes an allowance for the travel time from the points of access back to the strategic highway network.

Table 6-5 HGV Delivery Windows

Delivery to Primary CCS		Delivery to point of access		Return to wider Network
Destination	**Delivery Window**	**Access ID**	**Onward delivery movement permitted from Primary CCS***	**Return movement permitted from Point of Access***
E - Top Street	8am – 6pm	AP29 to AP31	9:00am – 2:30pm	9:00am – 2:30pm
			4:00pm – 4:30pm	4:00pm – 4:30pm
		AP27, AP28,	9:00am – 2:45pm 4:00pm – 4:45pm	9:00am – 2:45pm 4:00pm – 4:45pm
		AP17 to AP26	9:00am – 4:45pm	9:00am – 4:45pm
		AP14 -AP16	9:00am – 4:30pm	9:00am – 4:30pm
B – Paper Mill Lane	8am – 6pm	AP11, AP12	9:00am – 4:30pm	9:00am – 4:30pm
		AP10	9:00am – 2:45pm 4:00pm – 4:45pm	9:00am – 2:45pm 4:00pm – 4:45pm
		AP01 to AP08	9:00am – 4:45pm	9:00am – 4:45pm
*Permitted delivery windows				

95. In addition to avoiding peak hours and sensitive hours for particular routes the Principal Contractor will establish a line of communication with SCC's Emergency Planning Officer and Traffic Manager. If notified of a major incident obstructing the highway the Principal Contractor would liaise directly with suppliers to suspend HGV deliveries along affected routes.

96. If the obstruction is likely to be longer term, in the first instance the programme would be reviewed to ascertain if resource could be diverted to an alternative onshore cable route section. Failing that, the contractor would liaise with SCC to identify and assess alternative temporary access arrangements.

97. The Principal Contractor will also work closely with the local liaison groups to identify the dates of local planned events, e.g. harvests that could impact upon the project and seek to effectively manage deliveries during these events.

6.7 Training

98. All regular HGV construction vehicle drivers will be formally inducted to the proposed East Anglia THREE project. The induction will seek to establish a clear set of responsibilities that drivers will be required to follow and will include details of the following:

a. Timings, pre-booked slots;
b. The approved HGV routes;
c. Highway safety concerns;
d. Adherence to speed limits;
e. Additional safe working practices where access routes use PRoW or cycle routes;
f. Requirements for reporting accidents and 'near misses';
g. A Driver Code of Conduct;
h. Procedures for dealing with emergencies; and
i. Disciplinary measures for non-compliance.

99. An information pack will be distributed to all individuals involved in the transport of materials. The pack will be a convenient size so it can be stored in a truck cab. The pack will include the key information as described with respect to induction.

100. Any HGV construction vehicle driver not inducted and not regularly delivering to the proposed East Anglia THREE project will be issued with a Driver Code of Conduct and approved delivery route plan.

6.8 Control of HGV Numbers

101. The following measures will be implemented in order to minimise HGV movements:

a. The Principal Contractor will be responsible for managing the demand for deliveries and exports for their own fleet and that of their supply chain partners to ensure they comply with agreed daily traffic profiles contained within the updated transport assessment (i.e. the Traffic and Transport Technical Note at Appendix 1). A timed delivery booking system will be implemented. The proposed delivery schedule will be prepared weekly in advance by the Principal Contractor, taking into account other committed developments and seasonal variations, with limited spaces reserved for short notice deliveries. The planning of deliveries (via the booking system) will assist the Principal Contractor to allocate sufficient space within the temporary laydown area for the planned number of deliveries.
b. All regular construction vehicles and site vehicles will have a unique identifier number assigned, which will be displayed in a prominent location on each vehicle (see Appendix 3).
c. The Principal Contractor will be required to keep an up to date record of deliveries and exports from the EA THREE project, this will take the form of delivery receipts. This information will be collated by the TCo and included in the quarterly reporting to SCC/MSDC.
d. The registration numbers for all HGVs making deliveries will be recorded by the TCo. This would allow for checking and enforcement of any reported breaches of the agreed delivery routes and procedures.
e. In accordance with good construction practice, opportunities will be sought to reduce the overall number of HGV movements by consolidating loads and using the largest feasible vehicles taking into account any other environmental constraints that may affect HGV routes.
f. In accordance with the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084), the standard construction working hours for the proposed East Anglia THREE project and any construction-related traffic movements in and out of the site will be between the following hours:

   07:00 – 19:00 Monday to Saturday.
   There are a few exceptions to the above working times as defined in the DCO.
g. The TCo will be required to plan for maintaining stockpiles of critical path items such as aggregate. These stockpiles will facilitate advanced planning of deliveries, maximise payloads, and enable a smooth import profile to be maintained.

6.9 Signage

102. Appropriate signage will be installed to direct suppliers and contractor's vehicles along the Onshore Cable Works HGV routes. This is to minimise the impact of deliveries on local residents and also minimise the risk of construction traffic missing vital junctions and not being able to turn around easily in the downstream road network. Signage locations will be continually reviewed with SCC to ensure their suitability. Signage locations will be continually reviewed and agreed with SCC during the entire construction phase.

103. The Advance Warning signs to be installed shall include, but shall not be limited to:

- Information Signs, (including reference number, contact details, works to commence, proposed duration, diversionary routes);
- Works Access, directional and location (including No access to Unauthorised Persons - Construction Site);
- Construction traffic directional routing (e.g. EA THREE Access route (directional Arrows); No access to Construction Traffic, No HGV Beyond This Point);
- Road Works Ahead;
- SLOW – Workforce/obstructions in road ahead;
- New Layout Ahead;
- Changed Priorities;
- Pedestrian directions, crossings and directional;

- Temporary speed limits/restrictions – 30mph at all access points, crossing points and where straight line view is impaired by natural objects that cannot be removed due to environmental impact or engineering constraint. It is noted that despite the 30mph speed limit signs, not all drivers may reduce their speed accordingly. It is therefore proposed that road safety is continuously reviewed (for example through consideration of records of near misses) and if required, the need for further traffic calming measures will be agreed with SCC; and
- Warning signs for any restrictions and/or obstructions that may be affected as a consequence of the works.

104. In addition to the above, all drivers exiting a PCCS to deliver to particular locations on the cable route will be provided with an appropriate route map.

105. All temporary (and where agreed, permanent) traffic signs and road markings will be provided in accordance with the Traffic Signs and General Directions 2016 (DfT, 2016) and Chapter 8 'Traffic Safety Measures and Signs for Road Works, Temporary Situations' of the Traffic Signs Manual (DfT, 2009a and DfT. 2009b), in agreement with SCC (via Temporary Traffic Regulation Order applications) and Highways England (for works on A14). All temporary signage will be removed on completion.

6.10 Pre and Post Construction Surveys

106. Prior to the commencement of the construction works, pre-condition surveys (dilapidation surveys) of the Cable Works HGV routes will be agreed with and undertaken in conjunction with SCC in accordance with the UK Pavement Management System standard. The survey will most likely comprise a Coarse Visual Inspection survey with more detailed surveys (such as the use of Deflectograph) for specific areas. The exact specification of surveys required will be agreed with SCC prior to commencement.

107. The pre-construction survey will also identify road surface irregularities which require remediation prior to construction in order to mitigate vibration impacts.

108. Further detail on the mitigation regarding vibration impacts will be outlined in the Cable Route Construction Noise and Vibration Management Plan (EA3-LDC-CNS-REP-IBR-000086). Pre-construction surveys will be undertaken to determine road structures at all crossing points to determine the extent of carriageway strengthening requirements.

109. Any damage to the existing road network or street furniture occurring as a consequence of the construction activities will be made good to the satisfaction of SCC, in accordance with such requirements (as to specification of materials and standard) as prescribed by regulations under the New Roads and Street Works Act 1991 (as amended).

110. The post-construction surveys and measures to secure any subsequent remediation will be agreed with SCC. These shall be undertaken as soon as possible after completion of relevant works.

111. The two surveys will form the basis of any ameliorating works that may be required upon completion of the onshore works, to rectify specific damage to the local road network as a direct result of the construction works. These pre and post construction surveys will include before and after photographic records of street furniture and road conditions.

112. SCC will be kept updated of proposed start and completion dates via regular meetings and programme updates.

113. In accordance with the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084), pre and post-construction surveys of any Public Rights of Ways (PRoWs) affected will be undertaken by an experienced surveyor, including identification and assessment of the surface condition and with a scope of coverage and methodology to be agreed with the SCC PRoW team. The two surveys will form the basis of any ameliorating works that may be required upon completion of the onshore works, to rectify specific damage to the PRoW network as a direct result of the construction works. An Agricultural Liaison Officer (ALO) will be employed by EATL to ensure that information on existing land conditions is obtained, recorded and verified during the PRoW surveys.

6.11 Additional Controls

114. No daytime or overnight parking of site or construction vehicles (site employees or visitors) outside of any CCS or jointing bay compounds will be allowed without the prior agreement of SCC. However, during access point creation and reinstatement works, parking will be at locations within the access corridor where they will not interfere with the public highway. The numbers of vehicles parking on site, at such times, will, in any case, be minimised (through use of minibus/crewbus etc).

115. All traffic management measures will be temporary including traffic signs, road markings, barriers, lamps, traffic control and other such measures necessary in accordance with best practice unless otherwise agreed with SCC Network Assurance. These will be installed and maintained in good condition throughout the extent of the construction period.

116. On-site wheel wash provisions shall be provided at appropriate access points connecting the cable works to the public highway. Off-site road cleansing/sweeping provision along sections of the public highway will be used by construction vehicles shall be to the satisfaction of SCC. The wheel washing facilities will be designed and located to avoid used water running onto the highway.

117. The Principal Contractor and its suppliers' fleets will have arrangements with recovery companies to allow breakdowns and accidents to be cleared as quickly as possible in order to avoid any such incidents blocking the highway. All breakdowns and accidents will be reported to the TCo.

7. HIGHWAYS AND ACCESS IMPROVEMENTS

118. As noted in Section 6.2, an updated construction Transport Route Assessment (Appendix 2) has examined the appropriateness, viability and justification for the use of the existing transport networks. This study also considered the need for any road and access improvements to facilitate the works taking into consideration features pertinent to the geometry and safety of the route for the size of vehicle proposed. These included:

- Road width;
- Traffic volume and capacity;
- Visibility along route;
- Extent of hedgerows and trees along verges;
- Level of route in relation to adjacent land;
- Verges and extent of Public Highway;
- Third party land requirement;
- Pedestrian and non-motorised traffic flow; and
- Swept path tracking analysis

7.1 Highway Improvements

119. To facilitate access to the onshore cable works a number of highway improvements are required across the existing highway network. Full details of these improvements are given within Section 9 of the Access Management Plan (EA3-LDC-CNS-REP-IBR-000079), however in summary, these comprise the removal of overhanging branches (at 30 locations on Grundisburgh Road, Newbourne Road and Waldringifeld Road) and the installation of one passing bay.

120. The passing bay will be located on the eastern side of Ferry Road (B1083), at Grid Reference E 634616.488 N 239160.830, between Access Points AP30 and AP31. Construction and locational details for the passing bay are shown in Appendix 2 of the AMP. The passing bay will be a temporary measure and the highway will be returned to the existing layout following construction, unless otherwise recognised by Local Highway Authority (Suffolk County Council (SCC)) as having legacy benefit (e.g. by improving road safety or increasing asset life). The passing bay has been designed to a standard required for a permanent improvement. The passing bay has been proposed following discussion with SCC Highways Authority and will require a Section 278 Agreement under the Highways Act 1980.

121. The junction of Loraine Way and Bullen Lane was improved as part of the EA ONE construction works. This comprised the widening of the Loraine Way road surface to enable the addition of a third lane to the centre of the existing carriageway, protected by two ghost islands to permit traffic turning right into Bullen Lane. This remains in situ. A roundabout and access point were also installed at Top Street Road and 45 passing bays, were created that have now been made permanent.

7.2 Access Improvements

122. The proposed access arrangements are also given within the Access Management Plan and are summarised in Table 3-2 in Section 3.2 of this document.

8. MONITORING AND ENFORCEMENT

8.1 Monitoring

123. The following section sets out how the targets and measures contained within this TMP will be monitored to ensure compliance.

8.1.1 HGV Numbers

124. The HGV movements associated with the installation of the cable will be continuously monitored by the TCo through the use of the Booking System to ensure adherence with the assessed HGV movements.

125. The information, i.e. records of deliveries and return journeys together with any breaches of the agreed delivery routes or delivery hours, will be made available to SCC on a quarterly basis, for checking against the application profile.

8.1.2 HGV Routing

126. The vehicle identity system (See section 5) will help the public distinguish HGV construction vehicles associated with the proposed EA THREE project from other traffic on the highway network. Each HGV will be required to display a unique identifier, provided by the TCo within the window of the cab that will allow members of the public to report any concerns such as driver behaviour or the use of unapproved routes via a publicized telephone contact number. Signs will be erected at all construction accesses with the relevant contact number clearly displayed for public enquiries.

127. The TCo will be the first point of call for all concerns raised. Contact details will be made available in a regular newsletter that will be circulated to all local Parish and Town Councils and stored at community hubs, such as libraries, for reference.

128. The Principal Contractor will also ensure that where its HGV fleet is fitted with a GPS tracking system, that these are used to record the routes, time speed of vehicles when making deliveries. The GPS tracking together with delivery records will serve to augment the unique identifier to allow the TCo to respond to any complaints and provide a complete evidence base. The TCo will also ensure that, where installed, these monitoring systems are activated, and records are made available to the TCo to facilitate auditing and complaint investigation.

8.2 Enforcement

8.2.1 Introduction

129. The consequences of not complying with the measures contained within this TMP could result in an increase in HGV traffic on the highway network and road safety concerns, potentially impacting on sensitive receptors, leading to significant environmental effects. It is therefore essential that that the TCo can quickly react to any breaches and implement corrective processes. This section therefore provides a summary of the mechanisms that would ensure that the TMP is effectively enforced.

8.2.2 Potential Breaches

130. To ensure that the TMP can be effectively enforced it is important to define what would constitute a breach. The TMP therefore considers that the following would constitute a breach whereby corrective measures would be required:

a. Failure to implement or use the agreed traffic management measure;
b. Failure to follow the agreed delivery routes;
c. Failure of the HGV to display its unique identifier;
d. Construction HGV traffic operating outside of agreed hours;
e. Exceeding the agreed freight and delivery profiles as set out within the updated transport assessment (Traffic and Transport Technical Note Appendix 1);
f. Construction HGV traffic being driven inappropriately, e.g. speeding; and
g. Failure to record deliveries and departures for plant and materials with the booking system.

8.2.3 Corrective Process

131. On receipt of a report of a potential breach, the TCo would investigate the circumstances and compile a report for EATL, MSDC, ESC and SCC Highway Authority within seven working days. The report would outline the outcome of the investigation and what corrective action (if necessary) had been implemented. MSDC, ESC and SCC (as the Local Highway Authority) will then review the information, request further clarifications (if required) and confirm to the TCo if a material breach has occurred.

132. If the breach is found to be material, the following three stage process will be followed:

- Stage one – MSDC, ESC or SCC confirms a breach and requests TCo to review the data and concerns. MSDC, ESC or SCC and the TCo would then agree the extent of the breach of controls and agree action. This is likely to be a contractor warning at this stage;
- Stage two – If a further material breach is identified the contractor would be given a further warning and required to involve individuals/sub-contractors/suppliers to produce an action plan to outline how the issue would be rectified and any additional mitigation measures proposed. The action plan should identify a strategy with a duration of not more than seven working days to correct the breach. EATL, MSDC, ESC and SCC will be informed.
- Stage three – Should further breaches still occur the contractor would be required to remove the offender from site and the contractor/ supplier would receive a formal warning. Any continued breaches by individuals of the supplier/ contractor may be dealt with by the formal dispute procedures of the contract.

133. Failure to follow the performance standards as shown in Section 8.2.2 and (including the correction process, or continued breaches would be addressed by contractual measures between EATL and the contractor.

134. Individual employee breaches will be addressed through UK employment law whereby the three stage process outlined will form the basis for disciplinary proceedings.

8.2.4 Action Plan

Table 8-1 TMP Action Plan

Measure	Timescale	Responsibility
Appointment of a TCo	Prior to construction commencement	Principal Contractor
Obtain technical approval for construction of offsite highway mitigation measures	Prior to construction commencement	Principal Contractor
Implement advance warning signing	Prior to construction commencement	Principal Contractor
Establish monitoring systems: **• Delivering booking system;** **• Unique vehicle identifier system; and** **• Telephone reporting system.**	Prior to construction commencement	TCo
Agree scope of highway condition surveys with SCC	Prior to construction commencement	TCo
Agree abnormal load routing with the Suffolk Constabulary and SCCC Highways	Prior to abnormal load movements	TCo
Agree abnormal load restrictions with SCC through ESDAL	Prior to abnormal load movements	TCo

Measure	Timescale	Responsibility
Monitoring of TMP measures: **• HGV movements;** **• Accidents and near misses;** **• HGV monitoring;** **• Complaints; and** **• Produce monitoring reports.**	Ongoing throughout construction	TCo

9. REFERENCES

DfT, 2009a, *Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations, Part 1: Design*. London, TSO

DfT, 2009b, *Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations, Part 2: Operations*. London, TSO

DfT, 2016, *DfT Circular 01/2016, Traffic Signs and General Directions 2016*, Version 2

SCC, 2017, *Suffolk Lorry Route Network*, https://www.suffolk.gov.uk/assets/Roads-and-transport/lorry-management/Lorry-Route-Map-Amended-MAY-17.pdf

APPENDIX 1 TRAFFIC AND TRANSPORT TECHNICAL NOTE

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

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SLR Project No.: 404.05356.00006

15 November 2023

Revision: 02

Revision Record

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01	16 August 2023	Daniel Moran	Kay Griffin	Kay Griffen
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1.0 Introduction

1.1 Background

SLR Consulting Ltd. (SLR) has undertaken a review and analysis of the anticipated vehicle movements associated with the cable installation works stage of the East Anglia THREE Offshore Windfarm (EA THREE) Onshore Cable Works as per the Development Consent Order (DCO) dated 7th August 2017.

The forecast vehicle movements (personnel and Heavy Goods Vehicles (HGV)) were included in Chapter 27 'Traffic and Transport' of the Environmental Statement (ES), which was prepared by Royal HaskoningDHV in support of the DCO submission (Document Reference – 6.1.27).

The vehicle movements identified in the ES, which was prepared in 2015, were estimates based on a set of reasoned assumptions, professional experience and using previous project experience; however, NKT, the Principal Contractor for the EA THREE onshore cable works has now confirmed the vehicle movements for the construction programme. These revised vehicle movements form the basis of the analysis presented in this Technical Note.

1.2 Purpose of the Report

The objective of this Technical Note is to provide Suffolk County Council (SCC) with an overview of the confirmed (peak) vehicle numbers associated with the EA THREE onshore cable works, including an assessment of the likely impacts at the required locations on the highway network.

This Technical Note therefore sets out the following:

- A summary of the assessment assumptions and requirements for EA THREE as identified in the ES;
- A comparison of the ES and NKT vehicle movements associated with the EA THREE onshore cable works at the sensitive junctions on the highway network that are likely to be used by traffic associated with these works, using a lower vehicle occupancy for the NKT data than presented in the ES;
- A review of the likely impacts,by undertaking junction capacity assessments at the sensitive junctions on the highway network that are likely to be used by traffic associated with the EA THREE onshore cable works, including vehicle movements that are likely to be on the highway network associated with the EA THREE Converter Station construction works; and
- An update of road safety analysis at key junctions on the highway network that are likely to be used by traffic associated with the EA THREE cable installation works and EA THREE Converter Station.

2.0 DCO Submission Traffic Data

2.1 Assessment Assumptions

A brief summary of the assumptions employed to assess the impact of vehicle movements associated with the construction of EA THREE is set out as follows:

- The nature of construction works typically requires that employees work longer hours in the summer and shorter hours in the winter to take advantage of the available daylight. Therefore, whilst employees would arrive prior to the morning network peak hour (08:00 to 09:00) throughout the year (and therefore no requirement for assessment during this period), there is the possibility that there would be an overlap between construction employees departing and the network evening peak hour (17:00 to 18:00 observed from traffic counts) i.e. when the construction shift finishes at the same time as the evening network peak (employees would be departing their place of work and HGVs would be returning from making deliveries).
- As a worst case it was assumed that all employee trips would overlap with the evening network peak hour, recognising this scenario is only likely to occur during a two-month period before and after the summer months.
- The delivery of materials and plant to the Primary CCSs (Paper Mill Lane and Top Street) would be spread over a ten-hour period, whilst onward deliveries to Secondary CCSs or points of access would be scheduled to avoid the highway network peak hours.
- A car occupancy of 2.5 employees per vehicle; and
- To develop a worst-case impact scenario on the highway network, the peak traffic demand for each section was added together to create a theoretical ‘in-combination worst case’ week whereby the peak construction activity for all sections would occur concurrently. This results in the combined traffic flows on the ‘A’ class road network as over-estimated.

2.2 Assessment Requirements

In order to assess if there was any potential for significant impact the evening peak (17:00 to 18:00) on the highway network, the forecast EA THREE construction traffic generation was assigned to the junctions across the agreed study area, to inform the DCO application.

SCC identified 11 junctions across the agreed study area as potentially being susceptible to increases in traffic flow.

In Chapter 27 ‘Traffic and Transport’ it was concluded that the forecast vehicle movements associated with the construction of EA THREE (total construction works) were of a magnitude that could potentially lead to significant impacts at the following three sensitive junctions:

- Junction 1: Roundabout junction of the A14 and B1113 (Claydon Interchange);
- Junction 5: Roundabout junction of the A12 and A1214; and
- Junction 11: Roundabout junction of the A12 and B1438.

In the Outline Construction Traffic Management Plan Outline (CTMP), prepared for the EA THREE DCO application, the list of sensitive junctions where the forecast vehicle movements identified as having the potential to lead to significant impacts was as follows:

- Junction 5: Roundabout junction of the A12 and A1214;

- Junction 6: Roundabout junction of the A12 and Newbourne Road;
- Junction 8: Priority junction of the B1079 and Manor Road; and
- Junction 11: Roundabout junction of the A12 and B1438.

Capacity assessments were not undertaken at any of the junctions listed above (in Chapter 27 or the Outline CTMP) as part of the DCO application; however, the following strategy was proposed:

- The junctions identified as having the potential to lead to significant impacts would be subject to detailed analysis through the development of the Construction Traffic Management Plan (CTMP), post-consent, when a contractor has been appointed and can inform outcomes; and
- Further analysis would seek to quantify the potential significance of these impacts and the scope of mitigation measures. Potential mitigation measures would focus on enhanced travel planning and restricting peak hour movements rather than physical junction improvements.

The maximum vehicle movements in the evening peak hour at the sensitive junctions that would be used by the traffic associated with the EA THREE as identified in *Table 27.17 Peak Hour Traffic Flows through Sensitive Junctions* of Chapter 27 'Traffic and Transport', are set out in **Table 1**

Table 1: Evening Peak (17:00 – 18:00) Junction Vehicle Impacts (DCO Submission)

Junction		Total EA THREE		
		Cars/LGVs	HGVs	Total
1	A14/B1113	80	16	96
5	A12/A1214	88	22	110
6	A12/Newbourne Road	48	22	70
8	B1079/Manor Road	15	0	15
11	A12/B1438	134	22	156

3.0 Confirmed Traffic Data – Onshore Cable Works

3.1 Introduction

In the context of the strategy set out in **Section 2.2,** and using the assessment assumptions in Chapter 27 'Traffic and Transport', the following text sets out the confirmed peak vehicle movements for the EA THREE onshore cable works anticipated by NKT and the confirmed typical EA THREE Converter Station vehicle movements anticipated by Siemens. The assessment is based on the peak period of activity during the construction programme for the EA THREE cable installation works, which is predominately associated with the delivery of material for the construction of haul roads undertaken at the same time for a number of work locations. These are programmed to occur during the summer of 2024.

3.2 Trip Generation

3.2.1 EA THREE Cable Installation Works

The revised maximum (daily and evening peak) number of employee, employee vehicle movements (and HGV movements associated with the peak period of activity for the EA THREE cable works are set out in Table 2 (and provided in full in **Appendix A)** for the following scenarios:

- **Scenario 1:** The peak activity of works at access points AP28, AP29 and AP30 that will occur at the same time; or
- **Scenario 2:** The peak activity of works at access points AP2, AP3 and AP31 that will occur at the same time.

The EA THREE cable installation assessment flows for Scenarios 1 and 2, which will occur in Summer 2024, have been derived using information from NKT using the following assumptions:

- Daily employees / vehicle movements are arrivals and departures, during the peak hours and at other times during the day;
- Evening peak employees / vehicle movements are departures between 17:00 and 18:00 from the relevant access points at the end of the working day; and
- Daily HGV movements are arrivals and departures at the Primary CCSs, during the peak hours and at other times during the day; and
- Evening peak HGV movements are arrivals at a Primary CCS between 17:00 and 18:00.

Employee vehicle movements are based on a car occupancy of 1.5, which has been identified from lessons learnt from the EA TWO / EA ONE North ES and Examination, advice from SCC and through discussions with NKT, who has suggested that a 2.5 car occupancy is unlikely to be achievable.

Given the peak period of activity for the EA THREE cable installation will occur at the time in the year with the most available daylight hours (see **Appendix B** for a summary of daylight hours across the year and likely timing of workforce movements), in reality, the impacts set out in this Technical Note are likely to be much less.

Also, as HGVs are not permitted to make an onward journey from the Primary CCS to a Secondary CCS or construction access during the peak hours on the highway network, the forecast number of HGVs arriving at the Primary CCS's to inform this assessment are likely to be an over-estimate and therefore robust.

Table 2: EA THREE Confirmed Maximum Figures – Cable Installation (NKT)

Scenario (Access Points)	Employees				HGV Movements	
	Number		Vehicle Movements			
	Daily	PM Peak	Daily	PM Peak	Daily	PM Peak
1 (28, 29 and 30)	300	60	200	40	360	30
2 (2, 3 and 31)	230	48	153	32	440	20

3.2.2 EA THREE Converter Station

As the construction of the EA THREE Converter Station will be undertaken at the same time as the EA THREE onshore cable works, the typical vehicle movements associated with the EA THREE Converter Station have been included and are set out in **Table 3.**

Table 3: EA THREE Confirmed Typical Figures – Converter Station (Siemens)

Construction Phase	Employees				HGV Movements	
	Number		Vehicle Movements			
	Daily	PM Peak	Daily	PM Peak	Daily	PM Peak
Converter Station	80	80	106	53	20	4

3.3 Trip Distribution

3.3.1 Employees

The distribution for employee traffic identified in the ES, is shown in **Table 4** and has been used to distribute the NKT and Siemens construction traffic data for the EA THREE cable installation works and EA THREE Converter Station.

Table 4: Employee Traffic Distribution (ES) (percentages)

Labour Type	Origin/Destination					
	A12 South	A14 South	A12 North	A1214	A14 North	B1438
In-Migrant Labour (66%)	8.5	10.6	47.9	25.5	0	7.4
Resident Labour (34%)	43.6	2.0	8.9	21.8	19.8	4.0

3.3.2 HGVs

The distribution for HGVs has been provided by NKT for the EA THREE cable installation works and by Siemens for the EA THREE Converter Station, as set out below:

- Cable Installation Works (Paper Mill Lane)
  - 50% of HGVs from / to A14 South; and
  - 50% of HGVs from / to A14 North.
- Cable Installation Works (Top Street)
  - 62.5% of HGVs from / to A12 North; and
  - 37.5% of HGVs from / to A14 South.
- Converter Station

- 70% of HGVs from / to A14 South; and
- 30% of HGVs from / to A14 North.

3.4 Trip Assignment

3.4.1 EA THREE Onshore Cable Works

The maximum number of vehicle movements associated with the peak period for the EA THREE cable installation in the evening peak hour at Junctions 1, 5, 6, 8 and 11 (the highest from Scenario 1 and 2), is shown in **Table 5** to **Table 8.**

Table 5: EA THREE Onshore Cable Works Vehicle Impacts (Junction 1: A14/B1113 Claydon Interchange)

Arm	NKT		
	Cars/LGVs	HGVs	Total
B1113	24	0	24
A14 North	0	10	10
Ipswich Road	0	0	0
A14 South	0	10	10
Paper Mill Lane	0	0	0
Total	**24**	**20**	**44**

Table 6: EA THREE Onshore Cable Works Vehicle Impacts (Junction 5: A12/A1214)

Arm	NKT		
	Cars/LGVs	HGVs	Total
A12 North	10	0	10
Main Road	0	0	0
A12 South	6	13	19
A1214	0	0	0
P&R	0	0	0
Total	**16**	**13**	**29**

Table 7: EA THREE Onshore Cable Works Vehicle Impacts (Junction 6: A12/Newbourne Road)

Arm	NKT		
	Cars/LGVs	HGVs	Total
A12 North	7	0	7
Newbourne Road	0	0	0
A12 South	6	13	19
Foxhall Road	0	0	0
Total	**13**	**13**	**26**

Table 8: EA THREE Onshore Cable Works Vehicle Impacts (Junction 11: A12/B1438)

Arm	NKT		
	Cars/LGVs	HGVs	Total
A12 North	11	17	28
B1438	0	0	0
A12 South	4	13	17
Total	**15**	**30**	**45**

The NKT assessment flows are shown in **Figure 1** and **Figure 2.**

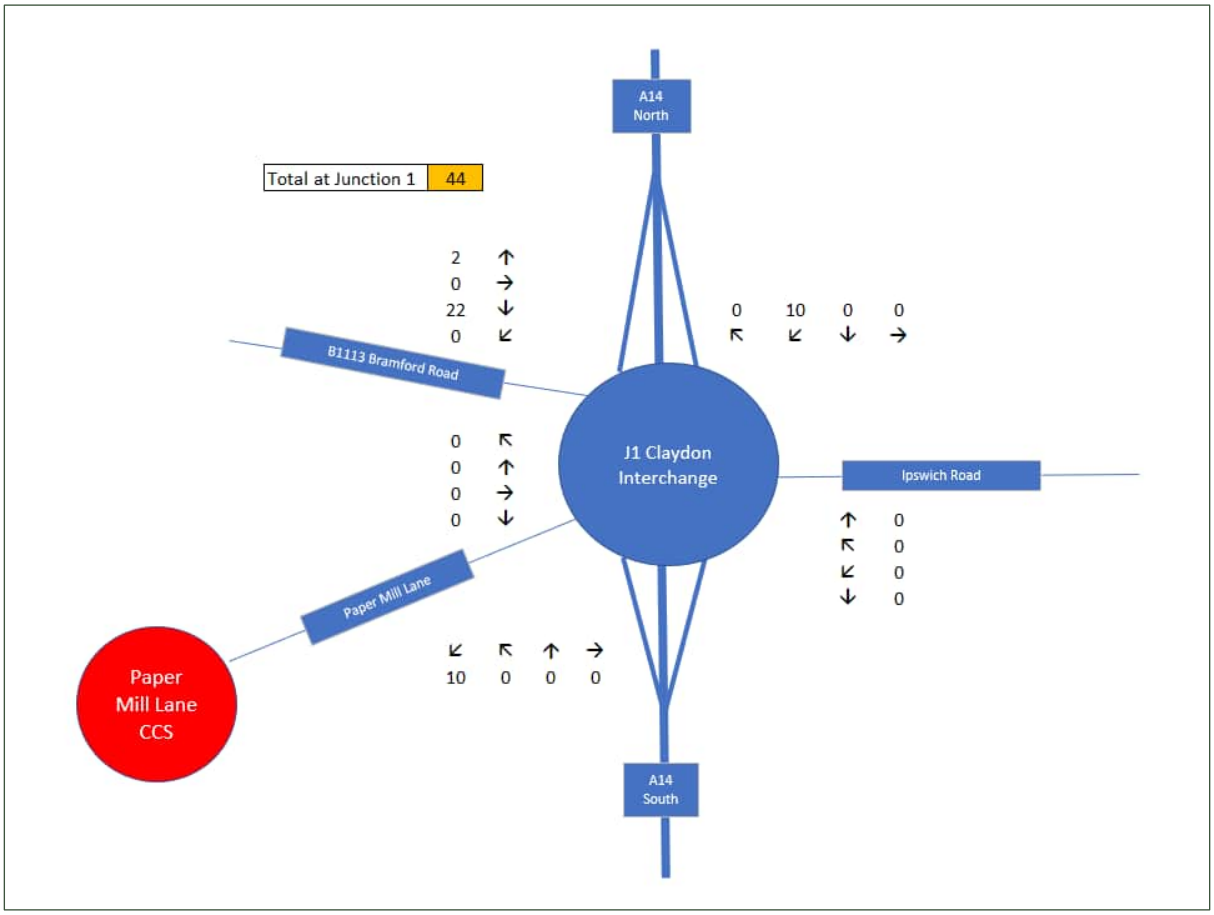


Figure 1: NKT EA THREE Onshore Cable Works Traffic Flows (Junction 1)

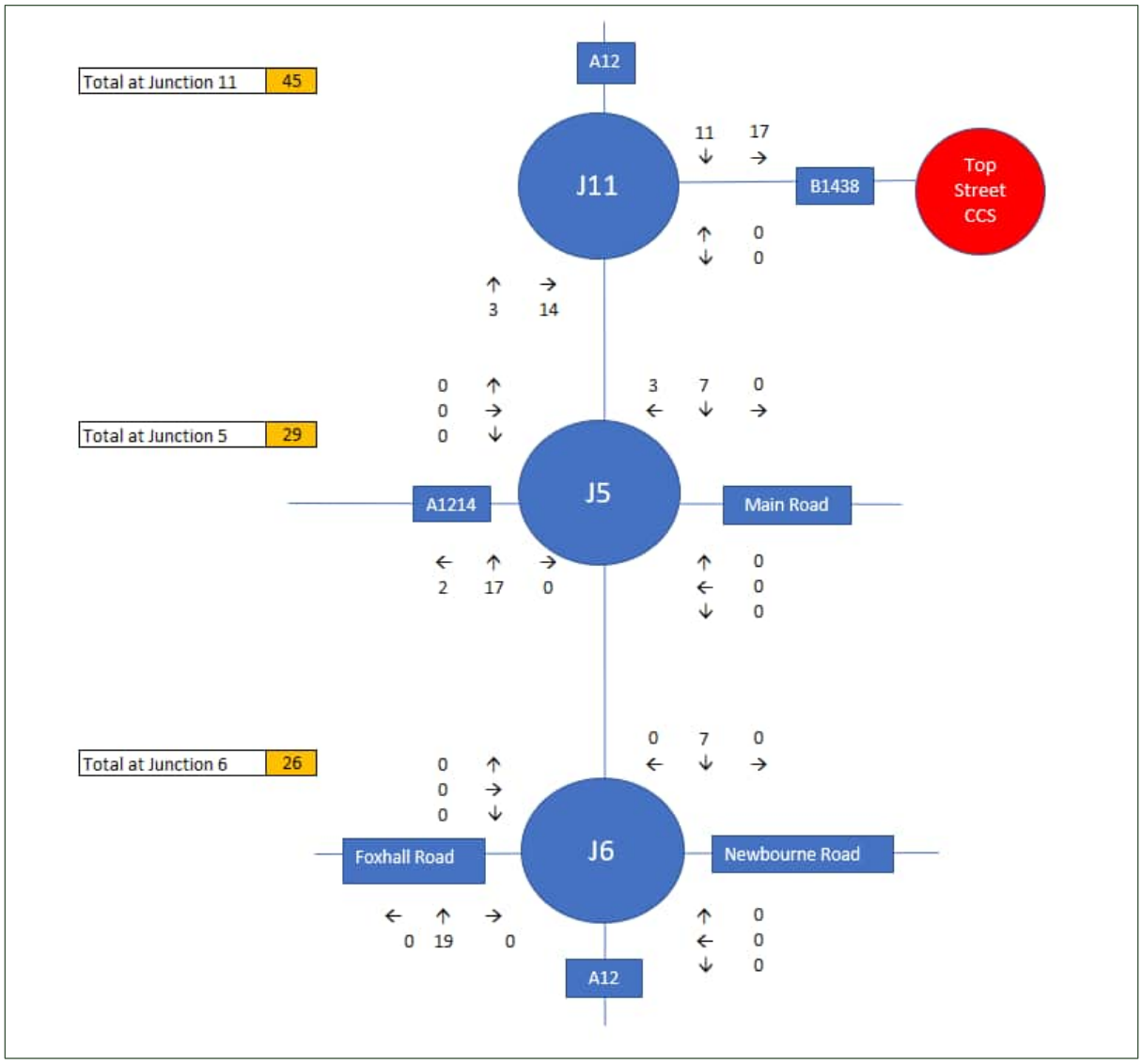


Figure 2: NKT EA THREE Onshore Cable Works Traffic Flows (Junctions 5, 6 & 11)

3.4.2 EA THREE Converter Station

The maximum number of vehicle movements associated with the peak period for the Converter Station in the evening peak hour at Junctions 1, 5, 6, 8 and 11 is shown in **Table 9** to **Table 12** and are in **Figure 3** and **Figure 4.**

Table 9: EA THREE Converter Station Vehicle Impacts (Junction 1: A14/B1113 Claydon Interchange)

Arm	Siemens		
	Cars/LGVs	HGVs	Total
B1113	53	0	53
A14 North	0	2	2
Ipswich Road	0	0	0
A14 South	0	2	2
Paper Mill Lane	0	0	0
Total	**53**	**4**	**57**

Table 10: EA THREE Converter Station Vehicle Impacts (Junction 5: A12/A1214)

Arm	Siemens		
	Cars/LGVs	HGVs	Total
A12 North	0	0	0
Main Road	0	0	0
A12 South	22	0	22
A1214	0	0	0
P&R	0	0	0
Total	**22**	**0**	**22**

Table 11: EA THREE Converter Station Vehicle Impacts (Junction 6: A12/Newbourne Road)

Arm	Siemens		
	Cars/LGVs	HGVs	Total
A12 North	0	0	0
Newbourne Road	0	0	0
A12 South	22	0	22
Foxhall Road	0	0	0
Total	**22**	**0**	**22**

Table 12: EA THREE Converter Station Vehicle Impacts (Junction 11: A12/B1438)

Arm	Siemens		
	Cars/LGVs	HGVs	Total
A12 North	0	0	0
B1438	0	0	0
A12 South	22	0	22
Total	**22**	**0**	**22**

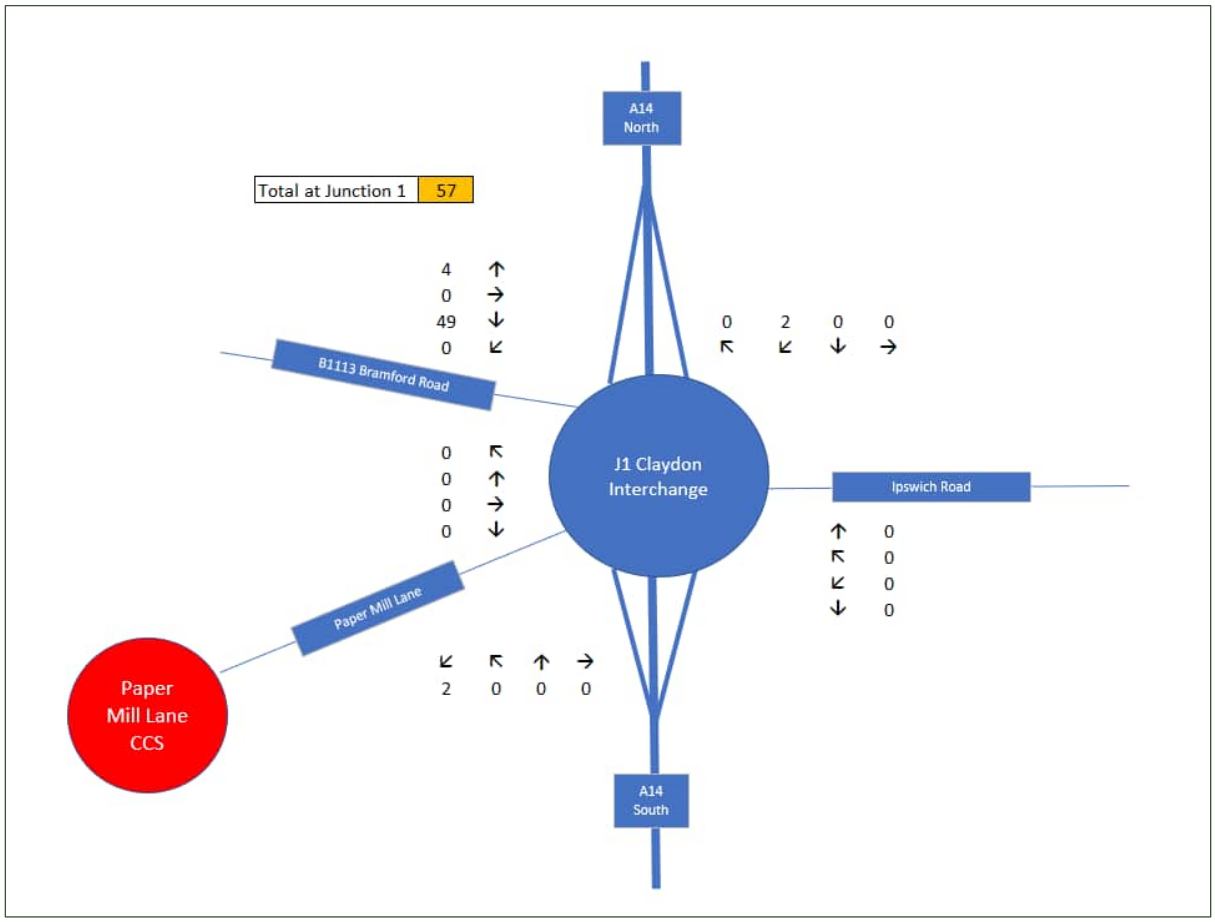


Figure 3: Siemens EA THREE Converter Station Traffic Flows (Junction 1)

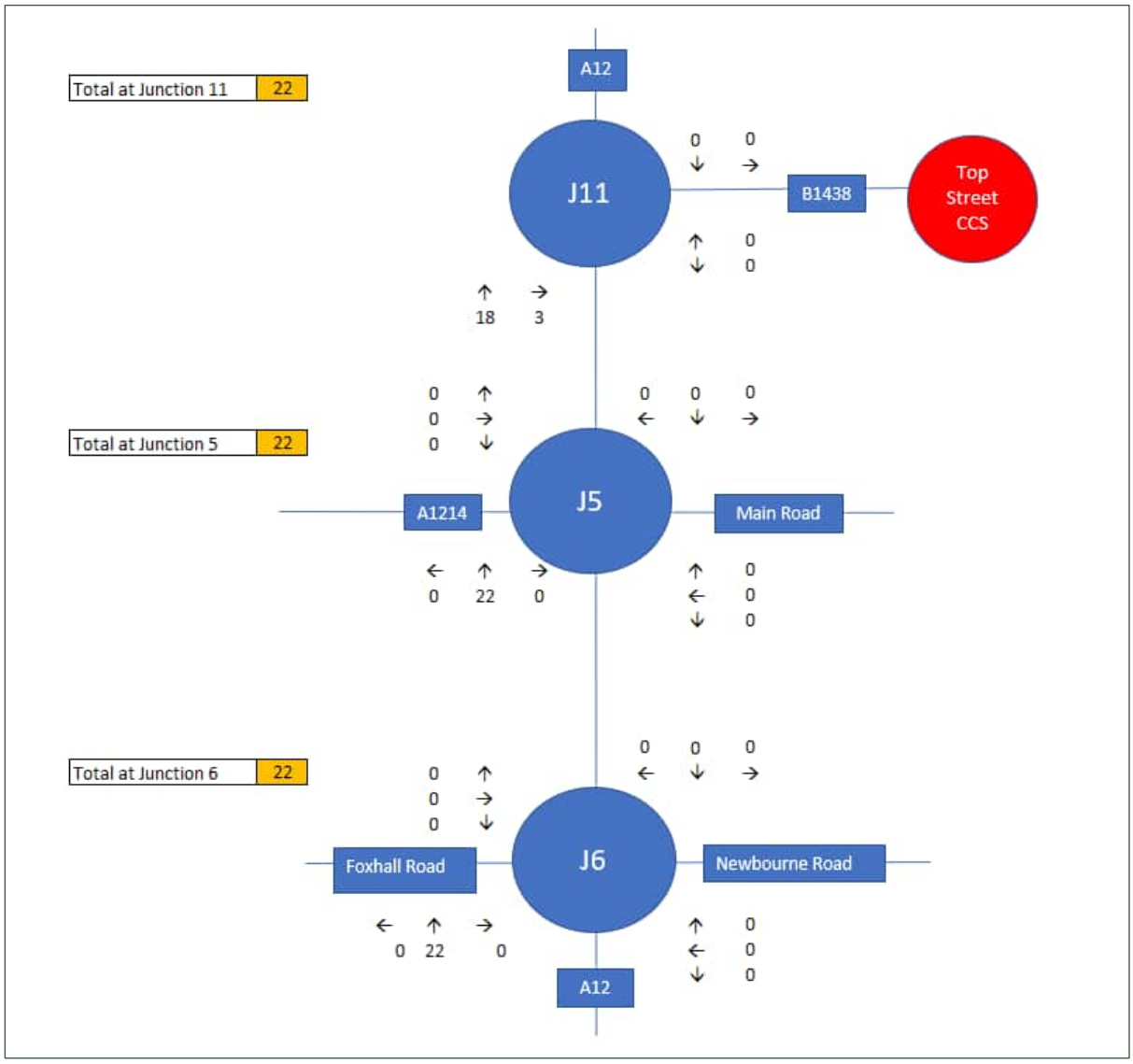


Figure 4: Siemens EA THREE Converter Station Traffic Flows (Junctions 5, 6 & 11)

3.4.3 EA THREE Onshore Cable Works and EA THREE Converter Station (EA THREE Total)

The maximum number of vehicle movements associated with the peak period for the EA THREE cable installation works and the EA THREE Converter Station in the evening peak hour at Junctions 1, 5, 6, 8 and 11 is shown in **Table 13** to **Table 16** compared to the EA THREE traffic movements assessed in the ES for the DCO application**,** and are also shown in **Figure 5** and **Figure 6.**

Table 13: EA THREE Total Vehicle Impacts (Junction 1: A14/B1113 Claydon Interchange)

Arm	ES			NKT and Siemens		
	Cars/LGVs	HGVs	Total	Cars/LGVs	HGVs	Total
B1113	84	8	92	77	0	77
A14 North	0	2	2	0	12	12
Ipswich Road	0	0	0	0	0	0

Arm	ES			NKT and Siemens		
	Cars/LGVs	HGVs	Total	Cars/LGVs	HGVs	Total
A14 South	0	6	6	0	12	12
Paper Mill Lane	0	0	0	0	0	0
Total	**84**	**16**	**100**	**77**	**24**	**101**

Table 14: EA THREE Total Vehicle Impacts (Junction 5: A12/A1214)

Arm	ES			NKT and Siemens		
	Cars/LGVs	HGVs	Total	Cars/LGVs	HGVs	Total
A12 North	65	0	65	10	0	10
Main Road	0	0	0	0	0	0
A12 South	10	22	32	28	13	41
A1214	13	0	13	0	0	0
P&R	0	0	0	0	0	0
Total	**88**	**22**	**110**	**38**	**13**	**51**

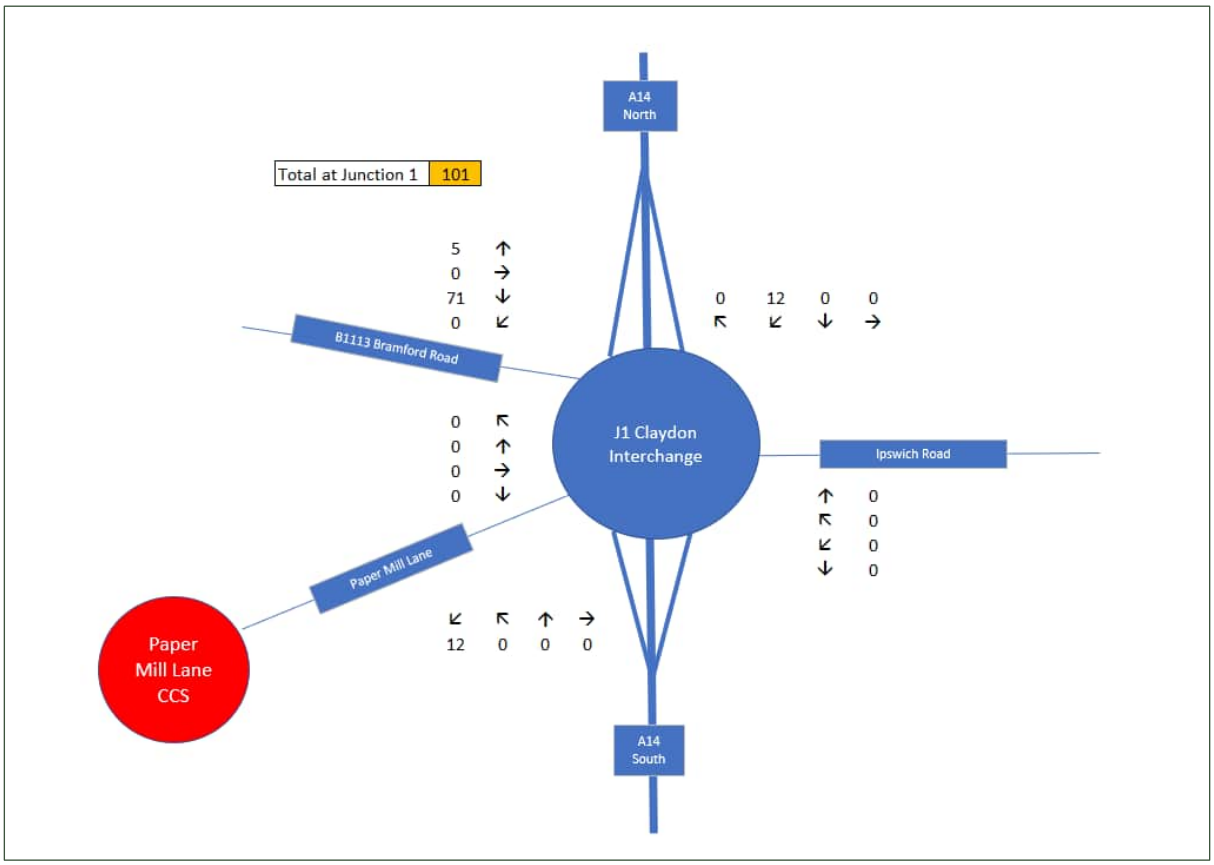


Figure 5: NKT and Siemens Total EA THREE Traffic Flows (Junction 1)

Table 15: EA THREE Total Vehicle Impacts (Junction 6: A12/Newbourne Road)

Arm	ES			NKT / Siemens		
	Cars/LGVs	HGVs	Total	Cars/LGVs	HGVs	Total
A12 North	38	0	38	7	0	7
Newbourne Road	5	0	5	0	0	0
A12 South	5	22	27	28	13	41
Foxhall Road	0	0	0	0	0	0
Total	**48**	**22**	**70**	**35**	**13**	**48**

Table 16: EA THREE Total Vehicle Impacts (Junction 11: A12/B1438)

Arm	ES			NKT / Siemens		
	Cars/LGVs	HGVs	Total	Cars/LGVs	HGVs	Total
A12 North	9	0	9	11	17	28
B1438	115	0	115	0	0	0
A12 South	10	22	32	26	13	39
Total	**134**	**22**	**156**	**37**	**30**	**67**

As **Table 13** shows, the confirmed number of EA THREE vehicle movements are of the same magnitude (one vehicle greater) in the evening peak hour (17:00 to 18:00) at Junction to the vehicle numbers assessed in the ES for the DCO Submission.

Table 14 to **Table 16** show the confirmed number of EA THREE vehicle movements are less (between around 30 to 50%) in the evening peak hour (17:00 to 18:0) at Junctions 5, 6 and 11 than the vehicle numbers assessed in the ES for the DCO Submission.

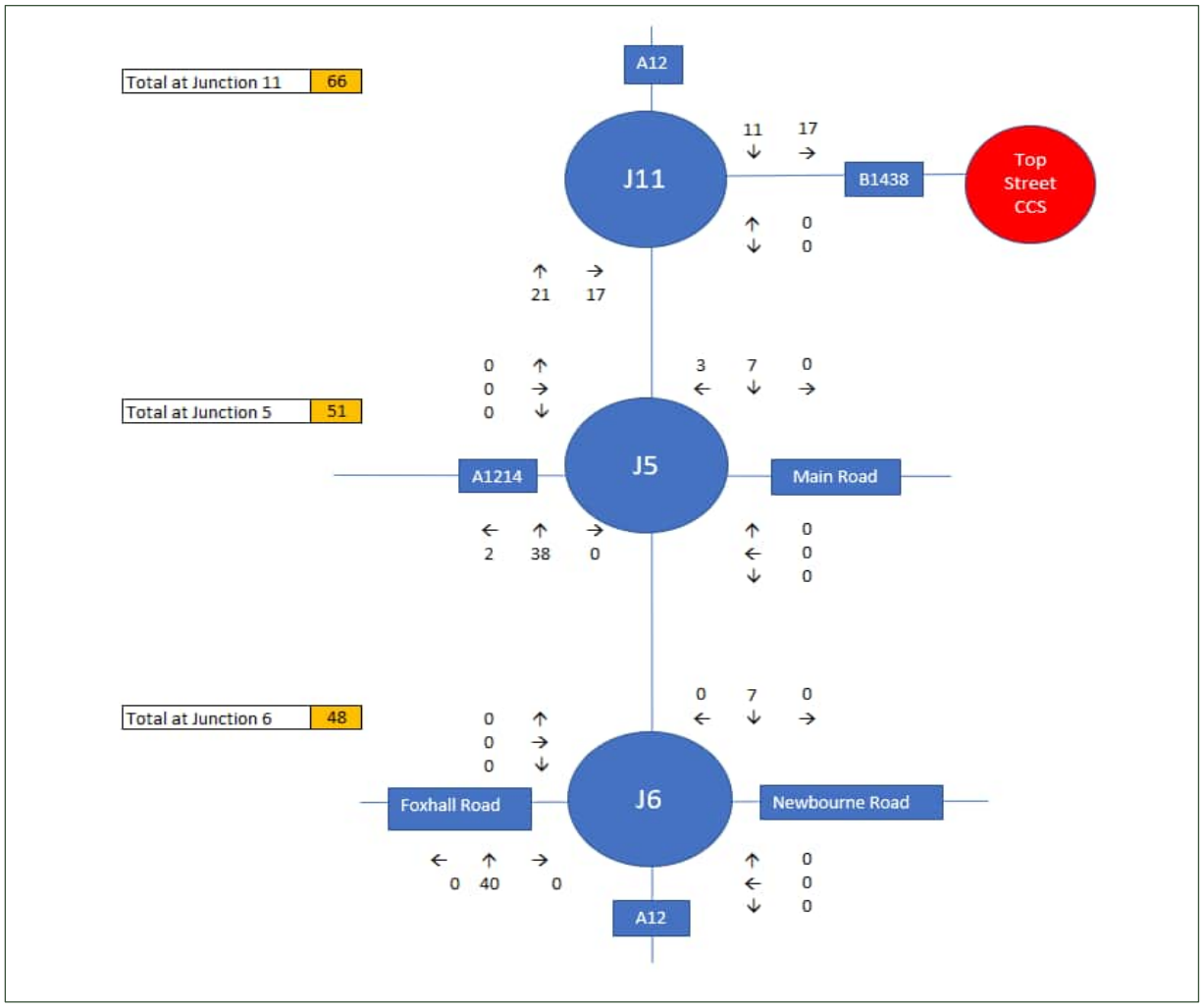


Figure 6: NKT and Siemens Total EA THREE Traffic Flows (Junctions 5, 6 & 11)

4.0 Impact Assessment

4.1 Introduction

This section presents a capacity assessment of the following sensitive junctions to assess the potential impact of the EA THREE onshore cable works and Converter Station construction traffic, based on the confirmed vehicle movement data provided by NKT and Siemens.

- Junction 1: Grade-separated roundabout junction of the A14 and B1113 (Claydon Interchange);
- Junction 5: Roundabout junction of the A12 and A1214;
- Junction 6: Roundabout junction of the A12 and Newbourne Road; and
- Junction 11: Roundabout junction of the A12 and B1438.

4.2 Assessment Parameters

The assessment has been based on the following parameters:

- Evening Peak (17:00 to 18:00);
- 2024 assessment year;
- Addition of proportionate committed development traffic that is assumed likely to be on the highway network in 2024 from land at Adastral Park (3,000 dwellings) Planning Application Ref: DC/17/1435/OUT, Blacktiles Lane (47 dwellings) Planning Application Ref: DC/16/1992/FUL and Sizewell C early years of the construction programme;
- Existing junction layouts; and
- Confirmed vehicle movement data provided by NKT and Siemens;

Baseline traffic flows for Junctions 1, 5 and 6 have been obtained from the following:

- Junction 1: A14/B113 Claydon Interchange – the capacity assessment output in the TA submitted in support of the planning application for the extension to Port One Business and Logistics Park (Ref: DC/20/01175);
- Junction 5: A12/A14 – the Transport Assessment (TA) prepared by TPA in December 2019) for the residential development at the Suffolk Constabulary Headquarters, in Martlesham Heath (Planning Application Ref: DC/20/0902/OUT;
- Junction 6: A12/Newbourne Road – the TA prepared in March 2019 by WYG for the Orwell Green Garden Village, development in Bucklesham (Planning Application Ref: DC/19/1988/OUT); and

The data are provided in **Appendix C.** The original survey data was not available for the 2016 data at the A12/Newbourne Road junction and therefore approximated HGV percentages have been applied to the Passenger Car Unit (PCU) flows using surveyed flows at the A12/A1214 as reasonable estimates.

Background traffic growth has been applied to the baseline traffic data to an assessment year of 2024, using TEMPRO v7.2, constrained to employment growth only given the addition of the committed housing schemes. Details of the committed development traffic data is provided in **Appendix D.**

There is a highway improvement scheme proposed by SCC at the A12/A1214 junction; however, as this is not a committed scheme, the existing junction has been modelled. There is a committed highway scheme at the A12/Newbourne Road roundabout associated with the Adastral Park development; however, this is not required until the occupation of the 601st dwelling and it is unlikely that this would occur by 2024, given the proposed build out rates set out in Table 23.1 of the Planning Statement submitted for the land at Adastral Park application (prepared by CODE Development Planners Ltd. in March 2017) and as we understand no dwellings have currently been built and occupied.

The baseline plus committed development traffic flows for Junction 11: A12/B1438 have been derived from the traffic model prepared to assess the impact of the Sizewell C development, provided by SCC.

4.3 Traffic Flows

The resulting traffic flows for the following assessment scenarios are shown in:

- 2024 base + committed development; and
- 2024 base + committed development + EA THREE (Onshore Cable Works[1] and Converter Station)

[1] Worst case Scenario 1 for Junctions 5,6 and 11 and worst case Scenario 2 for Junction 1

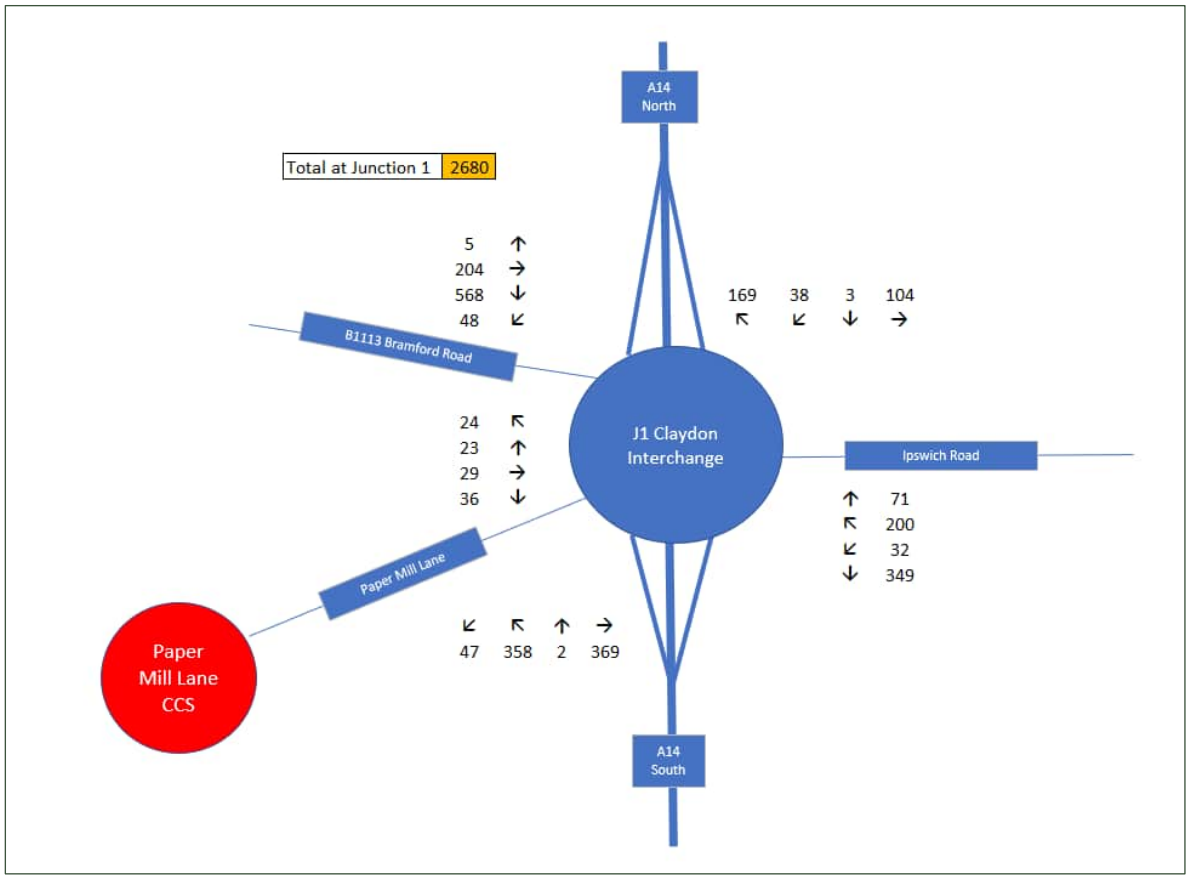


Figure 7: **Base 2024 plus Committed Development Traffic Flows (Junction 1)**

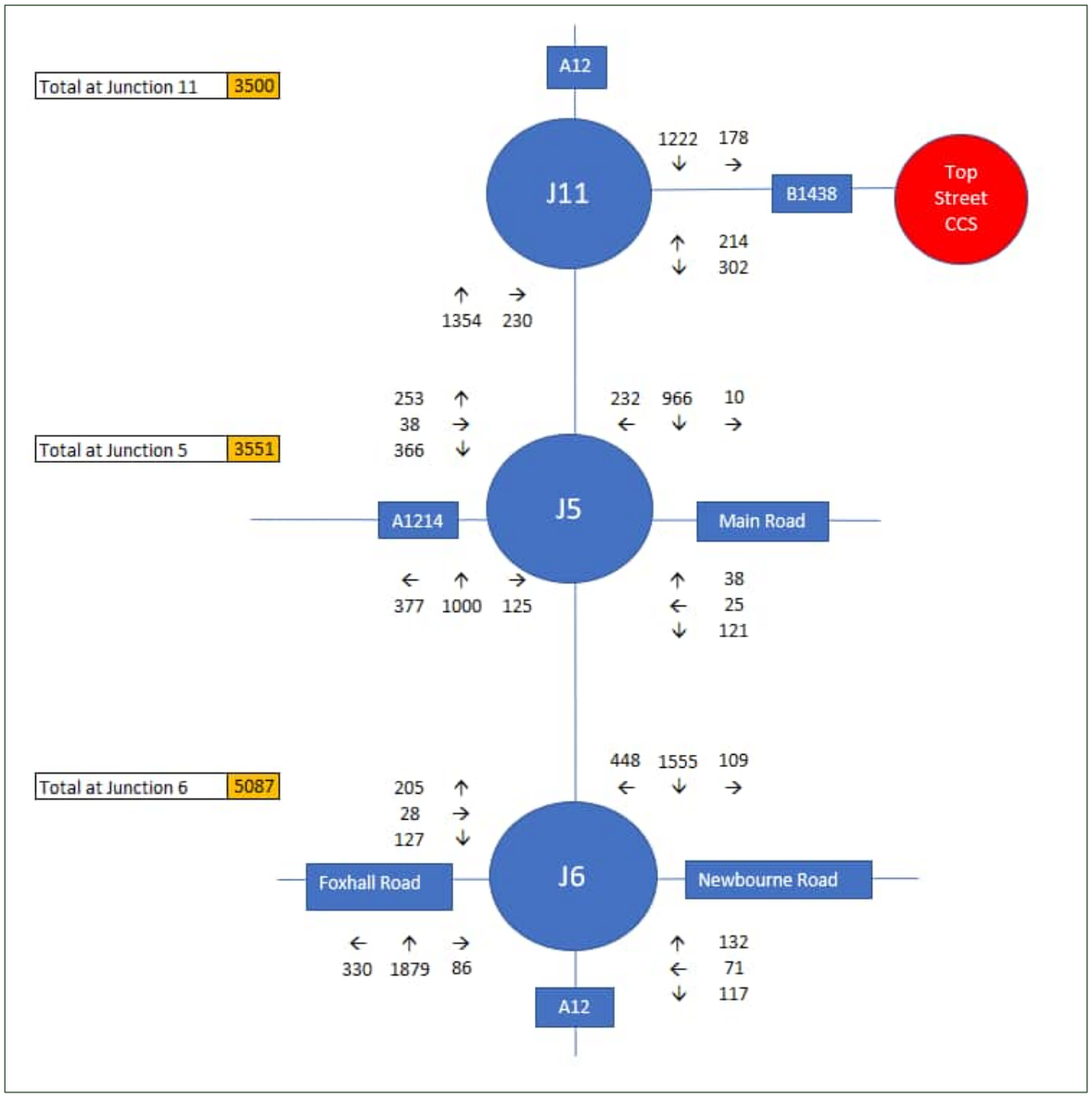


Figure 8: Base 2024 plus Committed Development Traffic Flows (Junctions 5, 6 & 11)

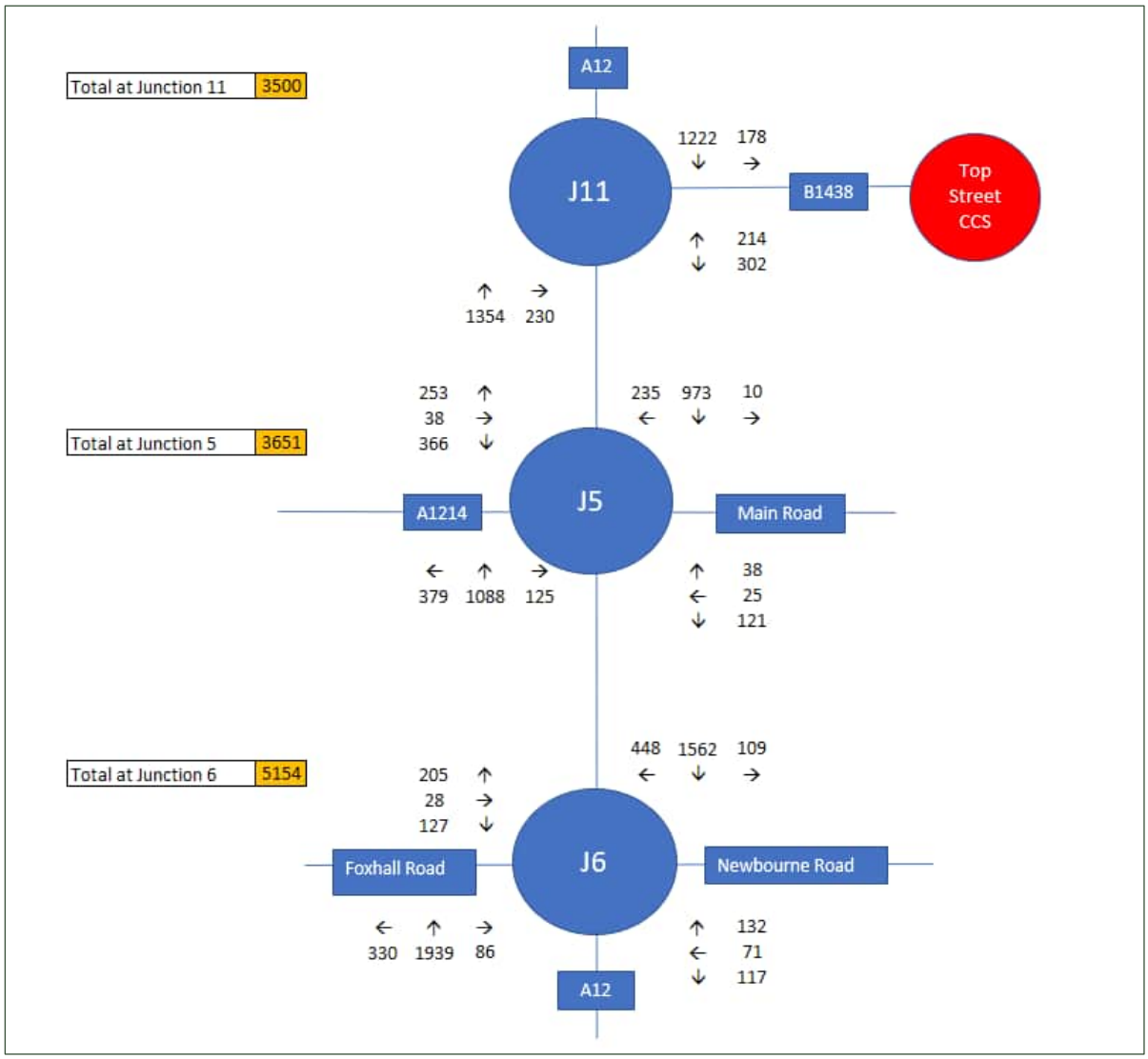


Figure 9: Base 2024 plus Committed Development plus EA THREE Scenario 1 Traffic Flows (Junctions 5, 6 & 11)

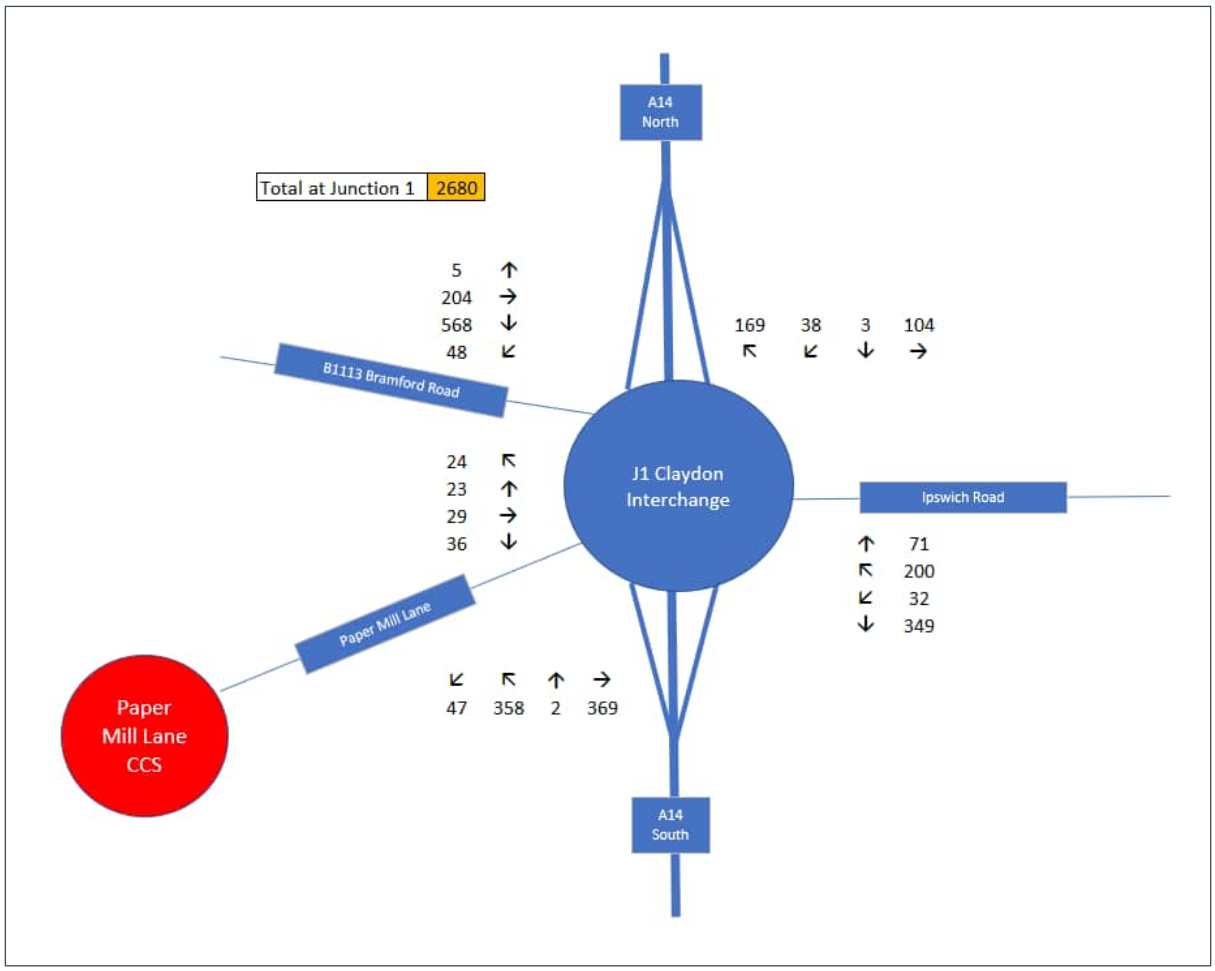


Figure 10: Base 2024 plus Committed Development plus EA THREE Scenario 2 Traffic Flows (Junction 1)

4.4 Capacity Assessments

4.4.1 Junction 1: A14/B1113 (Claydon Interchange)

The ARCADY model presented in the Transport Assessment for DC/20/01175 has been replicated and updated following a review of the junction geometries and additional comments from SCC, and the results of the two assessment scenarios (including a plan showing the junction geometries) identified above are provided in Appendix E and summarised in **Table 17.**

The replicated model was accepted for use by SCC in February 2022, prior to the submission of the EA THREE Converter Station Transport Technical Note (March 2023).

Table 17: Junction 1 ARCADY Results (17:00 to 18:00, 2024 Assessment)

Arm	2024 Base + Committed Development		2024 Base + Committed Development + EA3	
	RFC	Maximum Queue	RFC	Maximum Queue
Ipswich Road	0.41	1	0.44	1
A14 Northbound Off-slip	0.41	1	0.44	1
Paper Mill Lane	0.10	1	0.10	1
B1113 Bramford Road	0.64	2	0.70	1
A14 Southbound Off-slip	0.24	0	0.28	0

As **Table 17** shows, the junction operates well within its theoretical capacity in the base plus committed development scenario and continues to operate well within its theoretical capacity with the addition of the EA THREE vehicle movements, with negligible queues and spare capacity for additional vehicle movements.

Given the above, the temporary increase in vehicle movements at the A14/B1113 (Claydon Interchange) junction associated with the EA THREE onshore cable works and the EA THREE Converter Station (which are robust for the summer months) is considered to be a negligible impact that can be managed through the implementation of the CTMP.

4.4.2 Junction 5: A12/A1214

The Linsig model of the existing junction layout presented in the TA for DC/20/0902/OUT (300 dwellings at the Suffolk Constabulary Headquarters at Martlesham Heath) has been replicated. The full Linsig results are provided Appendix G.

The replicated model was accepted for use by SCC in February 2022, prior to the submission of the EA THREE Playford Corner and Clappits works Transport Technical Note (March 2023).

The results of the 2024 assessment scenarios with and without the EA THREE onshore cable works and EA THREE Converter Station traffic flows provided by NKT and Siemens are shown in **Table 18.**

Table 18: Junction 5 Linsig Results (17:00 to 18:00, 2024 Assessment)

Arm	2024 Base + Committed Development		2024 Base + Committed Development + EA THREE	
	Degree of Saturation (DoS)	Mean Maximum Queue (MMQ)	Degree of Saturation (DoS)	Mean Maximum Queue (MMQ)
A12 North	44.6	5	47.1	6
Main Road	22.3	1	23.0	1
A12 South	54.2	7	55.7	7
A1214	55.3	7	55.9	7
P&R	0	0	0	0
Practical Reserve Capacity (PRC)	62.7		60.6	
DoS across all arms	55.3%		55.9%	

Table 18 shows the junction is still predicted to operate well within its design and theoretical capacity in 2024 with the addition of committed development traffic flows. The addition of the EA THREE traffic flows has a negligible impact on Mean Maximum Queue (MMQ) lengths on the A12 north only, with very minor changes to the Practical Reserve Capacity (PRC) and Degree of Saturation (DoS).

Given the above, the temporary increase in vehicle movements at the A12/A1214 junction associated with the EA THREE cable installation works and the EA THREE Converter Station (which are robust for the summer months) is considered to be a negligible impact that can be managed through the implementation of the CTMP.

4.4.3 Junction 6: A12/Newbourne Road

An ARCADY model has been built of the existing roundabout junction at the A12/Newbourne Road and the results of the two 2024 assessment scenarios identified above are provided in **Appendix G** and summarised in **Table 19** below.

The model was accepted for use by SCC in February 2022, prior to the submission of the EA THREE Playford Corner and Clappits works Transport Technical Note (March 2023).

Table 19: Junction 6 ARCADY Results (17:00 to 18:00, 2024 Assessment)

Arm	2024 Base + Committed Development		2024 Base + Committed Development + EA3	
	RFC	Maximum Queue	RFC	Maximum Queue
A12 North	1.21	216	1.21	219
Newbourne Road	0.94	8	0.94	8
A12 South	1.22	247	1.27	326
Foxhall Road	0.88	6	0.90	7

Table 19 shows the junction to be operating well over its theoretical capacity in the 2024 with committed development scenario, with significant queues on the A12 arms. The addition of the EA THREE traffic flows has a negligible impact on the RFCs, with the biggest increase

in RFC of 0.05 on the A12 South, which has a significant increase in maximum queue of 79 vehicles. However, the following should be highlighted:

- Whilst the junction is over capacity in the 2024 baseline with committed development traffic, once the RFC reached a value of 1, queues build exponentially in ARCADY, which would not reflect what would occur in reality and the results should be treated with caution; and
- The highway improvement at the junction associated with the Adastral Park consented development is not required until the occupation of the 601st dwelling (which will be some years from now) and represents in the region of 200 vehicle movements at this junction permitted until the scheme is in place. Given the peak 48 vehicle movements associated with the EA THREE onshore cable works and EA Three Converter Station construction traffic are anticipated in the summer of 2024, this level of temporary impact should be considered acceptable.

Given the above, the temporary increase in vehicle movements at the A12/Newbourne Road junction associated with the EA THREE onshore cable works and the EA THREE Converter Station (which are robust for the summer months) is considered to be a negligible impact that can be managed through the implementation of the CTMP.

4.4.4 Junction 11: A12/B1438

An ARCADY model has been provided by SCC of the existing roundabout junction at the A12/B1438 and the results of the two 2024 assessment scenarios identified above are provided in **Appendix H** and summarised in **Table 20** below.

The model was accepted for use by SCC for the Sizewell C DCO application; however, SCC noted that some alterations were undertaken to the model associated with lane usage. SCC has suggested that, given the level of EA THREE impact compared to Sizewell C, the model should be acceptable for use and will review this with the submission of this Technical Note.

The base plus committed scenario selected from the model to be most appropriate to assess the impact of the peak EA THREE onshore cable works and typical EA THREE Converter Station works is the 2023 early years scenario, which does not include any improvements at the junction, as included in the 2028 and 2034 scenarios.

Table 20: Junction 11 ARCADY Results (17:00 to 18:00, 2024 Assessment)

Arm	2024 Base + Committed Development		2024 Base + Committed Development + EA3	
	RFC	Maximum Queue	RFC	Maximum Queue
A12 North	0.64	2	0.65	2
B1438	1.02	17	1.08	25
A12 South	1.04	44	1.07	71

The results in Table 20 show the junction is forecast to operate its theoretical capacity in the base plus committed scenario, which includes the Sizewell C early years construction traffic. The addition of the EA THREE vehicle movements exacerbates the queues on the A12 west and B1438. For the A12 west, the forecast maximum queue (71 vehicles) is lower than the following maximum queues forecast for the baseline plus committed scenarios for the morning peak hours:

- 07:00 to 08:00, approximately 108 vehicles; and
- 08:00 to 09:00, approximately 72 vehicles

During the summer months of 2024, which is the peak period for the EA THREE cable installation works, due to the available daylight hours, the number of vehicle movements associated with the construction of EA THREE during the morning peak hours (and evening peak hour) is likely to be negligible as set out in the ES for the DCO application.

The maximum queue on the B1438 only increases marginally with the addition of the EA THREE vehicle movements.

Given the above, the temporary increase in vehicle movements at the A12/B1438 junction associated with the EA THREE onshore cable works and the EA THREE Converter Station (which are robust for the summer months) is considered to be a negligible impact that can be managed through the implementation of the CTMP.

4.4.5 Capacity Assessment Summary

A summary of the forecast impact of the peak EA THREE vehicle movements associated with the peak months of activity for the cable installation works and a typical month associated with the construction of the Converter Station in the evening peak hour (17:00 to 18:00) assessed against a 2024 with committed development baseline is as follows:

- Junction 1: A14/B1113 Claydon Interchange – The forecast impact is negligible, with spare capacity at the junction for additional vehicle movements;
- Junction 5: A12/A1214 - The forecast impact is negligible, with spare capacity at the junction for additional vehicle movements;
- Junction 6: A12/Newbourne Road - Whilst the junction is already over capacity in the baseline plus committed development scenario, the forecast number of EA THREE vehicle movements are significantly lower than those permitted at the junction, associated with the Adastral Park consented scheme, prior to an improvement scheme being required and therefore can be considered a negligible impact, particularly as the vehicle movements will be temporary; and
- Junction 11: A12/B1438 – Whilst the junction is already over capacity in the baseline plus committed development scenario, which the addition of the EA THREE vehicle movements only exacerbates, the RFCs and maximum queues on the A12 west are less than the base plus committed development scenario in the morning peak hours, where there will be a negligible number of EA THREE movements, particularly in the summer months where the peak EA THREE activity will occur.

5.0 Road Safety Assessment Review

5.1 Scope

This section provides an update on road safety from the analysis provided in the EA THREE Converter Station and Paper Mill Lane Works, and the Playford Corner and Clappits Works Traffic and Transport Technical Notes, prepared by SLR and submitted to SCC in March 2022, at the sensitive locations on the highway network that will be used by the EA THREE construction traffic.

The analysis in the Transport Technical Notes prepared and submitted to SCC in March 2022 used Crashmap to compare the most recent five-year period (2015 to 2019) which avoided the years where traffic levels was affected by the Covid-19 pandemic, with the five-year period prior to the DCO application (2011 to 2015). The review identified there has been a general improvement of road safety since the submission of the DCO application, with no deficiency in the layout or condition of the junctions and routes reviewed.

Therefore, no changes to the measures proposed in the Traffic Management Plan were considered to be necessary, which was agreed by SCC.

As Crashmap only has data up to the end of 2021, accident data has been obtained from SCC for 2020 to the 30th April 2023. For a robust assessment the period between 1st January 2017 and 30th April 2023 (six years and four months, to allow for the periods in 2021 and 2022 affected by the Covid-19 pandemic) has been reviewed.

The review has been undertaken at the following sensitive junctions where there is forecast to be a greater number of EA THREE construction vehicle movements than identified in either of the Transport Technical Notes prepared and submitted to SCC in March 2022:

- A12/B1438;
- A12/A1214;
- A12/Newbourne Road;
- A12/B1113 Claydon Interchange; and
- B1113

An analysis has been provided below with the reports included in Appendix I**.**

5.2 Analysis

5.2.1 Junction 1: A14/B1113 Claydon Interchange

There have been fewer accidents in the vicinity of the A14/B1113 Claydon Interchange in the assessment period compared to the period assessed in the ES for the DCO application, as follows:

- 2011 to 2015 – 24; and
- 2017 to 2023 – 12

Figure 11 shows a cluster of four accidents on the A14 northbound off-slip at the roundabout. From further investigations, one of the accidents occurred on Ipswich Road and has the wrong grid reference attached to the report. Of the three accidents that did occur at this location, two involved a vehicle colliding into the back of another due to hesitancy of joining the circulating carriageway and one occurred due to aggressive driving behaviour and a sudden change in lane.

Given the reduction in accidents at the junction and since there have only been two accidents with the same location and causation factor identified in the most recent assessment period, it can be concluded that there are no road safety issues at this junction that an increase in vehicles associated with the construction of EA THREE would exacerbate.

Figure 11: Locations of Accidents at Junction 1: A14/B1113 Claydon Interchange

5.2.2 B1113/Somersham Road

There have been no accidents in the vicinity of the B1113/Somersham Road junction in the assessment period compared to the three in the period assessed in the ES for the DCO application.

Given the reduction in accidents at the junction, it can be concluded that there are no road safety issues at this junction that an increase in vehicles associated with the construction of EA THREE would exacerbate.

5.2.3 B1113/Bullen Lane

There have been no accidents at the B1113/Bullen Lane junction in either of the five year periods. Therefore, it can be concluded that there are no road safety issues at this junction

that an increase in vehicles associated with the construction of EA THREE would exacerbate.

5.2.4 Junction 5: A12/A1214

There have been fewer accidents in the vicinity of the A12/ A1214 roundabout junction in the assessment period (which are shown in **Figure 12**) compared to the period assessed in the ES for the DCO application, as follows:

- 2011 to 2015 – 8; and
- 2017 to 2023 – 6

Given the reduction in accidents at the junction and since no clusters have been identified in the most recent assessment period, it can be concluded that there are no road safety issues at this junction that an increase in vehicles associated with the construction of EA THREE would exacerbate.

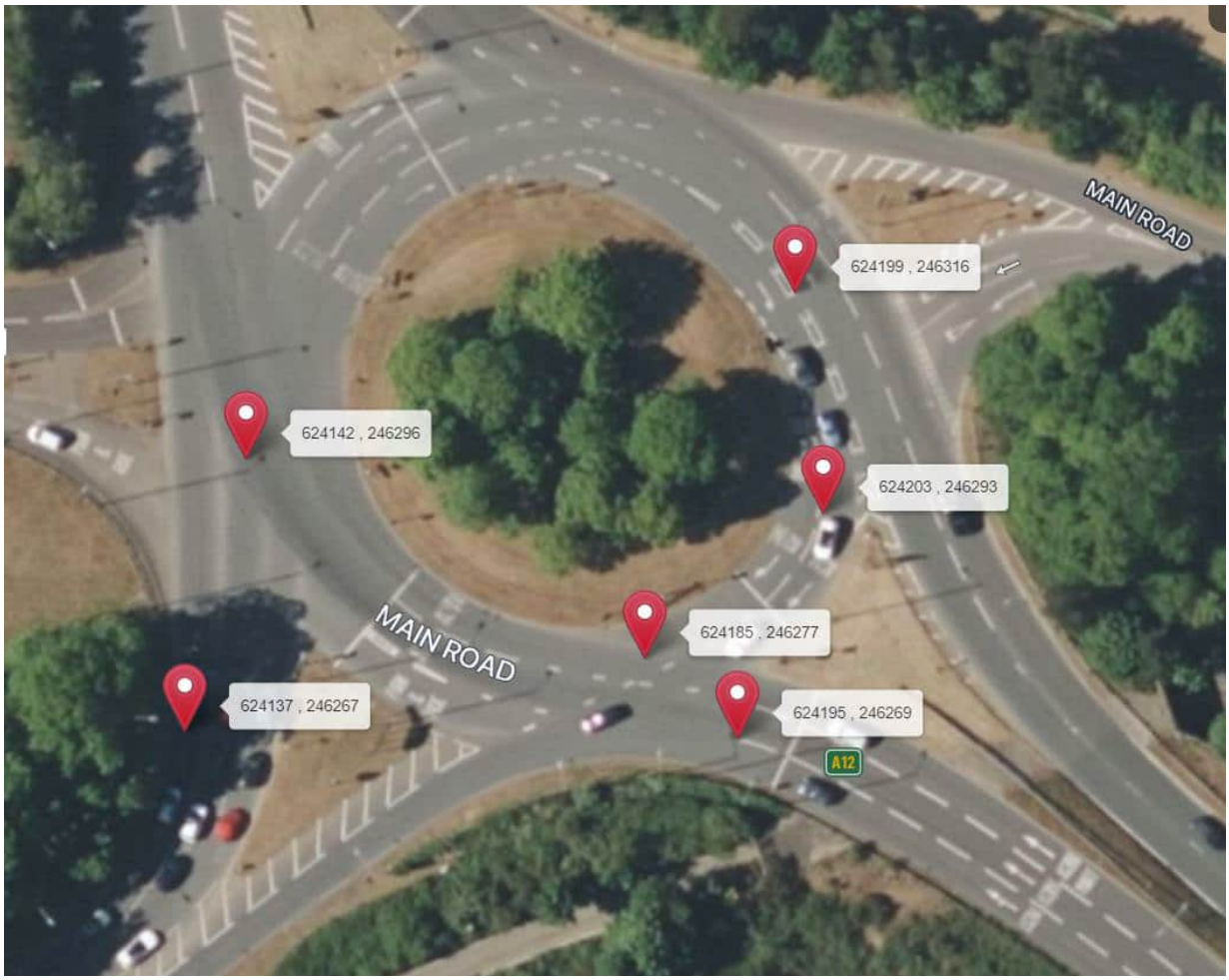


Figure 12: Locations of Accidents at Junction 5: A12/A1214

5.2.5 Junction 6: A12/Newbourne Road

There have been fewer accidents in the vicinity of the A12/ Newbourne Road roundabout junction in the assessment period compared to the period assessed in the ES for the DCO application, as follows:

- 2011 to 2015 – 11; and
- 2017 to 2023 – 10

Given the reduction in accidents at the junction in the current period compared to the period assessed in the ES and since no clusters have been identified in the most recent assessment period (as shown in **Figure 13**) It can be concluded that there are no road safety issues at this junction that an increase in vehicles associated with the construction of EA THREE would exacerbate.

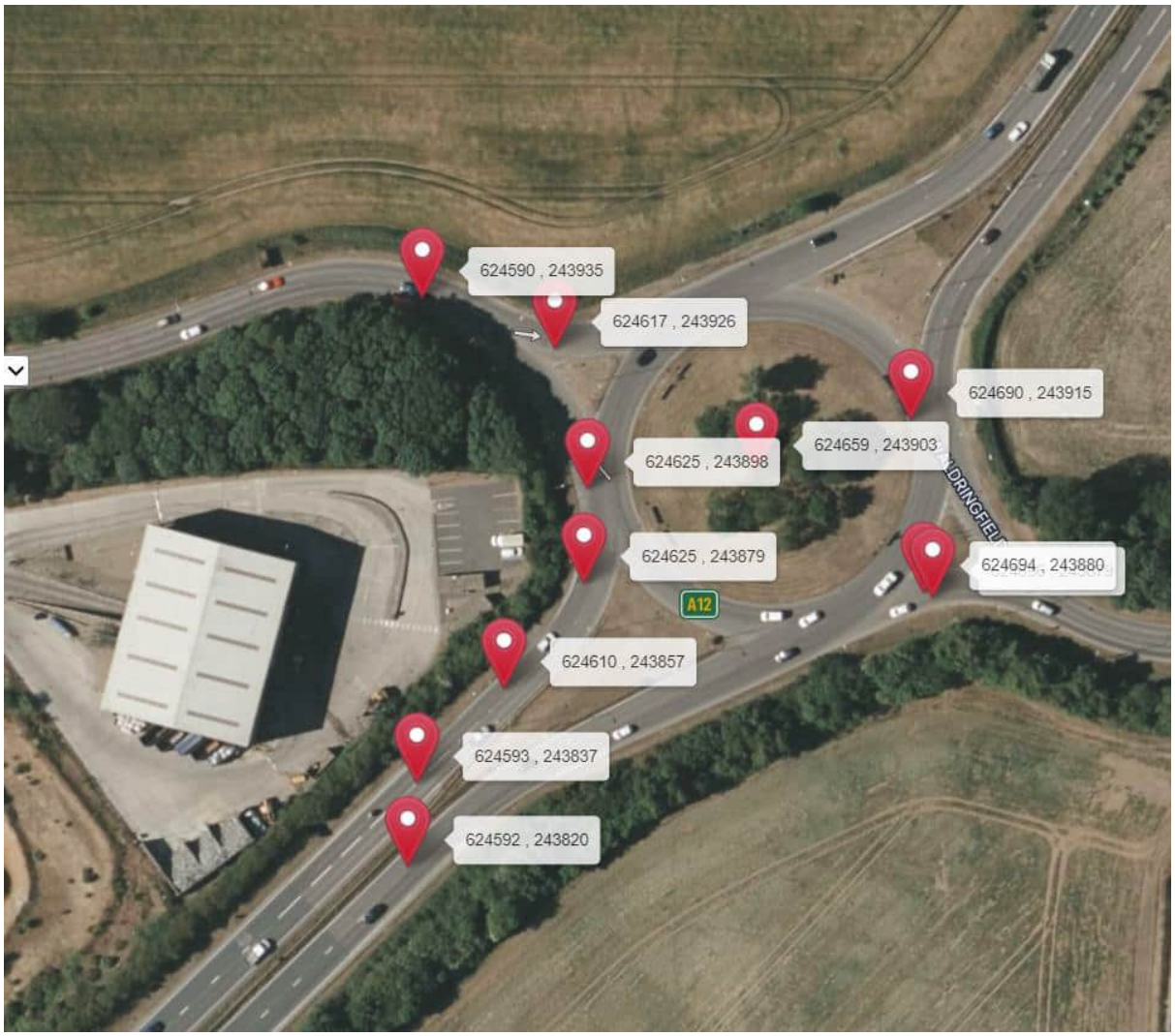


Figure 13: Locations of Accidents at Junction 6 A12/Newbourne Road

5.2.6 A12/B1438

There have been fewer accidents in the vicinity of the A12/B1438 roundabout junction in the assessment period (which are shown in **Figure 14**) compared to the period assessed in the ES for the DCO application, as follows:

- 2011 to 2015 – 8; and
- 2017 to 2023 – 6

Given the reduction in accidents at the junction and since no clusters have been identified in the most recent assessment period, it can be concluded that there are no road safety issues at this junction that an increase in vehicles associated with the construction of EA THREE would exacerbate.

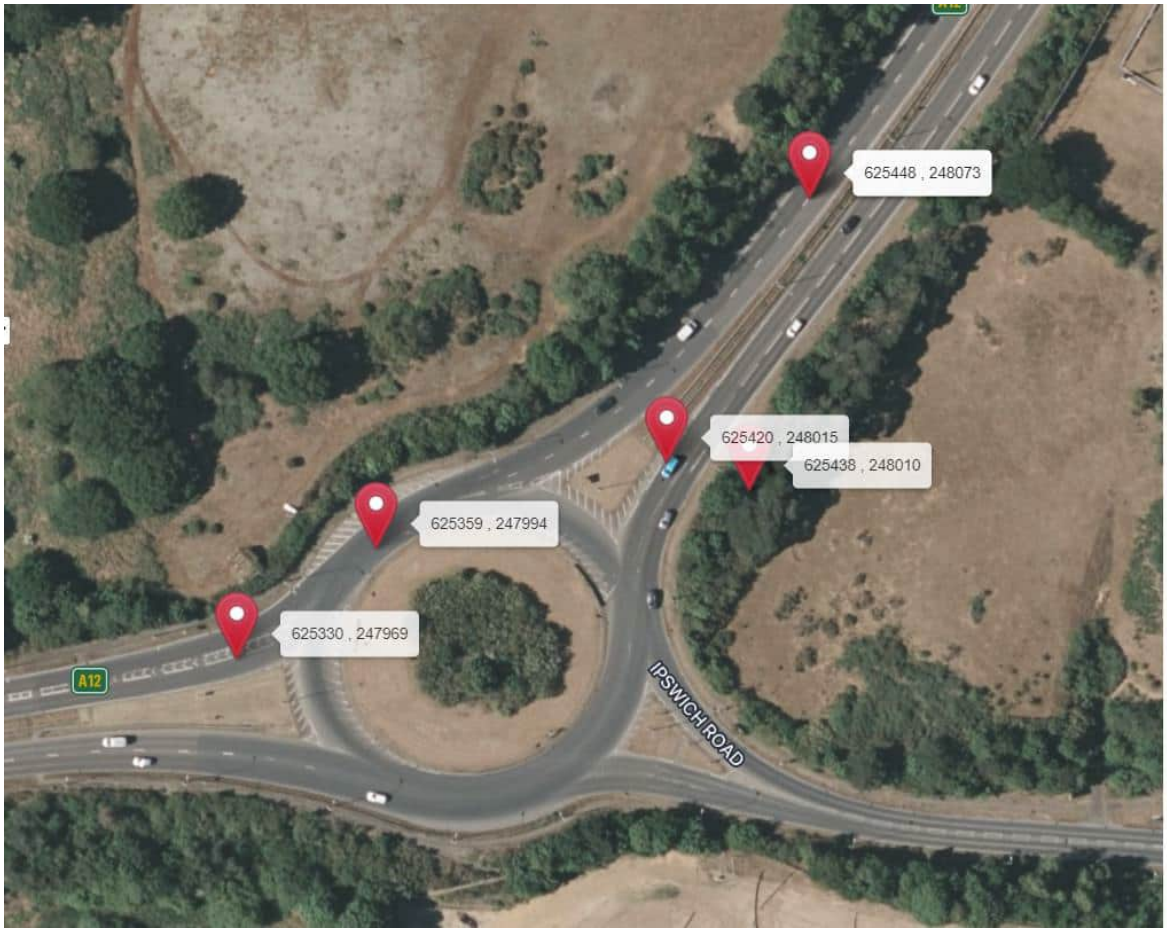


Figure 14: Locations of Accidents at Junction 11 A12/B1438

5.3 Summary

The review of road safety in this section would indicate that there has been an improvement in road safety since the submission of the DCO application at key junctions that will be used by the majority of construction traffic.

Therefore, no changes to the measures proposed in the Traffic Management Plan are considered to be necessary.

6.0 Summary and Conclusion

6.1 Summary

This Technical Note sets out the anticipated maximum number of vehicle movements associated with the construction of the EA THREE onshore cable works and EA THREE Converter Station in the evening peak hour at sensitive junctions on the A14 and A12 using confirmed data from NKT and Siemens. The assessment is based on a lower (and more realistic) vehicle occupancy of 1.5 employees, compared to the vehicle occupancy of 2.5 used in the ES for the DCO application.

The peak period for the EA THREE construction works will be in the summer of 2024, with the greatest number of daylight hours, which is likely to result in fewer workforce vehicles travelling in the evening peak hour, resulting in a robust assessment.

Junction capacity assessments have been undertaken to test the impact of the confirmed EA THREE traffic data at the junctions, incorporating vehicle movements associated with various committed developments. The assessment confirmed:

- There would be no or negligible additional queuing at Junction1 (A14/B1113 Claydon Interchange) and Junction 5 (A12/A1214) with the addition of the EA THREE vehicle movements compared to the 2024 with committed development scenario; and
- Whilst there would be increases in queuing at Junction 6 (A12/Newbourne Road) and Junction 11 (A12/B1438), due to the junctions already operating over their theoretical capacity in the 2024 with committed development scenario and queues building quickly (and not realistically) in the junction models, the impact is considered no worse than SCC has previously accepted for Adastral Park and Sizewell C, prior to improvements at those junctions being required.

A review of road safety on the routes that would be used by the construction traffic associated with EA THREE onshore cable works and EA THREE Converter Station shows there are no road safety issues that would be exacerbated by an increase in traffic flows and that no changes to the measures proposed in the EA THREE Traffic Management Plan are required.

6.2 Conclusion

As demonstrated, the impact of the confirmed EA THREE Onshore Cable Works and EA THREE Converter Station traffic data is such that there would be no significant impacts on capacity and no impacts on road safety on the routes used by construction traffic, with no mitigation required.

In, conclusion, as agreed with SCC, no further assessments on the highway network are required prior to the commencement of construction associated with the EA THREE Cable installation works and EA THREE Converter Station.

Appendix A NKT EA THREE Traffic Data

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

	Primary Vehicle movements	Rev-02

Table 1: HGVs to Primary CCS's

Destination	Number of HGVs (single trips)						Peak Hour %
	A14 south		A12 north		Total		
	Daily	Peak Hour	Daily	Peak Hour	Daily	Peak Hour	
Papermill Lane	70	10	70	10	140	20	14.3%
Top Street	80	13	100	17	180	30	16.7%

Table 2: Workforce vehicles to Primary CCS's

Destination	Number of Workforce light duty Vehicles (single trips)						Peak Hour %
	A14 south		A12 north		Total		
	Daily	Peak Hour	Daily	Peak Hour	Daily	Peak Hour	
Papermill Lane	50	20	35	15	85	35	41.2%
Top Street	60	30	90	30	150	60	40.0%

Table 4: Daily Single Movements from Paper Mill Lane

Vehicles between Paper Mill Lane and Secondary TCCs or Construction Access	Number of Vehicles			
	HGVs	Workforce	Totals	Movements x 2
Access Point 1 (Bullen Lane ONCS access)	25	20	45	90
Access Point 2 CCS 1 (Bullen Lane)	80	30	110	210
Access Point 3 (Somersham Road)	60	30	90	180
Access Point 4 (Somersham Road)	5	15	20	40
Access Point 5 (Somersham Road)	5	15	20	40
Access Point 6 (Bramford Road) (Greenhouse access)	n\a	n\a	n\a	n\a
Access Point 7 (Bramford Road)	5	10	15	15
Access Point 8 (Bramford Road)	60	30	90	180
Access Point 9 Papermill Lane PCCS (Papermill Lane)	n\a	n\a	n\a	n\a
Access Point 10 (Old Ipswich Road)	60	30	90	180
Access Point 11 (Henley Road)	60	30	90	180
Access Point 12 (Henley Road)	60	30	90	180
Access Point 13 (Clopton Road)	10	25	35	70
Access Point 14 (Tudenham Road)	3	25	25	50
Access Point 15 (Tudenham Road)	3	25	25	50
Access Point 16 (Bealings Road) CCS 2 (Playford)	3	25	25	50
Access Point 17 (Lodge Road)	3	25	25	50
Access Point 18 (Seckfordhall Road)	3	25	25	50
Access Point 19 Top Street PCCS (Top Street)	n\a	n\a	n\a	n\a
Access Point 20 (Sandy Lane)	3	25	28	56
Access Point 21 (Sandy Lane)	3	25	28	56
Access Point 22 (Walderingfield Road)	3	25	28	56
Access Point 23 (Walderingfield Road)	3	25	28	56
Access Point 24 (Walderingfield Road)	3	25	28	56
Access Point 25 (Ipswich Road)	3	25	28	56
Access Point 26 (Newbourne Road) CCS 3 (Clappits)	3	25	28	56
Access Point 27 (Park Lane)	3	25	28	56
Access Point 28 (Falkenham Road)	3	25	28	56
Access Point 29 (Shottisham Road)	3	25	28	56
Access Point 30 (Ferry Road)	3	25	28	56
Access Point 31 CCS 4 (Ferry Road) Landfall	3	25	28	56

Table 5: Daily Single Movements from Top Street

Vehicles between Top Street and Secondary TCCs or Construction Access	Number of Vehicles			
	HGVs	Workforce	Totals	Movements x 2
Access Point 1 (Bullen Lane ONCS access)	5	3	8	16
Access Point 2 CCS 1 (Bullen Lane)	5	3	8	16
Access Point 3 (Somersham Road)	5	3	8	16
Access Point 4 (Somersham Road)	2	3	5	10
Access Point 5 (Somersham Road)	2	3	5	10
Access Point 6 (Bramford Road) (Greenhouse access)	n\a	n\a	n\a	n\a
Access Point 7 (Bramford Road)	2	3	5	10
Access Point 8 (Bramford Road)	2	3	5	10
Access Point 9 Papermill Lane PCCS (Papermill Lane)	n\a	n\a	n\a	n\a
Access Point 10 (Old Ipswich Road)	2	3	5	10
Access Point 11 (Henley Road)	2	3	5	10
Access Point 12 (Henley Road)	2	3	5	10
Access Point 13 (Clopton Road)	2	3	5	10
Access Point 14 (Tudenham Road)	45	30	75	150
Access Point 15 (Tudenham Road)	45	30	75	150
Access Point 16 (Bealings Road) CCS 2 (Playford)	45	30	75	150
Access Point 17 (Lodge Road)	50	25	75	150
Access Point 18 (Seckfordhall Road)	50	25	75	150
Access Point 19 Top Street PCCS (Top Street)	n\a	n\a	n\a	n\a
Access Point 20 (Sandy Lane)	25	20	45	90
Access Point 21 (Sandy Lane)	10	20	20	40
Access Point 22 (Walderingfield Road)	25	25	45	90
Access Point 23 (Walderingfield Road)	25	25	45	90
Access Point 24 (Walderingfield Road)	50	25	75	150
Access Point 25 (Ipswich Road)	40	25	60	120
Access Point 26 (Newbourne Road) CCS 3 (Clappits)	80	30	110	220
Access Point 27 (Park Lane)	80	30	110	220
Access Point 28 (Falkenham Road)	50	30	75	150
Access Point 29 (Shottisham Road)	80	30	110	120
Access Point 30 (Ferry Road)	50	30	75	150
Access Point 31 CCS 4 (Ferry Road) Landfall	80	30	110	220

Notes

Multi work Locations	HGVs	Workforce	Totals	Movements x 2	Comments	Peak Hour Workforce
Access Point 28 (Falkenham Road)	50	50	75	150	East side of the river Deben work to take place in multiple location due to Environmental constraints	13
Access Point 29 (Shottisham Road)	80	60	110	120		16
Access Point 30 (Ferry Road)	50	40	75	150		11
Access Point 2 CCS 1 (Bullen Lane)	80	45	110	210	Construction of Haul roads and Hardstandings to be undertaken at the simultaneous due to construction programme constraints	12
Access Point 3 (Somersham Road)	60	40	90	180		11
Access Point 31 CCS 4 (Ferry Road)	80	30	110	220		8
Access Point 10 (Old Ipswich Road)	60	30	90	180	Construction of Haul roads and Hardstandings to be undertaken at the simultaneous due to construction programme constraints	8
Access Point 11 (Henley Road)	60	30	90	180		8
Access Point 26 (Newbourne Road) CCS 3 (Clappits)	80	30	110	220	Construction of Haul roads and Hardstandings to be undertaken at the simultaneous due to construction programme constraints	8
Access Point 27 (Park Lane)	80	30	110	220		8

Appendix B Daylight Hours Analysis

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

Month	First light		Last light		Workforce Arrivals	Workforce Departures
	Latest	Earliest	Earliest	Latest		
January	07:22	06:59	16:35	17:18	Before 07:00 for the majority of the month, some in the early part of 07:00 to 08:00	16:00 to 17:00 for half the month, 17:00 to 18:00 for half the month
February	06:58	06:09	17:19	18:06	Majority before 07:00	17:00 to 18:00 for half the month, 18:00 to 19:00 for half the month
March	06:07	05:58	18:08	20:01	Majority before 07:00	18:00 to 19:00 or 19:00 to 20:00
April	05:55	04:49	20:02	20:56	Majority before 07:00	Majority 19:00 to 20:00
May	04:47	03:56	20:58	21:59	Majority before 07:00	Majority 19:00 to 20:00
June	03:55	03:52	21:51	22:06	Majority before 07:00	Majority 19:00 to 20:00
July	04:35	03:52	21:28	22:06	Majority before 07:00	Majority 19:00 to 20:00
August	05:30	04:37	20:20	21:26	Majority before 07:00	Majority 19:00 to 20:00
September	06:21	05:32	19:09	20:18	Majority before 07:00	18:00 to 19:00 or 19:00 to 20:00
October	06:23	06:13	17:05	20:07	Majority before 07:00	18:00 to 1900 apart from a few days 17:00 to 18:00 when the clocks have gone back
November	06:59	06:14	16:28	17:03	Majority before 07:00	16:00 to 17:00 for half the month, 17:00 to 18:00 for half the month
December	07:22	07:01	16:34	16:27	Before 07:00 for the majority of the month, some in the early part of 07:00 to 08:00	16:00 to 17:00

Appendix C Baseline Traffic Data

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

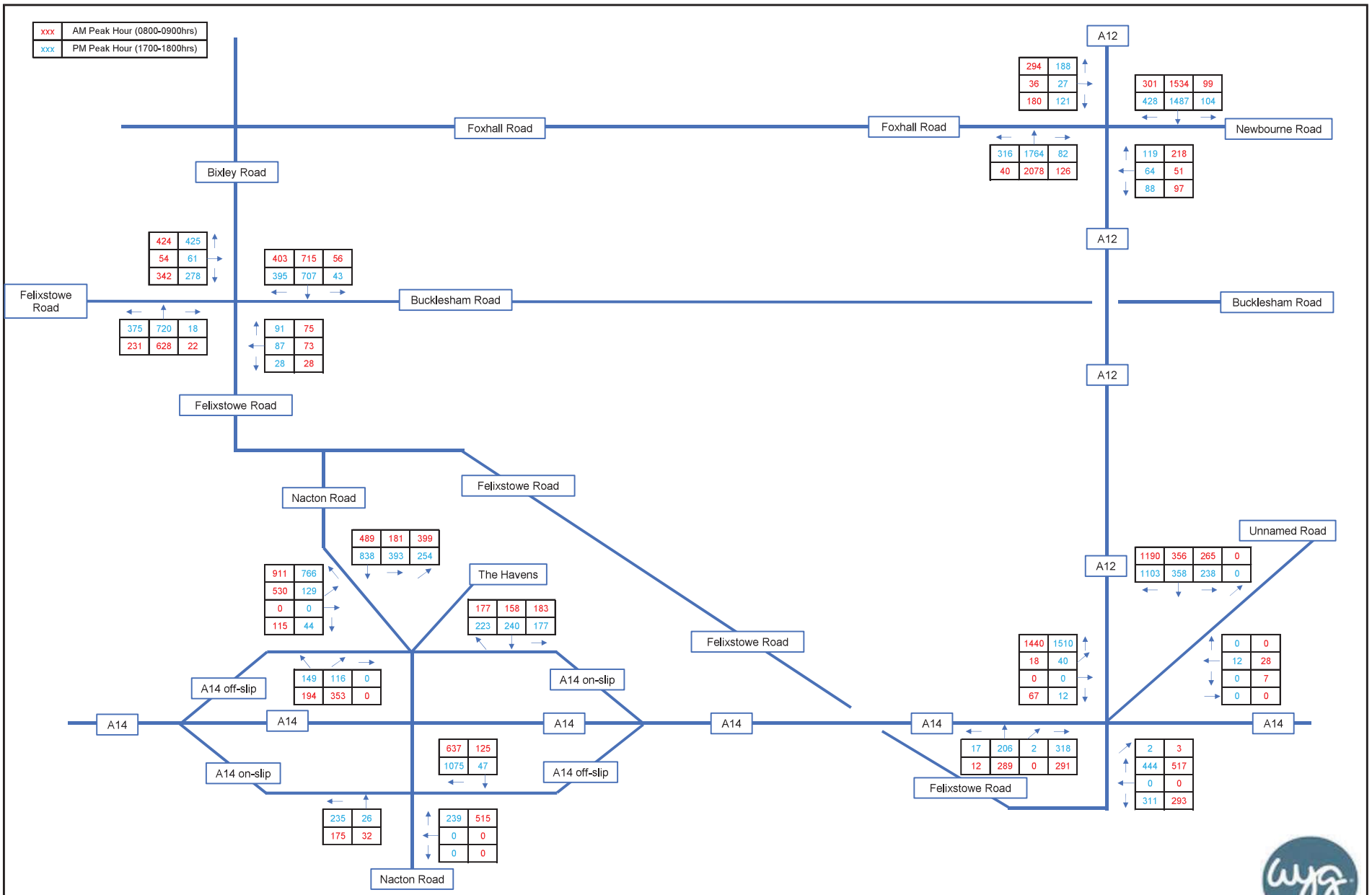
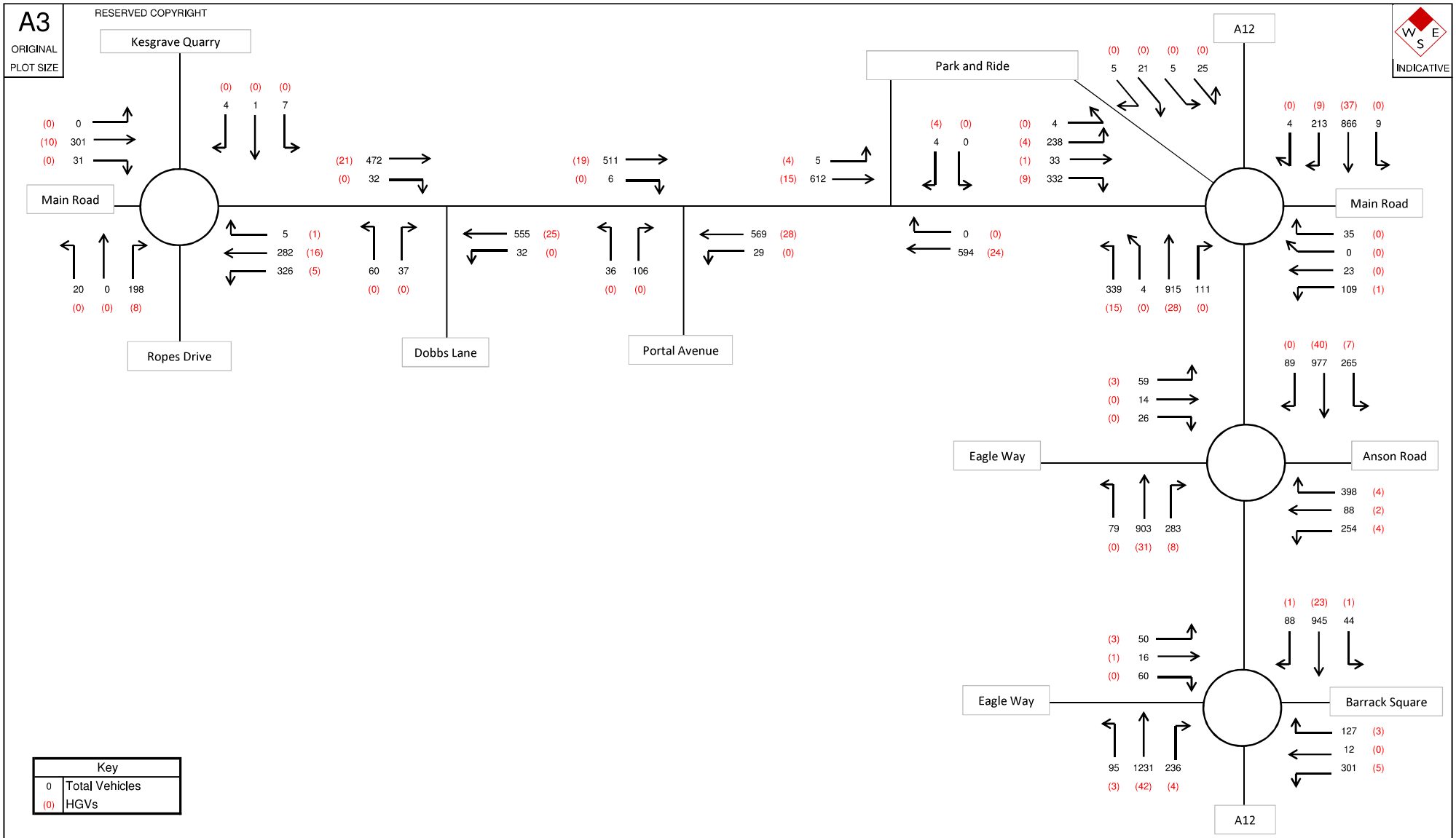


Figure 7.1 - 2016 Base Traffic Flows (PCUs)

A3
ORIGINAL
PLOT SIZE



Key	
0	Total Vehicles
(0)	HGVs

Bristol
Cambridge
London
Manchester
Oxford
Welwyn Garden City

The Stables
7 Chesterton Mill
French's Road
Cambridge
CB4 3NP
01223 455385
www.tpa.uk.com

Surveyed Traffic Flows - Evening peak (17:00-18:00)

Suffolk Constabulary, Martlesham

Police and Crime Commissioner for Suffolk

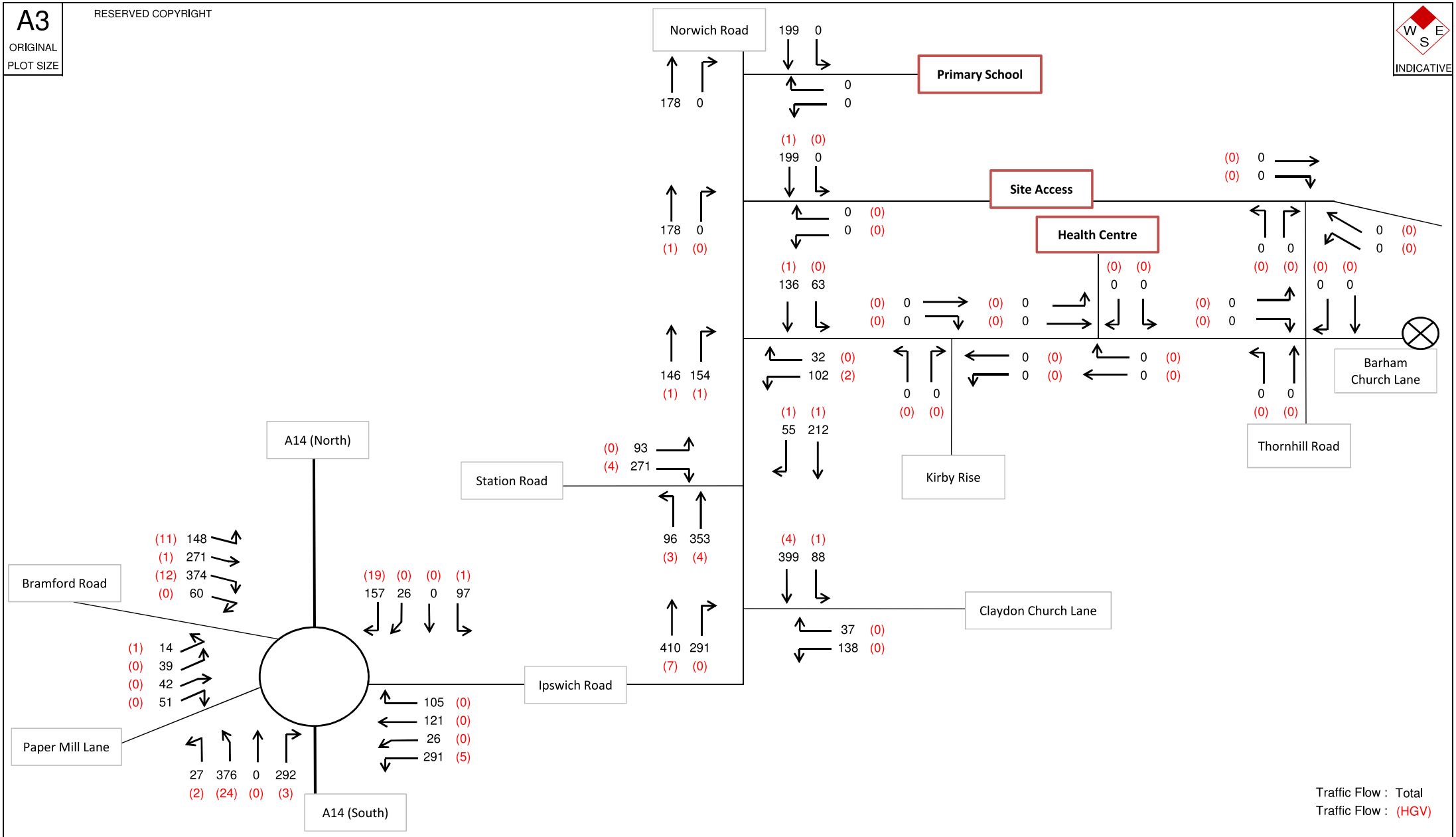
Date:	Status:	Scale:
NOV '19	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
LM	IB	IB

Project No:	Figure No:	Revision:
1605-81	3.7	-

A3
ORIGINAL
PLOT SIZE

INDICATIVE



Traffic Flow : Total
Traffic Flow : (HGV)

Bristol
Cambridge
London
Oxford
Welwyn Garden City

tpa
Transport Planning Associates

Sheraton House
Castle Park
Cambridge
CB3 0AX

01223 379135
www.tpa.uk.com

Surveyed (2016) Traffic Flows - PM Peak

Land off Norwich Road, Barham and Claydon

Pigeon Investment Management Ltd and Mr John Cutting

Date:	Status:	Scale:
April '17	INFORMATION	NTS

Prepared By:	Checked By:	Approved By:
LM	SM	JH

Project No:	Figure No:	Revision:
1601-86	3.1	-

Appendix D Committed Development Traffic

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

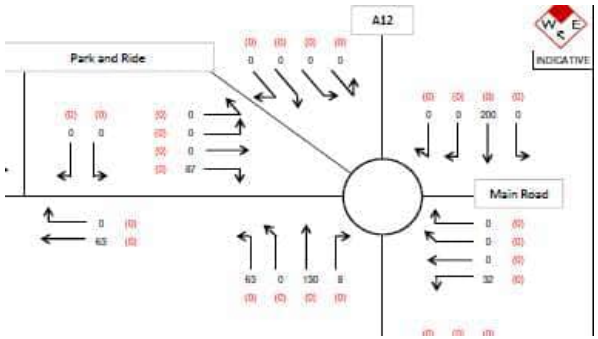
ScottishPower Renewables

SLR Project No.: 404.05356.00006

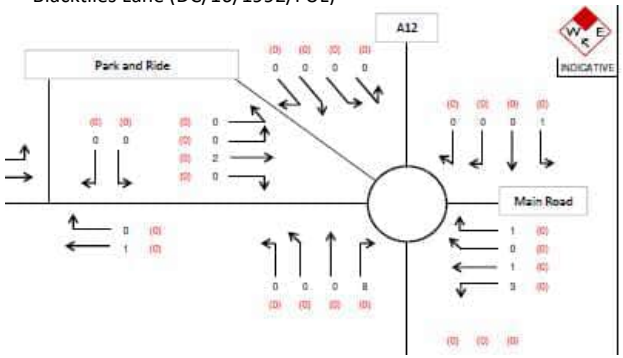
15 November 2023

Junction 5: A12/A1214

Adastral Park (DC/17/1435/OUT)



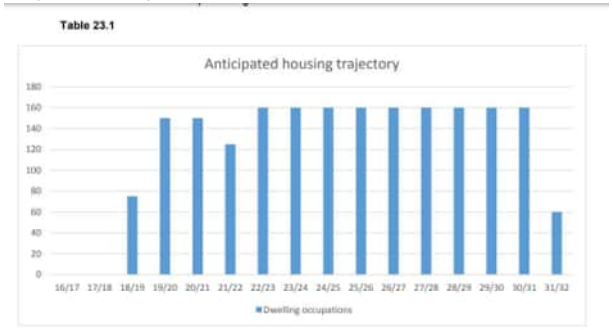
Blacktiles Lane (DC/16/1992/FUL)

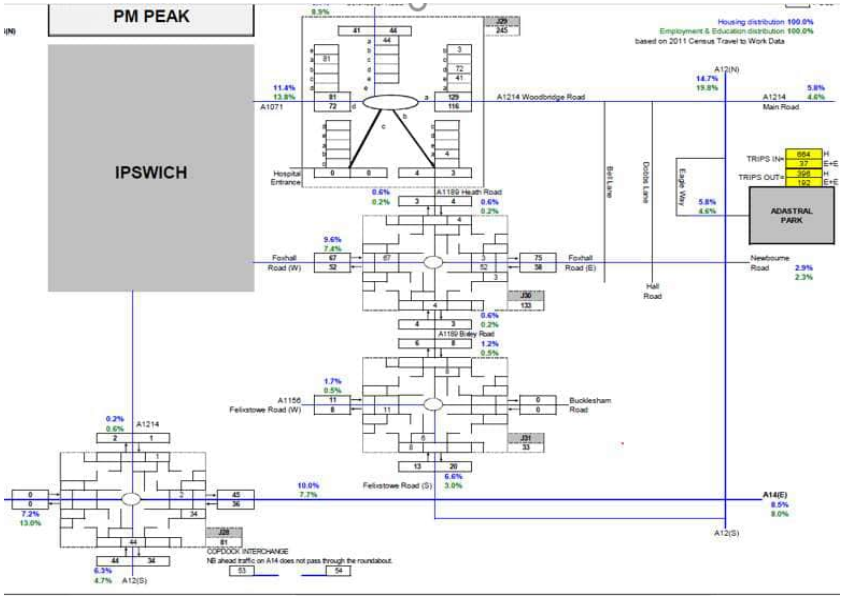


Junction 6: A12/Newbourne Road

Adastral Park (DC/17/1435/OUT)

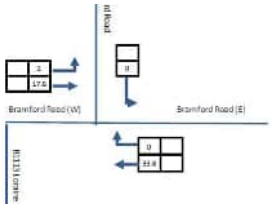
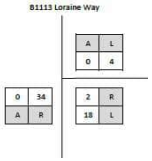
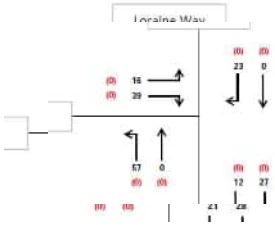
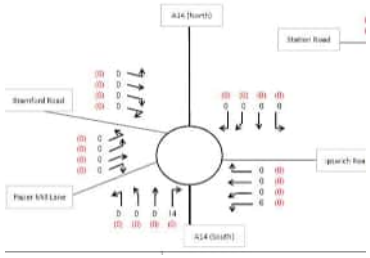
Original Phasing Plan





Assume first occupactions in 2023
Asssessment year of 2024
Assume 225 dwellings occupied 11%

	Total		A12 S			Foxhall Road		Newbourne Road		
	Arrivals	**Departures**	**Dist.**	**Arrivals**	**Departures**	**Arrivals**	**Departures**	**Dist.**	**Arrivals**	**Departures**
Housing	664	396	38.80%	258	154			2.90%	19	11
Employment	37	192	37.00%	14	71			2.30%	1	4
Total	**701**	**588**		**271**	**225**	**75**	**38**		**20**	**16**
11% at 2024	**77**	**65**	**0**	**30**	**25**	**8**	**4**	**0**	**2**	**2**

Reference	Comments	Include?	PM Peak Flows
DC/21/04711	Transport and Access Report. No HGVs during peak hours and construction personnel staggered (and not included in the assessment)	No	n/a
DC/21/00060	TMP - negligible vehicle movements	No	n/a
DC/19/01601	Same as DC/21/00060	No	n/a
DC/17/05331	No traffic data required for application	No	n/a
DC/19/03008	No traffic data required for application	No	n/a
DC/18/00233	Transport Assessment available - not assigned at Claydon Interchange, so 50/50 split to and from A14 S/N assumed	Yes	
DC/19/01401	Transport Assessment available - negligible flows (6 two-way) to/from B1113 north	No	
DC/19/00567	Transport Assessment available - not assigned at Claydon Interchange, so 50/50 split to and from A14 S/N assumed	Yes	
1856/17	TA Part 3	Yes	
DC/18/02010	Refused	No	n/a

	Total vehicle flows (cars)			
	Departures to		Arrivals from	
	A14 N	A14 S	A14 N	A14 S
B1113 Bramford Road	17	17	28	28
Ipswich Road		6		14

Appendix E Junction 1: A14/B1113 Claydon Interchange ARCADY Results

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.4.1693

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: 20220208_A14_Claydon_PM_B1113 revised flows v4.j10
Path: N:\Vectos Job Data\2023\VN232767
Report generation date: 11/08/2023 15:50:54

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2023 Base									
Arm 1	D1	1.1	4.31	0.52	A	D2	0.7	3.33	0.40	A
Arm 2		0.6	2.86	0.38	A		0.6	2.75	0.38	A
Arm 3		0.1	3.26	0.11	A		0.1	2.99	0.09	A
Arm 4		2.0	8.59	0.67	A		1.6	7.35	0.62	A
Arm 5		0.3	3.35	0.22	A		0.3	3.20	0.21	A
	2023 Base + Com Dev									
Arm 1						D3	0.7	3.49	0.41	A
Arm 2							0.7	2.92	0.41	A
Arm 3							0.1	3.13	0.10	A
Arm 4							1.7	7.69	0.64	A
Arm 5							0.3	3.38	0.24	A
	2023 Base + Com Dev + E3 S1									
Arm 1						D4	0.7	3.63	0.42	A
Arm 2							0.7	2.92	0.41	A
Arm 3							0.1	3.12	0.10	A
Arm 4							2.1	8.80	0.68	A
Arm 5							0.3	3.41	0.24	A
	2023 Base + Com Dev + E3 S2									
Arm 1						D5	0.8	3.91	0.44	A
Arm 2							0.8	3.23	0.44	A
Arm 3							0.1	3.13	0.10	A
Arm 4							2.3	9.25	0.70	A
Arm 5							0.4	3.98	0.28	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	
Location	
Site number	
Date	28/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SLR\llong
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2023 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2023 Base + Com Dev	PM	ONE HOUR	16:45	18:15	15	✓
D4	2023 Base + Com Dev + E3 S1	PM	ONE HOUR	16:45	18:15	15	✓
D5	2023 Base + Com Dev + E3 S2	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A14 Claydon Interchange	Large Roundabout		1, 2, 3, 4, 5	5.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.02	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Ipswich Road		
2	A14 Northbound Offslip		
3	Paper Mill Lane		
4	Bramford Road		
5	A14 Southbound Offslip		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1	3.05	7.85	36.0	55.3	127.0	15.0		
2	6.32	8.22	20.0	39.5	127.0	34.0		
3	3.05	7.67	24.5	30.4	127.0	18.0		
4	3.60	3.60	0.0	49.9	127.0	10.0		
5	6.90	7.35	20.0	49.7	127.0	14.0		

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1	1032	✓	55.60
2	718	✓	109.60
3	1373	✓	18.00
4	646	✓	55.60
5	1469	✓	107.90

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.906	2615
2	1.012	2848
3	0.784	2412
4	0.751	1794
5	0.886	2703

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	838	100.000
2		ONE HOUR	✓	699	100.000
3		ONE HOUR	✓	128	100.000
4		ONE HOUR	✓	777	100.000
5		ONE HOUR	✓	278	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	512	35	201	90
	2	305	0	23	369	2
	3	38	30	0	39	21
	4	233	490	43	11	0
	5	107	2	16	153	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	2	0	2	1
	2	3	0	13	13	0
	3	5	10	0	13	10
	4	3	11	0	24	27
	5	3	0	13	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.52	4.31	1.1	A	769	1153
2	0.38	2.86	0.6	A	641	962
3	0.11	3.26	0.1	A	117	176
4	0.67	8.59	2.0	A	713	1069
5	0.22	3.35	0.3	A	255	383

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	631	158	558	2017	0.313	629	513	0.0	0.5	2.590	A
2	526	132	412	2218	0.237	525	775	0.0	0.3	2.126	A
3	96	24	849	1550	0.062	96	88	0.0	0.1	2.475	A
4	585	146	365	1396	0.419	582	580	0.0	0.7	4.407	A
5	209	52	862	1731	0.121	209	85	0.0	0.1	2.365	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	753	188	669	1908	0.395	753	613	0.5	0.6	3.113	A
2	628	157	493	2138	0.294	628	928	0.3	0.4	2.383	A
3	115	29	1016	1422	0.081	115	105	0.1	0.1	2.754	A
4	699	175	437	1345	0.519	697	694	0.7	1.1	5.545	A
5	250	62	1032	1583	0.158	250	101	0.1	0.2	2.699	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	923	231	817	1761	0.524	921	750	0.6	1.1	4.274	A
2	770	192	603	2030	0.379	769	1135	0.4	0.6	2.853	A
3	141	35	1244	1246	0.113	141	128	0.1	0.1	3.255	A
4	855	214	534	1274	0.671	852	850	1.1	2.0	8.445	A
5	306	77	1262	1384	0.221	306	124	0.2	0.3	3.338	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	923	231	820	1759	0.525	923	752	1.1	1.1	4.305	A
2	770	192	604	2029	0.379	770	1138	0.6	0.6	2.857	A
3	141	35	1245	1245	0.113	141	129	0.1	0.1	3.259	A
4	855	214	535	1274	0.672	855	851	2.0	2.0	8.593	A
5	306	77	1266	1381	0.222	306	124	0.3	0.3	3.349	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	753	188	673	1904	0.396	755	616	1.1	0.7	3.136	A
2	628	157	495	2137	0.294	629	933	0.6	0.4	2.390	A
3	115	29	1018	1420	0.081	115	106	0.1	0.1	2.758	A
4	699	175	438	1344	0.520	702	696	2.0	1.1	5.639	A
5	250	62	1038	1578	0.158	250	102	0.3	0.2	2.710	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	631	158	562	2014	0.313	632	515	0.7	0.5	2.608	A
2	526	132	414	2216	0.237	527	780	0.4	0.3	2.131	A
3	96	24	852	1548	0.062	96	88	0.1	0.1	2.479	A
4	585	146	366	1395	0.419	586	583	1.1	0.7	4.459	A
5	209	52	867	1726	0.121	209	85	0.2	0.1	2.373	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A14 Claydon Interchange	Large Roundabout		1, 2, 3, 4, 5	4.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.31	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1	1032	✓	55.60
2	718	✓	109.60
3	1373	✓	18.00
4	646	✓	55.60
5	1469	✓	107.90

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2023 Base	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	646	100.000
2		ONE HOUR	✓	722	100.000
3		ONE HOUR	✓	112	100.000
4		ONE HOUR	✓	736	100.000
5		ONE HOUR	✓	274	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	343	32	200	71
	2	355	0	35	330	2
	3	29	36	0	24	23
	4	204	480	48	4	0
	5	104	3	26	141	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	2	3	3	1
	2	3	0	15	9	0
	3	0	6	0	17	0
	4	2	5	2	75	6
	5	3	0	0	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.40	3.33	0.7	A	593	889
2	0.38	2.75	0.6	A	663	994
3	0.09	2.99	0.1	A	103	154
4	0.62	7.35	1.6	A	675	1013
5	0.21	3.20	0.3	A	251	377

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	486	122	553	2036	0.239	485	519	0.0	0.3	2.319	A
2	544	136	392	2285	0.238	542	647	0.0	0.3	2.064	A
3	84	21	828	1632	0.052	84	106	0.0	0.1	2.325	A
4	554	139	388	1433	0.387	552	525	0.0	0.6	4.072	A
5	206	52	867	1775	0.116	206	72	0.0	0.1	2.294	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	581	145	662	1933	0.300	580	621	0.3	0.4	2.661	A
2	649	162	469	2208	0.294	649	774	0.3	0.4	2.308	A
3	101	25	991	1504	0.067	101	127	0.1	0.1	2.564	A
4	662	165	464	1377	0.481	660	628	0.6	0.9	5.016	A
5	246	62	1038	1629	0.151	246	86	0.1	0.2	2.603	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	711	178	810	1794	0.397	710	761	0.4	0.7	3.319	A
2	795	199	574	2103	0.378	794	947	0.4	0.6	2.750	A
3	123	31	1213	1329	0.093	123	155	0.1	0.1	2.985	A
4	810	203	568	1300	0.623	808	769	0.9	1.6	7.267	A
5	302	75	1270	1430	0.211	301	106	0.2	0.3	3.189	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	711	178	812	1792	0.397	711	762	0.7	0.7	3.331	A
2	795	199	575	2102	0.378	795	949	0.6	0.6	2.753	A
3	123	31	1214	1328	0.093	123	155	0.1	0.1	2.987	A
4	810	203	568	1300	0.624	810	770	1.6	1.6	7.353	A
5	302	75	1273	1427	0.211	302	106	0.3	0.3	3.197	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	581	145	666	1930	0.301	582	623	0.7	0.4	2.673	A
2	649	162	470	2207	0.294	650	777	0.6	0.4	2.312	A
3	101	25	993	1503	0.067	101	127	0.1	0.1	2.569	A
4	662	165	464	1376	0.481	664	629	1.6	0.9	5.076	A
5	246	62	1042	1625	0.152	247	86	0.3	0.2	2.612	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	486	122	557	2033	0.239	487	522	0.4	0.3	2.330	A
2	544	136	393	2284	0.238	544	650	0.4	0.3	2.069	A
3	84	21	831	1630	0.052	84	106	0.1	0.1	2.328	A
4	554	139	389	1432	0.387	555	527	0.9	0.6	4.112	A
5	206	52	872	1771	0.116	206	72	0.2	0.1	2.300	A

2023 Base + Com Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A14 Claydon Interchange	Large Roundabout		1, 2, 3, 4, 5	4.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.50	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1	1032	✓	55.60
2	718	✓	109.60
3	1373	✓	18.00
4	646	✓	55.60
5	1469	✓	107.90

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2023 Base + Com Dev	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	652	100.000
2		ONE HOUR	✓	764	100.000
3		ONE HOUR	✓	112	100.000
4		ONE HOUR	✓	749	100.000
5		ONE HOUR	✓	302	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	349	32	200	71
	2	369	0	35	358	2
	3	29	36	0	24	23
	4	204	497	48	0	0
	5	104	3	26	169	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	2	3	3	1
	2	3	0	15	9	0
	3	0	6	0	17	0
	4	2	5	2	75	6
	5	3	0	0	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.41	3.49	0.7	A	598	897
2	0.41	2.92	0.7	A	701	1052
3	0.10	3.13	0.1	A	103	154
4	0.64	7.69	1.7	A	687	1031
5	0.24	3.38	0.3	A	277	416

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	584	2008	0.244	490	530	0.0	0.3	2.368	A
2	575	144	410	2267	0.254	574	664	0.0	0.3	2.124	A
3	84	21	878	1594	0.053	84	106	0.0	0.1	2.384	A
4	564	141	398	1430	0.394	561	564	0.0	0.6	4.130	A
5	227	57	887	1752	0.130	227	72	0.0	0.1	2.360	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	699	1900	0.309	586	634	0.3	0.4	2.740	A
2	687	172	490	2187	0.314	686	794	0.3	0.5	2.400	A
3	101	25	1050	1458	0.069	101	127	0.1	0.1	2.651	A
4	673	168	476	1372	0.491	672	675	0.6	1.0	5.131	A
5	271	68	1062	1604	0.169	271	86	0.1	0.2	2.702	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	855	1753	0.410	717	776	0.4	0.7	3.472	A
2	841	210	600	2077	0.405	840	972	0.5	0.7	2.911	A
3	123	31	1286	1272	0.097	123	155	0.1	0.1	3.131	A
4	825	206	583	1293	0.638	822	826	1.0	1.7	7.584	A
5	333	83	1299	1402	0.237	332	106	0.2	0.3	3.363	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	858	1750	0.410	718	777	0.7	0.7	3.485	A
2	841	210	601	2076	0.405	841	974	0.7	0.7	2.915	A
3	123	31	1287	1271	0.097	123	155	0.1	0.1	3.135	A
4	825	206	584	1293	0.638	825	827	1.7	1.7	7.686	A
5	333	83	1302	1399	0.238	333	106	0.3	0.3	3.375	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	703	1896	0.309	587	636	0.7	0.4	2.751	A
2	687	172	492	2185	0.314	688	798	0.7	0.5	2.405	A
3	101	25	1052	1456	0.069	101	127	0.1	0.1	2.657	A
4	673	168	477	1372	0.491	676	676	1.7	1.0	5.200	A
5	271	68	1067	1599	0.170	272	86	0.3	0.2	2.712	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	588	2005	0.245	491	532	0.4	0.3	2.381	A
2	575	144	412	2266	0.254	576	667	0.5	0.3	2.132	A
3	84	21	881	1591	0.053	84	106	0.1	0.1	2.388	A
4	564	141	399	1429	0.395	565	566	1.0	0.7	4.173	A
5	227	57	892	1748	0.130	228	72	0.2	0.1	2.369	A

2023 Base + Com Dev + E3 S1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A14 Claydon Interchange	Large Roundabout		1, 2, 3, 4, 5	4.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.94	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1	1032	✓	55.60
2	718	✓	109.60
3	1373	✓	18.00
4	646	✓	55.60
5	1469	✓	107.90

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2023 Base + Com Dev + E3 S1	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	652	100.000
2		ONE HOUR	✓	766	100.000
3		ONE HOUR	✓	112	100.000
4		ONE HOUR	✓	802	100.000
5		ONE HOUR	✓	304	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	349	32	200	71
	2	369	0	37	358	2
	3	29	36	0	24	23
	4	204	546	48	0	4
	5	104	3	28	169	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	1	3	3	2
	2	3	0	20	9	0
	3	0	6	0	17	0
	4	2	5	2	0	0
	5	3	0	0	7	12

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.42	3.63	0.7	A	598	897
2	0.41	2.92	0.7	A	703	1054
3	0.10	3.12	0.1	A	103	154
4	0.68	8.80	2.1	A	736	1104
5	0.24	3.41	0.3	A	279	418

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	622	1982	0.248	490	530	0.0	0.3	2.409	A
2	577	144	411	2266	0.255	575	700	0.0	0.3	2.127	A
3	84	21	878	1598	0.053	84	109	0.0	0.1	2.377	A
4	604	151	398	1429	0.422	601	564	0.0	0.7	4.331	A
5	229	57	924	1767	0.130	228	75	0.0	0.1	2.339	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	745	1868	0.314	586	634	0.3	0.5	2.806	A
2	689	172	492	2186	0.315	688	838	0.3	0.5	2.403	A
3	101	25	1050	1463	0.069	101	130	0.1	0.1	2.641	A
4	721	180	476	1371	0.526	720	675	0.7	1.1	5.510	A
5	273	68	1106	1608	0.170	273	90	0.1	0.2	2.696	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	911	1713	0.419	717	776	0.5	0.7	3.610	A
2	843	211	602	2077	0.406	842	1025	0.5	0.7	2.914	A
3	123	31	1286	1279	0.096	123	159	0.1	0.1	3.114	A
4	883	221	583	1292	0.683	879	826	1.1	2.1	8.631	A
5	335	84	1352	1393	0.240	334	110	0.2	0.3	3.399	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	914	1710	0.420	718	777	0.7	0.7	3.627	A
2	843	211	603	2076	0.406	843	1028	0.7	0.7	2.918	A
3	123	31	1287	1278	0.097	123	160	0.1	0.1	3.117	A
4	883	221	584	1292	0.684	883	827	2.1	2.1	8.799	A
5	335	84	1356	1389	0.241	335	110	0.3	0.3	3.414	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	749	1863	0.315	587	636	0.7	0.5	2.824	A
2	689	172	494	2185	0.315	690	843	0.7	0.5	2.408	A
3	101	25	1052	1461	0.069	101	131	0.1	0.1	2.645	A
4	721	180	477	1371	0.526	725	676	2.1	1.1	5.611	A
5	273	68	1112	1603	0.171	274	90	0.3	0.2	2.711	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	626	1979	0.248	491	532	0.5	0.3	2.423	A
2	577	144	413	2264	0.255	577	705	0.5	0.3	2.134	A
3	84	21	881	1596	0.053	84	109	0.1	0.1	2.383	A
4	604	151	399	1428	0.423	605	566	1.1	0.7	4.382	A
5	229	57	929	1762	0.130	229	75	0.2	0.1	2.349	A

2023 Base + Com Dev + E3 S2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 1 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A14 Claydon Interchange	Large Roundabout		1, 2, 3, 4, 5	5.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.28	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1	1032	✓	55.60
2	718	✓	109.60
3	1373	✓	18.00
4	646	✓	55.60
5	1469	✓	107.90

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2023 Base + Com Dev + E3 S2	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	652	100.000
2		ONE HOUR	✓	786	100.000
3		ONE HOUR	✓	112	100.000
4		ONE HOUR	✓	825	100.000
5		ONE HOUR	✓	324	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1	2	3	4	5
From	1	0	349	32	200	71
	2	369	0	57	358	2
	3	29	36	0	24	23
	4	204	568	48	0	5
	5	104	3	48	169	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	2	3	3	1
	2	3	0	48	9	0
	3	0	6	0	17	0
	4	2	4	2	0	0
	5	3	0	46	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.44	3.91	0.8	A	598	897
2	0.44	3.23	0.8	A	721	1082
3	0.10	3.13	0.1	A	103	154
4	0.70	9.25	2.3	A	757	1136
5	0.28	3.98	0.4	A	297	446

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	654	1931	0.254	490	530	0.0	0.3	2.494	A
2	592	148	426	2182	0.271	590	717	0.0	0.4	2.260	A
3	84	21	878	1594	0.053	84	139	0.0	0.1	2.384	A
4	621	155	398	1435	0.433	618	564	0.0	0.8	4.391	A
5	244	61	940	1615	0.151	243	76	0.0	0.2	2.623	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	783	1808	0.324	586	634	0.3	0.5	2.943	A
2	707	177	510	2097	0.337	706	858	0.4	0.5	2.586	A
3	101	25	1050	1458	0.069	101	166	0.1	0.1	2.651	A
4	742	185	476	1377	0.539	740	675	0.8	1.2	5.639	A
5	291	73	1125	1466	0.199	291	91	0.2	0.2	3.063	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	956	1641	0.437	717	776	0.5	0.8	3.888	A
2	865	216	624	1982	0.437	864	1049	0.5	0.8	3.219	A
3	123	31	1285	1273	0.097	123	203	0.1	0.1	3.131	A
4	908	227	583	1298	0.700	904	826	1.2	2.3	9.045	A
5	357	89	1376	1265	0.282	356	111	0.2	0.4	3.958	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	718	179	960	1638	0.438	718	777	0.8	0.8	3.912	A
2	865	216	625	1980	0.437	865	1052	0.8	0.8	3.227	A
3	123	31	1287	1271	0.097	123	204	0.1	0.1	3.135	A
4	908	227	584	1297	0.700	908	827	2.3	2.3	9.249	A
5	357	89	1381	1261	0.283	357	111	0.4	0.4	3.980	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	586	147	788	1803	0.325	587	636	0.8	0.5	2.965	A
2	707	177	512	2095	0.337	708	863	0.8	0.5	2.595	A
3	101	25	1053	1456	0.069	101	167	0.1	0.1	2.658	A
4	742	185	477	1376	0.539	746	676	2.3	1.2	5.752	A
5	291	73	1132	1461	0.199	292	91	0.4	0.3	3.083	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	491	123	658	1927	0.255	491	532	0.5	0.3	2.507	A
2	592	148	428	2180	0.271	592	721	0.5	0.4	2.269	A
3	84	21	881	1591	0.053	84	139	0.1	0.1	2.388	A
4	621	155	399	1434	0.433	623	566	1.2	0.8	4.447	A
5	244	61	946	1610	0.151	244	76	0.3	0.2	2.635	A

Appendix F Junction 5: A12/A1214 Linsig Results

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

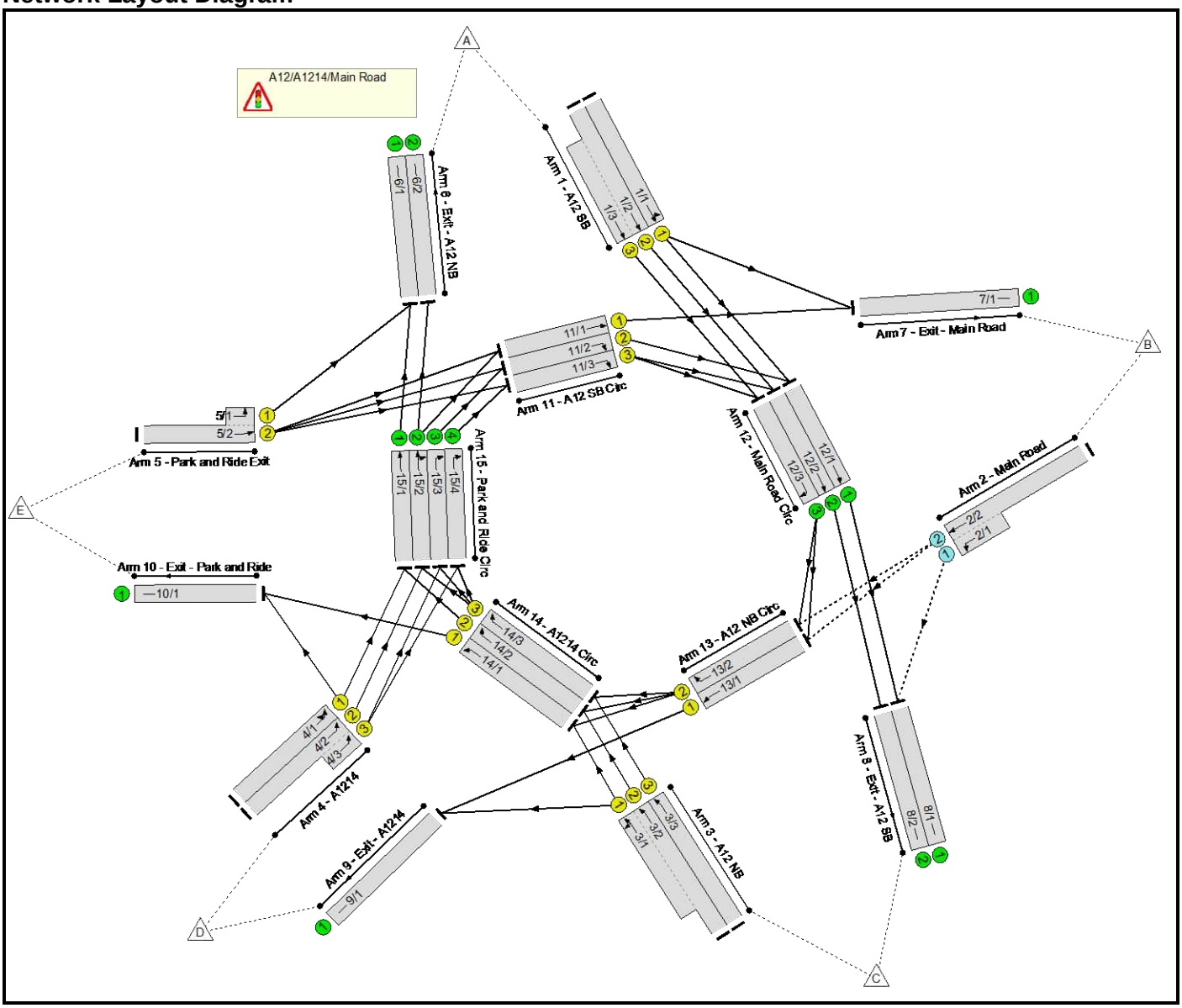
15 November 2023

Full Input Data And Results

User and Project Details

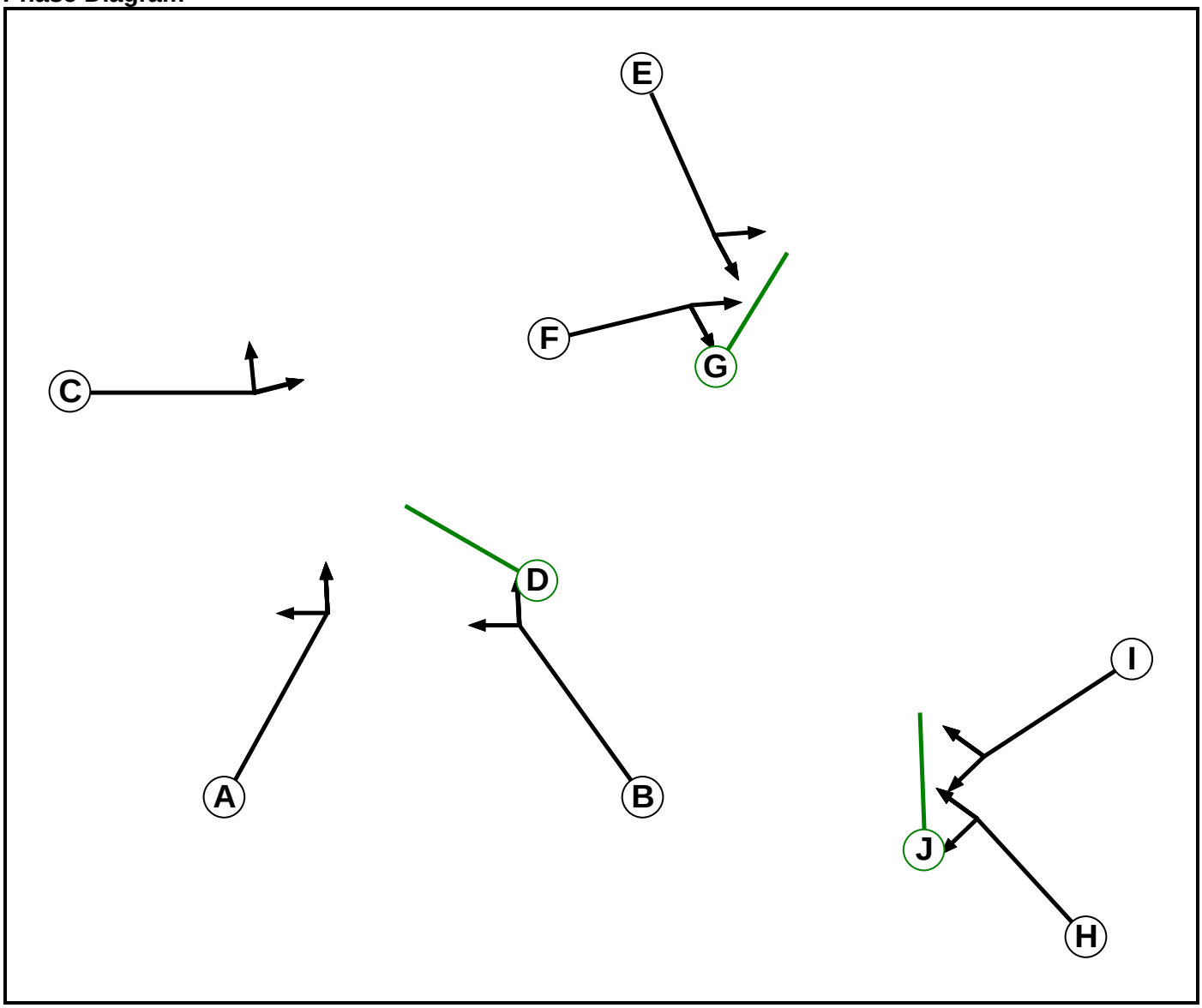
Project:	**East Anglia Three**
Title:	
Location:	A12/A1214/Main Road, Martlesham
Client:	Scottish Power Renewables
Additional detail:	
File name:	A12_A1214_Main Road - Scenario 1 and 2.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Dummy R/A	1		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Dummy R/A	2		7	7
H	Traffic	3		7	7
I	Traffic	3		7	7
J	Dummy R/A	3		7	7

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		5	9	3	-	-	-	-	-	-
B	5		9	3	-	-	-	-	-	-
C	5	5		3	-	-	-	-	-	-
D	2	2	2		-	-	-	-	-	-
E	-	-	-	-		5	3	-	-	-
F	-	-	-	-	5		3	-	-	-
G	-	-	-	-	2	2		-	-	-
H	-	-	-	-	-	-	-		5	3
I	-	-	-	-	-	-	-	5		3
J	-	-	-	-	-	-	-	2	2	

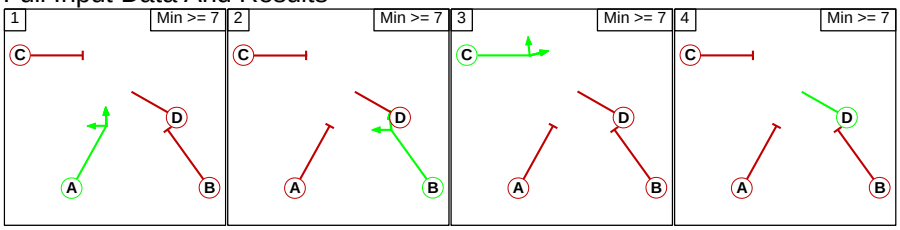
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
1	3	C
1	4	D
2	1	E
2	2	F
2	3	G
3	1	H
3	2	I
3	3	J

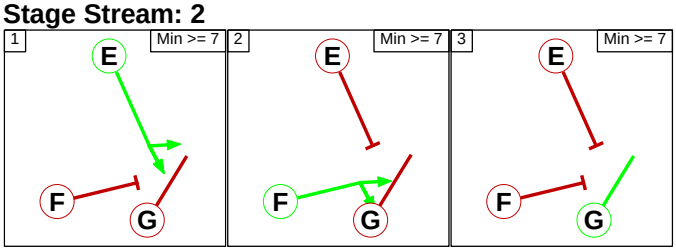
Stage Diagram

Stage Stream: 1

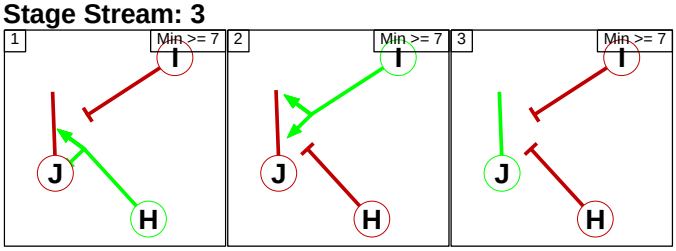
Full Input Data And Results



Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage			
		1	2	3	4
From Stage	1		5	9	3
	2	5		9	3
	3	5	5		3
	4	2	2	2	

Full Input Data And Results

Stage Stream: 2

From Stage \ To Stage		1	2	3
	1		5	3
	2	5		3
	3	2	2	

Stage Stream: 3

From Stage \ To Stage		1	2	3
	1		5	3
	2	5		3
	3	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A12/A1214/Main Road

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
2/1 (Main Road)	8/1 (Left)	852	0	12/1	0.49	All	-	-	-	-	-
2/2 (Main Road)	13/1 (Ahead)	852	0	12/1	0.49	All	-	-	-	-	-
				12/2	0.49	All					
				12/3	0.49	All					
	13/2 (Ahead)	852	0	12/1	0.49	All					
				12/2	0.49	All					
				12/3	0.49	All					

Full Input Data And Results

Lane Input Data

Junction: A12/A1214/Main Road

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A12 SB)	U	E	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 7 Left	Inf
											Arm 12 Ahead	Inf
1/2 (A12 SB)	U	E	2	3	60.0	Geom	-	3.50	0.00	N	Arm 12 Ahead	Inf
1/3 (A12 SB)	U	E	2	3	13.2	Geom	-	3.60	0.00	Y	Arm 12 Ahead	Inf
2/1 (Main Road)	O		2	3	4.7	Geom	-	4.00	0.00	Y	Arm 8 Left	Inf
2/2 (Main Road)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 13 Ahead	Inf
3/1 (A12 NB)	U	H	2	3	14.8	Geom	-	3.80	0.00	Y	Arm 9 Left	Inf
											Arm 14 Ahead	Inf
3/2 (A12 NB)	U	H	2	3	60.0	Geom	-	3.60	0.00	N	Arm 14 Ahead	Inf
3/3 (A12 NB)	U	H	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 14 Ahead	Inf
4/1 (A1214)	U	A	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 10 U-Turn	Inf
											Arm 15 Left	Inf
4/2 (A1214)	U	A	2	3	60.0	Geom	-	4.10	0.00	N	Arm 15 Left	Inf
4/3 (A1214)	U	A	2	3	3.2	Geom	-	4.20	0.00	Y	Arm 15 Left	Inf
5/1 (Park and Ride Exit)	U	C	2	3	2.4	Geom	-	4.10	0.00	Y	Arm 6 Left	Inf
5/2 (Park and Ride Exit)	U	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 11 Ahead	Inf
6/1 (Exit - A12 NB)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (Exit - A12 NB)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Exit - Main Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit - A12 SB)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (Exit - A12 SB)	U		2	3	60.0	Inf	-	-	-	-	-	-

9/1 (Exit - A1214)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Exit - Park and Ride)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (A12 SB Circ)	U	F	2	3	2.8	Geom	-	4.90	0.00	Y	Arm 7 Ahead	Inf
11/2 (A12 SB Circ)	U	F	2	3	2.8	Geom	-	4.90	0.00	N	Arm 12 Right	Inf
11/3 (A12 SB Circ)	U	F	2	3	2.8	Geom	-	4.70	0.00	Y	Arm 12 Right	Inf
12/1 (Main Road Circ)	U		2	3	2.6	Geom	-	4.40	0.00	Y	Arm 8 Ahead	Inf
12/2 (Main Road Circ)	U		2	3	2.6	Geom	-	4.40	0.00	Y	Arm 8 Ahead	Inf
12/3 (Main Road Circ)	U		2	3	2.6	Geom	-	3.80	0.00	Y	Arm 13 Right	Inf
13/1 (A12 NB Circ)	U	I	2	3	2.3	Geom	-	4.40	0.00	Y	Arm 9 Ahead	Inf
13/2 (A12 NB Circ)	U	I	2	3	2.3	Geom	-	4.40	0.00	Y	Arm 14 Right	Inf
14/1 (A1214 Circ)	U	B	2	3	2.6	Geom	-	4.60	0.00	Y	Arm 10 Ahead	Inf
14/2 (A1214 Circ)	U	B	2	3	2.4	Geom	-	4.40	0.00	N	Arm 15 Right	Inf
14/3 (A1214 Circ)	U	B	2	3	2.3	Geom	-	4.40	0.00	Y	Arm 15 Right	Inf
15/1 (Park and Ride Circ)	U		2	3	1.4	Geom	-	4.90	0.00	Y	Arm 6 Ahead	Inf
15/2 (Park and Ride Circ)	U		2	3	1.4	Geom	-	4.90	0.00	N	Arm 6 Ahead Arm 11 Right	Inf Inf
15/3 (Park and Ride Circ)	U		2	3	1.4	Geom	-	4.90	0.00	N	Arm 11 Right	Inf
15/4 (Park and Ride Circ)	U		2	3	1.4	Geom	-	4.90	0.00	Y	Arm 11 Right	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
3: '2024 Base + Com Dev - PM Peak'	17:00	18:00	01:00	
4: '2024 Base + Com Dev + Scenario 1 (accesses 28-30 + CS) PM Peak'	17:00	18:00	01:00	
5: '2024 Base + Com Dev + Scenario 2 (accesses 2,3 and 31 + CS) PM Peak'	17:00	18:00	01:00	

Scenario 3: '2024 Base + Com Dev - PM Peak' (FG3: '2024 Base + Com Dev - PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	10	966	232	4	1212
	B	38	0	121	25	0	184
	C	1000	125	0	377	4	1506
	D	253	38	366	0	4	661
	E	0	0	0	0	0	0
	Tot.	1291	173	1453	634	12	3563

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2024 Base + Com Dev - PM Peak
Junction: A12/A1214/Main Road	
1/1	447
1/2 (with short)	765(In) 529(Out)
1/3 (short)	236
2/1 (short)	121
2/2 (with short)	184(In) 63(Out)
3/1 (short)	381
3/2 (with short)	960(In) 579(Out)
3/3	546
4/1	187
4/2 (with short)	474(In) 108(Out)
4/3 (short)	366
5/1 (short)	0
5/2 (with short)	0(In) 0(Out)
6/1	784
6/2	507
7/1	173
8/1	750
8/2	703
9/1	634
10/1	12
11/1	163
11/2	192
11/3	174
12/1	629
12/2	703
12/3	236
13/1	257
13/2	42
14/1	8
14/2	601
14/3	562
15/1	784
15/2	670

15/3	192
15/4	174

Lane Saturation Flows

Junction: A12/A1214/Main Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A12 SB)	3.40	0.00	Y	Arm 7 Left Arm 12 Ahead	Inf Inf	2.2 % 97.8 %	1955	1955
1/2 (A12 SB)	3.50	0.00	N	Arm 12 Ahead	Inf	100.0 %	2105	2105
1/3 (A12 SB)	3.60	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1975	1975
2/1 (Main Road)	4.00	0.00	Y	Arm 8 Left	Inf	100.0 %	2015	2015
2/2 (Main Road)	4.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2015	2015
3/1 (A12 NB)	3.80	0.00	Y	Arm 9 Left Arm 14 Ahead	Inf Inf	99.0 % 1.0 %	1995	1995
3/2 (A12 NB)	3.60	0.00	N	Arm 14 Ahead	Inf	100.0 %	2115	2115
3/3 (A12 NB)	3.70	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1985	1985
4/1 (A1214)	4.10	0.00	Y	Arm 10 U-Turn Arm 15 Left	Inf Inf	2.1 % 97.9 %	2025	2025
4/2 (A1214)	4.10	0.00	N	Arm 15 Left	Inf	100.0 %	2165	2165
4/3 (A1214)	4.20	0.00	Y	Arm 15 Left	Inf	100.0 %	2035	2035
5/1 (Park and Ride Exit)	4.10	0.00	Y	Arm 6 Left	Inf	0.0 %	2025	2025
5/2 (Park and Ride Exit)	4.00	0.00	Y	Arm 11 Ahead	Inf	0.0 %	2015	2015
6/1 (Exit - A12 NB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit - A12 NB Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit - Main Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit - A12 SB Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit - A12 SB Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Exit - A1214 Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Exit - Park and Ride Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (A12 SB Circ)	4.90	0.00	Y	Arm 7 Ahead	Inf	100.0 %	2105	2105

Full Input Data And Results

11/2 (A12 SB Circ)	4.90	0.00	N	Arm 12 Right	Inf	100.0 %	2245	2245
11/3 (A12 SB Circ)	4.70	0.00	Y	Arm 12 Right	Inf	100.0 %	2085	2085
12/1 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/2 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/3 (Main Road Circ)	3.80	0.00	Y	Arm 13 Right	Inf	100.0 %	1995	1995
13/1 (A12 NB Circ)	4.40	0.00	Y	Arm 9 Ahead	Inf	100.0 %	2055	2055
13/2 (A12 NB Circ)	4.40	0.00	Y	Arm 14 Right	Inf	100.0 %	2055	2055
14/1 (A1214 Circ)	4.60	0.00	Y	Arm 10 Ahead	Inf	100.0 %	2075	2075
14/2 (A1214 Circ)	4.40	0.00	N	Arm 15 Right	Inf	100.0 %	2195	2195
14/3 (A1214 Circ)	4.40	0.00	Y	Arm 15 Right	Inf	100.0 %	2055	2055
15/1 (Park and Ride Circ)	4.90	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2105	2105
15/2 (Park and Ride Circ)	4.90	0.00	N	Arm 6 Ahead Arm 11 Right	Inf Inf	75.7 % 24.3 %	2245	2245
15/3 (Park and Ride Circ)	4.90	0.00	N	Arm 11 Right	Inf	100.0 %	2245	2245
15/4 (Park and Ride Circ)	4.90	0.00	Y	Arm 11 Right	Inf	100.0 %	2105	2105

Scenario 4: '2024 Base + Com Dev + Scenario 1 PM Peak' (FG4: '2024 Base + Com Dev + Scenario 1 (accesses 28-30 + CS) PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	10	973	235	4	1222
	B	38	0	121	25	0	184
	C	1088	125	0	379	4	1596
	D	253	38	366	0	4	661
	E	0	0	0	0	0	0
	Tot.	1379	173	1460	639	12	3663

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2024 Base + Com Dev + Scenario 1 PM Peak
Junction: A12/A1214/Main Road	
1/1	444
1/2 (with short)	778(In) 539(Out)
1/3 (short)	239
2/1 (short)	121
2/2 (with short)	184(In) 63(Out)
3/1 (short)	383
3/2 (with short)	1026(In) 643(Out)
3/3	570
4/1	227
4/2 (with short)	434(In) 68(Out)
4/3 (short)	366
5/1 (short)	0
5/2 (with short)	0(In) 0(Out)
6/1	873
6/2	506
7/1	173
8/1	785
8/2	675
9/1	639
10/1	12
11/1	163
11/2	230
11/3	136
12/1	664
12/2	675
12/3	239
13/1	260
13/2	42
14/1	8
14/2	650
14/3	601
15/1	873
15/2	669

15/3	230
15/4	136

Lane Saturation Flows

Junction: A12/A1214/Main Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A12 SB)	3.40	0.00	Y	Arm 7 Left Arm 12 Ahead	Inf Inf	2.3 % 97.7 %	1955	1955
1/2 (A12 SB)	3.50	0.00	N	Arm 12 Ahead	Inf	100.0 %	2105	2105
1/3 (A12 SB)	3.60	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1975	1975
2/1 (Main Road)	4.00	0.00	Y	Arm 8 Left	Inf	100.0 %	2015	2015
2/2 (Main Road)	4.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2015	2015
3/1 (A12 NB)	3.80	0.00	Y	Arm 9 Left Arm 14 Ahead	Inf Inf	99.0 % 1.0 %	1995	1995
3/2 (A12 NB)	3.60	0.00	N	Arm 14 Ahead	Inf	100.0 %	2115	2115
3/3 (A12 NB)	3.70	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1985	1985
4/1 (A1214)	4.10	0.00	Y	Arm 10 U-Turn Arm 15 Left	Inf Inf	1.8 % 98.2 %	2025	2025
4/2 (A1214)	4.10	0.00	N	Arm 15 Left	Inf	100.0 %	2165	2165
4/3 (A1214)	4.20	0.00	Y	Arm 15 Left	Inf	100.0 %	2035	2035
5/1 (Park and Ride Exit)	4.10	0.00	Y	Arm 6 Left	Inf	0.0 %	2025	2025
5/2 (Park and Ride Exit)	4.00	0.00	Y	Arm 11 Ahead	Inf	0.0 %	2015	2015
6/1 (Exit - A12 NB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit - A12 NB Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit - Main Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit - A12 SB Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit - A12 SB Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Exit - A1214 Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Exit - Park and Ride Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (A12 SB Circ)	4.90	0.00	Y	Arm 7 Ahead	Inf	100.0 %	2105	2105

11/2 (A12 SB Circ)	4.90	0.00	N	Arm 12 Right	Inf	100.0 %	2245	2245
11/3 (A12 SB Circ)	4.70	0.00	Y	Arm 12 Right	Inf	100.0 %	2085	2085
12/1 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/2 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/3 (Main Road Circ)	3.80	0.00	Y	Arm 13 Right	Inf	100.0 %	1995	1995
13/1 (A12 NB Circ)	4.40	0.00	Y	Arm 9 Ahead	Inf	100.0 %	2055	2055
13/2 (A12 NB Circ)	4.40	0.00	Y	Arm 14 Right	Inf	100.0 %	2055	2055
14/1 (A1214 Circ)	4.60	0.00	Y	Arm 10 Ahead	Inf	100.0 %	2075	2075
14/2 (A1214 Circ)	4.40	0.00	N	Arm 15 Right	Inf	100.0 %	2195	2195
14/3 (A1214 Circ)	4.40	0.00	Y	Arm 15 Right	Inf	100.0 %	2055	2055
15/1 (Park and Ride Circ)	4.90	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2105	2105
15/2 (Park and Ride Circ)	4.90	0.00	N	Arm 6 Ahead Arm 11 Right	Inf Inf	75.6 % 24.4 %	2245	2245
15/3 (Park and Ride Circ)	4.90	0.00	N	Arm 11 Right	Inf	100.0 %	2245	2245
15/4 (Park and Ride Circ)	4.90	0.00	Y	Arm 11 Right	Inf	100.0 %	2105	2105

Scenario 5: '2024 Base + Com Dev + Scenario 2 PM Peak' (FG5: '2024 Base + Com Dev + Scenario 2 (accesses 2,3 and 31 + CS) PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	10	968	234	4	1216
	B	38	0	121	25	0	184
	C	1031	125	0	377	4	1537
	D	253	38	366	0	4	661
	E	0	0	0	0	0	0
	Tot.	1322	173	1455	636	12	3598

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2024 Base + Com Dev + Scenario 2 PM Peak
Junction: A12/A1214/Main Road	
1/1	441
1/2 (with short)	775(In) 537(Out)
1/3 (short)	238
2/1 (short)	121
2/2 (with short)	184(In) 63(Out)
3/1 (short)	381
3/2 (with short)	997(In) 616(Out)
3/3	540
4/1	228
4/2 (with short)	433(In) 67(Out)
4/3 (short)	366
5/1 (short)	0
5/2 (with short)	0(In) 0(Out)
6/1	846
6/2	476
7/1	173
8/1	782
8/2	673
9/1	636
10/1	12
11/1	163
11/2	230
11/3	136
12/1	661
12/2	673
12/3	238
13/1	259
13/2	42
14/1	8
14/2	622
14/3	572
15/1	846
15/2	639

15/3	230
15/4	136

Lane Saturation Flows

Junction: A12/A1214/Main Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A12 SB)	3.40	0.00	Y	Arm 7 Left Arm 12 Ahead	Inf Inf	2.3 % 97.7 %	1955	1955
1/2 (A12 SB)	3.50	0.00	N	Arm 12 Ahead	Inf	100.0 %	2105	2105
1/3 (A12 SB)	3.60	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1975	1975
2/1 (Main Road)	4.00	0.00	Y	Arm 8 Left	Inf	100.0 %	2015	2015
2/2 (Main Road)	4.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2015	2015
3/1 (A12 NB)	3.80	0.00	Y	Arm 9 Left Arm 14 Ahead	Inf Inf	99.0 % 1.0 %	1995	1995
3/2 (A12 NB)	3.60	0.00	N	Arm 14 Ahead	Inf	100.0 %	2115	2115
3/3 (A12 NB)	3.70	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1985	1985
4/1 (A1214)	4.10	0.00	Y	Arm 10 U-Turn Arm 15 Left	Inf Inf	1.8 % 98.2 %	2025	2025
4/2 (A1214)	4.10	0.00	N	Arm 15 Left	Inf	100.0 %	2165	2165
4/3 (A1214)	4.20	0.00	Y	Arm 15 Left	Inf	100.0 %	2035	2035
5/1 (Park and Ride Exit)	4.10	0.00	Y	Arm 6 Left	Inf	0.0 %	2025	2025
5/2 (Park and Ride Exit)	4.00	0.00	Y	Arm 11 Ahead	Inf	0.0 %	2015	2015
6/1 (Exit - A12 NB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit - A12 NB Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit - Main Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit - A12 SB Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit - A12 SB Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Exit - A1214 Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Exit - Park and Ride Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (A12 SB Circ)	4.90	0.00	Y	Arm 7 Ahead	Inf	100.0 %	2105	2105

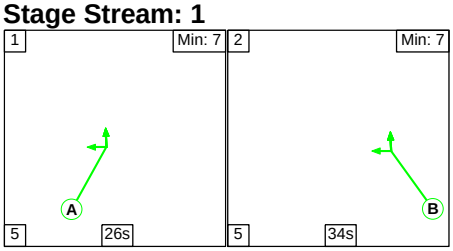
Full Input Data And Results

11/2 (A12 SB Circ)	4.90	0.00	N	Arm 12 Right	Inf	100.0 %	2245	2245
11/3 (A12 SB Circ)	4.70	0.00	Y	Arm 12 Right	Inf	100.0 %	2085	2085
12/1 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/2 (Main Road Circ)	4.40	0.00	Y	Arm 8 Ahead	Inf	100.0 %	2055	2055
12/3 (Main Road Circ)	3.80	0.00	Y	Arm 13 Right	Inf	100.0 %	1995	1995
13/1 (A12 NB Circ)	4.40	0.00	Y	Arm 9 Ahead	Inf	100.0 %	2055	2055
13/2 (A12 NB Circ)	4.40	0.00	Y	Arm 14 Right	Inf	100.0 %	2055	2055
14/1 (A1214 Circ)	4.60	0.00	Y	Arm 10 Ahead	Inf	100.0 %	2075	2075
14/2 (A1214 Circ)	4.40	0.00	N	Arm 15 Right	Inf	100.0 %	2195	2195
14/3 (A1214 Circ)	4.40	0.00	Y	Arm 15 Right	Inf	100.0 %	2055	2055
15/1 (Park and Ride Circ)	4.90	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2105	2105
15/2 (Park and Ride Circ)	4.90	0.00	N	Arm 6 Ahead Arm 11 Right	Inf Inf	74.5 % 25.5 %	2245	2245
15/3 (Park and Ride Circ)	4.90	0.00	N	Arm 11 Right	Inf	100.0 %	2245	2245
15/4 (Park and Ride Circ)	4.90	0.00	Y	Arm 11 Right	Inf	100.0 %	2105	2105

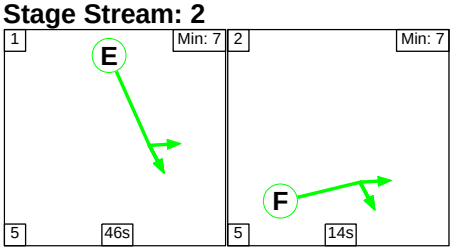
Scenario 3: '2024 Base + Com Dev - PM Peak' (FG3: '2024 Base + Com Dev - PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

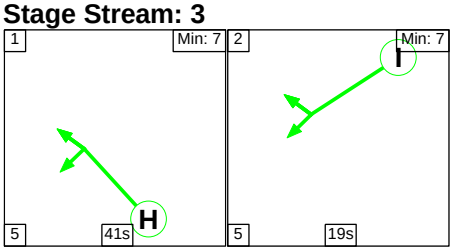


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	34
Change Point	20	51

Stage Stream: 2

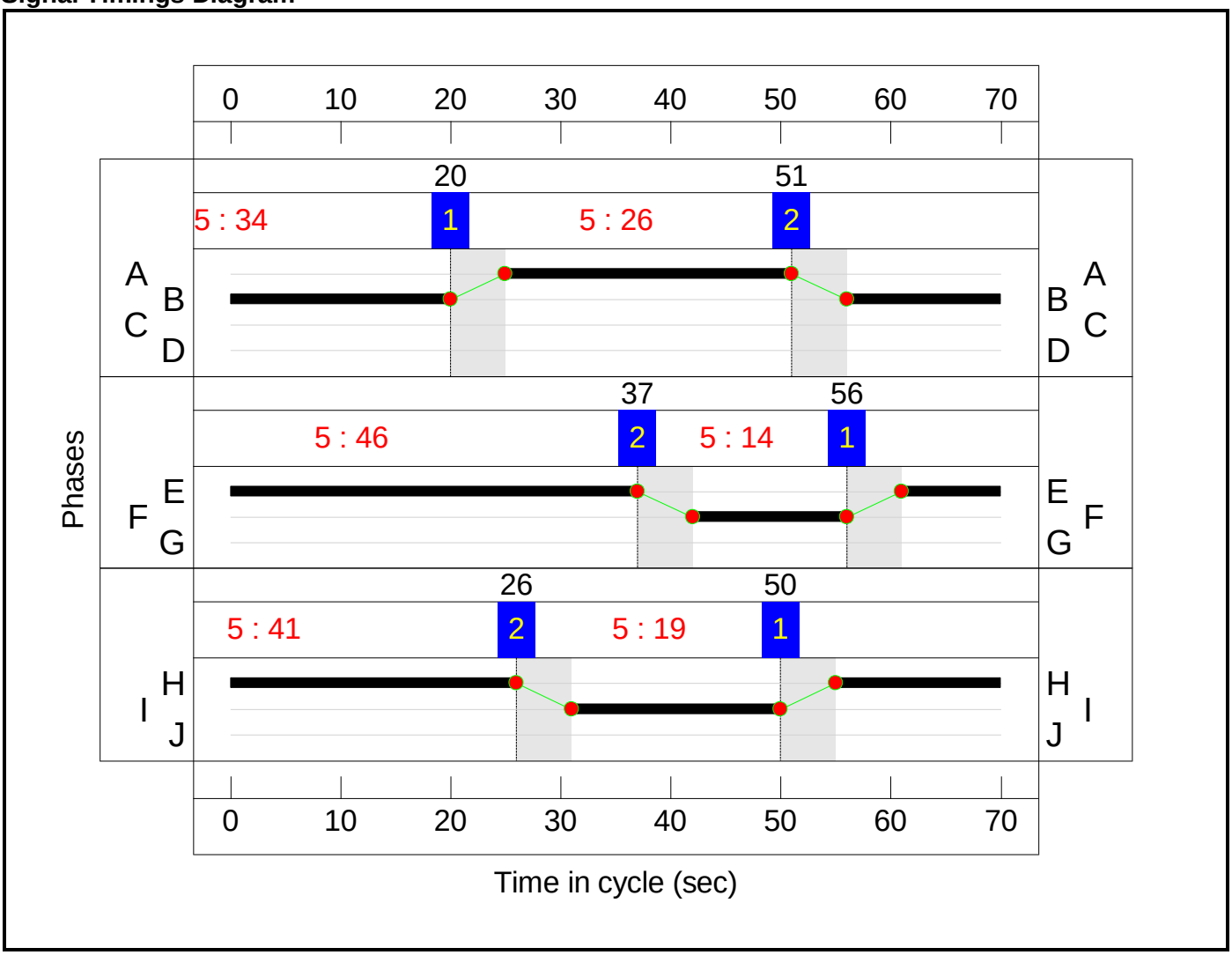
Stage	1	2
Duration	46	14
Change Point	56	37

Full Input Data And Results

Stage Stream: 3

Stage	1	2
Duration	41	19
Change Point	50	26

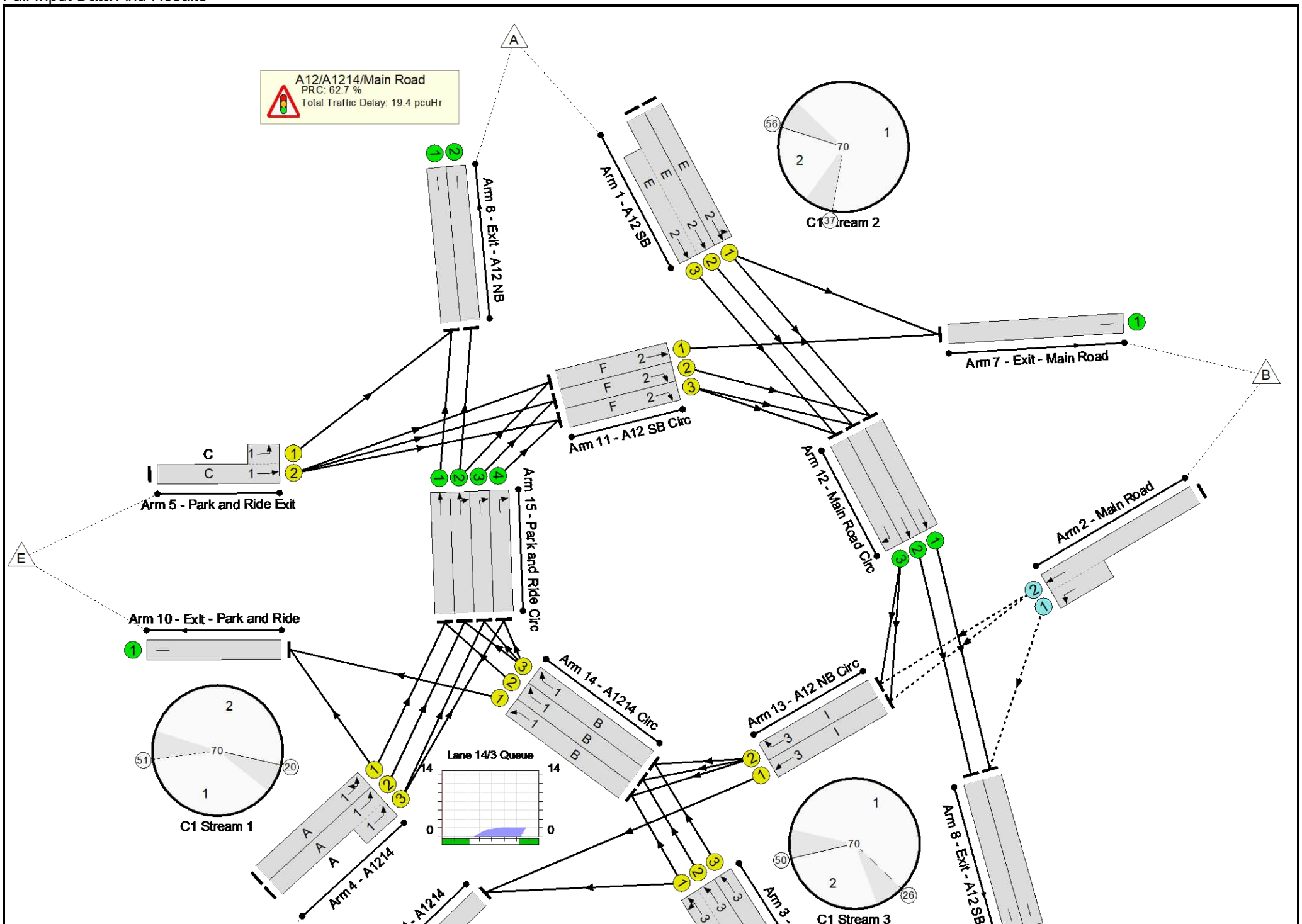
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.3%**
A12/A1214/Main Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.3%**
1/1	A12 SB Left Ahead	U	2	N/A	E		1	46	-	447	1955	1313	34.1%
1/2+1/3	A12 SB Ahead	U	2	N/A	E		1	46	-	765	2105:1975	1714	44.6%
2/2+2/1	Main Road Left Ahead	O	N/A	N/A	-		-	-	-	184	2015:2015	826	22.3%
3/2+3/1	A12 NB Left Ahead	U	3	N/A	H		1	41	-	960	2115:1995	1772	54.2%
3/3	A12 NB Ahead	U	3	N/A	H		1	41	-	546	1985	1191	45.8%
4/1	A1214 U-Turn Left	U	1	N/A	A		1	26	-	187	2025	781	23.9%
4/2+4/3	A1214 Left	U	1	N/A	A		1	26	-	474	2165:2035	857	55.3%
5/2+5/1	Park and Ride Exit Left Ahead	U	1	N/A	C		0	0	-	0	2015:2025	0	0.0%
6/1	Exit - A12 NB	U	N/A	N/A	-		-	-	-	784	Inf	Inf	0.0%
6/2	Exit - A12 NB	U	N/A	N/A	-		-	-	-	507	Inf	Inf	0.0%
7/1	Exit - Main Road	U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
8/1	Exit - A12 SB	U	N/A	N/A	-		-	-	-	750	Inf	Inf	0.0%
8/2	Exit - A12 SB	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
9/1	Exit - A1214	U	N/A	N/A	-		-	-	-	634	Inf	Inf	0.0%
10/1	Exit - Park and Ride	U	N/A	N/A	-		-	-	-	12	Inf	Inf	0.0%
11/1	A12 SB Circ Ahead	U	2	N/A	F		1	14	-	163	2105	451	36.1%
11/2	A12 SB Circ Right	U	2	N/A	F		1	14	-	192	2245	481	39.9%
11/3	A12 SB Circ Right	U	2	N/A	F		1	14	-	174	2085	447	38.9%

Full Input Data And Results

12/1	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	629	2055	2055	30.6%
12/2	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	703	2055	2055	34.2%
12/3	Main Road Circ Right	U	N/A	N/A	-		-	-	-	236	1995	1995	11.8%
13/1	A12 NB Circ Ahead	U	3	N/A	I		1	19	-	257	2055	587	43.8%
13/2	A12 NB Circ Right	U	3	N/A	I		1	19	-	42	2055	587	7.2%
14/1	A1214 Circ Ahead	U	1	N/A	B		1	34	-	8	2075	1038	0.8%
14/2	A1214 Circ Right	U	1	N/A	B		1	34	-	601	2195	1097	54.8%
14/3	A1214 Circ Right	U	1	N/A	B		1	34	-	562	2055	1027	54.7%
15/1	Park and Ride Circ Ahead	U	N/A	N/A	-		-	-	-	784	2105	2105	37.2%
15/2	Park and Ride Circ Ahead Right	U	N/A	N/A	-		-	-	-	670	2245	2245	29.8%
15/3	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	192	2245	2245	8.6%
15/4	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	174	2105	2105	8.3%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**368**	**0**	**0**	**13.1**	**6.3**	**0.0**	**19.4**	**-**	**-**	**-**	**-**
A12/A1214/Main Road	**-**	**-**	**368**	**0**	**0**	**13.1**	**6.3**	**0.0**	**19.4**	**-**	**-**	**-**	**-**
1/1	447	447	-	-	-	0.6	0.3	-	0.9	7.0	3.6	0.3	3.9
1/2+1/3	765	765	-	-	-	1.0	0.4	-	1.4	6.7	4.4	0.4	4.8
2/2+2/1	184	184	368	0	0	0.0	0.1	-	0.2	3.6	0.3	0.1	0.4
3/2+3/1	960	960	-	-	-	2.0	0.6	-	2.6	9.6	6.1	0.6	6.7
3/3	546	546	-	-	-	1.2	0.4	-	1.6	10.5	5.8	0.4	6.2
4/1	187	187	-	-	-	0.8	0.2	-	0.9	17.6	2.4	0.2	2.6
4/2+4/3	474	474	-	-	-	2.1	0.6	-	2.7	20.6	6.0	0.6	6.7
5/2+5/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	784	784	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	507	507	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	750	750	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	634	634	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	12	12	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	163	163	-	-	-	1.3	0.3	-	1.6	35.2	3.0	0.3	3.3
11/2	192	192	-	-	-	0.4	0.3	-	0.7	13.8	3.0	0.3	3.3
11/3	174	174	-	-	-	0.4	0.3	-	0.7	14.1	2.7	0.3	3.0
12/1	629	629	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
12/2	703	703	-	-	-	0.0	0.3	-	0.3	1.3	0.6	0.3	0.8
12/3	236	236	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	257	257	-	-	-	1.3	0.4	-	1.7	23.8	4.2	0.4	4.6
13/2	42	42	-	-	-	0.2	0.0	-	0.2	19.8	0.6	0.0	0.6
14/1	8	8	-	-	-	0.0	0.0	-	0.0	12.9	0.1	0.0	0.1

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14/2	601	601	-	-	-	0.9	0.6	-	1.5	9.2	2.5	0.6	3.1
14/3	562	562	-	-	-	0.8	0.6	-	1.4	9.3	2.0	0.6	2.6
15/1	784	784	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
15/2	670	670	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
15/3	192	192	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
15/4	174	174	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

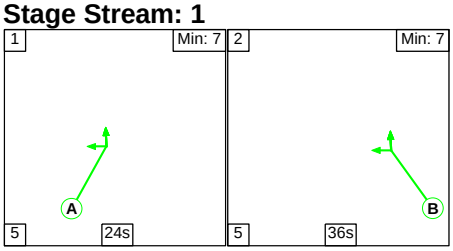
C1	Stream: 1 PRC for Signalled Lanes (%):	62.7	Total Delay for Signalled Lanes (pcuHr):	6.64	Cycle Time (s): 70
C1	Stream: 2 PRC for Signalled Lanes (%):	101.7	Total Delay for Signalled Lanes (pcuHr):	5.30	Cycle Time (s): 70
C1	Stream: 3 PRC for Signalled Lanes (%):	66.2	Total Delay for Signalled Lanes (pcuHr):	6.09	Cycle Time (s): 70
	PRC Over All Lanes (%):	62.7	Total Delay Over All Lanes(pcuHr):	19.36	

Full Input Data And Results

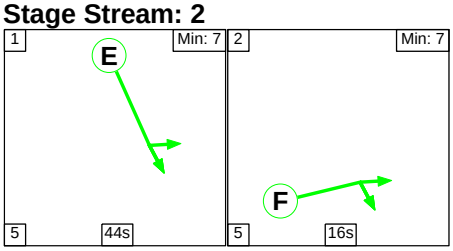
Scenario 4: '2024 Base + Com Dev + Scenario 1 PM Peak' (FG4: '2024 Base + Com Dev + Scenario 1 (accesses 28-30 + CS) PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

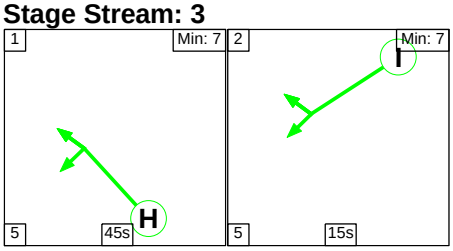
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	36
Change Point	20	49

Stage Stream: 2

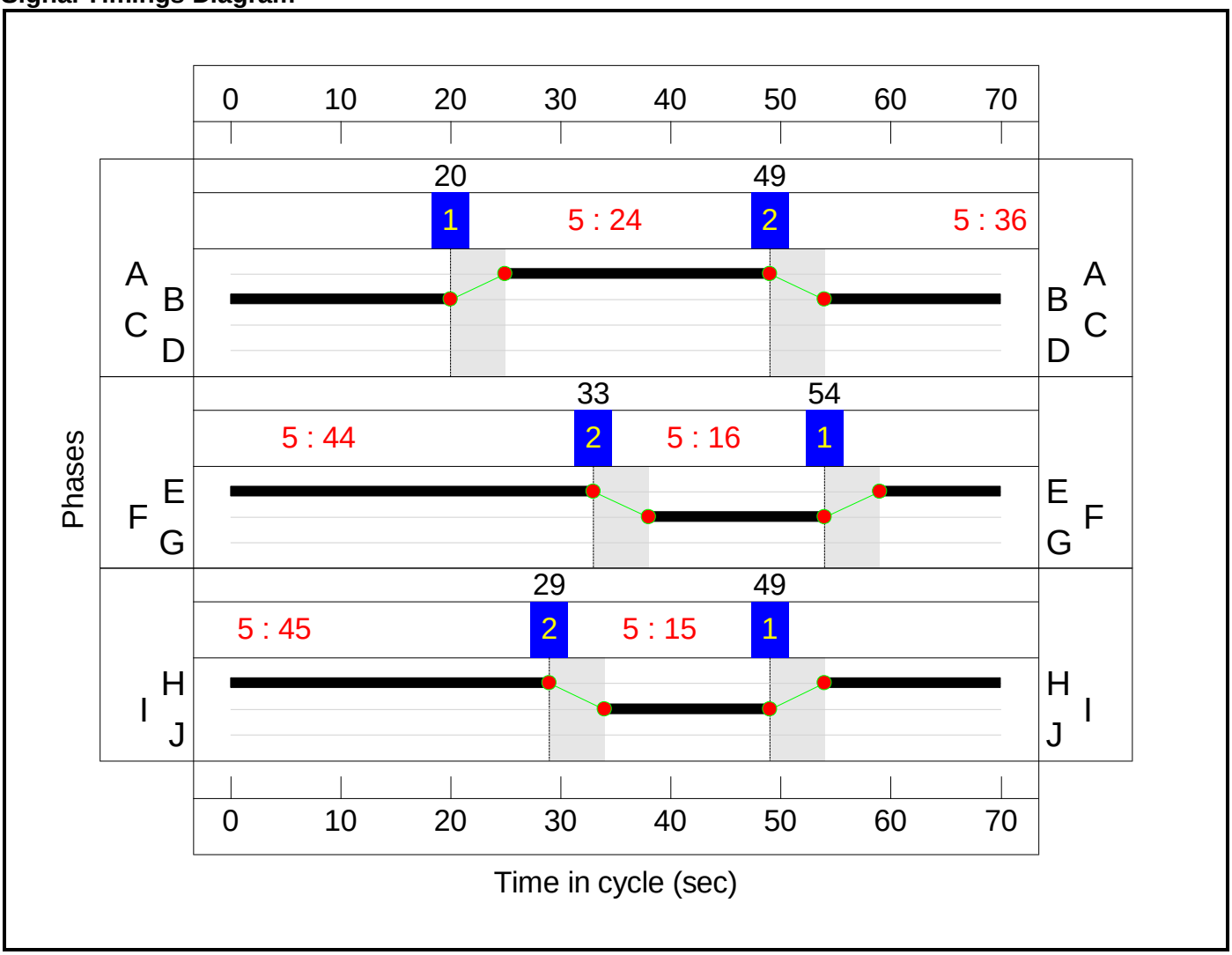
Stage	1	2
Duration	44	16
Change Point	54	33

Full Input Data And Results

Stage Stream: 3

Stage	1	2
Duration	45	15
Change Point	49	29

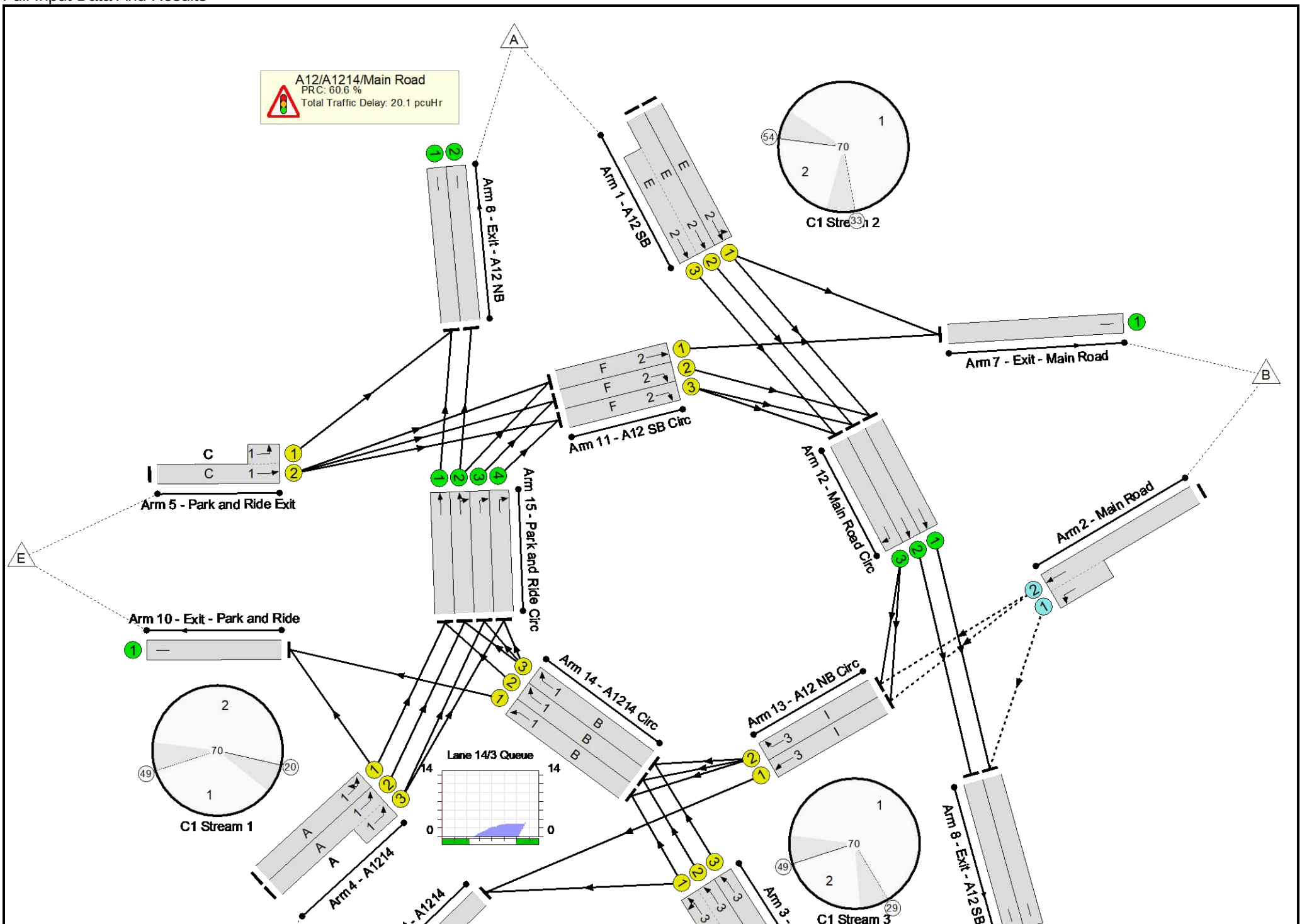
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.0%**
A12/A1214/Main Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.0%**
1/1	A12 SB Left Ahead	U	2	N/A	E		1	44	-	444	1955	1257	35.3%
1/2+1/3	A12 SB Ahead	U	2	N/A	E		1	44	-	778	2105:1975	1654	47.1%
2/2+2/1	Main Road Left Ahead	O	N/A	N/A	-		-	-	-	184	2015:2015	800	23.0%
3/2+3/1	A12 NB Left Ahead	U	3	N/A	H		1	45	-	1026	2115:1995	1844	55.7%
3/3	A12 NB Ahead	U	3	N/A	H		1	45	-	570	1985	1304	43.7%
4/1	A1214 U-Turn Left	U	1	N/A	A		1	24	-	227	2025	723	31.4%
4/2+4/3	A1214 Left	U	1	N/A	A		1	24	-	434	2165:2035	777	55.9%
5/2+5/1	Park and Ride Exit Left Ahead	U	1	N/A	C		0	0	-	0	2015:2025	0	0.0%
6/1	Exit - A12 NB	U	N/A	N/A	-		-	-	-	873	Inf	Inf	0.0%
6/2	Exit - A12 NB	U	N/A	N/A	-		-	-	-	506	Inf	Inf	0.0%
7/1	Exit - Main Road	U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
8/1	Exit - A12 SB	U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
8/2	Exit - A12 SB	U	N/A	N/A	-		-	-	-	675	Inf	Inf	0.0%
9/1	Exit - A1214	U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
10/1	Exit - Park and Ride	U	N/A	N/A	-		-	-	-	12	Inf	Inf	0.0%
11/1	A12 SB Circ Ahead	U	2	N/A	F		1	16	-	163	2105	511	31.9%
11/2	A12 SB Circ Right	U	2	N/A	F		1	16	-	230	2245	545	42.2%
11/3	A12 SB Circ Right	U	2	N/A	F		1	16	-	136	2085	506	26.9%

Full Input Data And Results

12/1	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	664	2055	2055	32.3%
12/2	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	675	2055	2055	32.8%
12/3	Main Road Circ Right	U	N/A	N/A	-		-	-	-	239	1995	1995	12.0%
13/1	A12 NB Circ Ahead	U	3	N/A	I		1	15	-	260	2055	470	55.4%
13/2	A12 NB Circ Right	U	3	N/A	I		1	15	-	42	2055	470	8.9%
14/1	A1214 Circ Ahead	U	1	N/A	B		1	36	-	8	2075	1097	0.7%
14/2	A1214 Circ Right	U	1	N/A	B		1	36	-	650	2195	1160	56.0%
14/3	A1214 Circ Right	U	1	N/A	B		1	36	-	601	2055	1086	55.3%
15/1	Park and Ride Circ Ahead	U	N/A	N/A	-		-	-	-	873	2105	2105	41.5%
15/2	Park and Ride Circ Ahead Right	U	N/A	N/A	-		-	-	-	669	2245	2245	29.8%
15/3	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	230	2245	2245	10.2%
15/4	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	136	2105	2105	6.5%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**368**	**0**	**0**	**13.4**	**6.7**	**0.0**	**20.1**	**-**	**-**	**-**	**-**
A12/A1214/Main Road	**-**	**-**	**368**	**0**	**0**	**13.4**	**6.7**	**0.0**	**20.1**	**-**	**-**	**-**	**-**
1/1	444	444	-	-	-	0.7	0.3	-	1.0	8.0	3.9	0.3	4.2
1/2+1/3	778	778	-	-	-	1.2	0.4	-	1.7	7.8	4.9	0.4	5.4
2/2+2/1	184	184	368	0	0	0.0	0.1	-	0.2	3.9	0.3	0.1	0.4
3/2+3/1	1026	1026	-	-	-	1.6	0.6	-	2.2	7.8	6.1	0.6	6.7
3/3	570	570	-	-	-	0.9	0.4	-	1.3	8.2	5.2	0.4	5.6
4/1	227	227	-	-	-	1.0	0.2	-	1.3	19.9	3.2	0.2	3.4
4/2+4/3	434	434	-	-	-	2.1	0.6	-	2.7	22.7	6.0	0.6	6.7
5/2+5/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	873	873	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	506	506	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	675	675	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	12	12	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	163	163	-	-	-	1.2	0.2	-	1.4	31.3	2.9	0.2	3.2
11/2	230	230	-	-	-	0.3	0.4	-	0.7	10.9	2.6	0.4	3.0
11/3	136	136	-	-	-	0.2	0.2	-	0.4	9.7	0.9	0.2	1.1
12/1	664	664	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
12/2	675	675	-	-	-	0.0	0.2	-	0.2	1.3	1.1	0.2	1.4
12/3	239	239	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	260	260	-	-	-	1.7	0.6	-	2.3	32.2	4.8	0.6	5.4
13/2	42	42	-	-	-	0.2	0.0	-	0.3	24.4	0.7	0.0	0.7
14/1	8	8	-	-	-	0.0	0.0	-	0.0	11.2	0.1	0.0	0.1

Full Input Data And Results

14/2	650	650	-	-	-	1.1	0.6	-	1.7	9.4	2.7	0.6	3.3
14/3	601	601	-	-	-	1.1	0.6	-	1.7	10.0	3.5	0.6	4.1
15/1	873	873	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
15/2	669	669	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
15/3	230	230	-	-	-	0.0	0.1	-	0.1	0.9	0.0	0.1	0.1
15/4	136	136	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

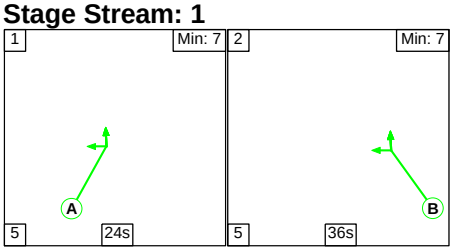
C1	Stream: 1 PRC for Signalled Lanes (%):	60.6	Total Delay for Signalled Lanes (pcuHr):	7.38	Cycle Time (s):	70
C1	Stream: 2 PRC for Signalled Lanes (%):	91.3	Total Delay for Signalled Lanes (pcuHr):	5.14	Cycle Time (s):	70
C1	Stream: 3 PRC for Signalled Lanes (%):	61.7	Total Delay for Signalled Lanes (pcuHr):	6.14	Cycle Time (s):	70
	PRC Over All Lanes (%):	60.6	Total Delay Over All Lanes(pcuHr):	20.07		

Full Input Data And Results

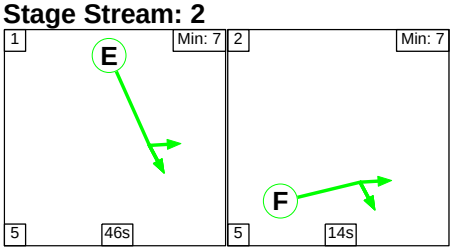
Scenario 5: '2024 Base + Com Dev + Scenario 2 PM Peak' (FG5: '2024 Base + Com Dev + Scenario 2 (accesses 2,3 and 31 + CS) PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

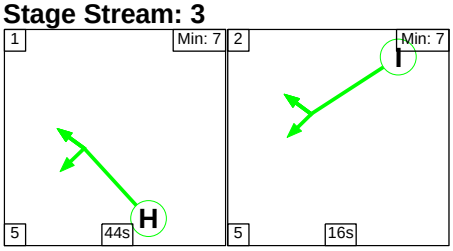
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	36
Change Point	13	42

Stage Stream: 2

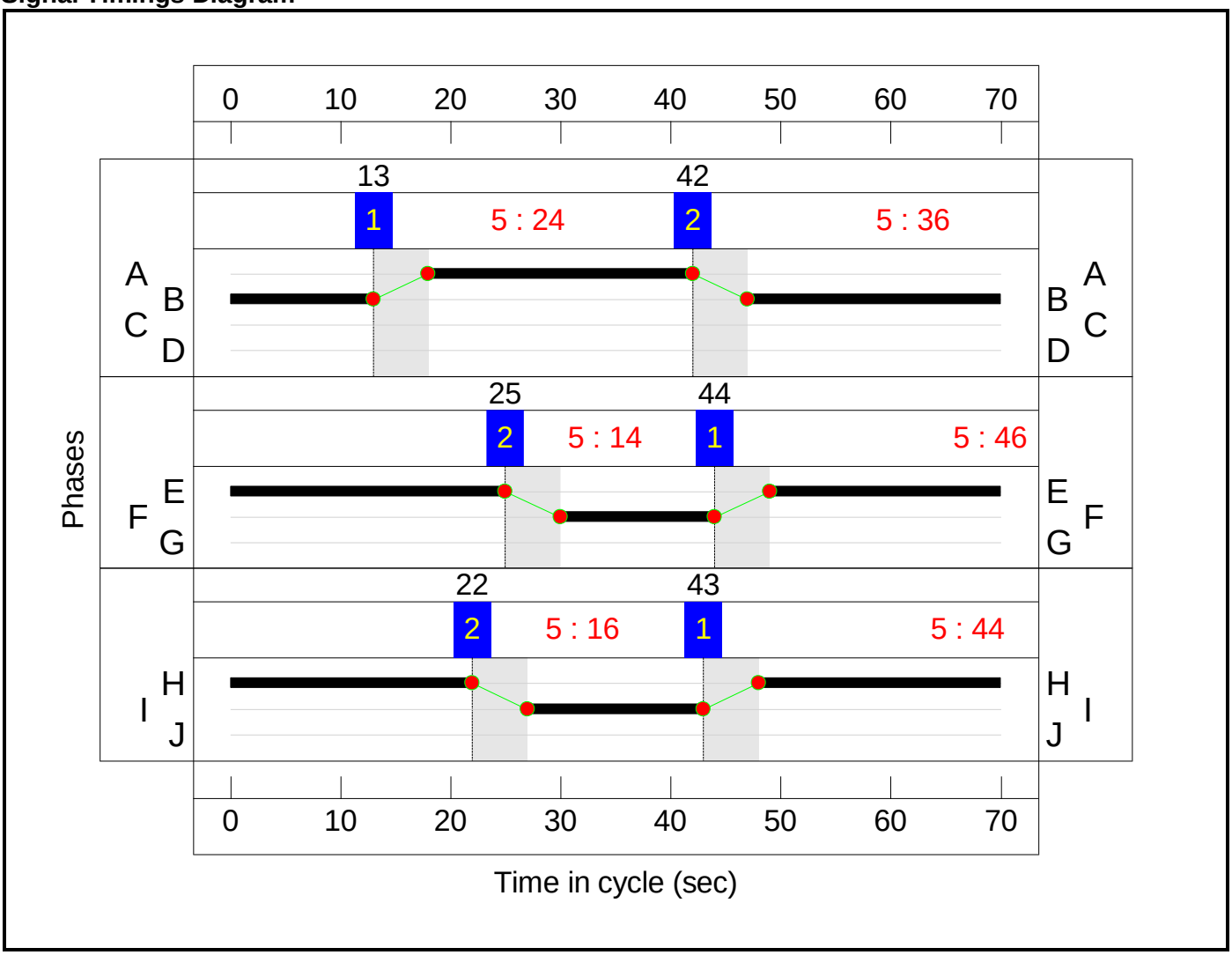
Stage	1	2
Duration	46	14
Change Point	44	25

Full Input Data And Results

Stage Stream: 3

Stage	1	2
Duration	44	16
Change Point	43	22

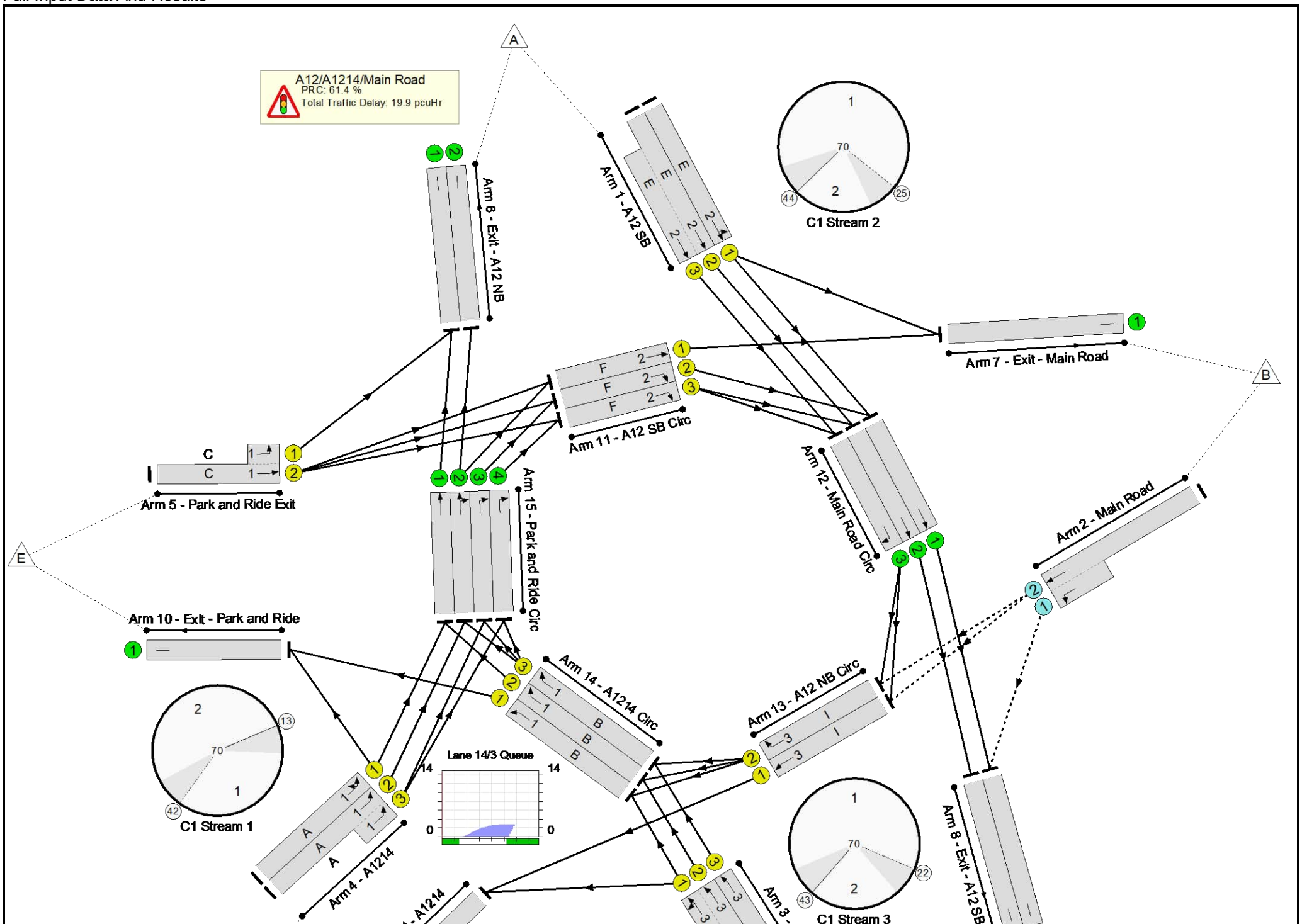
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.8%**
A12/A1214/Main Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**55.8%**
1/1	A12 SB Left Ahead	U	2	N/A	E		1	46	-	441	1955	1313	33.6%
1/2+1/3	A12 SB Ahead	U	2	N/A	E		1	46	-	775	2105:1975	1712	45.3%
2/2+2/1	Main Road Left Ahead	O	N/A	N/A	-		-	-	-	184	2015:2015	784	23.5%
3/2+3/1	A12 NB Left Ahead	U	3	N/A	H		1	44	-	997	2115:1995	1831	54.4%
3/3	A12 NB Ahead	U	3	N/A	H		1	44	-	540	1985	1276	42.3%
4/1	A1214 U-Turn Left	U	1	N/A	A		1	24	-	228	2025	723	31.5%
4/2+4/3	A1214 Left	U	1	N/A	A		1	24	-	433	2165:2035	776	55.8%
5/2+5/1	Park and Ride Exit Left Ahead	U	1	N/A	C		0	0	-	0	2015:2025	0	0.0%
6/1	Exit - A12 NB	U	N/A	N/A	-		-	-	-	846	Inf	Inf	0.0%
6/2	Exit - A12 NB	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
7/1	Exit - Main Road	U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
8/1	Exit - A12 SB	U	N/A	N/A	-		-	-	-	782	Inf	Inf	0.0%
8/2	Exit - A12 SB	U	N/A	N/A	-		-	-	-	673	Inf	Inf	0.0%
9/1	Exit - A1214	U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%
10/1	Exit - Park and Ride	U	N/A	N/A	-		-	-	-	12	Inf	Inf	0.0%
11/1	A12 SB Circ Ahead	U	2	N/A	F		1	14	-	163	2105	451	36.1%
11/2	A12 SB Circ Right	U	2	N/A	F		1	14	-	230	2245	481	47.8%
11/3	A12 SB Circ Right	U	2	N/A	F		1	14	-	136	2085	447	30.4%

Full Input Data And Results

12/1	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	661	2055	2055	32.2%
12/2	Main Road Circ Ahead	U	N/A	N/A	-		-	-	-	673	2055	2055	32.7%
12/3	Main Road Circ Right	U	N/A	N/A	-		-	-	-	238	1995	1995	11.9%
13/1	A12 NB Circ Ahead	U	3	N/A	I		1	16	-	259	2055	499	51.9%
13/2	A12 NB Circ Right	U	3	N/A	I		1	16	-	42	2055	499	8.4%
14/1	A1214 Circ Ahead	U	1	N/A	B		1	36	-	8	2075	1097	0.7%
14/2	A1214 Circ Right	U	1	N/A	B		1	36	-	622	2195	1160	53.6%
14/3	A1214 Circ Right	U	1	N/A	B		1	36	-	572	2055	1086	52.7%
15/1	Park and Ride Circ Ahead	U	N/A	N/A	-		-	-	-	846	2105	2105	40.2%
15/2	Park and Ride Circ Ahead Right	U	N/A	N/A	-		-	-	-	639	2245	2245	28.5%
15/3	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	230	2245	2245	10.2%
15/4	Park and Ride Circ Right	U	N/A	N/A	-		-	-	-	136	2105	2105	6.5%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**368**	**0**	**0**	**13.4**	**6.5**	**0.0**	**19.9**	**-**	**-**	**-**	**-**
A12/A1214/Main Road	**-**	**-**	**368**	**0**	**0**	**13.4**	**6.5**	**0.0**	**19.9**	**-**	**-**	**-**	**-**
1/1	441	441	-	-	-	0.6	0.3	-	0.9	6.9	3.6	0.3	3.8
1/2+1/3	775	775	-	-	-	1.0	0.4	-	1.5	6.8	4.5	0.4	4.9
2/2+2/1	184	184	368	0	0	0.0	0.2	-	0.2	3.9	0.3	0.2	0.4
3/2+3/1	997	997	-	-	-	1.7	0.6	-	2.3	8.2	6.0	0.6	6.6
3/3	540	540	-	-	-	0.9	0.4	-	1.3	8.6	5.1	0.4	5.5
4/1	228	228	-	-	-	1.0	0.2	-	1.3	19.9	3.2	0.2	3.4
4/2+4/3	433	433	-	-	-	2.1	0.6	-	2.7	22.7	6.0	0.6	6.7
5/2+5/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	846	846	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	12	12	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	163	163	-	-	-	1.2	0.3	-	1.4	31.8	2.9	0.3	3.2
11/2	230	230	-	-	-	0.5	0.5	-	0.9	14.4	2.1	0.5	2.6
11/3	136	136	-	-	-	0.3	0.2	-	0.5	12.8	0.9	0.2	1.1
12/1	661	661	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
12/2	673	673	-	-	-	0.0	0.2	-	0.2	1.3	0.6	0.2	0.8
12/3	238	238	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
13/1	259	259	-	-	-	1.8	0.5	-	2.4	32.7	4.9	0.5	5.4
13/2	42	42	-	-	-	0.2	0.0	-	0.3	24.9	0.7	0.0	0.7
14/1	8	8	-	-	-	0.0	0.0	-	0.0	11.3	0.1	0.0	0.1

Full Input Data And Results

14/2	622	622	-	-	-	1.0	0.6	-	1.6	9.1	2.6	0.6	3.2
14/3	572	572	-	-	-	1.0	0.6	-	1.6	9.8	2.8	0.6	3.3
15/1	846	846	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
15/2	639	639	-	-	-	0.0	0.2	-	0.2	1.1	0.0	0.2	0.2
15/3	230	230	-	-	-	0.0	0.1	-	0.1	0.9	0.0	0.1	0.1
15/4	136	136	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	61.4	Total Delay for Signalled Lanes (pcuHr):	7.16	Cycle Time (s): 70
C1	Stream: 2 PRC for Signalled Lanes (%):	88.2	Total Delay for Signalled Lanes (pcuHr):	5.15	Cycle Time (s): 70
C1	Stream: 3 PRC for Signalled Lanes (%):	65.3	Total Delay for Signalled Lanes (pcuHr):	6.19	Cycle Time (s): 70
	PRC Over All Lanes (%):	61.4	Total Delay Over All Lanes(pcuHr):	19.87	

Appendix G Junction 6: A12/Newbourne Road ARCADY Results

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

Junctions 10

ARCADY 10 - Roundabout Module

Filename: 20220120_A12_Foxhall_Road_2016_base revised v4.j10
Path: N:\Vectos Job Data\2023\VN232767
Report generation date: 11/08/2023 16:45:51

Summary of junction performance

	PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2024 Base + Com Dev				
Arm 1	D1	215.8	393.39	1.21	F
Arm 2		8.3	91.16	0.94	F
Arm 3		249.9	431.93	1.22	F
Arm 4		6.2	60.53	0.89	F
	2024 Base + Com Dev + EA3 S1				
Arm 1	D2	219.2	400.53	1.21	F
Arm 2		8.5	93.20	0.94	F
Arm 3		326.0	551.61	1.27	F
Arm 4		6.7	65.42	0.90	F
	2024 Base + Com Dev + EA3 S2				
Arm 1	D3	216.6	395.19	1.21	F
Arm 2		8.4	92.40	0.94	F
Arm 3		273.5	472.25	1.24	F
Arm 4		6.4	62.35	0.89	F

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

File summary

File Description

Title	A12/ Foxhall Road Roundabout
Location	Ipswich
Site number	
Date	13/01/2022
Version	1
Status	(new file)
Identifier	
Client	SPR
Jobnumber	404.05356.00006
Enumerator	SLR\llong
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2024 Base + Com Dev	PM	ONE HOUR	16:45	18:15	15

2024 Base + Com Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A12/ Foxhall Road	Standard Roundabout		1, 2, 3, 4	368.21	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	368.21	F

Arms

Arms

Arm	Name	Description	No give-way line
1	A12 N		
2	Newbourne Road		
3	A12 S		
4	Foxhall Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1	6.09	7.72	1.0	43.3	72.9	16.0		
2	3.93	3.93	9.4	25.1	72.9	30.0		
3	7.72	7.86	3.0	23.5	72.9	23.0		
4	3.57	4.12	16.2	27.5	72.9	19.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.568	2069
2	0.420	1202
3	0.617	2452
4	0.443	1295

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

Traffic Demand

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	2112	100.000
2		✓	320	100.000
3		✓	2295	100.000
4		✓	360	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	109	1555	448
	2	132	0	117	71
	3	1879	86	0	330
	4	205	28	127	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	3	4	4
	2	1	0	2	2
	3	3	2	0	5
	4	2	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	1.21	393.39	215.8	F
2	0.94	91.16	8.3	F
3	1.22	431.93	249.9	F
4	0.89	60.53	6.2	F

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1590	179	1967	0.808	1573	4.1	9.124	A
2	241	1587	536	0.449	238	0.8	12.118	B
3	1728	485	2153	0.803	1712	4.0	8.158	A
4	271	1564	601	0.451	268	0.8	10.950	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1899	212	1948	0.975	1848	16.8	28.440	D
2	288	1865	419	0.686	283	2.0	25.878	D
3	2063	571	2099	0.983	2004	18.9	28.676	D
4	324	1832	482	0.671	319	1.9	22.026	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	2325	242	1931	1.204	1927	116.5	131.707	F
2	352	1962	379	0.930	334	6.6	64.699	F
3	2527	621	2069	1.221	2065	134.2	140.069	F
4	396	1906	449	0.882	383	5.3	47.910	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	2325	247	1929	1.206	1928	215.8	314.121	F
2	352	1967	377	0.935	345	8.3	91.156	F
3	2527	628	2065	1.224	2064	249.9	338.429	F
4	396	1910	448	0.885	393	6.2	60.528	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1899	223	1942	0.978	1933	207.2	393.391	F
2	288	1952	383	0.751	307	3.5	54.452	F
3	2063	605	2079	0.992	2079	246.0	431.932	F
4	324	1907	449	0.721	337	2.9	35.631	E

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1590	197	1957	0.813	1947	118.0	301.757	F
2	241	1944	387	0.623	248	1.8	27.516	D
3	1728	570	2100	0.823	2091	155.1	345.889	F
4	271	1893	455	0.595	276	1.6	21.171	C

Appendix H Junction 11: A12/B1438 ARCADY Results

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

Junctions 10

ARCADY 10 - Roundabout Module

Filename: J10_2020.07.24_J26_Model_v16_new flows - v1.j10
Path: N:\Vectos Job Data\2023\VN232767\B1438
Report generation date: 11/08/2023 11:52:48

Summary of junction performance

	5-6 PM					
	Set ID	Queue (Veh)	95% Queue (Veh)	Delay (s)	RFC	LOS
	2023 Base + Comm Early Years					
A - A12 North	D15	39.0	105.8	81.76	1.04	F
B - A12 West		48.6	120.3	88.74	1.05	F
C - B1438 East		16.8	53.9	100.89	1.02	F
	2023 Base + Comm EA3 S1					
A - A12 North	D20	2.2	4.5	5.07	0.69	A
B - A12 West		54.8	127.6	96.38	1.06	F
C - B1438 East		19.0	56.4	111.41	1.04	F
	2023 Base + Comm EA3 S2					
A - A12 North	D30	1.8	3.5	4.34	0.65	A
B - A12 West		70.8	142.9	126.17	1.08	F
C - B1438 East		24.5	63.0	145.64	1.07	F

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	A12 / B1438
Location	52° 5'2.99"N, 1°17'16.92"E
Site number	26
Date	01/04/2019
Version	
Status	Skeleton Model
Identifier	
Client	
Jobnumber	
Enumerator	JV
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	mph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75	✓					0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2023 Base + Comm Early Years	5-6 PM	ONE HOUR	16:45	18:15	15	✓
D20	2023 Base + Comm EA3 S1	5-6 PM	ONE HOUR	16:45	18:15	15	✓
D30	2023 Base + Comm EA3 S2	5-6 PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2023 Base + Comm Early Years, 5-6 PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J26	A12 / B1438	Standard Roundabout		A, C, B	87.69	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	87.69	F

Arms

Arms

Arm	Name	Description	No give-way line
A	A12 North		
B	A12 West		
C	B1438 East		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A12 North	8.10	10.50	4.8	26.8	78.0	29.0		
B - A12 West	6.70	9.60	28.6	21.5	78.0	35.8		
C - B1438 East	2.90	8.30	25.8	20.6	78.0	42.0		

Exit Restrictions

Arm	Exit restriction present	Linked exit restriction present	Maximum capacity (PCU/hr)
A - A12 North	✓		1680
B - A12 West			
C - B1438 East			

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - A12 North	Direct	Please refer column "V" in "modelled vs Observed" worksheet in "Queue validation" spreadsheet	-150
B - A12 West	None		
C - B1438 East	Direct	Please refer column "V" in "modelled vs Observed" worksheet in "Queue validation" spreadsheet	-200

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A12 North	0.641	2627
B - A12 West	0.614	2649
C - B1438 East	0.481	1583

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2023 Base + Comm Early Years	5-6 PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A12 North		ONE HOUR	✓	1379	100.000
B - A12 West		ONE HOUR	✓	1548	100.000
C - B1438 East		ONE HOUR	✓	516	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	7	1211	161
	B - A12 West	1333	2	213
	C - B1438 East	214	302	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	0	6	2
	B - A12 West	4	0	2
	C - B1438 East	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A12 North	1.04	81.76	39.0	105.8	F	1265	1898
B - A12 West	1.05	88.74	48.6	120.3	F	1420	2131
C - B1438 East	1.02	100.89	16.8	53.9	F	474	711

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1038	260	162	2388	0.435	1035	1166	0.0	0.8	2.655	A
B - A12 West	1165	291	166	2448	0.476	1162	1136	0.0	0.9	2.791	A
C - B1438 East	389	97	916	1098	0.354	387	281	0.0	0.5	5.044	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1240	310	193	2369	0.523	1238	1395	0.8	1.1	3.182	A
B - A12 West	1392	348	198	2428	0.573	1390	1360	0.9	1.3	3.461	A
C - B1438 East	464	116	1095	1008	0.461	463	336	0.5	0.8	6.589	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1518	380	224	1507	1.008	1441	1616	1.1	20.5	37.288	E
B - A12 West	1704	426	229	1671	1.020	1611	1580	1.3	24.7	38.900	E
C - B1438 East	569	142	1274	588	0.967	534	390	0.8	9.4	50.678	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1518	380	224	1460	1.040	1444	1616	20.5	39.0	81.764	F
B - A12 West	1704	426	231	1621	1.051	1609	1585	24.7	48.6	88.742	F
C - B1438 East	569	142	1277	557	1.021	539	391	9.4	16.8	100.891	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1240	310	220	2352	0.527	1391	1586	39.0	1.1	4.413	A
B - A12 West	1392	348	226	2412	0.577	1580	1532	48.6	1.4	5.513	A
C - B1438 East	464	116	1230	940	0.494	528	380	16.8	1.0	10.148	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1038	260	162	2388	0.435	1040	1172	1.1	0.8	2.674	A
B - A12 West	1165	291	167	2447	0.476	1167	1143	1.4	0.9	2.816	A
C - B1438 East	389	97	919	1096	0.355	391	282	1.0	0.6	5.115	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.76	0.15	0.90	1.40	1.46			N/A	N/A
B - A12 West	0.90	0.14	0.95	1.50	1.51			N/A	N/A
C - B1438 East	0.54	0.54	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.09	0.03	0.30	1.57	5.32			N/A	N/A
B - A12 West	1.33	0.03	0.31	1.99	6.63			N/A	N/A
C - B1438 East	0.84	0.03	0.35	1.97	3.80			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	20.49	0.78	13.00	48.13	63.64			N/A	N/A
B - A12 West	24.68	1.16	17.37	54.86	70.74			N/A	N/A
C - B1438 East	9.38	0.17	4.29	24.16	33.84			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	38.99	3.15	29.22	83.44	105.77			N/A	N/A
B - A12 West	48.56	6.60	39.11	97.30	120.27			N/A	N/A
C - B1438 East	16.83	0.48	10.11	40.35	53.95			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.12	0.03	0.32	2.30	5.71			N/A	N/A
B - A12 West	1.38	0.03	0.32	2.77	7.13			N/A	N/A
C - B1438 East	0.99	0.03	0.33	2.22	4.91			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.77	0.03	0.29	1.22	3.36			N/A	N/A
B - A12 West	0.91	0.03	0.29	1.17	3.79			N/A	N/A
C - B1438 East	0.55	0.03	0.28	0.71	2.10			N/A	N/A

2023 Base + Comm EA3 S1, 5-6 PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J26	A12 / B1438	Standard Roundabout		A, C, B	61.10	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	61.10	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2023 Base + Comm EA3 S1	5-6 PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A12 North		ONE HOUR	✓	1418	100.000
B - A12 West		ONE HOUR	✓	1596	100.000
C - B1438 East		ONE HOUR	✓	516	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	0	1222	196
	B - A12 West	1354	0	242
	C - B1438 East	214	302	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	0	6	20
	B - A12 West	4	0	12
	C - B1438 East	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A12 North	0.69	5.07	2.2	4.5	A	1301	1952
B - A12 West	1.06	96.38	54.8	127.6	F	1465	2197
C - B1438 East	1.04	111.41	19.0	56.4	F	473	710

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1068	267	182	2316	0.461	1064	1176	0.0	0.8	2.868	A
B - A12 West	1202	300	160	2424	0.496	1198	1143	0.0	1.0	2.926	A
C - B1438 East	388	97	917	1097	0.354	386	329	0.0	0.5	5.048	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1275	319	217	2293	0.556	1273	1407	0.8	1.2	3.527	A
B - A12 West	1435	359	192	2405	0.597	1433	1368	1.0	1.5	3.695	A
C - B1438 East	464	116	1097	1007	0.461	463	393	0.5	0.8	6.597	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1561	390	250	2271	0.688	1558	1621	1.2	2.2	5.023	A
B - A12 West	1757	439	220	1706	1.030	1652	1652	1.5	27.9	41.677	E
C - B1438 East	568	142	1342	578	0.984	530	466	0.8	10.4	55.060	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1561	390	250	2271	0.688	1561	1621	2.2	2.2	5.071	A
B - A12 West	1757	439	221	1660	1.059	1650	1658	27.9	54.8	96.378	F
C - B1438 East	568	142	1345	549	1.035	534	466	10.4	19.0	111.407	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1275	319	250	2271	0.561	1278	1620	2.2	1.3	3.641	A
B - A12 West	1435	359	222	2387	0.601	1648	1415	54.8	1.5	6.656	A
C - B1438 East	464	116	1102	1005	0.462	536	427	19.0	0.9	8.969	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1068	267	183	2316	0.461	1069	1183	1.3	0.9	2.891	A
B - A12 West	1202	300	162	2423	0.496	1204	1150	1.5	1.0	2.957	A
C - B1438 East	388	97	921	1095	0.355	390	330	0.9	0.6	5.114	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.85	0.55	1.00	1.40	1.45			N/A	N/A
B - A12 West	0.98	0.13	0.98	1.40	1.75			N/A	N/A
C - B1438 East	0.54	0.54	1.00	1.40	1.45			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.24	0.05	0.50	2.94	4.49			N/A	N/A
B - A12 West	1.46	0.03	0.31	2.33	7.38			N/A	N/A
C - B1438 East	0.84	0.03	0.34	1.95	3.87			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	2.16	0.03	0.27	2.16	2.16			N/A	N/A
B - A12 West	27.87	2.28	20.96	58.98	74.54			N/A	N/A
C - B1438 East	10.41	0.25	5.56	25.65	34.97			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	2.18	0.03	0.26	2.18	2.18			N/A	N/A
B - A12 West	54.77	9.81	45.86	104.88	127.57			N/A	N/A
C - B1438 East	18.96	0.97	12.63	43.21	56.40			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.29	0.17	1.17	1.95	2.56			N/A	N/A
B - A12 West	1.53	0.03	0.32	2.93	7.93			N/A	N/A
C - B1438 East	0.87	0.03	0.31	1.54	4.32			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.86	0.06	0.73	1.53	1.93			N/A	N/A
B - A12 West	0.99	0.03	0.28	1.06	3.88			N/A	N/A
C - B1438 East	0.55	0.03	0.28	0.55	1.93			N/A	N/A

2023 Base + Comm EA3 S2, 5-6 PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J26	A12 / B1438	Standard Roundabout		A, C, B	80.39	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	80.39	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2023 Base + Comm EA3 S2	5-6 PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A12 North		ONE HOUR	✓	1383	100.000
B - A12 West		ONE HOUR	✓	1603	100.000
C - B1438 East		ONE HOUR	✓	523	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	0	1222	161
	B - A12 West	1381	0	222
	C - B1438 East	217	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A12 North	B - A12 West	C - B1438 East
From	A - A12 North	0	6	2
	B - A12 West	4	0	2
	C - B1438 East	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A12 North	0.65	4.34	1.8	3.5	A	1269	1904
B - A12 West	1.08	126.17	70.8	142.9	F	1471	2206
C - B1438 East	1.07	145.64	24.5	63.0	F	480	720

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1041	260	167	2388	0.436	1038	1199	0.0	0.8	2.661	A
B - A12 West	1207	302	162	2458	0.491	1203	1146	0.0	1.0	2.861	A
C - B1438 East	394	98	917	1093	0.360	392	287	0.0	0.6	5.116	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1243	311	199	2368	0.525	1242	1434	0.8	1.1	3.192	A
B - A12 West	1441	360	195	2438	0.591	1439	1372	1.0	1.4	3.598	A
C - B1438 East	470	118	1097	1003	0.469	469	344	0.6	0.9	6.721	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1523	381	225	2352	0.647	1520	1620	1.1	1.8	4.312	A
B - A12 West	1765	441	218	1668	1.058	1627	1651	1.4	35.8	50.678	F
C - B1438 East	576	144	1343	562	1.024	526	402	0.9	13.3	66.508	F

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1523	381	225	2352	0.647	1523	1620	1.8	1.8	4.340	A
B - A12 West	1765	441	220	1630	1.083	1625	1656	35.8	70.8	126.172	F
C - B1438 East	576	144	1345	540	1.066	531	402	13.3	24.5	145.635	F

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1243	311	225	2352	0.529	1246	1620	1.8	1.1	3.262	A
B - A12 West	1441	360	220	1648	0.874	1625	1411	70.8	24.8	108.602	F
C - B1438 East	470	118	1101	549	0.856	530	370	24.5	9.5	124.349	F

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A12 North	1041	260	180	2380	0.438	1043	1300	1.1	0.8	2.694	A
B - A12 West	1207	302	178	2448	0.493	1302	1172	24.8	1.0	3.418	A
C - B1438 East	394	98	921	1091	0.361	429	302	9.5	0.6	5.741	A

Queue Variation Results for each time segment

16:45 - 17:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.77	0.55	1.00	1.40	1.45			N/A	N/A
B - A12 West	0.96	0.10	0.93	1.48	1.82			N/A	N/A
C - B1438 East	0.56	0.07	0.73	1.35	1.42			N/A	N/A

17:00 - 17:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.10	0.05	0.63	2.42	3.49			N/A	N/A
B - A12 West	1.43	0.03	0.30	1.87	6.90			N/A	N/A
C - B1438 East	0.87	0.03	0.33	1.95	4.17			N/A	N/A

17:15 - 17:30

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.81	0.03	0.26	1.81	1.81			N/A	N/A
B - A12 West	35.82	6.63	30.07	67.65	81.98			N/A	N/A
C - B1438 East	13.35	0.85	9.09	29.55	38.20			N/A	N/A

17:30 - 17:45

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.82	0.03	0.26	1.82	1.82			N/A	N/A
B - A12 West	70.82	21.04	63.57	121.76	142.91			N/A	N/A
C - B1438 East	24.55	2.48	18.98	50.41	63.02			N/A	N/A

17:45 - 18:00

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	1.13	0.32	1.09	1.57	1.83			N/A	N/A
B - A12 West	24.78	15.36	23.81	32.14	34.80			N/A	N/A
C - B1438 East	9.49	3.85	8.53	13.88	15.72			N/A	N/A

18:00 - 18:15

Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
A - A12 North	0.78	0.08	0.81	1.41	1.41			N/A	N/A
B - A12 West	0.98	0.03	0.28	0.98	3.28			N/A	N/A
C - B1438 East	0.57	0.03	0.27	0.57	1.55			N/A	N/A

Appendix I Accident Data

East Anglia THREE Onshore Cable Works

Traffic and Transport Technical Note

ScottishPower Renewables

SLR Project No.: 404.05356.00006

15 November 2023

Accidents between dates **01/01/2020 and 30/04/2023** (40) months

Selection: **Notes:**

Selected using Manual Selection

20967772 15/07/2020 Wednesday Time 1120 Vehicles 3 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes

V1, V2 AND V3 WERE TRAVELLING ALONG A CARRIAGEWAY, V1 WAS IN ONE LANE, V2 AND V3 IN ANOTHER. V1 ATTEMPTED TO CHANGE LANES IN FRONT OF V2 CAUSING THEM TO BRAKE SHARPLY, THIS HAS RESULTED IN V3 COLLIDING INTO THE REAR OF V2. V1 FTS

Occurred on A14

Causation

	Factor:	Participant:	Confidence:
1st:	Exceeding speed limit	Vehicle 1	Very Likely
2nd:	Poor turn or manoevre	Vehicle 1	Very Likely
3rd:	Sudden braking	Vehicle 2	
4th:			
5th:			
6th:			

Vehicle Reference 1 Goods vehicle - unknown weight Changing lane to right
No skidding, jack-knifing or overturning
First point of impact Age of Driver Breath test Driver not contacted
Vehicle direction S to N

Journey Purpose: 6

Vehicle Reference 2 Car Stopping
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 33 Breath test Not requested
Vehicle direction E to W

Journey Purpose: 6

Casualty Reference: 1 Age: 33 Male Driver/rider Severity: Slight

Vehicle Reference 3 Goods vehicle - unknown weight Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 41 Breath test Not requested
Vehicle direction E to W

Journey Purpose: Journey as part of work

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211080996 14/07/2021 Wednesday Time 1645 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout
V002 HAS STOPPED AT JUNCTION WITH ROUNDABOUT TO TURN LEFT ONTO EASTBOUND SLIP ROAD TO DUAL CARRIAGEWAY. DRIVER HAS LOOKED LEFT AND HAS BEGUN TO MOVE OFF, BEFORE STOPPING AGAIN, AT WHICH POINT V001 HAS GONE INTO THE REAR OF V002.

Occurred on IPSWICH ROAD NEAR JUNCTION WITH BRAMFORD ROAD (B1113)

Causation

	Factor:	Participant:	Confidence:
1st:	Junction restart	Vehicle 2	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:	Inexperienced or learner driver/rider	Vehicle 1	Possible
4th:	Inexperienced or learner driver/rider	Vehicle 2	Possible
5th:			
6th:			

Vehicle Reference 1 Car Waiting to turn left
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 29 Breath test Negative
Vehicle direction NE to S

Journey Purpose: Commuting to/from work

Vehicle Reference 2 Car Waiting to turn left
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 33 Breath test Negative
Vehicle direction NE to S

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 33 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211109363 09/11/2021 Tuesday Time 0755 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Wet/Damp Daylight
Special Conditions None Road Type Single 3 lanes

V2 HAS PULLED UP AT THE ROUNDABOUT WAITING TO TURN LEFT AND HEAD UP THE ON SLIP. V1 HAS PULLED UP BEHIND V2 WANTING TO GO THE SAME WAY. V2 HAS MOVED SLIGHTLY BUT THEN STOPPED AGAIN BECAUSE OF TRAFFIC. V1 HAS MOVED OFF LOOKING RIGHT FOR TRAFFIC AND NOT SE
EN V2 STOPPING AND HAS COLLIDED INTO THE REAR OF V2. D2 HAS THEN HIT HER HEAD ON THE STEERING WHEEL CAUSING A BRUISE TO RIGHT EYE.

Occurred on IPSWICH ROAD AT JUNCTION WITH A14

Causation

	Factor:	Participant:	Confidence:
1st:			
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 48 Breath test
Vehicle direction S to N

Journey Purpose: Journey as part of work

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 32 Breath test
Vehicle direction S to N

Journey Purpose: Journey as part of work

Casualty Reference: 1 Age: 32 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221151161 25/01/2022 Tuesday Time 1737 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Darkness: street lights present and lit
Special Conditions None Road Type Single 2 lanes
V2 HAS BEEN SAT AT JUNCTION AT ROUNDABOUT. V1 HAS PREDICTED THAT V2 WOULD MOVE OFF FROM ROUNDABOUT AND MOVED FORWARD HITTING V2 IN THE REAR.

Occurred on IPSWICH ROAD

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Offside Age of Driver 49 Breath test Negative
Vehicle direction E to W

Journey Purpose: Other/Not known

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 43 Breath test Negative
Vehicle direction E to W

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 43 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221154309 16/03/2022 Wednesday Time 1232 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout

V001 HAS COMMITTED TO THE SLIP ROAD FROM A14 LANE 2 SUDDENLY, CUTTING ACROSS THE PATH OF V002. V002 HAS SOUNDED HIS HORN AS HE AS ALSO TAKEN THE OFFSLIP. V002 HAS BEEN IN THE LEFT LANE ON THE SLIP ROAS WHEN V001 HAS CUT ACROSS HIM AGAIN, CAUSING V002 TO SWERVE TO AVOID HIM AND FAIL TO BRAKE FOR THE ROUNDABOUT IN TIME, CAUSING HIM TO HIT THE DIRECTIONAL SIGNS ON THE ROUNDABOUT. DRIVER OF V001 HAS STOPPED TO MAKE SURE DRIVER OF V002 WAS OK, AND HAS THEN CARRIED ON HIS JOURNEY

Occurred on A14 NEAR JUNCTION WITH BRAMFORD ROAD (B1113)

Causation

	Factor:	Participant:	Confidence:
1st:	Aggressive driving	Vehicle 1	Very Likely
2nd:	Junction overshoot	Vehicle 2	Very Likely
3rd:	Loss of control	Vehicle 2	Possible
4th:	Inexperienced or learner driver/rider	Vehicle 2	Possible
5th:	Swerved	Vehicle 1	Very Likely
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Did not impact Age of Driver Breath test Not applicable
Vehicle direction SE to W

Journey Purpose: 6

Vehicle Reference 2 Motor Cycle over 50 cc and up to 125cc Going ahead other
Skidded
First point of impact Front Age of Driver 19 Breath test Negative
Vehicle direction SE to W

Journey Purpose: 6

Casualty Reference: 1 Age: 19 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221168058 15/04/2022 Friday Time 0001 Vehicles 1 Casualties 1 Slight
Fine without high winds Road surface Dry Darkness: no street lighting
Special Conditions None Road Type Single 3 lanes
V1 HAS BEEN TRAVELLING W/B WHEN AT THE OFFSLIP AREA A DEER HAS RAN OUT IN FRONT OF HIS VEHICLE, CAUSING HIM TO TAKE AVOIDING ACTION. THIS HAS RESULTED IN HIM LOSING CONTROL & SPINNING. OFF THE CARRIAGEWAY, ACROSS THE START OF THE OFFSLIP & INTO THE VER
GE AND TREES.

Occurred on A14 OFF SLIP, CLAYDON, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Animal or object in carriageway	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 46 Breath test Negative
Vehicle direction E to W

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 46 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221186926 13/06/2022 Monday Time 0815 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
HGV HAS NOT PAID ATTENTION TO WHAT WAS IN FRONT OF HIM. HE HAS ASSUMED THE VEHICLE IN FRONT HAS MOVED OFF AND COLLIDED WITH IT.

Occurred on BRAMFORD ROAD (B1113), CLAYDON, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 40 Breath test Negative
Vehicle direction W to E

Journey Purpose: Journey as part of work

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 23 Breath test Negative
Vehicle direction W to E

Journey Purpose: Taking pupil to/from school

Casualty Reference: 1 Age: 23 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221242249 14/11/2022 Monday Time 0750 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Wet/Damp Daylight
Special Conditions None Road Type Single 3 lanes
V2 WAS WAITING TO JOIN THE ROUNDABOUT WHEN IT WAS STRUCK FROM THE REAR BY V1, WHICH HAD MOVED OFF, THINKING V2 HAD ALREADY MOVED OFF.

Occurred on A14 NEAR JUNCTION WITH BRAMFORD ROAD (B1113), CLAYDON, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Starting
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 33 Breath test Negative
Vehicle direction SE to NW

Journey Purpose: Journey as part of work

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 44 Breath test Negative
Vehicle direction SE to W

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 44 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221245255 17/11/2022 Thursday Time 1730 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Darkness: street lights present and lit
Special Conditions None Road Type Single 3 lanes
V2 STATIONARY WAITING AT ROUNDABOUT AND V1 COLLIDED WITH REAR OF V2, BOTH VEHICLES STOPPED AND EXCHANGED TELEPHONE NUMBERS, D1 ADDED NUMBER TO PHONE AND TEXT D2 AND STATED HE WOULD PAY FOR DAMAGE AND DIDN'T WANT TO GO THROUGH INSURANCE AND D1 HAS NOW
OCKED THE NUMBER.

Occurred on A14 NEAR JUNCTION WITH BRAMFORD ROAD (B1113), CLAYDON, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Careless/Reckless/In a hurry	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 19 Breath test Driver not contacted
Vehicle direction E to W

Journey Purpose: Other/Not known

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 35 Breath test Driver not contacted
Vehicle direction E to W

Journey Purpose: Journey as part of work

Casualty Reference: 1 Age: 35 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020** **and** **30/04/2023** (40) months

Selection:

Selected using Manual Selection

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	8	8
2-wheeled motor vehicles	0	0	1	1
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	0	9	9

Casualties:

	Fatal	Serious	Slight	Total
Vehicle Driver	0	0	8	8
Passenger	0	0	0	0
Motorcyclist	0	0	1	1
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	9	9

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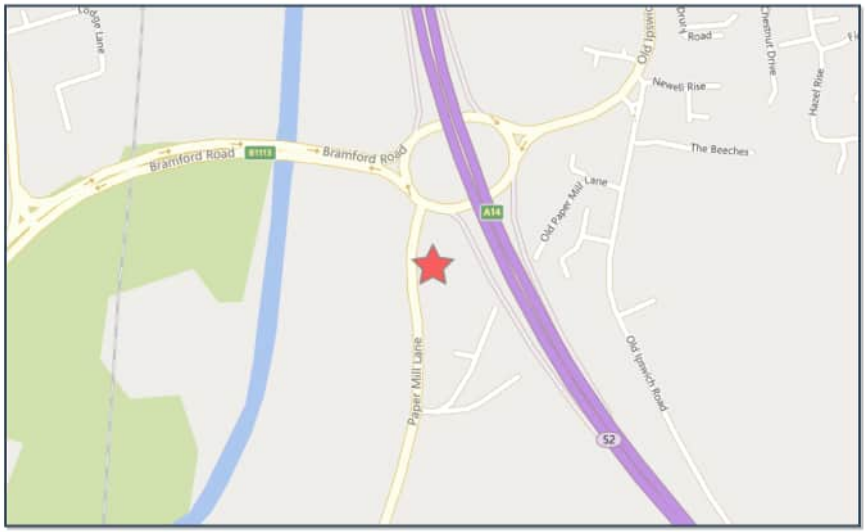
Validated Data

Crash Date:	Wednesday, November 09, 2016	**Time of Crash:**	10:43:00 PM	**Crash Reference:**	**2016370132278**
Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	1
Local Authority:	Mid Suffolk District			**OS Grid Reference:**	612880 249408
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	70				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	15	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Vehicle or pillion passenger	Female	36 - 45	Unknown or other	Unknown or other

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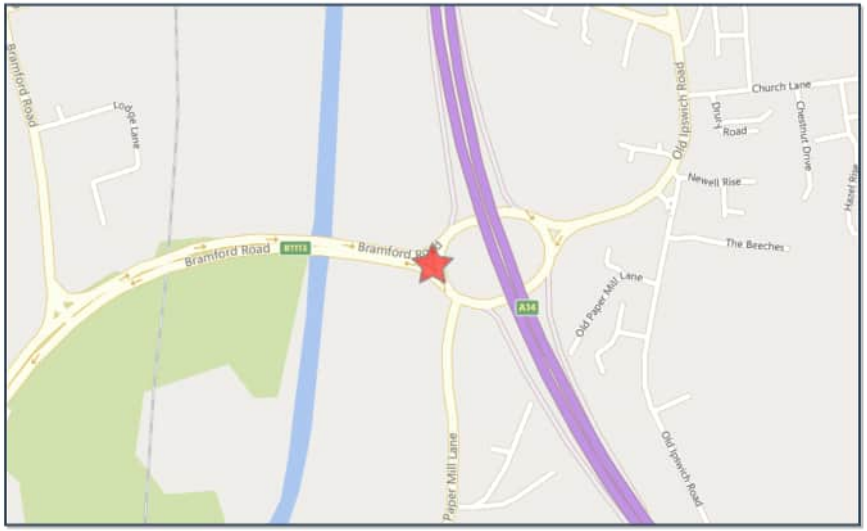
Validated Data

Crash Date:	Monday, August 21, 2017	**Time of Crash:**	5:50:00 PM	**Crash Reference:**	**2017370218598**

Highest Injury Severity:	Slight	**Road Number:**	B1113	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	4
Local Authority:	Mid Suffolk District			**OS Grid Reference:**	612819 249547
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	40				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	10	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	18	Male	16 - 20	Vehicle is slowing down or stopping	Front	Other	None	None
3	Car (excluding private hire)	12	Male	56 - 65	Vehicle is slowing down or stopping	Back	Other	None	None
4	Car (excluding private hire)	9	Female	26 - 35	Vehicle is slowing down or stopping	Back	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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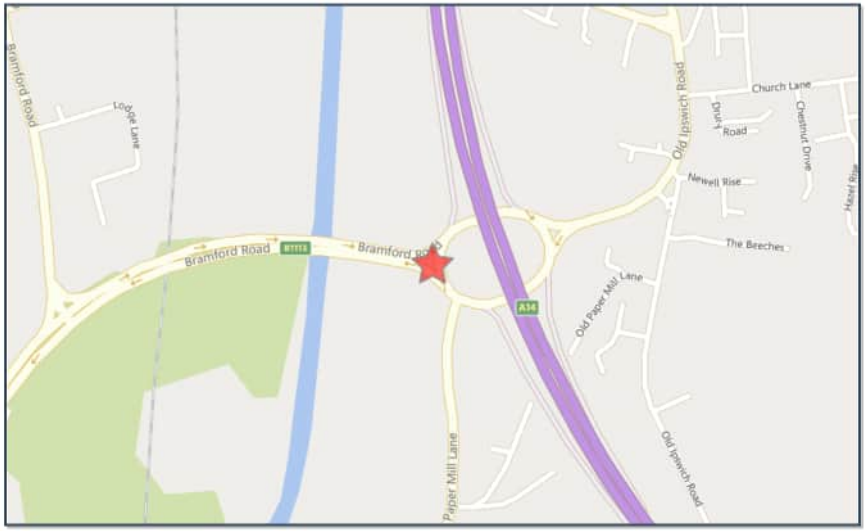
Validated Data

Crash Date:	Friday, July 20, 2018	**Time of Crash:**	7:26:00 AM	**Crash Reference:**	**2018370319130**

Highest Injury Severity:	Slight	**Road Number:**	B1113	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Mid Suffolk District			**OS Grid Reference:**	612819 249547
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Other junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	2	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	Wall or fence
2	Agricultural vehicle	4	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

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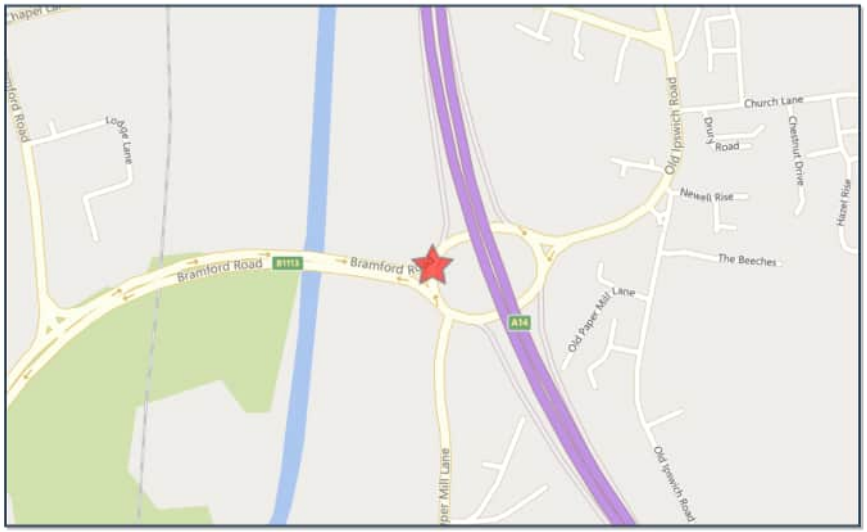
Validated Data

Crash Date:	Thursday, July 19, 2018	**Time of Crash:**	5:45:00 AM	**Crash Reference:**	**2018370336188**

Highest Injury Severity:	Serious	**Road Number:**	B1113	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	1
Local Authority:	Mid Suffolk District			**OS Grid Reference:**	612829 249569
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 50cc and up to 125cc	11	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other

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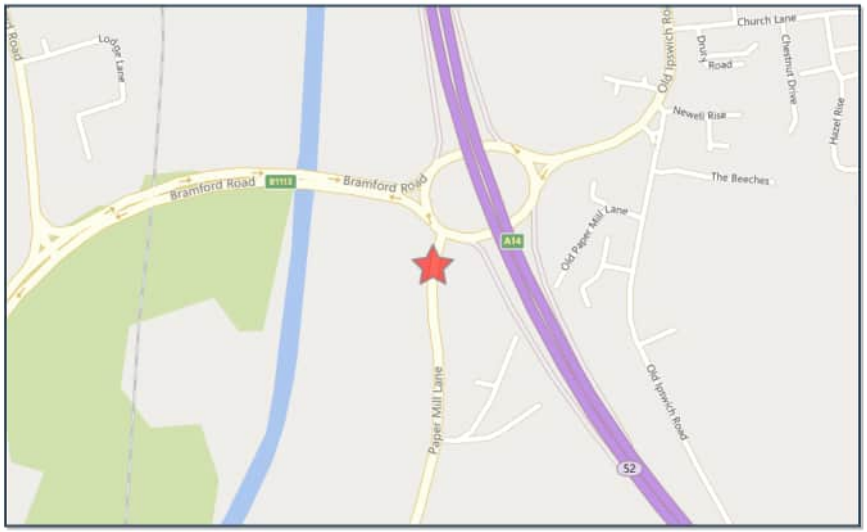
Validated Data

Crash Date:	Friday, October 05, 2018	**Time of Crash:**	8:27:00 AM	**Crash Reference:**	**2018370338860**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	2
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Mid Suffolk District			**OS Grid Reference:**	612846 249443
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	11	Female	36 - 45	Vehicle is moving off	Front	Commuting to/from work	None	None
2	Car (excluding private hire)	14	Female	46 - 55	Vehicle is waiting to proceed normally but is held up	Back	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	36 - 45	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	36 - 45	Unknown or other	Unknown or other

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Validated Data

Crash Date:	Thursday, November 28, 2019	**Time of Crash:**	6:35:00 PM	**Crash Reference:**	**2019370927135**

Highest Injury Severity:	Slight	**Road Number:**	A1071	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Babergh District			**OS Grid Reference:**	612358 243647
Weather Description:	Raining without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	30				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				

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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	3	Female	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Journey as part of work	None	None
2	Car (excluding private hire)	8	Male	46 - 55	Vehicle is in the act of turning right	Offside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211066775 24/05/2021 Monday Time 0630 Vehicles 2 Casualties 3 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
LORRY HAS BEEN IN LEFT HAND LANE. HAS NEEDED TO BE IN THE RIGHT HAND LANE BUT HAS MISSED IT. HAS STOPPED IN LEFT LANE AND REVERSED TO TRY AND MAKE TURN. THIS HAS RESULTED IN LORRY HITTING FRONT OF CAR CAUSING DAMAGE TO BONNET AND CAUSING INJURY TO 3 P
ERSONS. ALL WITH NECK AND BACK PAIN.

Occurred on BRAMFORD ROAD (B1113)

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 2	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 2	Very Likely
3rd:	Illegal turn or direction of travel	Vehicle 2	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 38 Breath test Negative
Vehicle direction NE to SW

Journey Purpose: Journey as part of work

Casualty Reference: 1 Age: 38 Male Driver/rider Severity: Slight

Casualty Reference: 2 Age: 40 Male Passenger Severity: Slight

Casualty Reference: 3 Age: 25 Male Passenger Severity: Slight

Vehicle Reference 2 Goods vehicle - unknown weight Reversing
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 42 Breath test Negative
Vehicle direction NE to NW

Journey Purpose: Journey as part of work

Accidents between dates **01/01/2020** **and** **30/04/2023** (40) months

Selection:

Selected using Manual Selection

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	1	1
2-wheeled motor vehicles	0	0	0	0
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	0	1	1

Casualties:

	Fatal	Serious	Slight	Total
Vehicle Driver	0	0	1	1
Passenger	0	0	2	2
Motorcyclist	0	0	0	0
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	3	3

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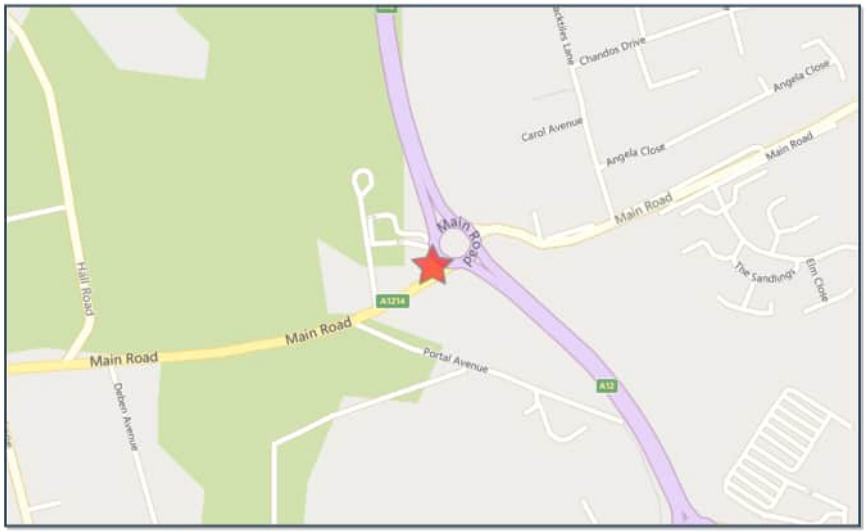
Validated Data

Crash Date:	Tuesday, January 10, 2017	**Time of Crash:**	4:45:00 PM	**Crash Reference:**	**2017370149550**

Highest Injury Severity:	Slight	**Road Number:**	A1214	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624137 246267
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	11	Female	21 - 25	Vehicle is moving off	Front	Unknown	None	None
2	Car (excluding private hire)	1	Female	26 - 35	Vehicle is waiting to proceed normally but is held up	Back	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other

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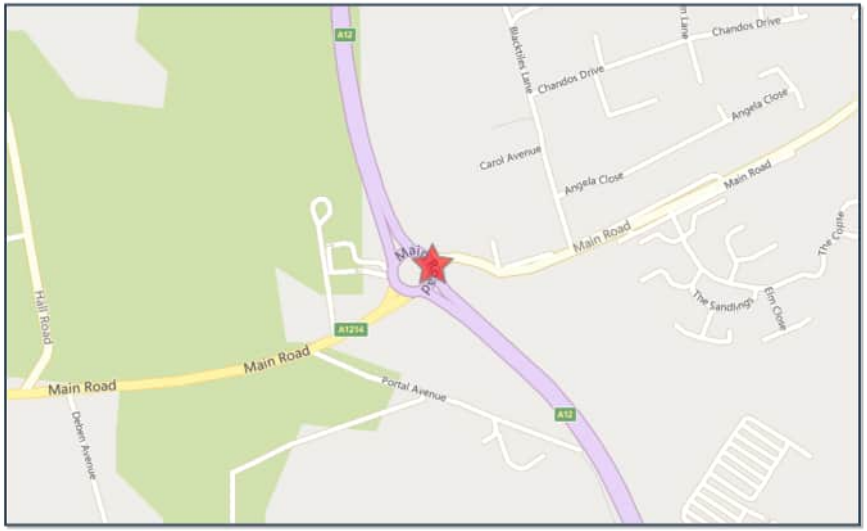
Validated Data

Crash Date:	Sunday, May 21, 2017	**Time of Crash:**	6:56:00 PM	**Crash Reference:**	**2017370202057**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624199 246316
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	50				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	13	Male	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	Central island of roundabout	None
2	Van or goods vehicle 3.5 tonnes mgw and under	7	Male	21 - 25	Vehicle is moving off	Offside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	21 - 25	Unknown or other	Unknown or other

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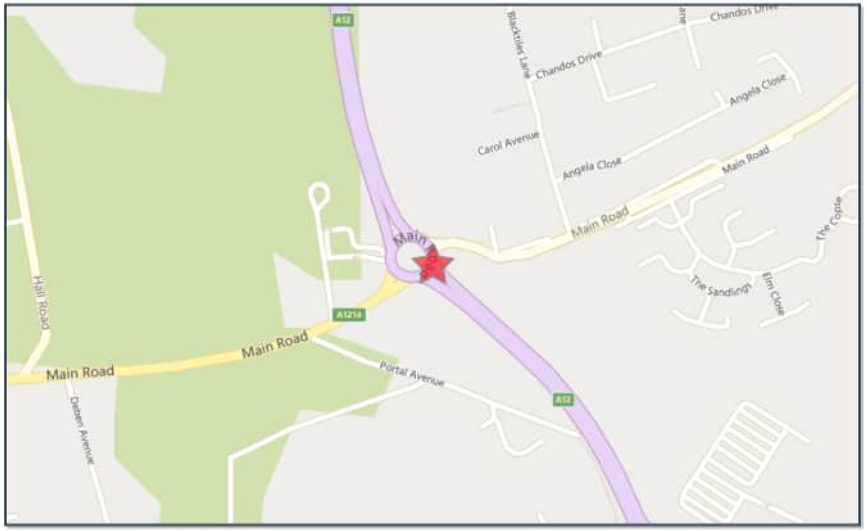
Validated Data

Crash Date:	Monday, July 08, 2019	**Time of Crash:**	8:08:00 AM	**Crash Reference:**	**2019370872127**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624203 246293
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Auto traffic signal				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Goods vehicle 7.5 tonnes mgw and over	1	Male	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Journey as part of work	None	None
2	Motorcycle over 500cc	10	Male	21 - 25	Vehicle proceeding normally along the carriageway, not on a bend	Front	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	21 - 25	Unknown or other	Unknown or other

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Validated Data

Crash Date:	Sunday, March 19, 2017	**Time of Crash:**	1:08:00 PM	**Crash Reference:**	**2017370168745**

Highest Injury Severity:	Serious	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624694 243880
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Unknown				
Junction Control:	Give way or uncontrolled				

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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	4	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Back	Unknown	None	None
2	Motorcycle over 500cc	10	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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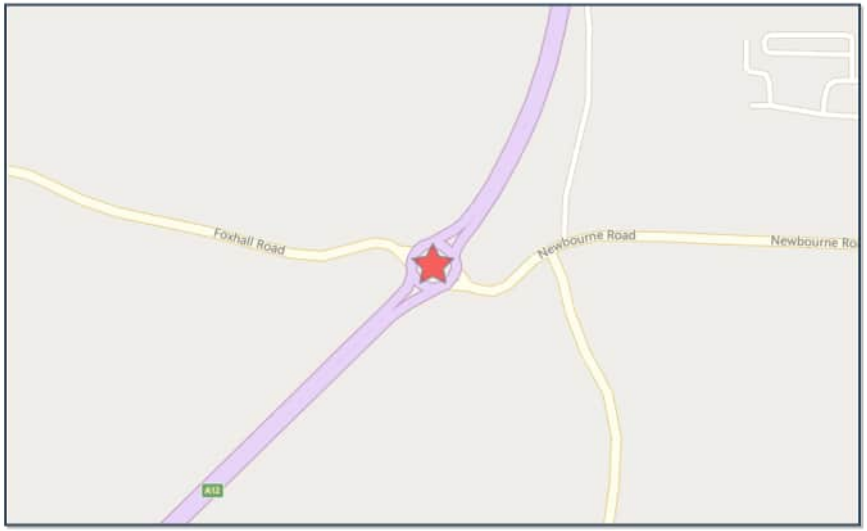
Validated Data

Crash Date:	Saturday, July 08, 2017	**Time of Crash:**	9:40:00 AM	**Crash Reference:**	**2017370205793**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624659 243903
Weather Description:	Unknown				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None
2	Car (excluding private hire)	1	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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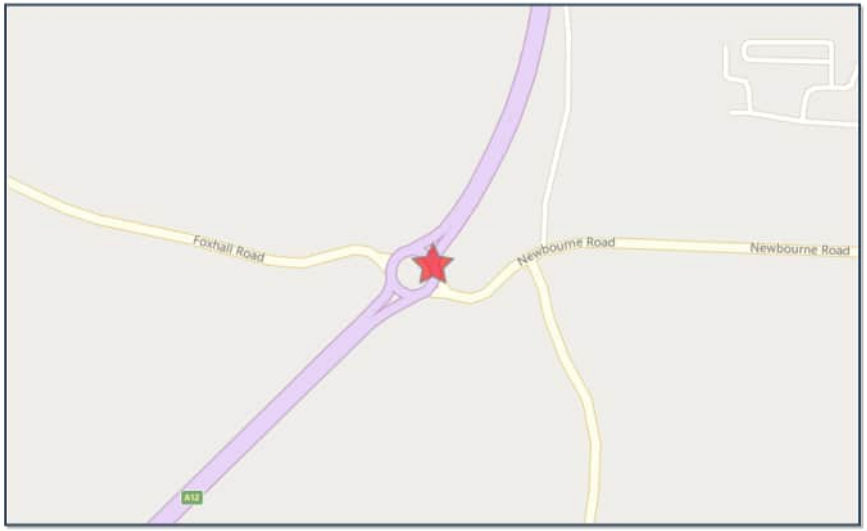
Validated Data

Crash Date:	Thursday, December 06, 2018	**Time of Crash:**	9:46:00 AM	**Crash Reference:**	**2018370353955**

Highest Injury Severity:	Slight	**Road Number:**	U0	**Number of Casualties:**	2
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624690 243915
Weather Description:	Raining without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle of unknown engine capacity	-1	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Front	Journey as part of work	None	None
2	Car (excluding private hire)	5	Male	21 - 25	Vehicle proceeding normally along the carriageway, not on a bend	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Vehicle or pillion passenger	Male	16 - 20	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	21 - 25	Unknown or other	Unknown or other

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Validated Data

Crash Date:	Wednesday, November 06, 2019	**Time of Crash:**	11:52:00 AM	**Crash Reference:**	**2019370922692**
Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	2
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	624625 243898
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Give way or uncontrolled				

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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	3	Female	66 - 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	7	Male	36 - 45	Vehicle proceeding normally along the carriageway, not on a bend	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Male	36 - 45	Unknown or other	Unknown or other
2	2	Slight	Vehicle or pillion passenger	Male	36 - 45	Unknown or other	Unknown or other

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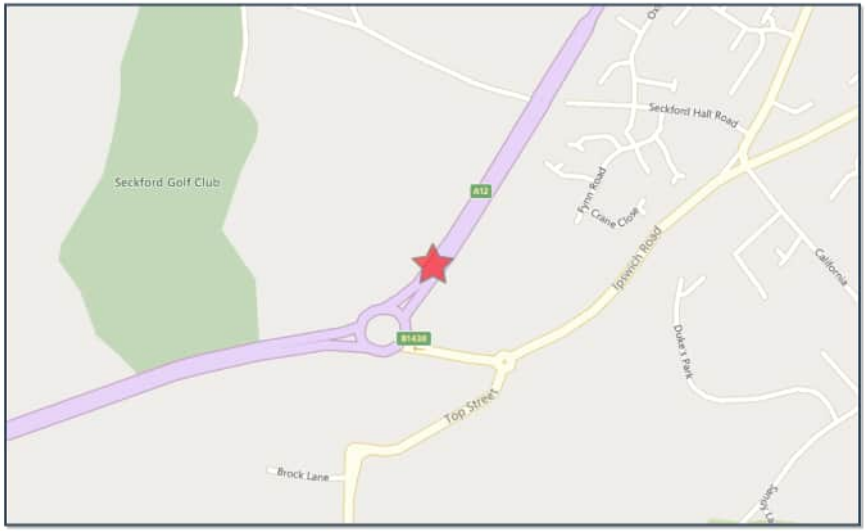
Validated Data

Crash Date:	Monday, October 23, 2017	**Time of Crash:**	1:05:00 PM	**Crash Reference:**	**2017370238221**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625448 248073
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	0	Male	56 - 65	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	1	Female	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Driver or rider	Female	46 - 55	Unknown or other	Unknown or other

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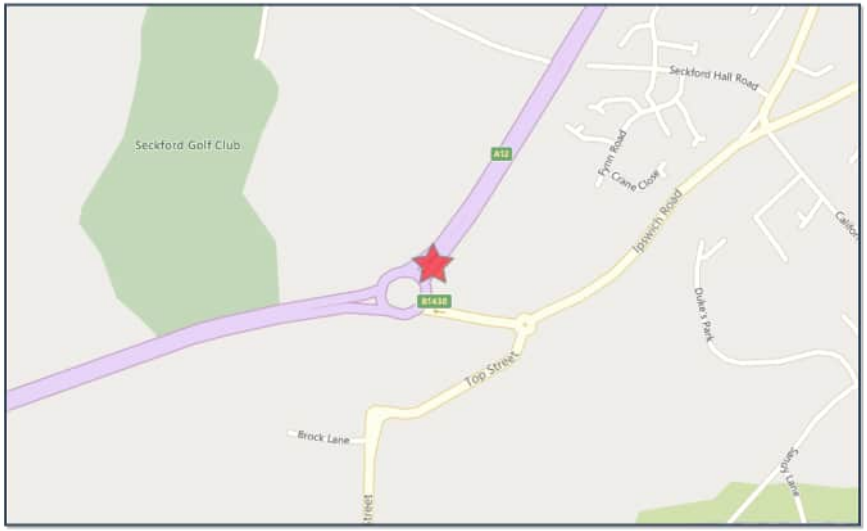
Validated Data

Crash Date:	Thursday, February 01, 2018	**Time of Crash:**	6:20:00 PM	**Crash Reference:**	**2018370265732**

Highest Injury Severity:	Serious	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625420 248015
Weather Description:	Raining without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	3	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Offside	Other	None	None
2	Motorcycle over 500cc	10	Male	56 - 65	Vehicle is in the act of turning right	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Serious	Driver or rider	Male	56 - 65	Unknown or other	Unknown or other

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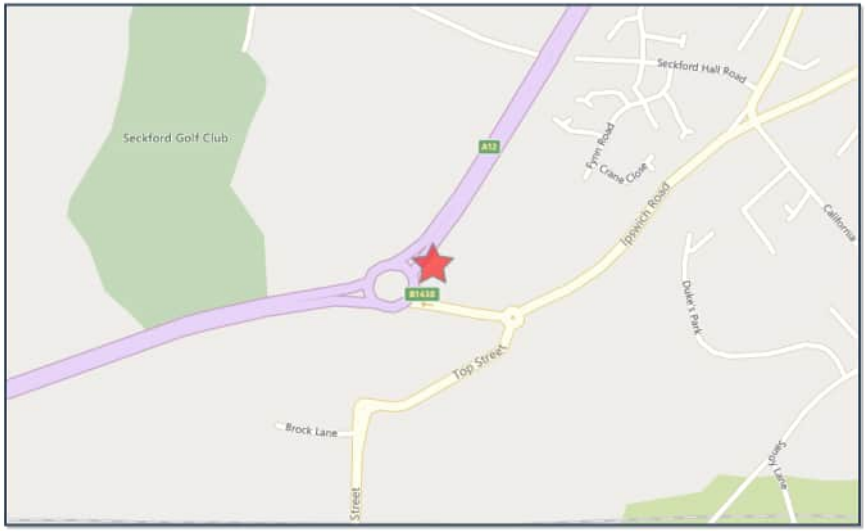
Validated Data

Crash Date:	Monday, May 14, 2018	**Time of Crash:**	3:48:00 PM	**Crash Reference:**	**2018370298289**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	2
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625438 248010
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 500cc	15	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	3	Female	21 - 25	Vehicle proceeding normally along the carriageway, not on a bend	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	46 - 55	Unknown or other	Unknown or other

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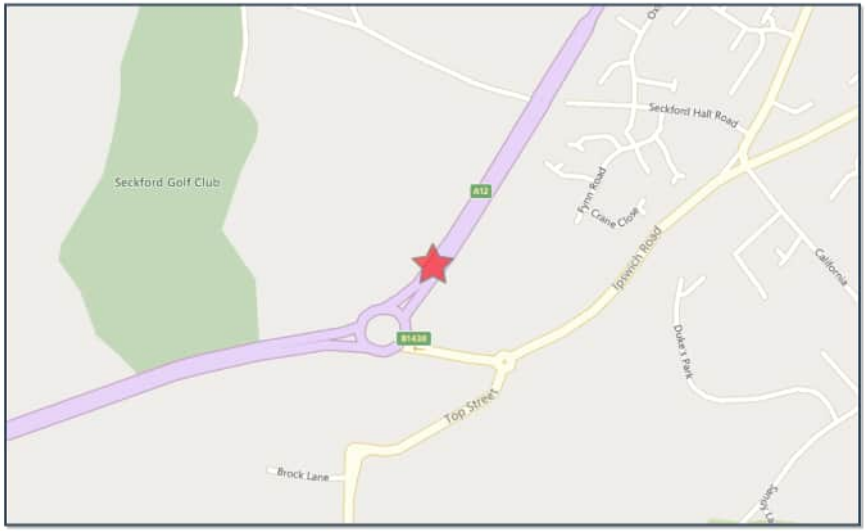
Validated Data

Crash Date:	Friday, June 29, 2018	**Time of Crash:**	4:46:00 PM	**Crash Reference:**	**2018370313189**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	3
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625448 248073
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Not Applicable				



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Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	17	Female	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Car (excluding private hire)	-1	Male	Over 75	Vehicle is slowing down or stopping	Back	Other	None	None
3	Car (excluding private hire)	3	Female	56 - 65	Vehicle is slowing down or stopping	Back	Unknown	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Female	46 - 55	Unknown or other	Unknown or other

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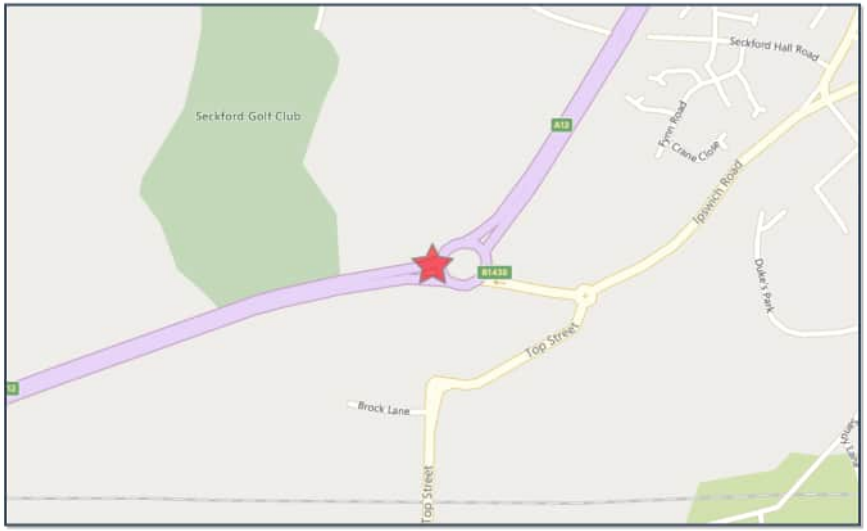
Validated Data

Crash Date:	Friday, May 10, 2019	**Time of Crash:**	4:20:00 PM	**Crash Reference:**	**2019370840842**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	1
Highway Authority:	Suffolk			**Number of Vehicles:**	3
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625330 247969
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	60				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Van or goods vehicle 3.5 tonnes mgw and under	9	Male	21 - 25	Vehicle is slowing down or stopping	Front	Commuting to/from work	None	None
2	Car (excluding private hire)	5	Male	56 - 65	Vehicle is slowing down or stopping	Back	Other	None	None
3	Car (excluding private hire)	18	Male	26 - 35	Vehicle is slowing down or stopping	Back	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Slight	Vehicle or pillion passenger	Female	56 - 65	Unknown or other	Unknown or other

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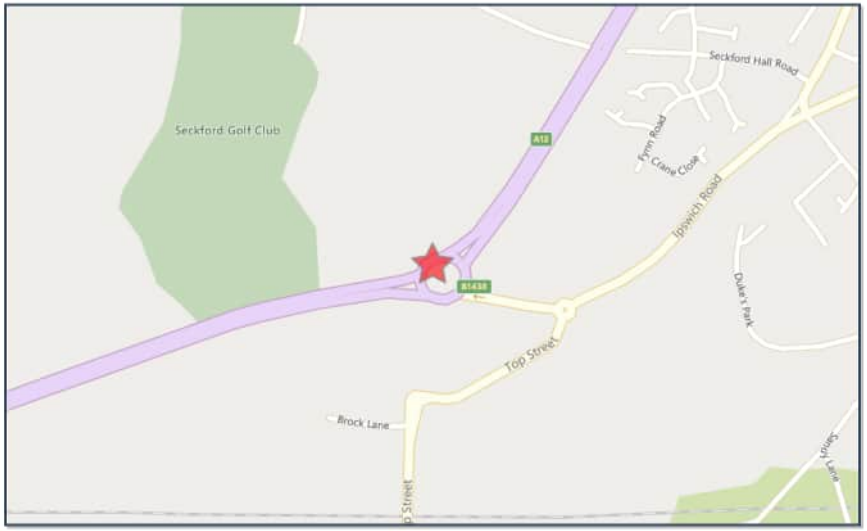
Validated Data

Crash Date:	Tuesday, June 25, 2019	**Time of Crash:**	11:18:00 PM	**Crash Reference:**	**2019370864420**

Highest Injury Severity:	Slight	**Road Number:**	A12	**Number of Casualties:**	2
Highway Authority:	Suffolk			**Number of Vehicles:**	1
Local Authority:	Suffolk Coastal District			**OS Grid Reference:**	625359 247994
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	70				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	Roundabout				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Roundabout				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	14	Male	16 - 20	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Slight	Driver or rider	Male	16 - 20	Unknown or other	Unknown or other
1	2	Slight	Vehicle or pillion passenger	Male	Unknown	Unknown or other	Unknown or other

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20935970 18/01/2020 Saturday Time 1700 Vehicles 2 Casualties 2 Slight
Fine without high winds Road surface Dry Darkness: street lights present and lit
Special Conditions None Road Type Roundabout
V2 HAS STOPPED AT ROUNDABOUT AND APPLIED BREAKS, V1 HAS NOT SEEN THIS AND COLLIDED INTO THE BACK OF V2.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Sudden braking	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Failed to look properly	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Other Vehicle Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver Breath test Driver not contacted
Vehicle direction N to S

Journey Purpose: 6

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 23 Breath test Driver not contacted
Vehicle direction N to SE

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 23 Male Driver/rider Severity: Slight

Casualty Reference: 2 Age: 26 Female Passenger Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20939891 05/03/2020 Thursday Time 1122 Vehicles 3 Casualties 2 Slight
Raining without high winds Road surface Wet/Damp Daylight
Special Conditions None Road Type Dual 2 lanes
V1 HAS NOT BRAKED IN TIME AND COLLIDED INTO THE REAR OF V2 NEAR A JUNCTION, SHUNTING IT FORWARD TO COLLIDE WITH V3

Occurred on A12 - 40 METRES FROM JUNCTION WITH A12

Causation

	Factor:	Participant:	Confidence:
1st:	Following too close	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
4th:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 72 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 72 Male Driver/rider Severity: Slight

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 71 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 2 Age: 71 Male Driver/rider Severity: Slight

Vehicle Reference 3 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 36 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20940847 11/03/2020 Wednesday Time 0855 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
V1 HAS COLLIDED WITH THE REA OF V2 THAT WAS STATIONARY ON APPROACH TO A ROUNDABOUT

Occurred on A12 - 25 METRES FROM JUNCTION WITH A12

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Possible
2nd:	Failed to look properly	Vehicle 1	Possible
3rd:	Defective brakes	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 51 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 74 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 74 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20949133 02/05/2020 Saturday Time 1120 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Single 2 lanes
V1 AND V2 WERE TRAVELLING ON FOXHALL ROAD TOWARDS THE ROUNDABOUT WITH THE A12. BOTH V1 AND V2 WERE STATIONARY AT THE ROUNDABOUT V1 HAS MISJUDGED WHEN V2 IS MOVING OFF TO JOIN THE A12 AND HAS STRUCK THE REAR OF V2.

Occurred on FOXHALL ROAD

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:	Failed to look properly	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Waiting to turn left
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 57 Breath test Negative
Vehicle direction W to E

Journey Purpose: Commuting to/from work

Vehicle Reference 2 Car Waiting to turn left
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 59 Breath test Negative
Vehicle direction W to E

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 59 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20950951 09/05/2020 Saturday Time 0905 Vehicles 1 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
VEHICLE 1 (MOTORCYCLE) WAS TRAVELLING ON DUAL CARRIAGEWAY WHEN A MUNTJAC DEER HAS ENTERED CARRIAGEWAY AND COLLIDED WITH V1, CAUSING RIDER TO FALL OFF.

Occurred on A12 - 66 METRES FROM JUNCTION WITH A12

Causation

	Factor:	Participant:	Confidence:
1st:			
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 17 Breath test Negative
Vehicle direction S to N

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 17 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20963890 12/07/2020 Sunday Time 1937 Vehicles 1 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
RIDER HAS BEEN SEEN ACCELELORATING IN LANE TWO BEFORE PULLING A WHEELIE, WHILST ACCELORATING HARDER, AT WHICH POINT HE HAS LOST CONTROL OF THE BIKE AND FALLEN OFF. BIKE HAS SLID ALONG THE ROAD ON ITS N/S SPILLING FUEL ACROSS TWO LANES.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:	Loss of control	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Motorcycle over 500cc Overtaking moving vehicle O/S
No skidding, jack-knifing or overturning
First point of impact Nearside Age of Driver 33 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 33 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

20974416 20/08/2020 Thursday Time 1515 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout
V2 WAS IN A QUEUE AT A ROUNDABOUT, V1 THEN COLLIDED INTO V2 RESULTING IN SLIGHT INJURIES BUT NO DAMAGE. BOTH DRIVERS HAVE EXCHANGED DETAILS

Occurred on FOXHALL ROAD - 21 METRES FROM JUNCTION WITH A12

Causation

	Factor:	Participant:	Confidence:
1st:			
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car

First point of impact Age of Driver Breath test Driver not contacted
Vehicle direction to

Journey Purpose: 6

Vehicle Reference 2 Car

First point of impact Age of Driver 43 Breath test Driver not contacted
Vehicle direction to

Journey Purpose: 6

Casualty Reference: 1 Age: 43 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

201015400 03/12/2020 Thursday Time 1817 Vehicles 1 Casualties 1 Slight
Raining without high winds Road surface Wet/Damp Darkness: street lights present and lit
Special Conditions None Road Type Single 2 lanes
VEHICLE 1 HAS STRUCK A PEDESTRIAN WHO WAS WALKING WITH HIS BACK TO TRAFFIC WHILE DRESSED ALL IN BLACK WITH NO REFLECTIVES. MINOR INJURIES WERE CAUSED TO THE PEDESTRIAN THOUGH HE REFUSED ANY MEDICAL ATTENTION. MINOR DAMAGE WAS CAUSED TO VEHICLE 1 INCLU
DING A CRACKED WINDSCREEN AND BUMPER.

Occurred on PORTAL AVENUE - 29 METRES FROM JUNCTION WITH UNCLASSIFIED ROAD

Causation

	Factor:	Participant:	Confidence:
1st:	Pedestrian wearing dark clothing at night	Casualty 1	Very Likely
2nd:	Rain, sleet, snow, or fog	Vehicle 1	Very Likely
3rd:	Failed to look properly	Casualty 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 41 Breath test Negative
Vehicle direction W to E

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 17 Male Pedestrian Severity: Slight
Pedestrian Direction: E
Pedestrian Injured in the Course of 'On th Road' Work: Not Applicable

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211038491 05/04/2021 Monday Time 2140 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Darkness: street lights present and lit
Special Conditions None Road Type Dual 2 lanes
V2 TRAVELLING NORTHBOUND ON DUAL CARRIAGEWAY. V2 STOPPED AT TRAFFIC LIGHT CONTROLLED ROUNDABOUT. V1 PULLED UP ALONGSIDE AND V2 DRIVER WAS SWORN AT. V2 MOVED OFF FROM TRAFFIC LIGHTS AND V1 PULLED IN FRONT OF V2 CAUSING V2 TO BRAKE SHARPLY CAUSING INJURY T
O LEFT LEG AND FOOT OF PASSENGER IN V2.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Aggressive driving	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Did not impact Age of Driver Breath test Driver not contacted
Vehicle direction S to N

Journey Purpose: 6

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Did not impact Age of Driver 50 Breath test Driver not contacted
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 28 Female Passenger Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211048482 27/04/2021 Tuesday Time 0826 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout
V2 JOINS THE ROUNDABOUT, V1 IS STATIONARY AT THE ROUNDABOUT. V1 HAS SEEN A RED CAR PASS AND CLEAR THE ROUNDABOUT AND BELIEVED IT WAS CLEAR AND STARTED TO PULL ONTO THE ROUNDABOUT INTO THE PATH OF V2 AND V2 HAS COLLIDED WITH THE F/O/S OF V1.

Occurred on IPSWICH ROAD (B1438) AT JUNCTION WITH TOP STREET

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Vehicle blind spot	Vehicle 1	Very Likely
3rd:	Failed to judge other persons path or speed	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Starting
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 35 Breath test Negative
Vehicle direction W to E

Journey Purpose: Commuting to/from work

Vehicle Reference 2 Pedal Cycle Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 46 Breath test Not applicable
Vehicle direction S to E

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 46 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211050963 25/05/2021 Tuesday Time 1515 Vehicles 1 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Single 2 lanes
V1 HAS REVERSED INTO PEDESTRIAN. DRIVER HAS APOLOGISED AND DRIVEN OFF.

Occurred on BLACKTILES LANE

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Reversing
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 71 Breath test Driver not contacted
Vehicle direction N to S

Journey Purpose: 6

Casualty Reference: 1 Age: 51 Male Pedestrian Severity: Slight
Pedestrian Direction: Unknown
Pedestrian Injured in the Course of 'On th Road' Work: Not Applicable

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

211101060 02/09/2021 Thursday Time 1615 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout

V002 HAS TRAVELLED ON FOXHALL ROAD AND APPROACHED JUNCTION WITH A12. IT HAS STOPPED AT JUNCTION DUE TO BUSY TRAFFIC. V001 HAS STOPPED BEHIND V002 AT THE ROUNDABOUT. V001 HAS MOVED FORWARD BELIEVING V002 WAS MOVING OFF BUT V002 REMAINED STATIONARY. V001
HAS SHUNTED V002 FROM BEHIND AT LOW SPEED CAUSING MINOR VEHICLE DAMAGE. DRIVER OF V002 HAS PRE-EXISITING BACK INJURY WHICH HAS BEEN AGGRAVATED, CAUSING PAIN.

Occurred on WALDRINGFIELD ROAD NEAR JUNCTION WITH A12

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:	Careless/Reckless/In a hurry	Vehicle 1	Possible
4th:	Following too close	Vehicle 1	Possible
5th:			
6th:			

Vehicle Reference 1 Car Starting
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 61 Breath test Negative
Vehicle direction E to W

Journey Purpose: Other/Not known

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 50 Breath test Negative
Vehicle direction E to W

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 50 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221185067 21/04/2022 Thursday Time 1647 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
V2 WAS TRAVELLING TOWARDS THE ROUNDABOUT IN LANE 2, TO TAKE THE SECOND EXIT. TRAVELLED AROUND THE ROUNDABOUT BUT MISSED THE EXIT, SO CONTINUED AROUND ROUNDABOUT. AS V2 WAS TRAVELLING AROUND ANOTHER VEHICLE CAME AROUND THEIR O/S TO TAKE THE NEXT EXIT.
THIS CAUSED DRIVER OF V2 TO PANIC AND SHE SLAMMED ON HER BRAKES, WHICH CAUSED V1 TO HIT V2 IN THE REAR.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Junction overshoot	Vehicle 1	Very Likely
2nd:	Poor turn or manoevre	Vehicle 1	Very Likely
3rd:	Sudden braking	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 36 Breath test Negative
Vehicle direction E to W

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 42 Male Passenger Severity: Slight

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 35 Breath test Not applicable
Vehicle direction E to W

Journey Purpose: Other/Not known

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221203380 17/06/2022 Friday Time 1805 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout
V2 WAS WAITING TO MOVE FORWARD AT ROUNDABOUT JUNCTION. V1 WAS BEHIND V2 AND SAW VEHICLES IN LANE 2 MOVING OFF AND SO PULLED OFF INTO THE BACK OF V2, WHICH HAD REMAINED STATIONARY, CAUSING MINOR INJURY TO DRIVER OF V2.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Junction restart	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 33 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Vehicle Reference 2 Car Going ahead but held up
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 54 Breath test Negative
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 54 Female Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221198876 14/07/2022 Thursday Time 1610 Vehicles 1 Casualties 1 Serious
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
V1 TRAVELLING A12 AT FOXHALL. V1 NEGOTIATES THE R/BOUT JUNCTION WITH FOXHALL ROAD, NEWBOURNE ROAD AND THE A12. V1 THEN JOINS THE A12 S/B AND CROSSES FROM LANE 1 TO LANE 2 AS V1 DOES SO IT LOSES CONTROL AND COLLIDES WITH THE CENTRAL RESERVATION BEFORE EJE
CTING THE RIDER WHO LANDED INBETWEEN LANES ONE AND TWO V1 COMES TO REST IN LANE 1.

Occurred on A12 - 81 METRES FROM JUNCTION WITH A12, FOXHALL, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Loss of control	Vehicle 1	Very Likely
2nd:	Poor turn or manoevre	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Motorcycle over 500cc Going ahead other
Skidded and overturned
First point of impact Front Age of Driver 56 Breath test Negative
Vehicle direction NE to SW

Journey Purpose: Commuting to/from work

Casualty Reference: 1 Age: 56 Male Driver/rider Severity: Serious

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221204622 29/07/2022 Friday Time 2208 Vehicles 2 Casualties 1 Slight
Fine without high winds Road surface Dry Darkness: no street lighting
Special Conditions None Road Type Dual 2 lanes
V1 & V2 TRAVELLING NORTHBOUND ON DUAL CARRIAGEWAY. V1 SUDDENLY VEERS ACROSS LANE 1 TOWARDS THE
CENTRE. V2 STEERS TO THE N/S TO TRY & AVOID CONTACT. V2 MAKES LIGHT CONTACT WITH RIDER OF V1, WHO DSIDE.

Occurred on A12, MARTLESHAM, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Vehicle 2	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Pedal Cycle Going ahead other
No skidding, jack-knifing or overturning
First point of impact Nearside Age of Driver 62 Breath test Not applicable
Vehicle direction S to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 62 Male Driver/rider Severity: Slight

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Offside Age of Driver 23 Breath test Not requested
Vehicle direction S to N

Journey Purpose: Other/Not known

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221213395 29/08/2022 Monday Time 1420 Vehicles 2 Casualties 2 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Roundabout
V2 WAS TRAVELLING N ALONG THE A12 TOWARDS WOODBRIDGE AROUND PARK AND RIDE ROUNDABOUT, MARTLESHAM. V1 WAS TRAVELLING NORTH WEST EMERGING FROM A1214 MAIN ROAD, KESGRAVE. V1 HAS CONTRAVENED GIVE WAY MARKINGS AT THE JUNCTION OF A1214 MAIN ROAD ONTO THE ROUND ABOUT AND HAS COLLIDED WITH FRONT NEAR SIDE OF V2.

Occurred on OPPOSITE TO PARK AND RIDE ENTRANCE, APPROACHING MAIN ROAD (A12)N TOWARDS

Causation

	Factor:	Participant:	Confidence:
1st:	Disobeyed Give Way or Stop sign or markings	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead right bend
No skidding, jack-knifing or overturning
First point of impact Offside Age of Driver Breath test Not applicable
Vehicle direction S to N

Journey Purpose: 6

Vehicle Reference 2 Car Going ahead right bend
No skidding, jack-knifing or overturning
First point of impact Nearside Age of Driver 48 Breath test Negative
Vehicle direction SE to N

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 48 Male Driver/rider Severity: Slight

Casualty Reference: 2 Age: 50 Female Passenger Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221269812 26/11/2022 Saturday Time 1222 Vehicles 2 Casualties 3 Serious
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Dual 2 lanes
V1 HAS FAILED TO STOP WHEN APPROACHING THE ROUNDABOUT TRAVELLING S/B. V1 HAS THEN COLLIDED WITHTHE REAR END OF V2, AS IT WAS PULLING AWAY FROM THE JUNCTION ONTO THE ROUNDABOUT.

Occurred on A12

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Junction restart	Vehicle 1	Very Likely
3rd:	Dazzling sun	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Starting
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 86 Breath test Not applicable
Vehicle direction N to S

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 86 Female Driver/rider Severity: Serious

Casualty Reference: 2 Age: 90 Male Passenger Severity: Slight

Vehicle Reference 2 Car Starting
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 25 Breath test Negative
Vehicle direction N to S

Journey Purpose: Other/Not known

Casualty Reference: 3 Age: 25 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221279105 26/12/2022 Monday Time 2128 Vehicles 2 Casualties 2 Serious
Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit
Special Conditions None Road Type Roundabout
V1 WAS TRAVELLING NORTHBOUND, BELIEVED TO BE TRAVELLING AT EXCESSIVE SPEED AND HAS PLOUGHED INTO A STATIONARY CAR (V2) PARKED AT THE RED TRAFFIC LIGHTS AWAITING ENTRY ONTO THE ROUNDABOUT.

Occurred on MAIN ROAD (A12) NEAR JUNCTION WITH MAIN ROAD (A1214), MARTLESHAM, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Vehicle 1	Very Likely
2nd:	Exceeding speed limit	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 29 Breath test Positive
Vehicle direction N to S

Journey Purpose: 6

Casualty Reference: 1 Age: 29 Male Driver/rider Severity: Serious

Vehicle Reference 2 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Back Age of Driver 56 Breath test Negative
Vehicle direction N to S

Journey Purpose: Other/Not known

Casualty Reference: 2 Age: 56 Male Driver/rider Severity: Serious

Accidents between dates **01/01/2020 and 30/04/2023** (40) months
Selection: **Notes:**
Selected using Manual Selection

221258941 29/12/2022 Thursday Time 1105 Vehicles 1 Casualties 1 Slight
Fine without high winds Road surface Dry Daylight
Special Conditions None Road Type Single 2 lanes
V1 TRAVELLING SOUTHBOUND ON A SINGLE CARRIAGEWAY ROAD IN A RURAL AREA WITHIN NATIONAL SPEED LIMIT SECTION OF ROAD APPROACHING OFFSIDE BEND AND ENTRY TO 30MPH LIMIT AREA. V1 LEAVES CARRIAGEWAY TO NEARSIDE AND COLLIDES WITH SINGLE STORY RED BRICK STRUCTU
RE LOCATED ON GRASS VERGE THAT CONTAINS MAJOR GAS UTILITIES INFRASTRUCTURE. DRIVER PROVIDES ROADSIDE BREATH TEST READING OF 148 UGS.

Occurred on TOP STREET, MARTLESHAM, SUFFOLK

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Going ahead other
No skidding, jack-knifing or overturning
First point of impact Front Age of Driver 58 Breath test Positive
Vehicle direction N to S

Journey Purpose: Other/Not known

Casualty Reference: 1 Age: 58 Male Driver/rider Severity: Slight

Accidents between dates **01/01/2020** **and** **30/04/2023** (40) months

Selection:
Selected using Manual Selection

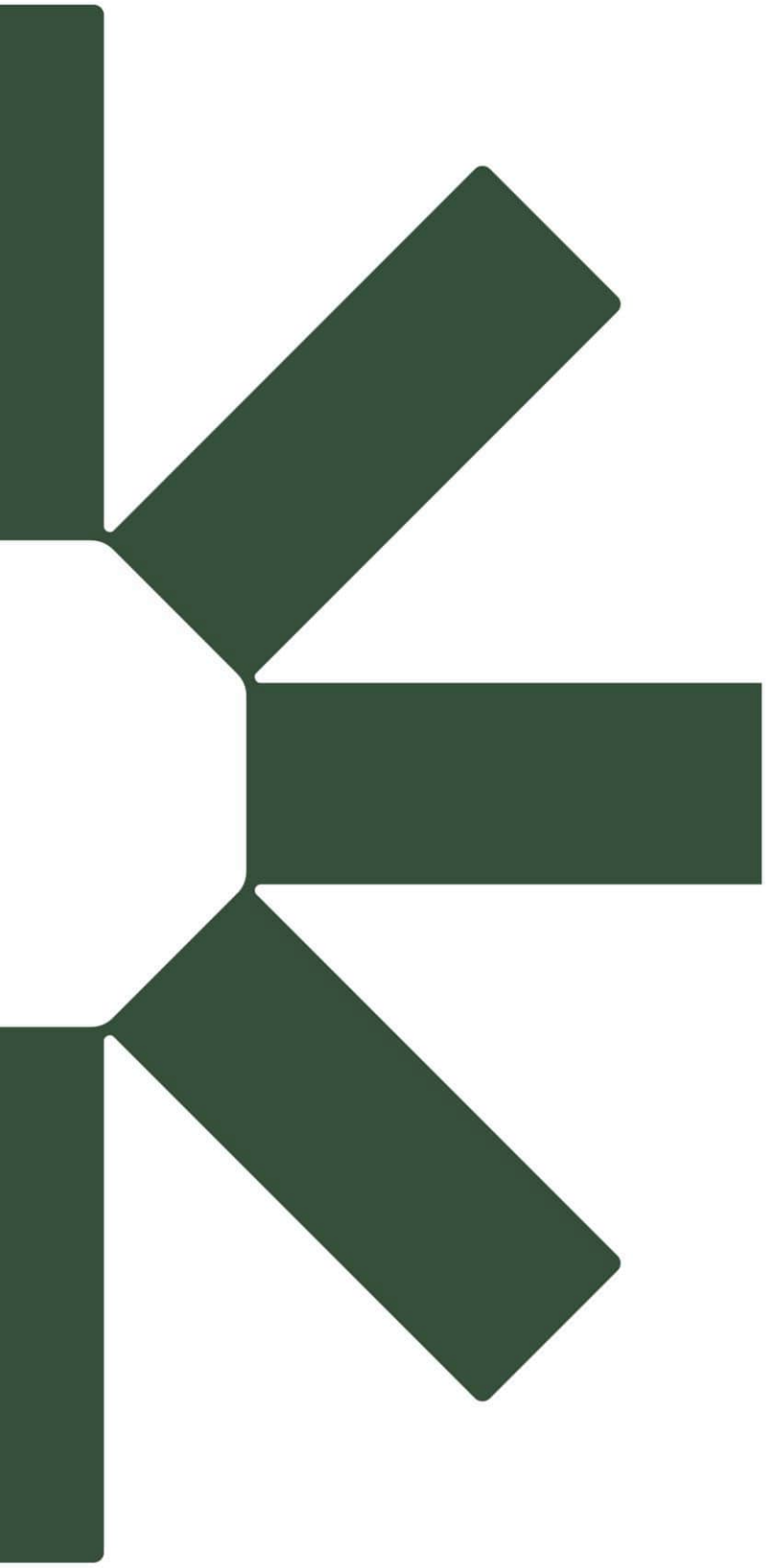
Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	2	13	15
2-wheeled motor vehicles	0	1	2	3
Pedal cycles	0	0	2	2
Horses & other	0	0	0	0
Total	0	3	17	20

Casualties:

	Fatal	Serious	Slight	Total
Vehicle Driver	0	3	11	14
Passenger	0	0	5	5
Motorcyclist	0	1	2	3
Cyclist	0	0	2	2
Pedestrian	0	0	2	2
Other	0	0	0	0
Total	0	4	22	26



Making Sustainability Happen

APPENDIX 2 TRANSPORT ROUTE ASSESSMENT

NKT HVC Ltd

EA3 HVDC Route, Main Works.

Transport Route Assessment

May 2023

Fairhurst Doc Ref No:

152889-DOC-06

NKT ID:

1AA0604653

Aconnex ID:

EA3-LDC-RSM-RSA-NKT-000006

NKT

FAIRHURST

FAIRHURST

CONTROL SHEET

CLIENT:	**NKT HVC Ltd**
PROJECT TITLE:	**EA3 HVDC Route, Main Works**
REPORT TITLE:	**Transport Route Assessment**
PROJECT REFERENCE:	**152889**
DOCUMENT NUMBER:	**152889-DOC-06**
NKT ID:	**1AA0604653**
ACONNEX ID:	**EA3-LDC-RSM-RSA-NKT-000006**

Issue & Approval Schedule

	Name	Signature	Date
Prepared by	G Park		12/05/2023
Checked by	A Madden		12/05/2023
Approved by	S G Dickson		12/05/2023

Revision Record

Rev.	Date	Status	Description	Signature	
1	12.07.23	Final	Updated following receipt of comments from SPR	Prepared By	G Park
				Checked	A Madden
				Approved	A Kram
2	02.08.23	Final [2]	Updated following receipt of comments from SPR	Prepared By	G Park
				Checked	A Madden
				Approved	A Kram
3	08.08.23	Final [3]	Updated following receipt of comments from SPR	Prepared By	G Park
				Checked	A Madden
				Approved	A Kram
4	21.08.23	Final [4]	Table 1 updated to clarify the previous EA3 I.D for the proposed AP-22 was CR-5	Prepared By	G Park
				Checked	A Madden
				Approved	A Kram
5	17.10.23	Final [5]	AP-13 removed from works. Section 4.14 Updated. Route to AP-11 & 12 updated to remove approach from north.	Prepared By	G Park
				Checked	S Dickson
				Approved	M Wills

Contents

1.0 Introduction

1.1. Transportation Assessment Overview

Fairhurst has been appointed by NKT HVC Ltd, on behalf of Scottish Power Renewables, to undertake an assessment of the transport routes associated with the main works for the East Anglia Three (EA3) cable installation project.

During construction of the East Anglia One project (EA1), ducts required for the future EA3 project were installed in the cable corridor from the landfall site at Bawdsey, to the new converter station at Bullen Lane, Bramford. As part of the EA1 project, several sections of the existing local road network were upgraded to accommodate construction traffic, along with the construction of new access junctions into the cable corridor Construction Consolidation Sites (CCS). Improvement works included designated passing places and vegetation removal. On completion of the EA1 project, the majority the new access junctions were removed, however all of the passing places, which were constructed on the local road network, were retained at the request of Suffolk County Council.

This next phase of construction (EA3) will again require construction access into the cable corridor in order to re-establish various CCS compounds and sections of Haul Road, to facilitate access to the proposed Jointing Bay locations, to construct the Jointing Bays, and pull new cables through the previously installed ducts.

Several of the previously designed and approved access points, which were constructed during the EA1 project, will be re-instated to facilitate access, along with any new access points, which were not part of the original EA1 scheme.

A phase of early commencement works was undertaken during 2022, which saw AP-09^{CCSB} and AP-16^{CCSC} constructed, along with their respective CCS compounds. The junction works for AP-26^{CCSE} were also installed.

This document covers the assessment of the remaining main works access points and public road crossing points noted in **Table 1**.

***Table 1**: Access I.D and Current Status*

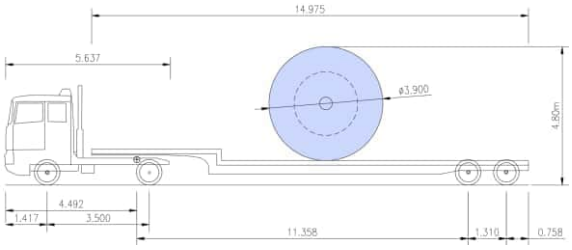
Access I.D and Location	Previous I.D at EA3 Planning Stage	Previous I.D from EA1 where applicable	Access Status
AP-02 Bullen Lane *	N/A	AX-01	To be reconstructed
AP-03 Somersham Rd *	N/A	N/A	New Junction
AP-04 Somersham Rd	N/A	N/A	Existing access
AP-05 Somersham Rd	AP-AK	N/A	Existing access
AP-07 Bramford Rd	AP-AI	AX-02	Existing access
AP-08 Bramford Rd	AP-AH	AX-03	Existing access
AP-09 Paper Mill Lane	N/A	AX-05	Existing access (Early Commencement Works)
AP-10 Old Ipswich Rd *	AP-AE	AX-06	To be reconstructed
AP-11 Henley Rd *	AP-AD	N/A	New junction
AP-12 Henley Rd *	AP-AD	N/A	New junction
AP-14 Grundisburgh Rd	AP-AA	N/A	Existing access
AP-15 Grundisburgh Rd	AP-Z	N/A	Existing access
AP-16 Bealings Rd *	AP-X	AX-08	Existing access (Early Commencement Works)
AP-17 Lodge Rd *	AP-V	AX-09	To be reconstructed
AP-18 Seckford Hall Rd *	AP-U	AX-10	Existing access
AP-19 Top Street	AP-S	AX-11	Existing access
AP-20 Sandy Lane *	AP-Q	AX-12	To be reconstructed
AP-21 Sandy Lane *	AP-R	Haul road exit	To be reconstructed
AP-22 Waldringfield Rd *	CR-5	AX-13	To be reconstructed
AP-23 Waldringfield Rd *	AP-N	N/A	New junction
AP-24 Waldringfield Rd *	AP-M	N/A	New junction
AP-25 Ipswich Road *	N/A	N/A	New junction
AP-26 Newbourne Rd *	AP-H	AX-14	Existing access (Early Commencement Works)
AP-27 Park Lane *	AP-E	N/A	New junction
AP-28 Falkenham Rd	AP-D	N/A	Existing access
AP-29 Shottisham Rd	AP-C	AX-18	Existing junction
AP-30 Ferry Rd *	AP-B	N/A	Existing junction to be upgraded
AP-31 Ferry Rd *	AP-A	AX-19	To be reconstructed
CP-05 Paper Mill Lane *	AP-AF	AX-04	Crossing point replacing previous junction
CP-12 Cockfield Hall Lane *	N/A	PR-09	Crossing point reconstructed
CP-14 Witnesham Rd *	AP-AC	PR-10	Crossing point reconstructed
CP-17 Butts Rd *	N/A	PR-10	Crossing point reconstructed
CP-18 Church Rd *	N/A	PR-14	Crossing point reconstructed
CP-22 Lodge Rd *	N/A	PR-16	Crossing point reconstructed
CP-31 Waldringfield Rd *	CR 3&4	PR-21	Crossing point reconstructed
CP-36 The Street *	CR 1&2	PR-24	Crossing point reconstructed
CP-40 Park Lane *	N/A	PR-25	Crossing point reconstructed

* indicates junction which are to be removed and land reinstated on completion of project.

1.2. Scope of assessment

Route Assessment:

The proposed routes have been assessed from where they join the main road network, as indicated on the Suffolk Lorry Route Plan, along minor roads and towards each access point. The route assessment has considered safe access arrangements, the use of passing places and the requirements for advance warning signage, together with any weight restrictions, and any obstructions, which may compromise the transportation of equipment. For the purpose of this assessment, an articulated low-loader vehicle transporting a cable drum has been taken as the worst case scenario.



Access Point/Junction Design:

As noted in the introduction, a phase of Early Commencement works was undertaken in 2022, which included the design, approval, and construction of the following three access points:

- AP-09 located on Paper Mill Lane, serving CCSB
- AP-16 located on Bealings Road, Playford, serving CCSC.
- AP-26 located on Woodbridge Road, serving CCSE

Eight new access junctions have been designed as part of the EA3 Main Works. These are:

- AP-03 located on Somersham Road
- AP-11 located on Henley Road
- AP-12 located on Henley Road
- AP-23 located on Waldringfield Road
- AP-24 located on Waldringfield Road
- AP-25 located on Ipswich Road
- AP-27 located on Park Lane
- AP-30 located on Ferry Road

Design of each new junction/access has taken cognisance of the existing topography, existing vegetation, required visibility sightlines, and the minimum turning area required to accommodate the articulated low-loader vehicle.

A review of eight of the previously installed access points used during the EA1 project, which are to be fully reinstated as part of this EA3 project, has also been undertaken. These are:

- AP-02 located on Bullen Lane (*former AX-01 under EA1*)
- AP-10 located on Old Ipswich Road *(former AX-06 under EA1 and only part removed)*
- AP-17 located on Lodge Road (*former AX-09 under EA1*)
- AP-18 located on Seckford Hall Road *(former AX-10 under EA1 and only part removed)*
- AP-20 located on Sandy Lane (*former AX-12 under EA1*)
- AP-21 located on Sandy Lane (*former Haul Road Access/Egress*)
- AP-22 located on Waldringfield Road (*former AX-13 under EA1*)
- AP-31 located on Ferry Road (*former AX-19 under EA1 and only part removed*)

Following completion of the EA1 project, the following four access points remain fully in place and will be utilised during the Main Works for EA3:

- AP-07 located on Bramford Road
- AP-08 located on Bramford Road
- AP-19 located on Top Street
- AP-29 located on Shottisham Road

The following five access points are existing and are contained within the red line DCO boundary. These five junctions will also be used for accessing the cable corridor however there are no requirements for any modification to the junctions.

- AP-04 located on Somersham Road
- AP-05 located on Somersham Road
- AP-14 located on Grundisburgh Road
- AP-15 located on Grundisburgh Road
- AP-28 located on Falkenham Road

A total of 28 access points are proposed from AP-02 to AP-31 inclusive.

In addition to the access points, there are nine locations where the cable corridor Haul Road will cross the public highway. These are:

- CP-05 crossing Paper Mill Lane
- CP-12 crossing Cockfield Hall Lane
- CP-14 crossing Witnesham Road
- CP-17 crossing Butts Road
- CP-18 crossing Church Road
- CP-22 crossing Lodge Road
- CP-31 crossing Waldringfield Road
- CP-36 crossing The Street
- CP-40 crossing Park Lane

All of the above noted crossing points were utilised during the EA1 construction phase, and subsequently removed with the land reinstated. The Main Works for the EA3 project will see these crossing points reinstated in the same location as the EA1 installation.

2.0 Route Assessment

2.1. General Description

Two Primary CCS Compounds (Construction Consolidation Site) are to be utilised to control delivery of plant and material distribution to the various cable route access points. These primary locations are, CCS B located at Paper Mill Lane and CCS D located at Top Street.

Access to CCS B is taken via AP-09, which was designed, approved and constructed as part of the Early Commencement works in 2022, and is now operational. The previous designation for AP-09 during the early commencement works was AP-X.

Access to CCS D is taken via AP-19, which was designed, approved and constructed as part of the EA1 project, and remains fully in place, and operational. The previous designation for AP-19 during EA1 was AX-11.

Highway Routes to all of the access points (AP-02 to A-31 incl), from either CCS B or CCS D, have been assessed as part of this report.

Route plans to each access point from either CCS B or CCS D are included in **Appendix A**

Each route provides access from the major road networks surrounding Ipswich, as identified on the Suffolk Lorry Route plan, to all access points required for the cable works, based on the scope outlined in section 1.2 of this report.

2.2. Access to AP-02 (Bullen Lane)

AP-02 will be accessed from CCS B. Exit CCS B right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road, which merges into Loraine Way, for 2.2 Miles. Take the right turn filter lane and turn into Bullen Lane. Continue along Bullen Lane for 1.2 Miles. AP-02 is located on the right hand side.

The width of Bramford Road is suitable for the majority of vehicles to safely pass each other. Bullen Lane itself is narrower but there are passing places affording the passage of two vehicles with care. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.0 : Access to AP-02 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Installed as per Drg No. 152889/1050
Is 30mph Speed restriction required	YES	Installed as per Drg No. 152889/1050

2.3. Access to AP-03, AP-04 and AP-05 (Somersham Road)

AP-03, AP-04 and AP-05 will be accessed from CCS B. Exit CCS B right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road, which merges into loraine Way, for 1.7 Miles. Take the right turn at the junction signposted Somersham and Lt. Blakenham, onto Somersham Road. Continue along Somersham Road for 0.5 Miles. AP-03 is located on the left hand side of Somersham Road. AP-04 is opposite AP-03 and provides access to the Agri-Hire premises. AP-05 is a further 0.7 Miles ahead, located on the right hand side of Somersham Road, and provides access to the Palmer Group premises.

The width of Bramford Road, Loraine Way and Somersham Road are suitable for the majority of vehicles to safely pass each other. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.1 : Access to AP-03, AP-04 and AP-05 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is a main road
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Installed as per Drg No. 152889/1051
Is 30mph Speed restriction required	YES	Installed as per Drg No. 152889/1051

2.4. Access to AP-06, AP-07 & AP-08 (Bramford Road)

AP-06, AP-07 and AP-08 will be accesed from CCS B. Exit CCS B right onto Paper Mill Lane. At the roundabout, take the first exit signposted Gt. Blakenham, Needham Market, B1113. Continue straight ahead on Bramford Road for 0.6 Miles. AP-08 is located on the left hand side. AP-07 is a further 100yds ahead, on the right hand side of Bramford Road, with AP-06 being a further 380yds ahead, on the right hand side of Bramford Road.

The width of Bramford Road is suitable for the majority of vehicles to safely pass each other. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.2 : Access to AP-06, AP-07 and AP-08 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is a main road
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Installed as per Drg No. 152889/1051
Is 30mph Speed restriction required	YES	Installed as per Drg No. 152889/1051

2.5. Access to AP-09 (Paper Mill Lane)

Paper Mill Lane is accessed off the roundabout at junction 52 of the A14 Trunk Road. AP-09 is approximately 530m south of the A14, along Paper Mill Lane. The width of carriageway on Paper Mill Lane is suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage was erected during the early commencement works phase in 2022, and remains in place.

No weight restrictions have been identified for this access route.

Table 2.3: Access to AP-09 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is a main road
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1053
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1053

2.6. Access to AP-10 (Old Ipswich Road)

AP-10 will be accesed from CCS B. Exit CCS B right onto Paper Mill Lane. At the roundabout, take the third exit signposted Claydon and Hill View Business Park. Continue towards Claydon for 250yds. Take the next junction left, signposted Hill View Business Park, onto Old Ipswich Road. Continue on Old Ipswich Road for 750yds. AP-10 is located on the left hand side.

Old Ipswich Road is suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.4: Access to AP-10 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	-
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1054
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1054

2.7. Access to AP-11 and AP-12 (Henley Road)

AP-11 and AP-12 on Henley Road will be accessed from CCS B.

Traffic accessing AP-11 and AP-12 from CCS B would approach from the south. From Paper Mill Lane (CCS B), head north towards the roundabout on the A14. Take the exit south onto the A14 and continue south to the roundabout at junction 55. Take the slip road then first exit left onto the A1214. Continue along the A1214 (London Road), for 2.2 miles. Take the junction left, signposted Woodbridge A1214, onto Yarmouth Road. Continue along Yarmouth Road for 700yds until you reach a signal controlled junction. Continue straight-ahead onto Chevallier Street. Continue a further 300yds until you reach the double mini-roundabout. Continue straight over and onto Valley Road. Continue along Valley Road for 0.7 miles. Take a left turn at the junction signposted Henley, onto Henley Road. AP-11 and AP-12 are located 2 miles north along Henley Road. AP-11 is on the right hand side, with AP-12 on the left.

Henley Road, and the proposed access routes to AP-11 & AP-12 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.5: Access to AP-11 and AP-12 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	-
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1055
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1055

2.8. Access to AP-14 and 15 (Grundisburgh Road)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roandabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exit left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 2.5 miles. Take the next junction left, signposted Tuddenham, Grundisburgh Village. Continue on Woodbridge Road, which merges into The Street, Rose Hill, Ipswich Road and Grundisburgh Road, for 2.7 miles. AP-15 is located on the southern side of Grundisburgh Road with AP-15 a further 80 yards along on the right hand side.

The proposed access routes to AP-14 and AP-15 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. There are several low level tree branches along the route south of Grundisburgh Village, which will require to be trimmed to facilitate transport of the cable drums. On street parking within Grundisburgh Village may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.7: Access to AP-14 and AP-15 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	• Temporary prohibition of on street parking may be required to facilitate safe passage through Grundisburgh village. • Minor trimming of low level tree branches along route.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1059
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1059

2.9. Access to AP-16 (Bealings Road, Playford Corner)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exit left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 2.5 miles. Take the next junction left, signposted Tuddenham, Grundisburgh Village. Continue on Woodbridge Road, which merges into The Street, Rose Hill, Ipswich Road and Grundisburgh Road, for 2.5 miles. Take the next junction left, signposted Great Bealings, Hasketon and Woodbridge. Continue along Beaings Road for 1 Mile. AP-16 is located on the south side of Bealings Road.

The proposed access routes to AP-16 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. There are several low level tree branches along the route south of Grundisburgh Village, which will require to be trimmed to facilitate transport of the cable drums. On street parking within Grundisburgh Village may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary "Prohibition of Parking Order" and that any large construction vehicle movements are planned accordingly.

Advance warning signage was erected during the early commencement works phase in 2022, and remains in place. No weight restrictions have been identified for this access route.

Table 2.8: Access to AP-16 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route very narrow and is supplemented with existing passing places
Any obstruction to prevent access	NO	• Temporary prohibition of on street parking may be required to facilitate safe passage through Grundisburgh village. • Minor trimming of low level tree branches along route.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1061
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1061

2.10. Access to AP-17 (Lodge Road)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 1 mile until you reach the next roundabout. Take the first exist left signposted Grundisburgh, Hasketon, B1079. Continue along the B1079 for 0.5 miles. Take the next junction left onto an unnamed road and continue for 0.65 miles. Bear left at the fork in the road, onto Lodge Road. AP-17 is located a further 530yds on the left hand side.

The proposed access along Lodge Road is very narrow. Passing places were installed during the EA1 project, and these remain in place and will be utilised for construction traffic movements during EA3.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.9: Access to AP-17 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	• Minor trimming of low level tree branches • Overgrown vegetation
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1064
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1064

2.11. Access to AP-18 (Seckford Hall Road)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north 450yds. Take the next junction left onto Seckford Hall Road. AP-18 is located a further 0.7 miles ahead, on the left hand side.

The proposed access along Seckford Hall Road is relativley narrow. Passing places were installed during the EA1 project, and these remain in place and will be utilised for construction traffic movements during EA3.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.10: Access to AP-18 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	• Minor trimming of low level tree branches • Overgrown vegetation
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1065
Is 30mph Speed restriction required	NO	

2.12. Access to AP-19 (Top Street)

Access to Top Street (CCS D) is taken off the A12. At the roundabout on the A12, take the exit signposted Woodbridge. Continue for 200yds until you reach another roundabout. Take the second exit signposted Martlesham and Little Bealings. Continue along Top Street for another 300yds and AP-19 (CCS D) is located on the right hand side at the mini-roundabout.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.11: Access to AP-19 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	-
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1066
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1066

2.13. Access to AP-20 and AP-21 (Sandy Lane)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbrodge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, take a right, signposted Woodbridge (Town centre only), and onto Melton Road. Continue on Melton Road, which merges into The Thoroughfare. Continue for 200yds then bear left onto Lime Kiln Quay Road, which merges into Quayside. At the signal contolled junction go straight ahead. Continue over the Zebra Crossing onto Station Road. Continue for another 500yds where Station road merges into Cumberland Street. Continue for 200yds and at the mini-roundabout, continue straight ahead onto the B1438 Ipswich Road. Continue for anther 600yds, then take the next junction on the left, onto Sandy Lane. AP-20 is located a further 600yds ahead, on the south side of Sandy Lane. AP-21 is located a further 250yds south from AP-20, on the right hand side.

The proposed access routes to AP-20 and AP-21 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. On street parking at the northern end of Sandy Lane may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.12: Access to AP-20 and AP-21 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Temporary prohibition of on street parking may be required at the northern end of Sandy Lane.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1067
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1067

2.14. Access to AP-22 to AP-24 incl (Waldringfield Road)

From Top Street (CCS D), head south for 700yds. Take the junction left signposted Waldringfield. Continue along School Lane for 650yds where School Lane merges into Waldringfield Road. Continue for another 800yds. At the junction of Waldringfield Road and Newbourne Road, take the left junction onto Waldringfield Road. AP-22 is located a further 430yds on the left hand side. AP-23 is a further 600yds ahead, on the left hand side, with AP-24 a further 675yds ahead on the left hand side.

The proposed access routes to AP-22, AP-23 and AP-24 are along relativley narrow roads leading up to AP-22, however the roads are enhanced by numerous passing places which were constructed during the EA1 project, and remain in place. From AP-22 to AP-24, Waldringfield Road becomes very narrow. There are however several informal passing places which can be utilised. In addition, the road channels have been covered by compacted silt which has reduced the width of running surface. It is recommended that some enabling works are undertaken along Waldringfield Road, bewteen AP-22 and AP-24, to clear the road channels and expose the wider running surface. The route also has several low level tree branches which should be trimmed back as part of any enabling works.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works. No weight restrictions have been identified for this access route.

Table 2.13: Access to AP-22 to AP-24 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is enhanced by existing passing places, but will also benefit from clearing of compacted silt to the road channel.
Any obstruction to prevent access	YES	Low level tree branches will require removal at various ints along Waldringfield Road. Refer to Section 3.0 of this report for full details.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1067 (AP-22) Install as per Drg No. 152889/1068 (AP-23)

		Install as per Drg No. 152889/1070 (AP-24)
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1067 (AP-22) Install as per Drg No. 152889/1068 (AP-23) Install as per Drg No. 152889/1070 (AP-24)

2.15. Access to AP-25 (Ipswich Road)

AP-25 will be accessed from CCS D at Top Street. From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 3.2 Miles. At the roundabout, take the first exit signposted Bucklesham, Brightwell, Newbourne and Waldringfield. Continue east along Newbourne Road for approximately 820yds at which point the road sweeps left into Ipswich Road. Continue along Ipswich Road for approximately 1.4 Miles. AP-25 is located on the right hand side of Ipswich Road.

Ipswich Road, and the proposed access routes to AP-25 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.14: Access to AP-25 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Minor trimming of low level tree branches
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1072
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1072

2.16. Access to AP-26 (Woodbridge Road)

AP-26 will be accessed from CCS D at Top Street. From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 3.2 Miles. At the roundabout, take the first exit signposted Bucklesham, Brightwell, Newbourne and Waldringfield. Continue east along Newbourne Road for approximately 820yds at which point the road sweeps left into Ipswich Road. Continue along Ipswich Road for approximately 1 Mile. Take the next junction Right, signposted Newbourne and Felixstowe, onto Newbourne Road. Head

south along Newbourne Road for 0.7 Miles, which merges into Woodbridge Road. AP-26 is located on the left hand side, just past the entrance to Clappits.

Woodbridge Road/Newbourne Road, leading up to AP-26 are relatively narrow, however the passing places which were installed during the EA1 project remain in place. The remaing access routes leading up to Woodbridge Road/Newbourne Road are suitable for the majority of vehicles to pass each other safely without the requirement for passing places. No physical obstructions were noted during the survey which would prevent construction vehicles from reaching the access point.

Advance warning signage was erected during the early commencement works phase in 2022, and remains in place.

No weight restrictions have been identified for this access route.

Table 2.15: Access to AP-26 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Minor trimming of low level tree branches
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1073
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1073

2.17. Access to AP-27 (Park Lane)

AP-27 will be accessed from CCS D at Top Street. From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 5 Miles. At the roundabout, take the second exit signposted Felixstowe, onto the slip road of the A14. Continue along the A14 for 2 Miles and take the next junction on the left signposted Kirton. Continue along Innocence Lane and take a right turn at the Y-Junction, which continues as Innocence Lane. Continue east for another 1 Mile. At the staggered junction, turn left onto Trimley Road. Continue north for 0.4 Miles where Trimley Road merges into Bucklesham Road and carry on for another 350yds. Take the next junction on the right into Park Lane, signposted Kirton Lodge. AP-27 is a further 740yds along Park Lane, on the left hand side.

Park Lane, and the proposed access routes to AP-27 are suitable for the majority of vehicles to pass each other safely without the requirement for passing places, up to the junction with Park Lane. Park Lane itself is slightly narrower, however there are numerous passing places available along with passing places installed as part of the EA1 project, which remain in place.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.16: Access to AP-27 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	No physical obstructions observed.
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1075
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1075

2.18. Access to AP-28 (Falkenham Road)

AP-28 will be accessed from CCS D at Top Street. From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the first exit at the roundabout, signposted Colchester, Ipswich, Felixstowe and Martlesham. Continue south on the A12 for 5 Miles. At the roundabout, take the second exit signposted Felixstowe, onto the slip road of the A14. Continue along the A14 for 2 Miles and take the next junction on the left signposted Kirton. Continue along Innocence Lane and take a right turn at the Y-Junction, which continues as Innocence Lane. Continue east for another 1 Mile. At the staggered junction, turn right onto Trimley Road, then sharp left onto Back Road. Continue along Back Road for 900yds to the junction with Falkenham Road. Turn right at the junction onto Falkenham Road. AP-28 is located a further 0.65 Miles ahead, on the left hand side, just before the red telephone box.

Falkenham Road, and the proposed access routes to AP-28 are suitable for the majority of vehicles to pass each other safely, using the numerous existing passing places, which are supplemented by various informal passing places. On street parking at the eastern end of Back Road may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

No weight restrictions have been identified for this access route.

Table 2.17: Access to AP-28 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Temporary prohibition of on street parking may be required at the east end of Back Road
Are there any weight restrictions	NO	No weight restrictions identified.
Is advance warning signage required	YES	Install as per Drg No. 152889/1076
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1076

2.19. Access to AP-29 (Shottisham Road)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Continue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbrodge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, go straight ahead onto Wilford Bridge Road and continue for 0.8 Miles. At the next roundabout, take the second exit signposted Bawdsey and Hollesley B1083. Continue south for 4 Miles, towards Shottisham. At the T-Junction, turn right, signposted Bawdsey, Alderton B1083. Continue south on Woodbridge Road for 2.7 Miles towards Alderton. At the point where Woodbridge Road turns sharp left, take the junction to the right onto Shottisham Road. AP-29 is located a further 1.5 Miles along, on the left hand side.

On-street parking at the northern end of The Street, in Alderton, may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

Shottisham Bridge Weight Restriction to be confirmed by SCC

Table 2.18: Access to AP-29 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Narrow nature of Shottisham Bridge may require single file traffic controlled by temporay lights.
Are there any weight restrictions	YES	Shottisham Bridge Weight Restriction to be confirmed by SCC
Is advance warning signage required	YES	Install as per Drg No. 152889/1077
Is 30mph Speed restriction required	NO	

2.20. Access to AP-30 and AP-31 (Ferry Road)

From Top Street (CCS D), exit left. Continue on Top Street to the roundabout. Take the first exit left signposted Ipswich A1214. Contniue for 200yds until you reach the Roundabout on the A12. Take the second exit signposted Lowestoft A12 and Melton. Continue north for 2 miles until you reach the second roundabout. Take the second exit signposted Orford, Rendlesham, Woodbrodge, Melton and A1152. Continue along the A1152 for 0.9 miles. At the signal controlled junction, go straight ahead onto Wilford Bridge Road and continue for 0.8 Miles. At the next roundabout, take the second exit signposted Bawdsey and Hollesley B1083. Continue south for 4 Miles, towards Shottisham. At the T-Junction, turn right, signposted Bawdsey, Alderton B1083. Continue south on Woodbridge Road for 2.7 Miles towards Alderton.

Woodbridge Road sweeps left towards Alderton. Continue for 150yds, where Woodbridge road sweeps right, and merges into The Street. Continue south along The Street for 1.3 Miles. The Street then sweeps right and onto Ferry Road. AP-31 is a further 700yds ahaed, on the left hand side. AP-30 is a further 300yds on from AP-31, and is located on the right hand side.

On-street parking at the northern end of The Street, in Alderton, may restrict the movement of larger construction vehicles. It is recommended that an application is made to Suffolk County Council for a temporary “Prohibition of Parking Order” and that any large construction vehicle movements are planned accordingly.

Advance warning signage will be erected to warn/advise other road users of the presence of construction vehicles for the duration of the works.

Shottisham Bridge Weight Restriction to be confirmed by SCC

Table 2.19: Access to AP-30 and AP-31 Route Summary:

Question	Answer	Comments
Is access route suitable in width	YES	Route is supplemented with existing passing places
Any obstruction to prevent access	NO	Temporary prohibition of on street parking may be required to facilitate safe passage through Alderton.
Are there any weight restrictions	NO	Shottisham Bridge Weight Restriction to be confirmed by SCC
Is advance warning signage required	YES	Install as per Drg No. 152889/1078 AP-30 Install as per Drg No. 152889/1079 AP-31
Is 30mph Speed restriction required	YES	Install as per Drg No. 152889/1078 AP-30 Install as per Drg No. 152889/1079 AP-31

2.21. Overall Route Summary

Table 2.20: Overall Route Summary:

Route to:	Width acceptable	Passing Places present PP	Tree branches and vegetation clearance required	On street parking issues	Weight Restrictions
AP-02	Yes	Yes	No	No	No
AP-03	Yes	Yes	No	No	No
AP-04	Yes	Yes	No	No	No
AP-05	Yes	Yes	No	No	No
AP-07	Yes	Yes	No	No	No
AP-08	Yes	Yes	No	No	No
AP-09	Yes	Yes	No	No	No
AP-10	Yes	Yes	No	No	No
AP-11	Yes	Yes	No	No	No
AP-12	Yes	Yes	No	No	No
AP-14	Yes	Yes	Yes	Yes Grundisburgh Village	No
AP-15	Yes	Yes	Yes	Yes Grundisburgh Village	No
AP-16	Yes	Yes	Yes	Yes Grundisburgh Village	No
AP-17	Single track with PP	Yes	Yes vegetation	No	No
AP-18	Yes	Yes	No	No	No
AP-19	Yes	Yes	No	No	No
AP-20	Yes	Yes	No	YesSandy Lane	No
AP-21	Yes	Yes	No	YesSandy Lane	No
AP-22	Single track with PP	Yes	Yes	No	No
AP-23	Single track with PP	informal	Yes	No	No
AP-24	Single track with PP	informal	Yes	No	No
AP-25	Yes	Yes	No	No	No
AP-26	Yes	Yes	No	No	No
AP-27	Yes	Yes	No	No	No
AP-28	Yes	Yes	No	Yes Back Road	No
AP-29	Yes	Yes	No	Yes The Street	Yes
AP-30	Yes	1 new required	Yes vegetation	Yes The Street	Yes
AP-31	Yes	Yes	No	Yes The Street	Yes

The passing places, which were constructed during the installation of the cable corridor associated with EA1, have been retained at the request of Suffolk County Council, and these will assist with the abnormal load movement in a similar way to EA1.

The use of a pilot/escort vehicle for all abnormal load movements is recommended.

2.22. S278 and TTRO Applications

The following Table 2.21 provides confirmation of all junctions which will be the subject of a Section 278 Application to Suffolk County Council, along with any locations which will require a TTRO (Temporary Traffic Restriction Order).

Table 2.21: S278 and TTRO Application Requirements

Junction Reference	Section 278 Minor Works	Section 278	Section 278 Abridged	TTRO Application Required
AP-02	-	-	Yes	Yes
AP-03	-	Yes	-	Yes
AP-04	Existing access in place with no works required.			Included with AP-03 application
AP-05	Existing access in place with no works required.			Included with AP-03 application
AP-07	Yes	-	-	No
AP-08	Yes	-	-	No
AP-09	In place from the Early Commencement Works			
AP-10	Yes	-	-	No
AP-11	-	Yes	-	Yes
AP-12				
AP-14	Yes	-	-	Yes
AP-15				
AP-16	In place from the Early Commencement Works			
AP-17	-	-	Yes	No
AP-18	Yes	-	-	No
AP-19	Existing access in place from EA1, with no works required.			
AP-20	-	-	Yes	No
AP-21				
AP-22	-	Yes	-	Yes
AP-23				
AP-24				
AP-25	-	Yes	-	Yes
AP-26	In place from the Early Commencement Works			
AP-27	-	Yes	-	No
AP-28	Existing access in place with no works required.			
AP-29	Yes	-	-	No
AP-30	-	-	Yes	Yes
AP-31	Yes	-	-	Yes

3.0 Tree Works

3.1. Overview of assessment.

The following routes have been identified as those, which will require works to remove low-level branches to accommodate any abnormal load movements, such as cable drums. For the purpose of this report, and based on the information available at the time of writing, the combined height of Cable Drum and Transportation Cradle, is 4.9m. it is therefore proposed that the minimum height of any tree branches should be in the order of 5.0m from road surface.

The assessment of overhanging branches was undertaken using a laser-measuring device to determine the height of low-lying branches from the road surface.

3.2. Grundisburgh Road

Table 3: Grundisburgh Tree Survey

Tree Ref	Clear height to branches	Easting	Northing	Trimming Required
GR-001	5.048m	622164.643	250217.530	NO
GR-002	5.105m	622121.115	250136.692	NO
GR-003	4.642m	621905.161	250032.894	YES
GR-004	4.874m	621559.932	249559.654	YES
GR-005	5.207m	621303.907	249278.577	NO
GR-006	5.472m	621287.003	249223.463	NO
GR-007	4.996m	620840.762	249114.734	YES
GR-008	5.400m	621971.671	248633.448	NO
GR-009	4.693m	622399.644	248568.431	YES
GR-010	4.537m	622412.504	248547.329	YES

3.3. Newbourne Road

Table 4: Newbourne Tree Survey

Tree Ref	Clear height to branches	Easting	Northing	Trimming Required
NR-001	5.030m	624995.904	243961.979	NO
NR-002	5.090m	625008.917	243961.959	NO
NR-003	5.125m	625873.272	244440.355	NO
NR-004	5.119m	625939.255	244495.424	NO
NR-005	5.429m	626034.063	244523.986	NO
NR-006	5.311m	626089.759	244537.138	NO
NR-007	5.253m	626117.577	244543.562	NO
NR-008	4.926m	626152.238	244551.566	YES
NR-009	4.835m	626198.780	244562.264	YES
NR-010	5.103m	626223.212	244567.772	NO
NR-011	4.777m	626410.008	244610.381	YES

3.4. Waldringfield Road

Table 5: Waldringfield Road Tree Survey

Tree Ref	Clear height to branches	Easting	Northing	Trimming Required
WR-001	4.693	626150.183	246369.804	YES
WR-002	4.190	626.70.243	246282.658	YES
WR-003	4.624	626471.099	246219.217	YES
WR-004	4.830	626562.783	246150.155	YES
WR-005	4.835	626625.815	246096.545	YES
WR-006	4.477	626634.855	246080.293	YES
WR-007	4.836	626789.252	245859.845	YES
WR-008	4.126	627008.749	245610.739	YES
WR-009	4.736	627044.614	145590.972	YES

3.5. Limitations of Assessment

It should also be noted that the assessment of overhanging branches has been undertaken well in advance of the proposed commencement of works, and as such, the condition of the trees noted above may have changed during the intervening period.

The contractor should undertake a further assessment leading up to the start date for the tree works to ensure that all areas are captured.

4.0 Access Junction Design

4.1. General Description

Twenty-Eight Junctions have been reviewed as part of this assessment. Each junction provides access from the local road network into the cable corridor for the Main Works. Junction geometry has been taken into consideration for access by an articulated low-loader vehicle.

Of the thirty junctions reviewed, three have already been constructed as part of the early commencement works in 2022. AP-09, AP-16 and AP-26 are therefore not included in this section of the report.

Five of the junctions reviewed were designed, approved and constructed as part of the EA1 project, and remain in place. AP-07, AP-08, AP-18, AP-19 and AP-29 are therefore not included in this section of the report

Five junctions are existing and are contained within the red-line DCO boundary. These are AP-04, AP-05, AP-06, AP-14, AP-15 and AP-28. There are no modifications necessary to any of these junctions to facilitate the required access to the cable corridor and they are therefore not included in this section of the report.

The following junctions, which are new, or are being reinstated to the same standard as those constructed during EA1, have been considered in this section of the report:

- AP-02 Bullen Lane - Reinstated
- AP-03 Somersham Road - New
- AP-10 Old Ipswich Road - Reinstated
- AP-11 Henley Road - New
- AP-12 Henley Road - New
- AP-17 Lodge road - Reinstated
- AP-20 Sandy Lane - Reinstated
- AP-21 Sandy Lane - Reinstated
- AP-22 Waldringfield Road - Reinstated
- AP-23 Waldringfield Road - New
- AP-24 Waldringfield Road - New
- AP-25 Ipswich Road - New
- AP-27 Park Lane - New
- AP-30 Ferry Road - New
- AP-31 Ferry Road - Reinstated

4.2. AP-02 Bullen Lane

AP-02 was designed, approved, and constructed as part of the EA1 project and was designated as AX-01. On completion of EA1, the junction was removed and all land reinstated to previous conditions.

Due to the successful operation of the previously approved junction, the proposal for EA3 is to simply reinstate the AP-02 junction to the exact specification previously approved.

Refer to drawing number 152889/1050

4.3. AP-03 Somersham Road

AP-03 is a proposed new access point, located to the south side of Somersham Road, and will provide access to the cable corridor.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-03 without the need to over-run any verges.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Somersham Road. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Somersham Road is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1051

4.4. AP-10 Old Ipswich Road

AP-10 was designed, approved, and constructed as part of the EA1 project and was designated as AX-06. On completion of EA1, the junction was removed and all land reinstated to previous conditions.

Due to the successful operation of the previously approved junction, the proposal for EA3 is to simply reinstate the AP-10 junction to the exact specification previously approved.

Refer to drawing number 152889/1054

4.5. AP-11 and AP-12 Henley Road

AP-11 and AP-12 are proposed new access points, located on Henley Road, and will provide access to the cable corridor.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-11 and AP-12 without the need to over-run any verges.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Henley Road. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Henley Road is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1055

4.6. AP-17 Lodge Road

AP-17 was designed, approved, and constructed as part of the EA1 project and was designated as AX-09. On completion of EA1, the junction was removed and all land reinstated to previous conditions.

Due to the successful operation of the previously approved junction, the proposal for EA3 is to simply reinstate the AP-17 junction to the exact specification previously approved.

Refer to drawing number 152889/1064

4.7. AP-20 and AP-21 Sandy Lane

AP-20 was designed, approved, and constructed as part of the EA1 project and was designated as AX-12. On completion of EA1, the junction was removed and all land reinstated to previous conditions.

In addition, the Haul Road used during EA1 emerged onto Sandy Lane to allow construction vehicles to access AX-12 (now AP-20). This former Access/Egress from the haul road was never designated during EA1, but has now been designated as AP-21.

Due to the successful operation of the previously approved junction and access/egress from the haul road, the proposal for EA3 is to simply reinstate the AP-20 and AP-21 junctions to the exact specification previously approved.

Refer to drawing number 152889/1067

4.8. AP-22 Waldringfield Road

AP-22 was designed, approved, and constructed as part of the EA1 project and was designated as AX-13. On completion of EA1, the junction was removed and all land reinstated to previous conditions.

Due to the successful operation of the previously approved junction, the proposal for EA3 is to simply reinstate the AP-22 junction to the exact specification previously approved.

Refer to drawing number 152889/1068

4.9. AP-23 and AP-24 Waldringfield Road

AP-23 and AP-24 are proposed new access points, located on Waldringfield Road, and will provide access to the cable corridor.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-23 and AP-24 without the need to over-run any verges, or define the extent of additional verge widening required.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Waldringfield Road. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Waldringfield Road is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1070 AP-23 and 152889/1071 AP-24

4.10. AP-25 Ipswich Road

AP-25 is a proposed new access point, located on Ipswich Road, and will provide access to the cable corridor.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-25 without the need to over-run any verges, or define the extent of additional verge widening required.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Ipswich Road. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Ipswich Road is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1072

4.11. AP-27 Park Lane

AP-27 is a proposed new access point, located on Park Lane, and will provide access to cable corridor. During the EA1 project, AX-16 was located on the southern side of Park Lane. For the main works associated with EA3, this junction cannot be reinstated in the same location due to land boundary issues, hence the new location for AP-27 is proposed.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-27 without the need to over-run any verges, or define the extent of additional verge widening required.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Park Lane. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Park Lane is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1075

4.12. AP-30 Ferry Road

AP-30 is a proposed new access point, located on Ferry Road, and will provide access to the cable corridor.

All new access junctions must take cognisance of the following design parameters:

- Junction radii designed to suit the requirements of an articulated low-loader.
- Allowance for sufficient length of hardstanding surface off the adjoining carriageway in order to prevent vehicles from blocking the public highway
- Designed with suitable junction visibility to suit the speed of the main road
- Junctions to be within the width of the confines of the cable corridor.
- An access gate to be located across the end of the junction, which opens inwards towards the cable corridor.

Vehicle swept path analysis has been undertaken to demonstrate that an articulated low-loader HGV can access AP-30 without the need to over-run any verges, or define the extent of additional verge widening required.

The extent of hard surfacing to the junction has been set back 20.0m from the southern channel line of Ferry Road. This will allow the articulated low-loader, which is approximately 18m long, to sit fully off the public highway when the haul road access gates are closed, and thus not affect any other road users.

Ferry Road is currently subject to the National Speed Limit. However, Suffolk County Council has previously advised that all public roads, in the vicinity of any access points, should be reduced to 30mph. Accordingly, junction visibility splays should be set with an X-distance of 2.4m and a Y-distance of 90m, which would comply with the requirements of DMRB CD123 & CD109.

Refer to drawing number 152889/1078

4.13. AP-31 Ferry Road

AP-31 was designed, approved, and constructed as part of the EA1 project and was designated as AX-19. On completion of EA1, the junction was retained; however, a partial soil bund was constructed over the tarmac surfacing. Works required under the EA3 project are to remove the soil bund, thoroughly clean and inspect the junction surfacing for damage and make good as require, along with refreshing of the white lining.

Due to the successful operation of the previously approved junction, the proposal for EA3 is to simply reinstate the AP-31 junction to the exact specification previously approved.

Refer to drawing number 152889/1079

4.14. Crossing Points for Haul Road

All crossing points where the Haul Road will cross a public road will be surfaced with asphalt on approach to the public road.

Access gates will be set back 20m from the edge of the adjoining public road in order to allow construction vehicles using the crossing to sit fully off the public road. A marshal will control all construction vehicle movement across the defined crossing points.

In addition, the Haul Road crossing will be signal controlled in order to stop public vehicles on the approach roads whilst construction vehicles cross the carriageway. Advance warning signs will also be erected, all in accordance with Figure 3.4 Haul Road Crossing from the "*Traffic Signs Manual, Chapter 8, Traffic Safety Measures and Signs for Road Works and Temporary Situations Part 1: Design 2009*"

No construction vehicles will be permitted to turn onto the public road from any crossing points, and similarly no construction vehicles are permitted to turn into any of the defined crossing points from the public road. The crossing point is there to facilitate a straight-over crossing of the public road only, and to provide continuity of the Haul Road.

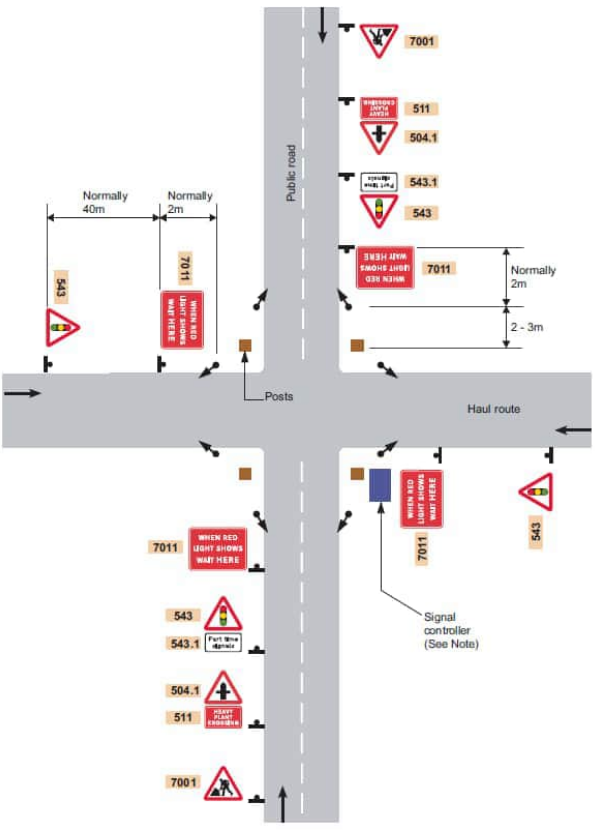


Figure 3.4 Haul route crossing

5.0 Existing Services

5.1. Electrical and Telecom Services

During the site survey works, overhead electrical cables and telecom cables, which cross the public highway, were observed in numerous locations. No survey information was obtained as to the height of each service cable, as this would have required specialist non-contact measuring devices.

Published guidance notes indicate that overhead power lines should be at a minimum clearance from the ground of 5.8 metres where they cross public roads. Telecom Cables can vary in height from 4m to 7m.

The potential for existing overhead services to clash with any abnormal load movement along the public roads will require to be assessed and confirmed using specialist non-contact survey equipment, with all works taking full cognisance of the requirements of GSE Guidance Note GS6 (Fourth Edition).

Woodbridge Road Grundisburgh

Appendix A

Route Plans from CCS B Paper Mill Lane **and CCS D** Top Street
to all other CCS and Cable Corridor Access Locations

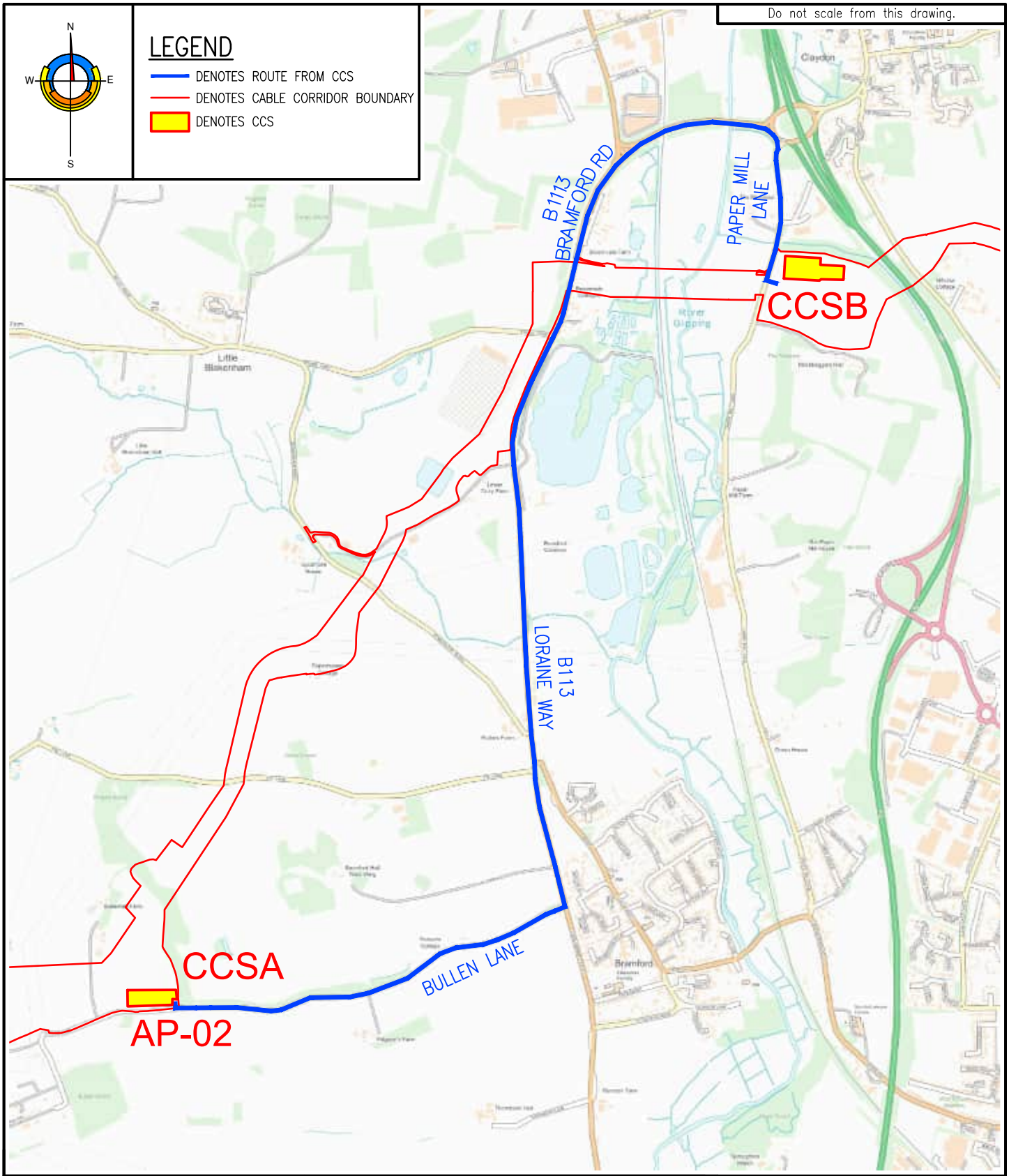
Drawing Number 152889/8000 to 152889/8018 incl

Note: The following drawings have been deleted from this appendix in accordance with the updated report:

152889/8005 ROUTE PLAN FROM CCSD TO AP-11 AND AP-12

152889/8006 ROUTE PLAN FROM CCSD TO AP-13

Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:
1:20000	For Information

Drawing Title:
ROUTE PLAN FROM CCSB TO AP-02 AND CCSA

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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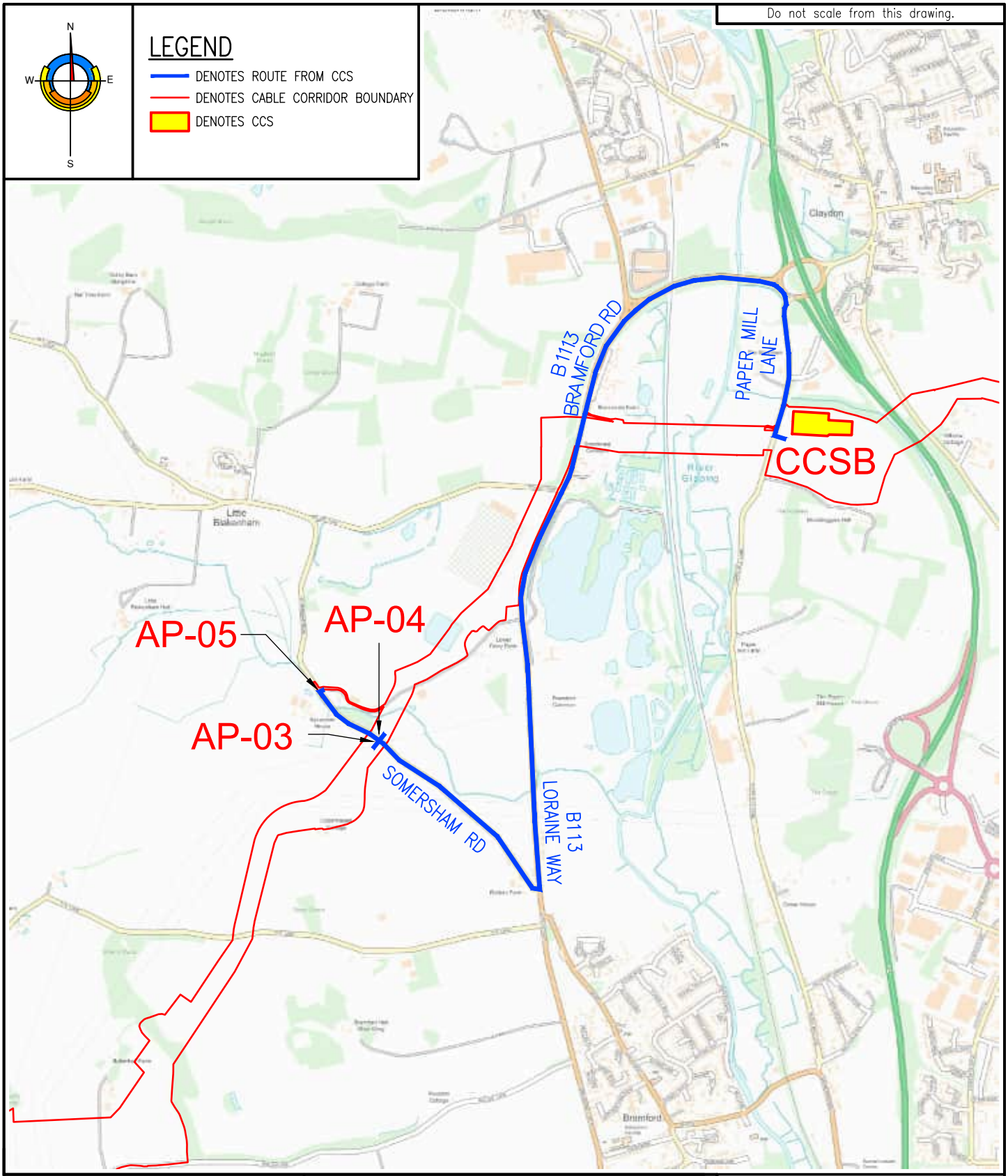
Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:20000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSB TO AP-03, AP-04 AND AP-05

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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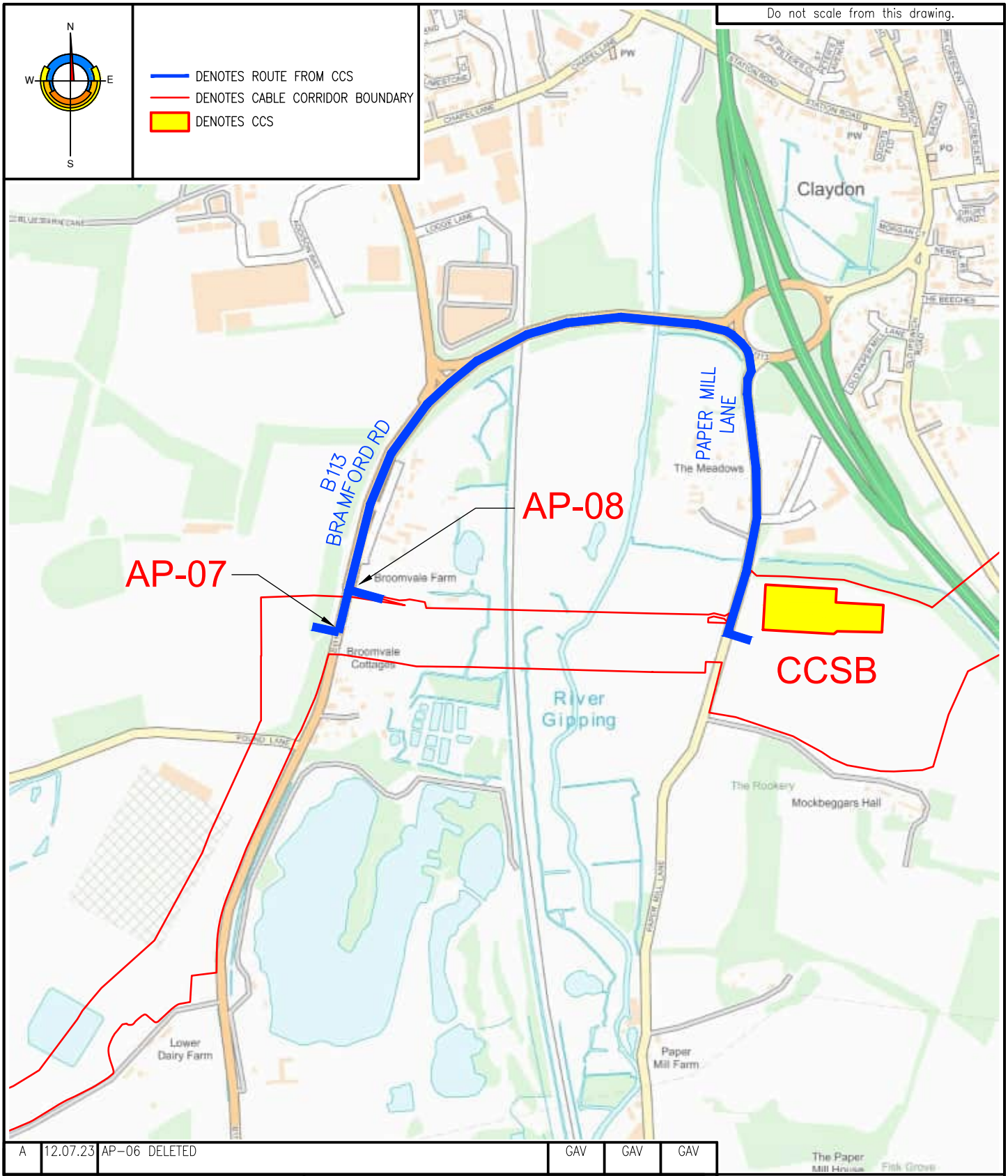
Do not scale from this drawing.



A	12.07.23	AP–06 DELETED	GAV	GAV	GAV

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Drawing Title:
ROUTE PLAN FROM CCSB TO AP–07 AND AP–08

Scale at A4:	Status:	
1:10000	For Information	
Drawn:	**Checked:**	**Approved:**
BMQ	AM	GAV
Date:	**Date:**	**Date:**
07/03/23	07/03/23	07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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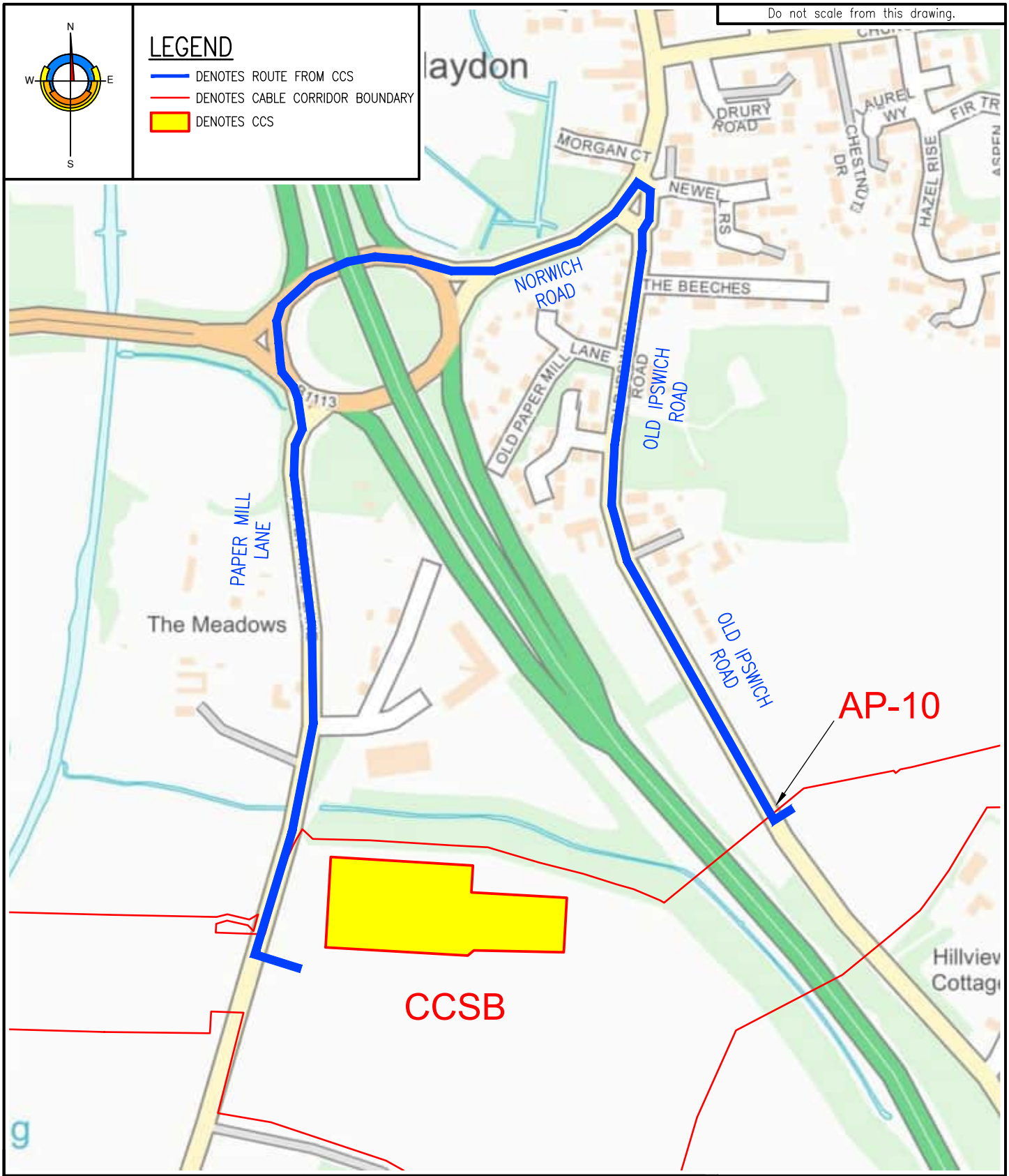
Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:5000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSB TO AP-10

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
1AA0604637	EA3-LDC-CSM-DRG-NKT-000112	152889/8003	–

Do not scale from this drawing.

LEGEND

- DENOTES ROUTE FROM CCS
- DENOTES CABLE CORRIDOR BOUNDARY
- DENOTES CCS

N
W
E
S

CCSB
PAPER MILL LANE
A14
AP-11
AP-12
HENLEY ROAD
A1156 BURY ROAD
A1156 NORWICH ROAD
A1214 VALLEY ROAD
HENLEY ROAD

A	17.10.23	ROUTE UPDATED	JEA	GAV	GAV

NKT

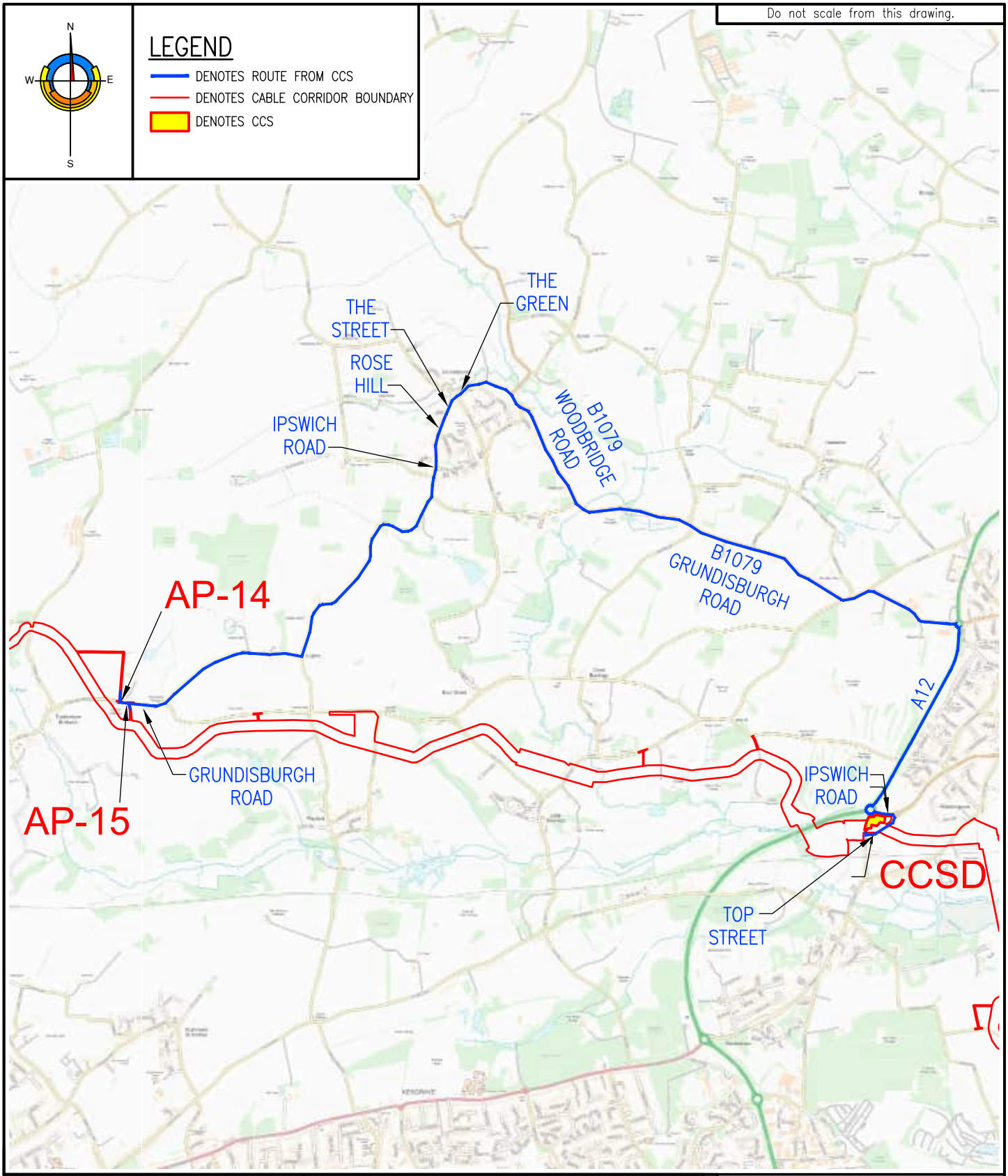
Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Drawing Title:
ROUTE PLAN FROM CCSB TO
AP–11 AND AP–12

Scale at A3: N.T.S.	Status: For Information		
Drawn: BMQ	Checked: AM	Approved: GAV	
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23	
NKT ID: 1AA0604638	Aconnex ID: EA3-LDC-CSM-DRG-NKT-000113	Drawing No.: 152889/8004	Revision: A

Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
N.T.S.	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP–14 AND AP–15

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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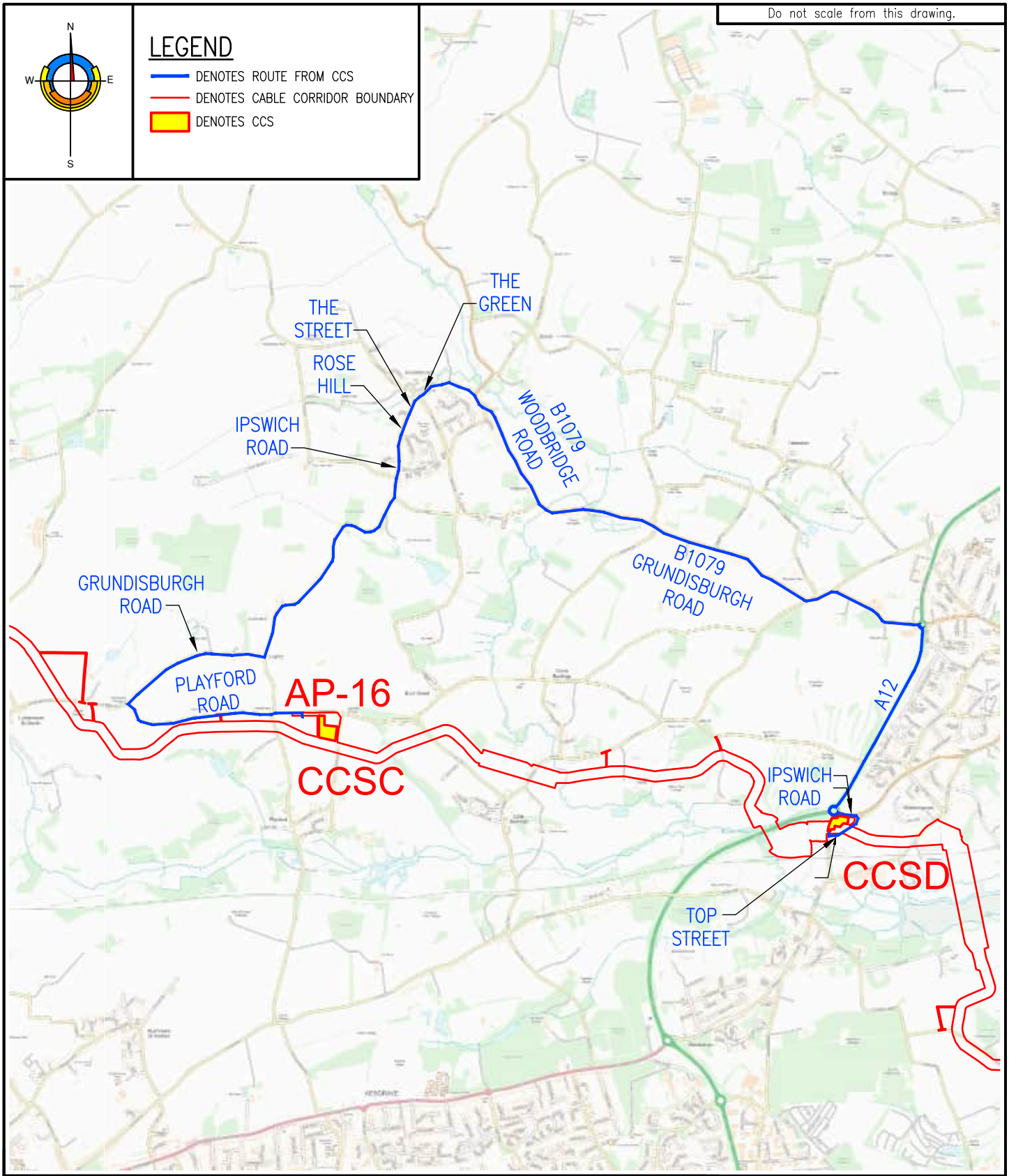

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-16 AND CCSC

Scale at A4:	Status:	
N.T.S.	For Information	
Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date:	Date:	Date:
07/03/23	07/03/23	07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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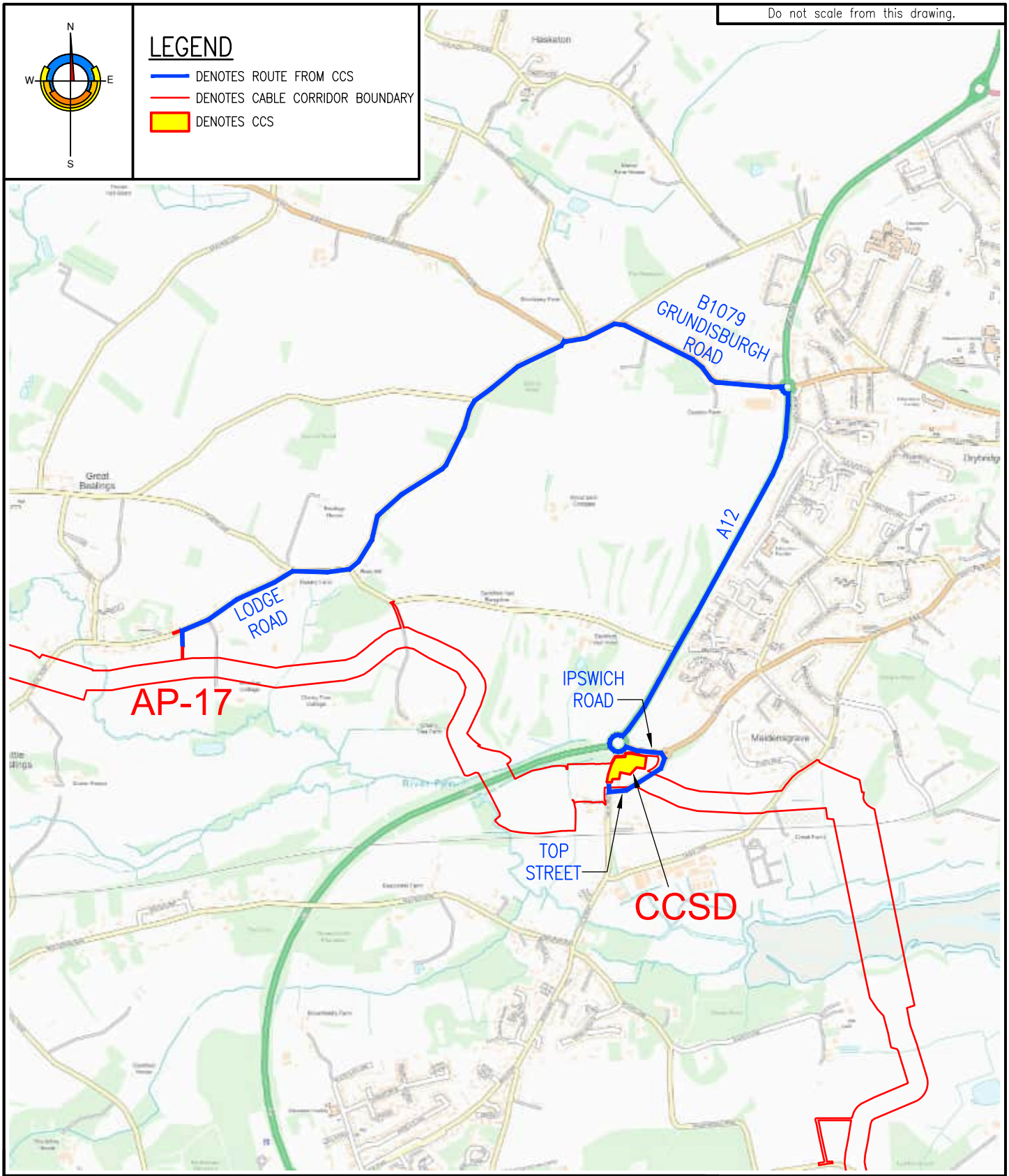

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:20000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP–17

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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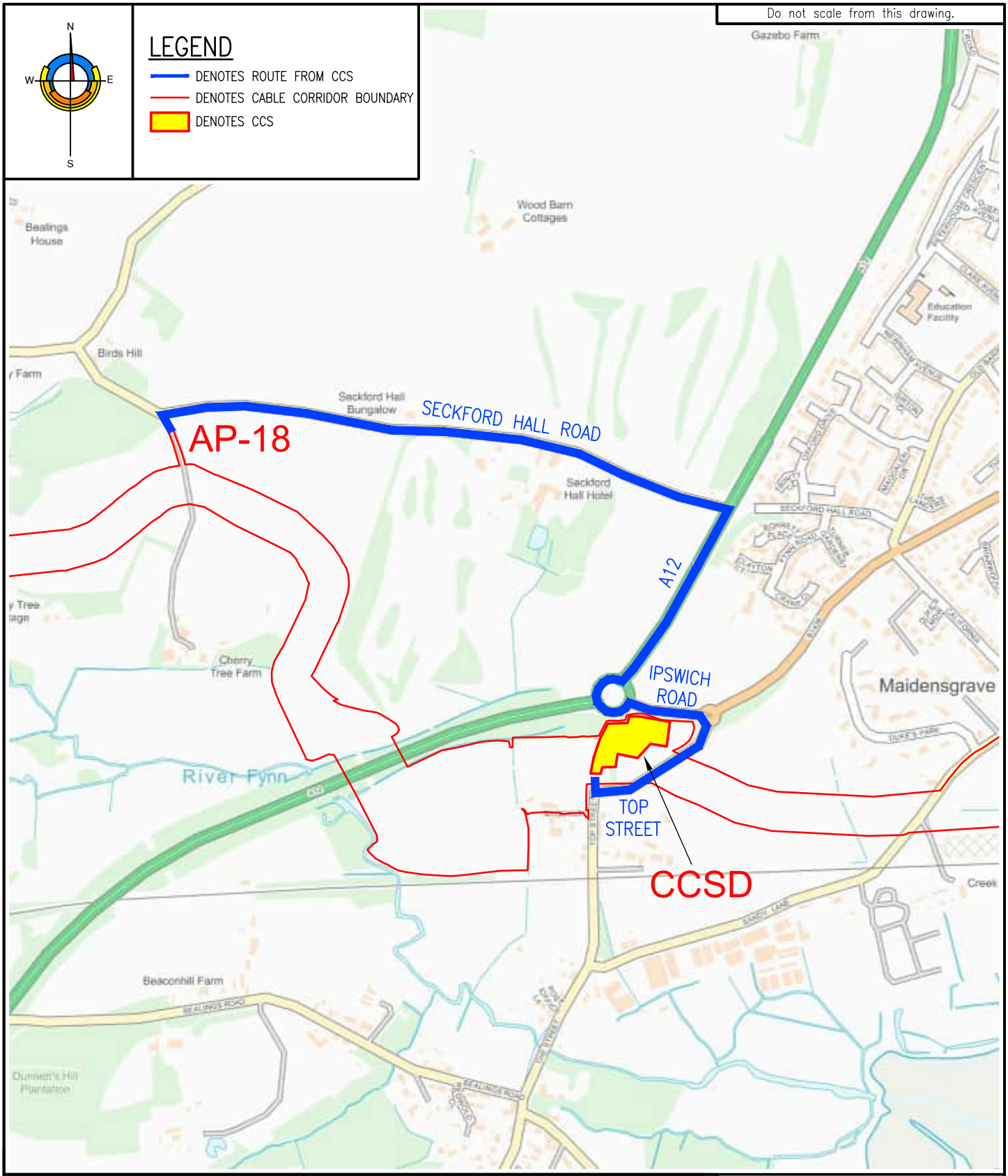

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:10000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-18

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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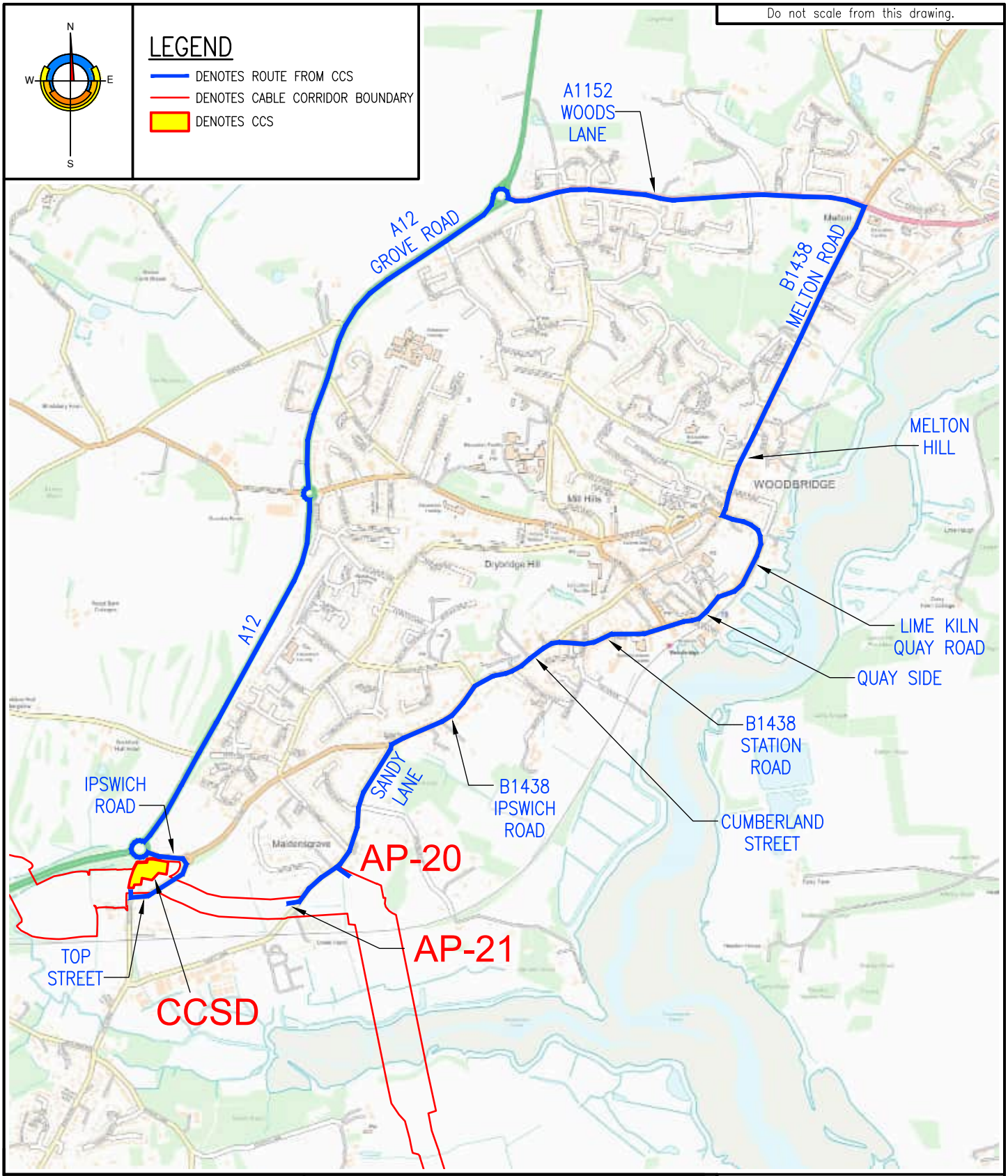
Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:20000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO
AP-20 AND AP-21

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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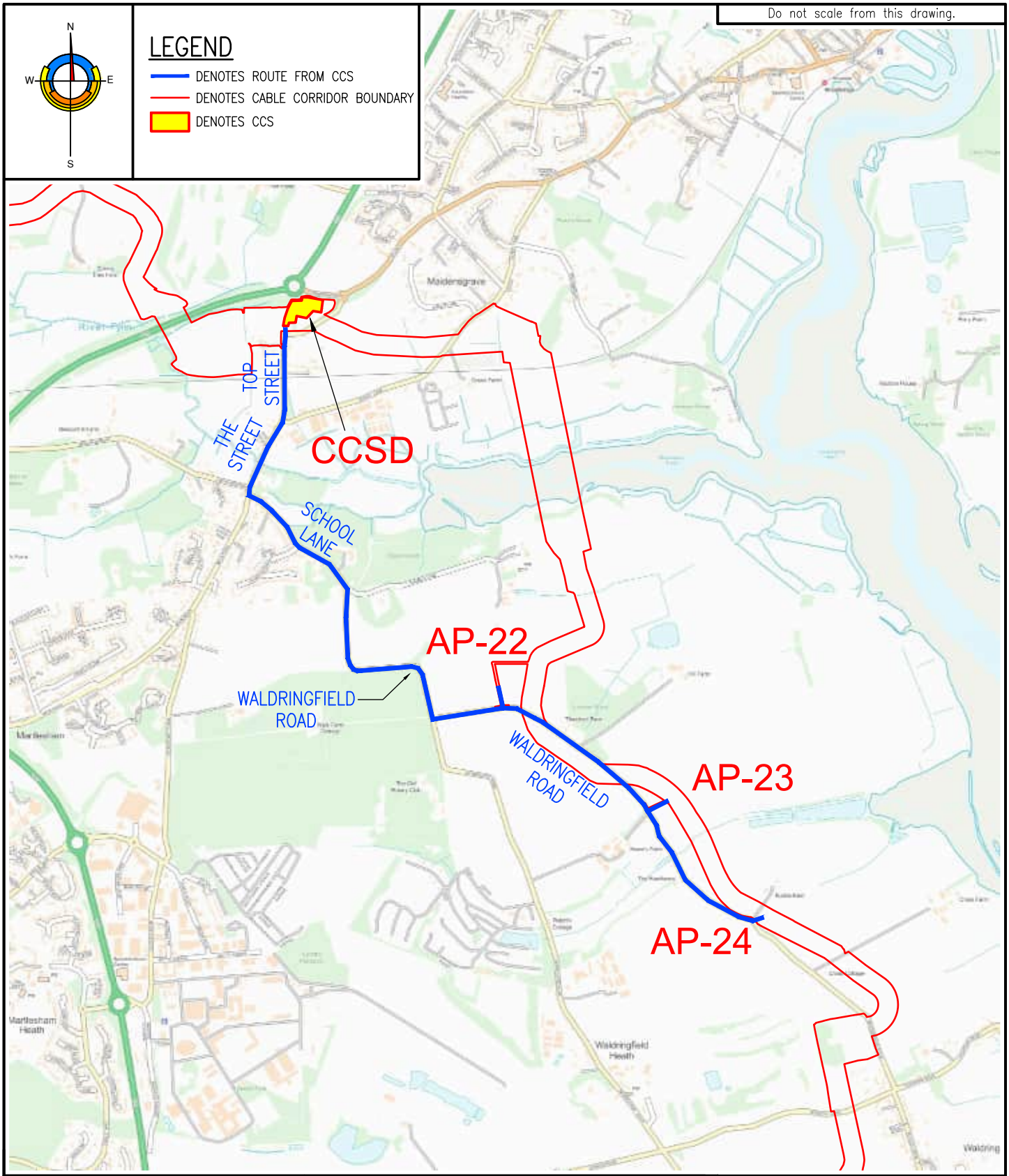

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
1:20000	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-22, AP-23 AND AP-24

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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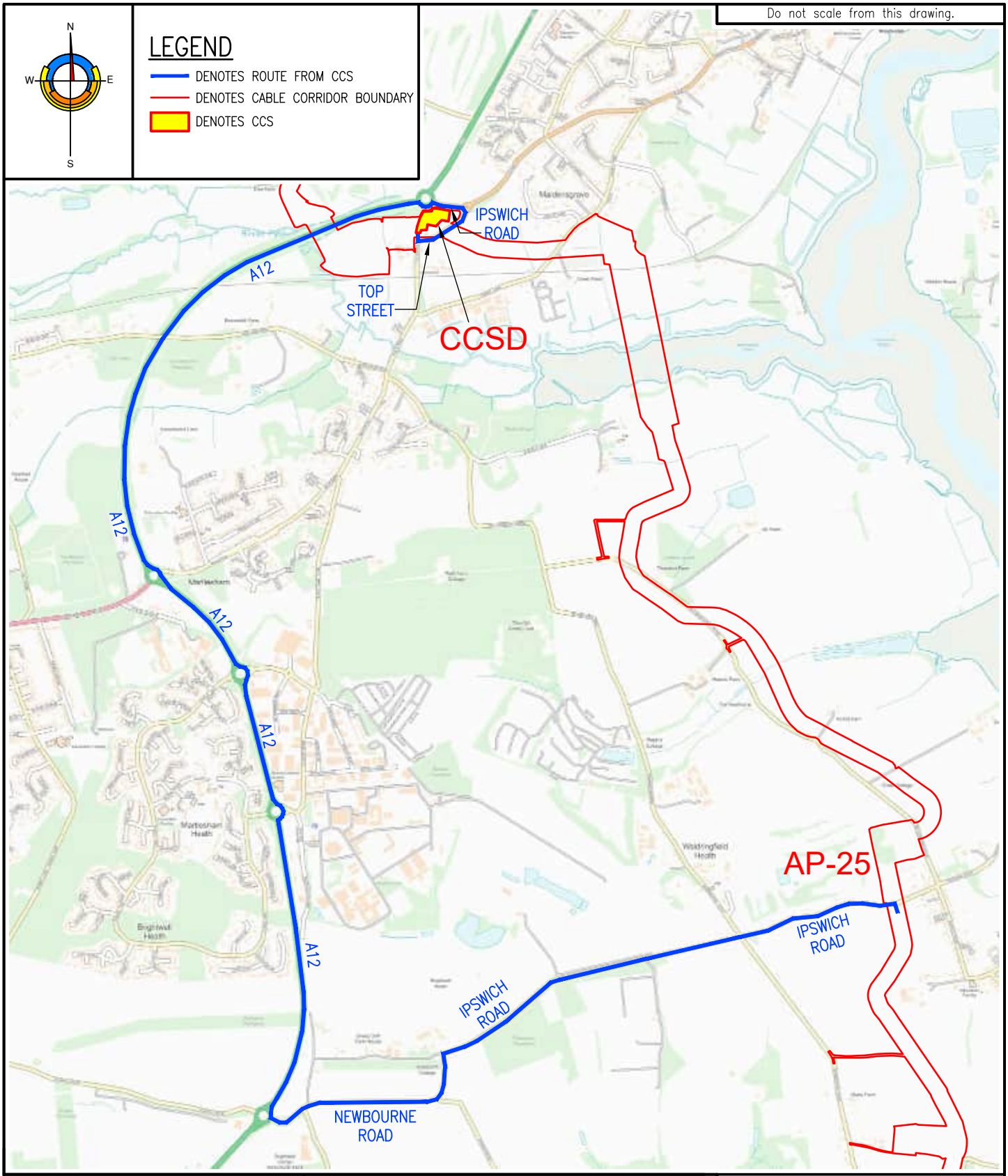

NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
N.T.S.	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP–25

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
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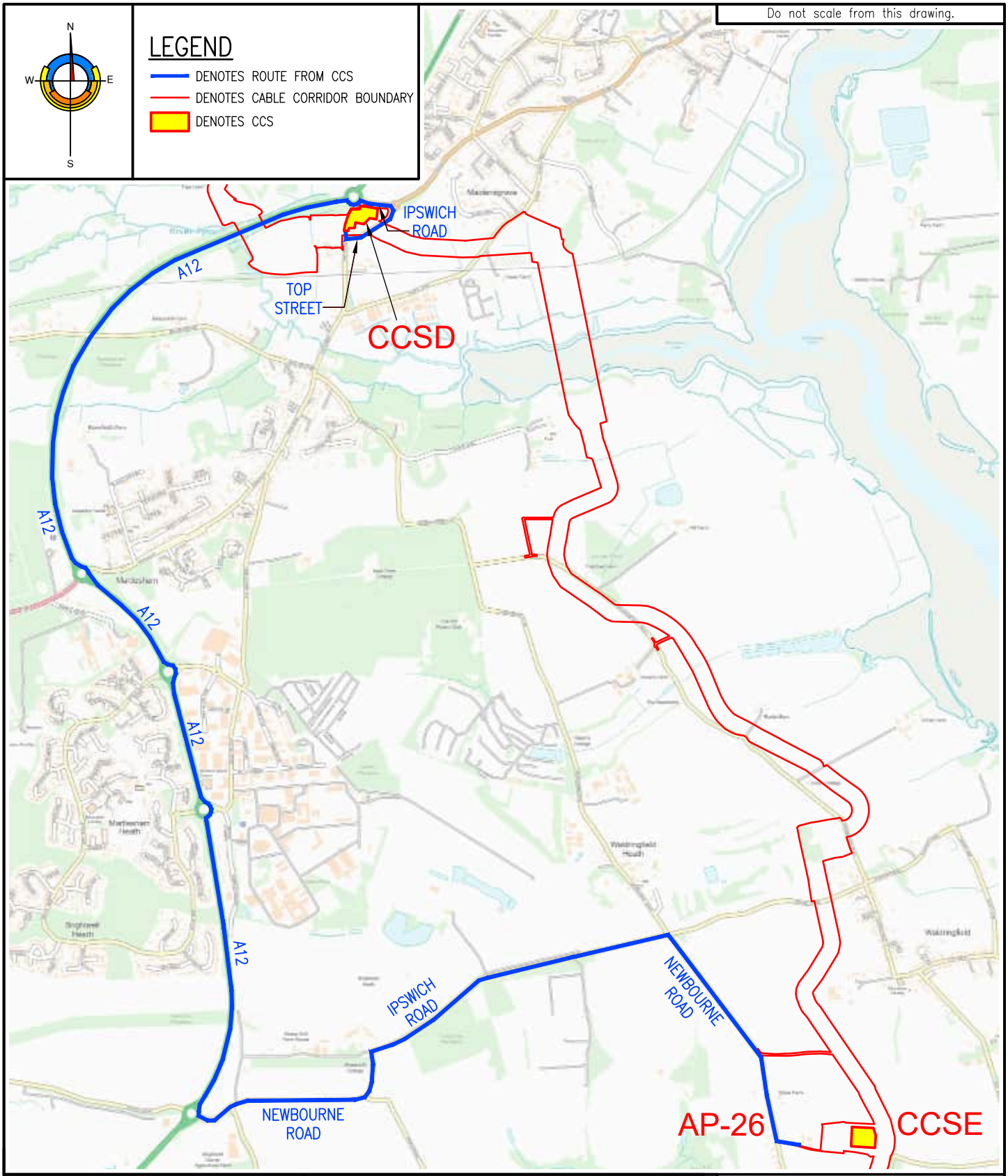
Do not scale from this drawing.



NKT

Project Title:
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A4:	Status:	
N.T.S.	For Information	

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-26 AND CCSE

Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date: 07/03/23	Date: 07/03/23	Date: 07/03/23

NKT ID:	Aconnex ID:	Drawing No.:	Revision:
1AA0604648	EA3-LDC-CSM-DRG-NKT-000123	152889/8014	–

Do not scale from this drawing.

N

W E

S

LEGEND

- DENOTES ROUTE FROM CCS
- DENOTES CABLE CORRIDOR BOUNDARY
- DENOTES CCS

CCSD

IPSWICH ROAD

TOP STREET

A12

A14

AP-27

PARK LANE

BUCKLESHAM ROAD

TRIMLEY ROAD

KIRTON

INNOCENCE LANE

CROFT LANE

KESGRAVE

NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-27

NKT ID: 1AA0604649

Aconnex ID: EA3-LDC-CSM-DRG-NKT-000124

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A3:	Status:		
N.T.S.	For Information		
Drawn:	Checked:	Approved:	
BMQ	AM	GAV	
Date:	Date:	Date:	
07/03/23	07/03/23	07/03/23	

Drawing No.: 152889/8015

Revision: –

Do not scale from this drawing.

N
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LEGEND

- DENOTES ROUTE FROM CCS
- DENOTES CABLE CORRIDOR BOUNDARY
- DENOTES CCS

IPSWICH ROAD
TOP STREET
CCSD
A12
A14
CROFT LANE
INNOCENCE LANE
BACK ROAD
FALKENHAM ROAD
KIRTON
AP-28

NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-28

NKT ID: 1AA0604650

Aconnex ID: EA3-LDC-CSM-DRG-NKT-000125

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A3:	Status:	
N.T.S.	For Information	
Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date:	Date:	Date:
07/03/23	07/03/23	07/03/23

Drawing No.: 152889/8016

Revision: –

Do not scale from this drawing.

N
W E
S

LEGEND

- DENOTES ROUTE FROM CCS
- DENOTES CABLE CORRIDOR BOUNDARY
- DENOTES CCS

A1152 WOODS LANE
A12 GROVE ROAD
A1152 WILFORD BRIDGE ROAD
B1083
A12
IPSWICH ROAD
CCSD
TOP STREET
B1083
MAIN ROAD
B1083 WOODBRIDGE ROAD
B1083 FORD HILL
HUMP BACK BRIDGE AT SHOTTISHAM
B1083
B1083
SHOTTISHAM ROAD
ALDERTON
AP-29

NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-29

NKT ID: 1AA0604651

Aconnex ID: EA3-LDC-CSM-DRG-NKT-000126

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A3:	Status:		
N.T.S.	For Information		
Drawn:	Checked:	Approved:	
BMQ	AM	GAV	
Date:	Date:	Date:	
07/03/23	07/03/23	07/03/23	

Drawing No.: 152889/8017

Revision: –

Do not scale from this drawing.

LEGEND

- DENOTES ROUTE FROM CCS
- DENOTES CABLE CORRIDOR BOUNDARY
- DENOTES CCS

N
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WOODS LANE
A12 GROVE ROAD
A1152 WILFORD BRIDGE ROAD
B1083
A12
IPSWICH ROAD
CCSD
TOP STREET
B1083
MAIN ROAD
B1083 WOODBRIDGE ROAD
B1083 FORD HILL
HUMP BACK BRIDGE AT SHOTTISHAM
B1083
B1083
B1083
ALDERTON
B1083 THE STREET
THE STREET
FERRY ROAD
AP-31
CCSF
AP-30

NKT

Project Title:
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

Drawing Title:
ROUTE PLAN FROM CCSD TO AP-30, AP-31 AND CCSF

NKT ID: 1AA0604652

Aconnex ID: EA3-LDC-CSM-DRG-NKT-000127

FAIRHURST
Westerton of Craigie,
Southampton Road, DUNDEE, DD4 7PN
Tel: 01382 453300 Fax: 0844 381 4412

Scale at A3:	Status:	
N.T.S.	For Information	
Drawn:	Checked:	Approved:
BMQ	AM	GAV
Date:	Date:	Date:
07/03/23	07/03/23	07/03/23

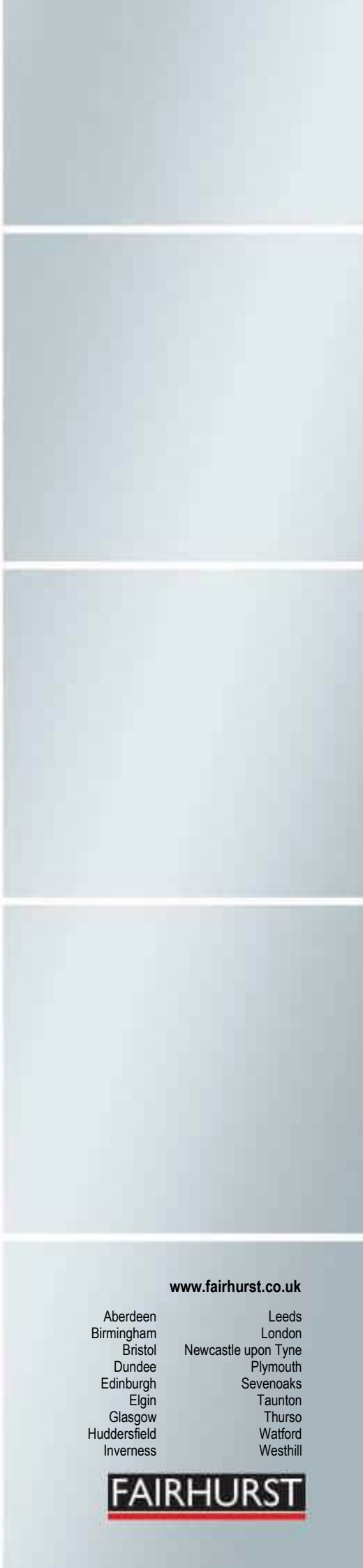
Drawing No.: 152889/8018

Revision: –

Appendix B

List of Access Point Design Drawings Including Advance Warning Signage
(Drawings are not included in this report)

Drawing No.	Drawing Title:
152889/1040	Road Construction Details
152889/1041	Road Construction Details at AP-13
152889/1050	AP-02 (BULLEN LANE)
152889/1051	AP-03, AP-04 AND AP-05 (SOMERSHAM ROAD)
152889/1052	AP-07 AND AP-08 (BRAMFORD ROAD)
152889/1053	AP-09 AND CP-05 (PAPER MILL LANE)
152889/1054	AP-10 (OLD IPSWICH ROAD)
152889/1055	AP-11 AND AP-12 (HENLEY ROAD)
152889/1056	CP-12 (COCKFIELD HALL LANE)
152889/1057	CP-14 (WITNESHAM ROAD)
152889/1059	AP-14 AND AP-15 (GRUNDISBURGH ROAD)
152889/1060	CP-17 (BUTTS ROAD)
152889/1061	AP-16 (BEALINGS ROAD)
152889/1062	CP-18 (CHURCH ROAD)
152889/1063	CP-22 (LODGE ROAD)
152889/1064	AP-17 (LODGE ROAD)
152889/1065	AP-18 (SECKFORD HALL ROAD)
152889/1066	AP-19 (TOP STREET, MARTLESHAM)
152889/1067	AP-20 AND AP-21 (SANDY LANE)
152889/1068	AP-22 (WALDRINGFIELD ROAD)
152889/1069	CP-31 (WALDRINGFIELD ROAD)
152889/1070	AP-23 (WALDRINGFIELD ROAD)
152889/1071	AP-24 (WALDRINGFIELD ROAD)
152889/1072	AP-25 (IPSWICH ROAD)
152889/1073	AP-26 (NEWBOURNE ROAD)
152889/1074	CP-36 (THE STREET, NEWBOURNE)
152889/1075	AP-27, CP-40 (PARK LANE)
152889/1076	AP-28 (FALKENHAM ROAD)
152889/1077	AP-29 (SHOTTISHAM ROAD)
152889/1078	AP-30 (FERRY ROAD)
152889/1079	AP-31 (FERRY ROAD)
152889/1080	ROAD SIGNS
152889/1081	ROUTE SIGNS
152889/1082	ROUTE DIRECTIONAL SIGN LAYOUT SHEET 1 OF 4
152889/1083	ROUTE DIRECTIONAL SIGN LAYOUT SHEET 2 OF 4
152889/1084	ROUTE DIRECTIONAL SIGN LAYOUT SHEET 3 OF 4
152889/1085	ROUTE DIRECTIONAL SIGN LAYOUT SHEET 4 OF 4



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FAIRHURST

APPENDIX 3 UNIQUE VEHICLE ID

1. All construction vehicles and regular site visiting vehicles will have a unique identifier number assigned, which will be displayed in a prominent location on each vehicle. This process will be implemented as follows:

- The Principal Contractor will issue a Driver Instruction Pack to all suppliers engaged in deliveries to the sites.
- Instruction Pack will include a template unique identifier to be updated and printed off for display in vehicles arriving at site.
- Site security logging entry of vehicles/deliveries into the site will record:
  - Compliance with display of Identifier in line with instructions;
  - Record of Identifier against vehicle registration; and
  - Arrival and departure times from the site location.
- Security will supply recorded information to Traffic Co-ordinator for records and to allow the Principal Contractor to track overall compliance with the Traffic Management Plan (and also the Travel Plan) and against instructions issued to suppliers, to identify any failings and implement any performance improvement measures necessary.
- Records will be maintained on site in order to cross-reference against any complaints received relating to delivery vehicles by the local community and to action as necessary.

2. An example template of the unique identifiers to be used (and included within the Driver Instruction Pack) is as follows:

Diagram 1 Example Vehicle Identification Card

APPENDIX 4 ROAD SAFETY AUDITS

Road Safety Audit - Somersham Road

Export Cable EPCI

Revision	Date	Reason for Issue
1	2023-05-29	IFI

Summary of Changes (latest revision only)
Issued for Information

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE, CONSTRUCTION ACCESS TO CABLE CORRIDOR

PROPOSED ACCESS POINTS AP-03, AP-04 & AP-05

SOMERSHAM ROAD, IPSWICH, SUFFOLK

REPORT REF: BN/FAIRHURST/23-122

Job no BN-FAIRHURST-23-122	Issue no 1	Date May 2023
Prepared by BN	Verified by JB	Approved by BN

Beth Newiss and Associates
Road Safety Consultants

19a Grange Hill
Coggeshall
Essex
CO6 1RE

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE,
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

PROPOSED ACCESS POINTS
AP-03, AP-04 & AP-05

SOMERSHAM ROAD, IPSWICH, SUFFOLK

May 2023

REPORT REF: BN/FAIRHURST/23-122

Client: Milestone Transport Planning
Abbey House,
282 Farnborough Road,
Farnborough,
Hants GU14 7NA

Report Prepared By:

Beth Newiss MSoRSA

Checked By:

Jason Bown MSoRSA

NB: This report was produced for Fairhurst, for the specific purpose of documenting the combined Stage 1 and 2 Road Safety Audit process undertaken under GG119.

PROJECT DETAILS	
Report Title:	Combined Stage 1 and 2 Road Safety Audit
Date:	May 2023
Document reference and revision:	BN-FAIRHURST-23-122
Prepared by:	Beth Newiss and Associates
Design Organisation:	Fairhurst
Project Sponsor:	NKT UK
Overseeing Organisation:	Suffolk County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Combined Stage 1 and 2 Road Safety Audit drafted for Audit Team discussions.	BN			15/05/2023
1	Combined Stage 1 and 2 Road Safety Audit finalised and issued to the Design Organisation.	BN	JB	BN	24/05/2023

CONTENTS

APPENDICES

DISTRIBUTION

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1.0 INTRODUCTION

1.1 OVERVIEW:

This report results from a combined Stage 1 and 2 Road Safety Audit (RSA) carried out on the proposed access points AP-03, AP-04 and AP-05 in Somersham Road, Ipswich, Suffolk in association with the EA3 HVDC Route – Construction Access to Cable Corridor. The audit was requested by Fairhurst on behalf of NKT UK.

1.2 SCHEME INFORMATION (Taken directly from the Audit Brief):

During construction of the EA1 project, spare cable ducts were laid in the same corridor zone to facilitate the future construction of the EA3 windfarm, and installation of cables. As part of the EA3 works, there is a requirement to gain access to certain parts of the cable corridor in order to construct Jointing Bays to allow the new cables associated with EA3 to be installed within the existing ducts. With regard to access, there was a planning condition for EA1 which required all construction access points to be removed upon completion of the works and roads/verges reinstated to their previous condition. As such, the majority of access points to the cable corridor no longer exist. The Construction Access to the Cable Corridor works will see the reinstatement of seven former access junctions, along with eight new access junctions and the use of fourteen existing/enhanced accesses. It is the new access junctions designated AP-03, AP-04 and AP-05, which form the basis of this RSA.

1.3 SITE LOCATION (Taken directly from the Audit Brief):

The road network in and around Ipswich, in the area of the proposed access routes, is rural in nature with limited carriageway width. Somersham Road, the location of AP-03, AP-04 & AP-05 is currently the subject of the National Speed limit.

1.4 THE PROPOSALS:

The proposals to be audited within this report relates to are as follows:

- Access points (known as AP-03, AP-04 and AP-05) to be introduced on Somersham Road 830m north-west of junction with Lorraine Way. AP-04 and AP-05 are exiting accesses.
- Advanced Warning signs warning drivers of the presence of Construction Traffic will be introduced.
- The existing speed limit to be reduced from National Speed Limit to 30pmh in the vicinity of the proposals.
- Vegetation within visibility splays is to be removed.

1.5 The Road Safety Audit was undertaken during May 2023. The Road Safety Audit Brief was provided on the 4th May 2023 by Gavin Park of the Design Organisation – Fairhurst, on behalf of the Project Sponsor, NKT UK. Audit Team approval has been sought and received from

Suffolk County Council.

1.6 The Road Safety Audit comprised of an examination of the Audit Brief and drawings provided as detailed in **Appendix A1** and a visit to site.

1.7 SITE VISIT:

A visit to site was undertaken by the Audit Team, together, on the 18th May 2023 between the hours of 11:00 and 12:00.

During the site visit the weather was dry and warm. The road surface was dry. A constant flow of vehicular traffic was observed, but no pedestrian nor cycles.

1.8 COLLISION DATA (Taken from Audit Brief):

The Audit Team was presented with collision data within the Audit Brief. The information provided shows that there have been no (0) collisions within the vicinity.

1.9 DEPARTURES FROM STANDARD (Taken from Audit Brief):

There are no Departures or Relaxations from Standards for this scheme.

1.10 AUDIT TEAM INFORMATION

The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of the Local Authority.

The Audit Team consists of the following members:

Beth Newiss MCIHT MSoRSA and **Jason Bown** IEng FIHE MICE MSoRSA
Beth Newiss and Associates - 19a Grange Hill, Coggeshall, Essex, CO6 1RE
TEL: 07962349262 Email: bethnewissandassociates@gmail.com

1.11 TERMS OF REFERENCE

The terms of reference of this Road Safety Audit are as described in GG119. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. A technical audit has not been included. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been

illustrated adjacent to the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

1.12 Recommendations made in this report are proportionate and viable suggestions for improvement to eliminate or mitigate, in accordance with GG119, and do not imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when the Design Organisation responds to this report.

1.13 The Designer Organisation Response to the RSA should be formally recorded and reported to the Overseeing Organisation and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion.

2.0 PREVIOUS ROAD SAFETY AUDIT(S)

2.1 The Audit Team have been advised that no previous audit have been undertaken for this scheme.

3.0 SAFETY ISSUES RAISED AT THIS COMBINED STAGE 1 AND 2 ROAD SAFETY AUDIT

3.1 The Audit Team have no comments to raise at this stage.

4.0 AUDIT TEAM, DESIGN TEAM AND OVERSEEING ORGANISATION STATEMENT(S)

4.1 AUDIT TEAM

We certify that this audit has been undertaken in accordance with the principles of GG119.

NB: The Audit Team qualifications and experience accord with the requirements of Suffolk City Council.

Audit Team Leader

Beth Newiss MCIHT MSoRSA

Date: 22nd May 2023

Audit Team Member

Jason Bown IEng FIHE MICE MSoRSA

Date: 24th May 2023

4.2 DESIGN ORGANISATION STATEMENT

On behalf of the Design Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.

Name: Gavin Park	
Signed:	
Organisation: FAIRHURST	
Position: Senior Engineer	Date: 25/05/23

4.3 OVERSEEING ORGANISATION STATEMENT

On behalf of the Overseeing Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design team and;
2) The agreed RSA will be progressed.

Name: David Fryett	
Signed:	
Organisation: NKT HVC Ltd	
Position: Project Installation Manager (Onshore)	Date: 25/05/23

APPENDIX A1

INFORMATION PRESENTED FOR AUDIT

INFORMATION PRESENTED FOR AUDIT

Documents:

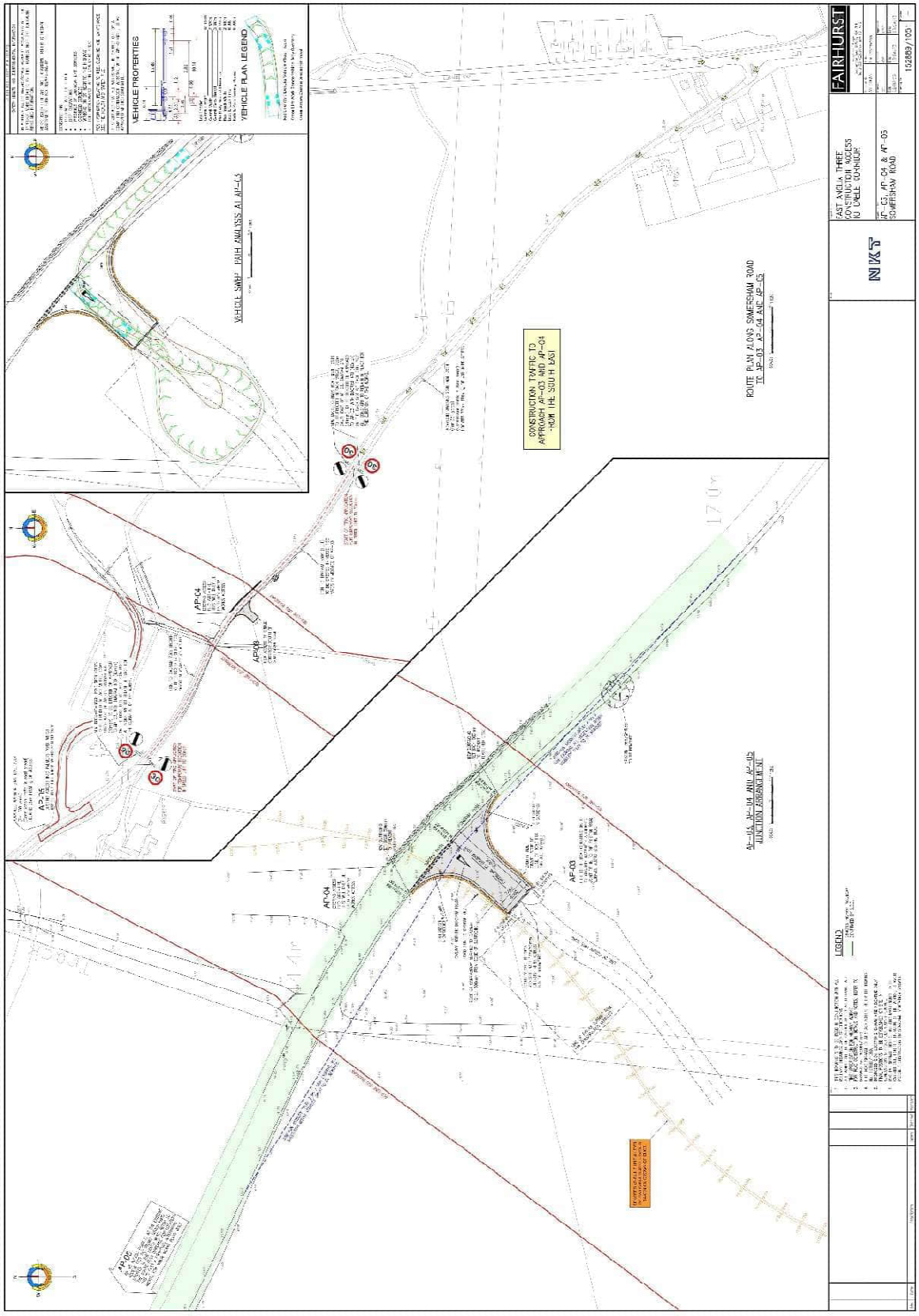
Audit Brief	152889-DOC-02

Including Drawings:

152889-1040	ROAD CONSTRUCTION DETAILS
152889-1051	AP-03, AP-04 & AP-05 SOMERSHAM ROAD
152889-1080	ROAD SIGNS

APPENDIX A2

LOCATION PLAN


VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH ANALYSIS AT AP-05
CONSTRUCTION TRAFFIC TO APPROACH AP-03 AND AP-04 FROM THE SOUTH EAST
ROUTE PLAN ALONG SOMERSHAW ROAD TO AP-03, AP-04 AND AP-05
AP-03, AP-04 AND AP-05 JUNCTION ARRANGEMENT
AP-04
AP-05
AP-06
A2-15
LEGEND
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR
TP GS AP 04 & AP 05 SOMERSHAW ROAD
FAIRHURST
NKT
132889/105

Road Safety Audit -Henley Road

Export Cable EPCI

Revision	Date	Reason for Issue
1	2023-05-29	IFI

Summary of Changes (latest revision only)
Issued for Information

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE, CONSTRUCTION ACCESS TO CABLE CORRIDOR

PROPOSED ACCESS POINTS AP-11 & AP-12

HENLEY ROAD, IPSWICH, SUFFOLK

REPORT REF: BN/FAIRHURST/23-121

Job no	BN-FAIRHURST-23-121	Issue no	1	Date	May 2023
Prepared by	BN	Verified by	JB	Approved by	BN

Beth Newiss and Associates
Road Safety Consultants

19a Grange Hill
Coggeshall
Essex
CO6 1RE

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE, CONSTRUCTION ACCESS TO CABLE CORRIDOR

PROPOSED ACCESS POINTS AP-11 & AP-12

HENLEY ROAD, IPSWICH, SUFFOLK

May 2023

REPORT REF: BN/FAIRHURST/23-121

Client: FAIRHURST
Westerton of Craigie
Southampton Road
Dundee,
DD4 7PN

Report Prepared By:

Beth Newiss MSoRSA

Checked By:

Jason Bown MSoRSA

NB: This report was produced for Fairhurst, for the specific purpose of documenting the combined Stage 1 and 2 Road Safety Audit process undertaken under GG119.

PROJECT DETAILS	
Report Title:	Combined Stage 1 and 2 Road Safety Audit
Date:	May 2023
Document reference and revision:	BN-FAIRHURST-23-121
Prepared by:	Beth Newiss and Associates
Design Organisation:	Fairhurst
Project Sponsor:	NKT UK
Overseeing Organisation:	Suffolk County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Combined Stage 1 and 2 Road Safety Audit drafted for Audit Team discussions.	BN			15/05/2023
1	Combined Stage 1 and 2 Road Safety Audit finalised and issued to the Design Organisation.	BN	JB	BN	24/05/2023

CONTENTS

APPENDICES

DISTRIBUTION

ORGANISATION	CONTACT	COPIES
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1.0 INTRODUCTION

1.1 OVERVIEW:

This report results from a combined Stage 1 and 2 Road Safety Audit (RSA) carried out on the proposed access points AP-11 and AP-12 in Henley Road, Ipswich, Suffolk in association with the EA3 HVDC Route – Construction Access to Cable Corridor. The audit was requested by Fairhurst on behalf of NKT UK.

1.2 SCHEME INFORMATION (Taken directly from the Audit Brief):

During construction of the EA1 project, spare cable ducts were laid in the same corridor zone to facilitate the future construction of the EA3 windfarm, and installation of cables. As part of the EA3 works, there is a requirement to gain access to certain parts of the cable corridor in order to construct Jointing Bays to allow the new cables associated with EA3 to be installed within the existing ducts. With regard to access, there was a planning condition for EA1 which required all construction access points to be removed upon completion of the works and roads/verges reinstated to their previous condition. As such, the majority of access points to the cable corridor no longer exist. The Construction Access to the Cable Corridor works will see the reinstatement of seven former access junctions, along with eight new access junctions and the use of fourteen existing/enhanced accesses. It is the new access junctions designated AP-11 and AP-12, which form the basis of this RSA.

1.3 SITE LOCATION (Taken directly from the Audit Brief):

The road network in and around Ipswich, in the area of the proposed access routes, is rural in nature with limited carriageway width. Henley Road, the location of AP-11 & AP-12 is currently the subject of the National Speed limit.

1.4 THE PROPOSALS:

The proposals to be audited within this report relates to are as follows:

- Access points (known as AP-11 and AP-12) to be introduced on Henley Road.
- Advanced Warning signs warning drivers of the presence of Construction Traffic will be introduced.
- The existing speed limit to be reduced from National Speed Limit to 30pmh in the vicinity of the proposals.
- Vegetation within visibility splays is to be removed.

1.5 The Road Safety Audit was undertaken during May 2023. The Road Safety Audit Brief was provided on the 4th May 2023 by Gavin Park of the Design Organisation – Fairhurst, on behalf of the Project Sponsor, NKT UK. Audit Team approval has been sought and received from Suffolk County Council.

1.6 The Road Safety Audit comprised of an examination of the Audit Brief and drawings provided as detailed in **Appendix A1** and a visit to site.

1.7 SITE VISIT:

A visit to site was undertaken by the Audit Team, together, on the 18th May 2023 between the hours of 10:00 and 10:30.

During the site visit the weather was dry and warm. The road surface was dry. A constant flow of vehicular traffic was observed, but no pedestrian nor cycles.

1.8 COLLISION DATA (Taken from Audit Brief):

The Audit Team was presented with collision data within the Audit Brief. The information provided shows that there has been one (1) serious collision in April 2017, 370m south of the proposed location of AP-11 and AP-12.

1.9 DEPARTURES FROM STANDARD (Taken from Audit Brief):

There are no Departures or Relaxations from Standards for this scheme.

1.10 AUDIT TEAM INFORMATION

The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of the Local Authority.

The Audit Team consists of the following members:

Beth Newiss MCIHT MSoRSA and **Jason Bown** IEng FIHE MICE MSoRSA
Beth Newiss and Associates - 19a Grange Hill, Coggeshall, Essex, CO6 1RE
TEL: 07962349262 Email: bethnewissandassociates@gmail.com

1.11 TERMS OF REFERENCE

The terms of reference of this Road Safety Audit are as described in GG119. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. A technical audit has not been included. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated adjacent to the items along with relevant photographs for clarity, where

appropriate, as well as on the Location Plan attached at **Appendix A2**.

1.12 Recommendations made in this report are proportionate and viable suggestions for improvement to eliminate or mitigate, in accordance with GG119, and do not imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when the Design Organisation responds to this report.

1.13 The Designer Organisation Response to the RSA should be formally recorded and reported to the Overseeing Organisation and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion.

2.0 PREVIOUS ROAD SAFETY AUDIT(S)

2.1 The Audit Team have been advised that no previous audit have been undertaken for this scheme.

3.0 SAFETY ISSUES RAISED AT THIS COMBINED STAGE 1 AND 2 ROAD SAFETY AUDIT

3.1 The Audit Team have no comments to raise at this stage.

4.0 AUDIT TEAM, DESIGN TEAM AND OVERSEEING ORGANISATION STATEMENT(S)

4.1 AUDIT TEAM

We certify that this audit has been undertaken in accordance with the principles of GG119.

NB: The Audit Team qualifications and experience accord with the requirements of Suffolk City Council.

Audit Team Leader

Beth Newiss MCIHT MSoRSA

Date: 22nd May 2023

Audit Team Member

Jason Bown IEng FIHE MICE MSoRSA

Date: 24th May 2023

4.2 DESIGN ORGANISATION STATEMENT

On behalf of the Design Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.

Name: Gavin Park	
Signed: 	
Organisation: FAIRHURST	
Position: Senior Engineer	Date: 25/05/23

4.3 OVERSEEING ORGANISATION STATEMENT

On behalf of the Overseeing Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design team and;
2) The agreed RSA will be progressed.

Name: David Fryett	
Signed:	
Organisation: NKT HVC Ltd	
Position: Project Installation Manager (Onshore)	Date: 25/05/23

APPENDIX A1

INFORMATION PRESENTED FOR AUDIT

INFORMATION PRESENTED FOR AUDIT

Documents:

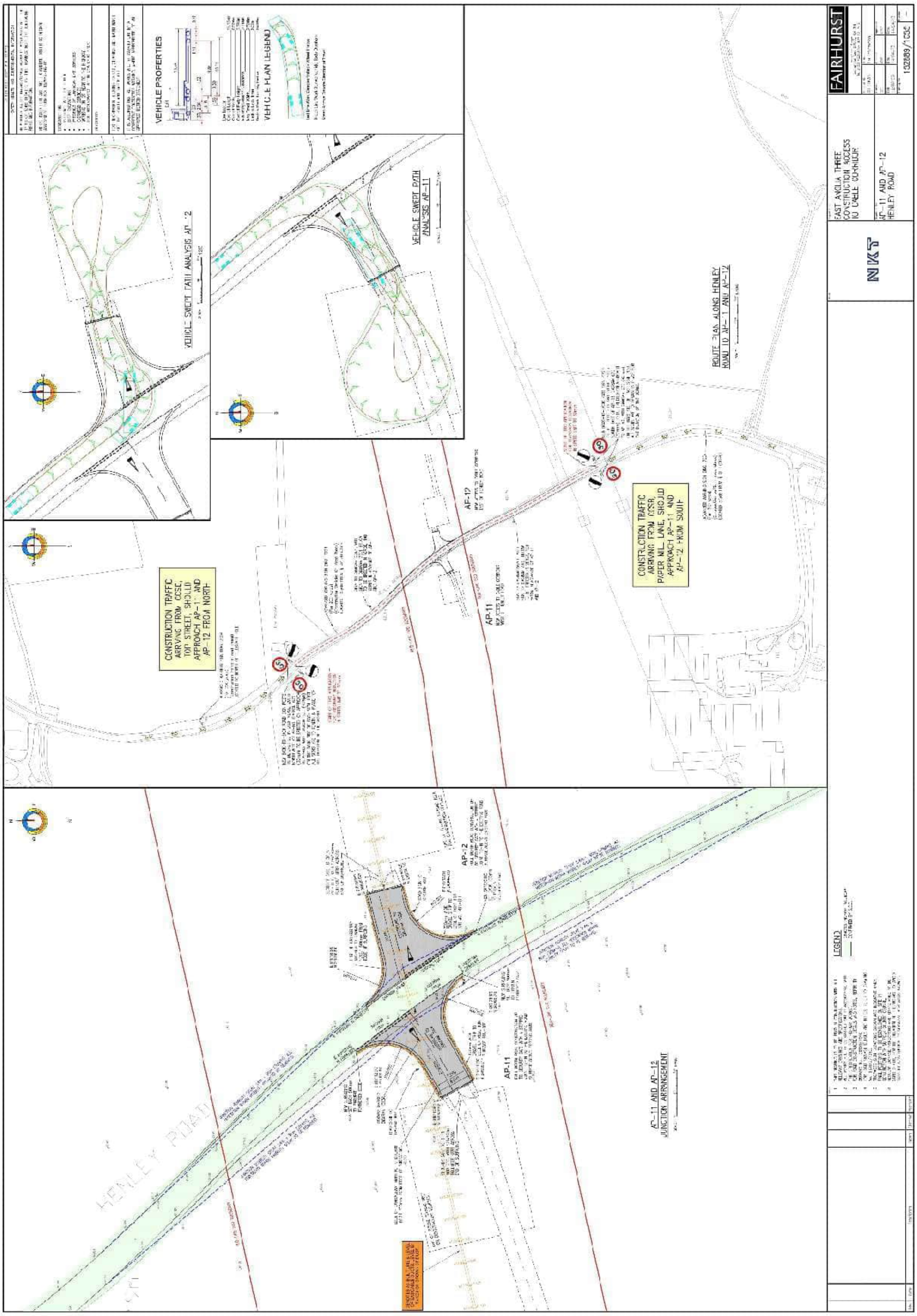
Audit Brief	152889-DOC-03

Including Drawings:

152889-1040	ROAD CONSTRUCTION DETAILS
152889-1055	AP-11 & AP-12 HENLEY ROAD
152889-1080	ROAD SIGNS

APPENDIX A2

LOCATION PLAN


FAIRHURST
NKT
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR
AP-11 AND AP-12 HENLEY ROAD
VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH ANALYSIS AP-12
VEHICLE SWEPT PATH ANALYSIS AP-11
ROUTE PLAN ALONG HENLEY ROAD TO AP-11 AND AP-12
AP-11 AND AP-12 JUNCTION ARRANGEMENT
AP-11
AP-12
LEGEND
HENLEY ROAD

Road Safety Audit - Walderingfield Road

Export Cable EPCI

Revision	Date	Reason for Issue
1	2023-05-29	IFI

Summary of Changes (latest revision only)
Issued for Information

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE, CONSTRUCTION ACCESS TO CABLE CORRIDOR

PROPOSED ACCESS POINTS AP-22, AP-23, AP-24 & AP-25

WALDRINGFIELD ROAD, WOODBRIDGE, SUFFOLK

REPORT REF: BN/FAIRHURST/23-123

Job no	BN-FAIRHURST-23-123	Issue no	1	Date	May 2023
Prepared by	BN	Verified by	JB	Approved by	BN

Beth Newiss and Associates
Road Safety Consultants

19a Grange Hill
Coggeshall
Essex
CO6 1RE

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE,
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

PROPOSED ACCESS POINTS
AP-22, AP-23, AP-24 & AP-25

WALDRINGFIELD ROAD, WOODBRIDGE, SUFFOLK

May 2023

REPORT REF: BN/FAIRHURST/23-123

Client: FAIRHURST,
Westerton of Craigie
Southampton Road,
Dundee,
DD4 7PN

Report Prepared By:

Beth Newiss MSoRSA

Checked By:

Jason Bown MSoRSA

NB: This report was produced for Fairhurst, for the specific purpose of documenting the combined Stage 1 and 2 Road Safety Audit process undertaken under GG119.

PROJECT DETAILS	
Report Title:	Combined Stage 1 and 2 Road Safety Audit
Date:	May 2023
Document reference and revision:	BN-FAIRHURST-23-123
Prepared by:	Beth Newiss and Associates
Design Organisation:	Fairhurst
Project Sponsor:	NKT UK
Overseeing Organisation:	Suffolk County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Combined Stage 1 and 2 Road Safety Audit drafted for Audit Team discussions.	BN			22/05/2023
1	Combined Stage 1 and 2 Road Safety Audit finalised and issued to the Design Organisation.	BN	JB	BN	22/05/2023

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APPENDICES

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1.0 INTRODUCTION

1.1 OVERVIEW:

This report results from a combined Stage 1 and 2 Road Safety Audit (RSA) carried out on the proposed access points AP-22, AP-23, AP-24, and AP-25 in Waldringfield Road, Woodbridge, Suffolk in association with the EA3 HVDC Route – Construction Access to Cable Corridor. The audit was requested by Fairhurst on behalf of NKT UK.

1.2 SCHEME INFORMATION (Taken directly from the Audit Brief):

During construction of the EA1 project, spare cable ducts were laid in the same corridor zone to facilitate the future construction of the EA3 windfarm, and installation of cables. As part of the EA3 works, there is a requirement to gain access to certain parts of the cable corridor in order to construct Jointing Bays to allow the new cables associated with EA3 to be installed within the existing ducts. With regard to access, there was a planning condition for EA1 which required all construction access points to be removed upon completion of the works and roads/verges reinstated to their previous condition. As such, the majority of access points to the cable corridor no longer exist. The Construction Access to the Cable Corridor works will see the reinstatement of seven former access junctions, along with eight new access junctions and the use of fourteen existing/enhanced accesses. It is the new access junctions designated AP-22, AP-23, AP-24 and AP-25, which form the basis of this RSA.

1.3 SITE LOCATION (Taken directly from the Audit Brief):

The road network in and around Ipswich, in the area of the proposed access routes, is rural in nature with limited carriageway width. Waldringfield Road, the location of AP-22, AP-23, AP-24, & AP-25, hich is located on Ipswich Road. Both roads are currently the subject of the National Speed limit.

1.4 THE PROPOSALS:

The proposals to be audited within this report relates to are as follows:

- Access points, known as AP-22, AP-23, and AP-24, to be introduced on Waldringfield Road. Access AP-22 was formerly an access within EA1, AP-23 is an existing informal field access and AP-24 is an existing entry to a field and located alongside an existing informal access.
- Access point, known as AP-25, is a new access to be located on Ipswich Road.
- Advanced Warning signs warning drivers of the presence of Construction Traffic will be introduced.
- The existing speed limit to be reduced from National Speed Limit to 30pmh in the vicinity of the proposals.
- Several 'Potential Passing Places' have been noted along the length of carriageway of Waldringfield Road between the junctions of AP-22 and AP-24.

- Vegetation within visibility splays is to be removed.

1.5 The Road Safety Audit was undertaken during May 2023. The Road Safety Audit Brief was provided on the 4th May 2023 by Gavin Park of the Design Organisation – Fairhurst, on behalf of the Project Sponsor, NKT UK. Audit Team approval has been sought and received from Suffolk County Council.

1.6 The Road Safety Audit comprised of an examination of the Audit Brief and drawings provided as detailed in **Appendix A1** and a visit to site.

1.7 SITE VISIT:

A visit to site was undertaken by the Audit Team, together, on the 17th May 2023 between the hours of 11:30 and 13:30.

During the site visit the weather was dry and warm. The road surface was dry. Limited vehicular traffic and one dog walker was observed. No cyclists were noted during the site visit.

1.8 COLLISION DATA (Taken from Audit Brief):

The Audit Team was presented with collision data within the Audit Brief. The information provided shows that there have been two (2) slight collisions in October 2018 and January 2018 in the surrounding area, but none in the direct vicinity of AP-22, AP-23, AP-24, and AP-25.

1.9 DEPARTURES FROM STANDARD (Taken from Audit Brief):

There are no Departures or Relaxations from Standards for this scheme.

1.10 AUDIT TEAM INFORMATION

The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of the Local Authority.

The Audit Team consists of the following members:

Beth Newiss MCIHT MSoRSA and **Jason Bown** IEng FIHE MICE MSoRSA
Beth Newiss and Associates - 19a Grange Hill, Coggeshall, Essex, CO6 1RE
TEL: 07962349262 Email: bethnewissandassociates@gmail.com

1.11 TERMS OF REFERENCE

The terms of reference of this Road Safety Audit are as described in GG119. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and

knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. A technical audit has not been included. All comments and recommendations are referenced to the design drawings supplied with the Audit Brief and the location of road safety concerns raised have been illustrated adjacent to the items along with relevant photographs for clarity, where appropriate, as well as on the Location Plan attached at **Appendix A2**.

1.12 Recommendations made in this report are proportionate and viable suggestions for improvement to eliminate or mitigate, in accordance with GG119, and do not imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when the Design Organisation responds to this report.

1.13 The Designer Organisation Response to the RSA should be formally recorded and reported to the Overseeing Organisation and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion.

2.0 PREVIOUS ROAD SAFETY AUDIT(S)

2.1 The Audit Team have been advised that no previous audit have been undertaken for this scheme.

3.0 SAFETY ISSUES RAISED AT THIS COMBINED STAGE 1 AND 2 ROAD SAFETY AUDIT

3.1. The Audit Team have no comments to raise at this stage.

4.0 AUDIT TEAM, DESIGN TEAM AND OVERSEEING ORGANISATION STATEMENT(S)

4.1 AUDIT TEAM

We certify that this audit has been undertaken in accordance with the principles of GG119.

NB: The Audit Team qualifications and experience accord with the requirements of Suffolk City Council.

Audit Team Leader

Beth Newiss MCIHT MSoRSA

Date: 22nd May 2023

Audit Team Member

Jason Bown IEng FIHE MICE MSoRSA

Date: 24th May 2023

4.2 DESIGN ORGANISATION STATEMENT

On behalf of the Design Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.

Name: Gavin Park	
Signed:	
Organisation: FAIRHURST	
Position: Senior Engineer	Date: 25/05/23

4.3 OVERSEEING ORGANISATION STATEMENT

On behalf of the Overseeing Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the design team and;
2) The agreed RSA will be progressed.

Name: David Fryett	
Signed:	
Organisation: NKT HVC Ltd	
Position: Project Installation Manager (Onshore)	Date: 25/05/23

APPENDIX A1

INFORMATION PRESENTED FOR AUDIT

INFORMATION PRESENTED FOR AUDIT

Documents:

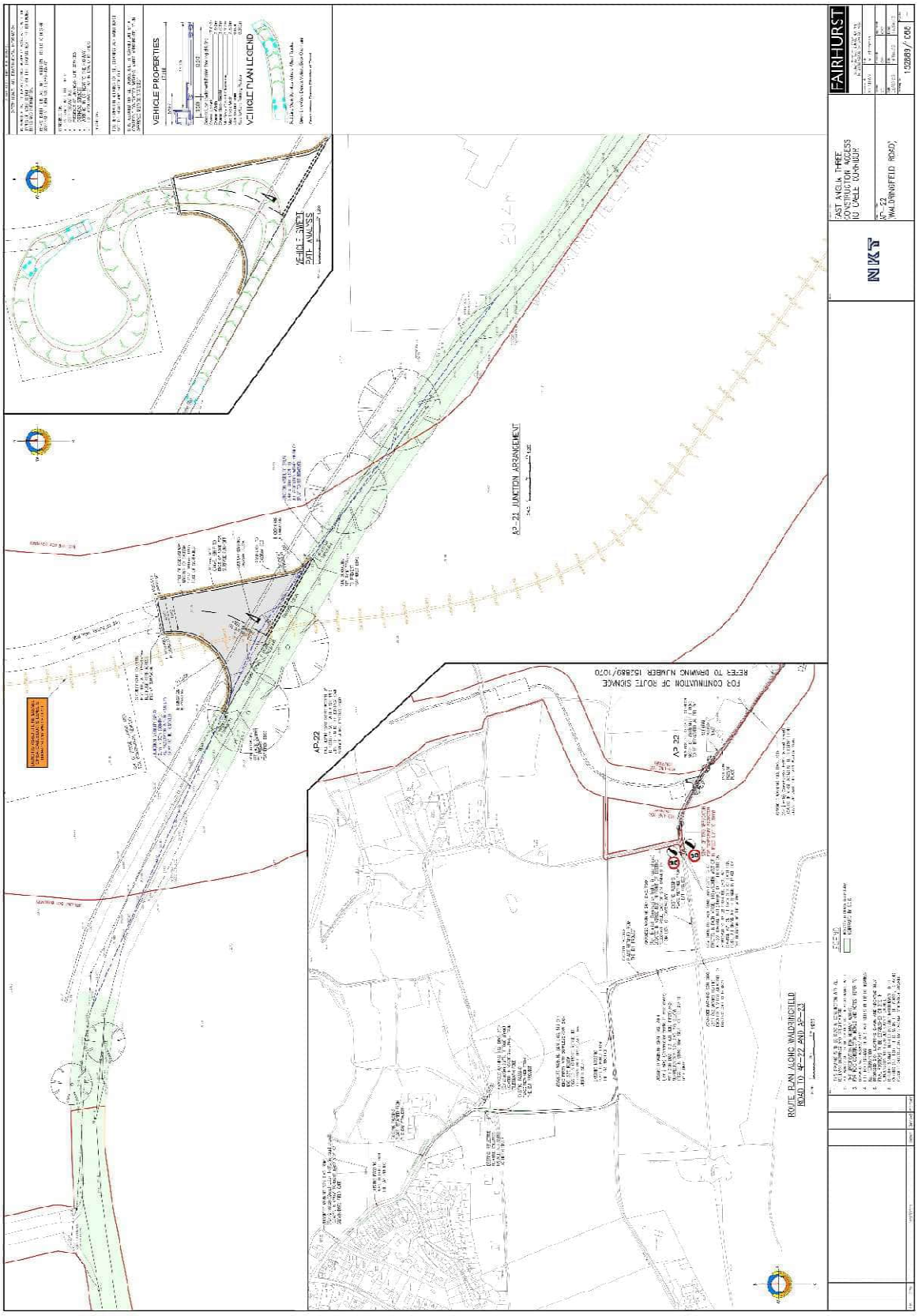
Audit Brief	152889-DOC-04

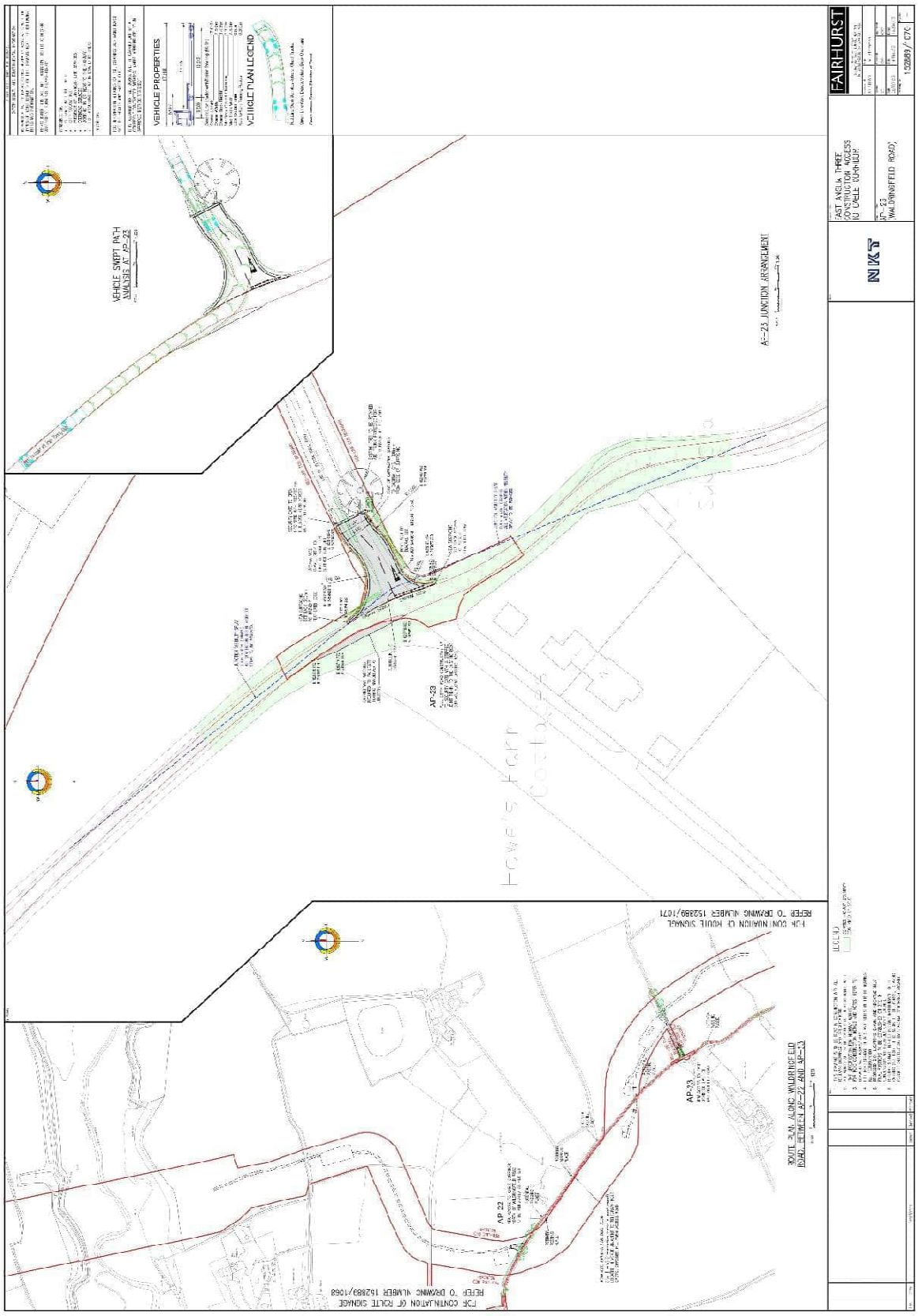
Including Drawings:

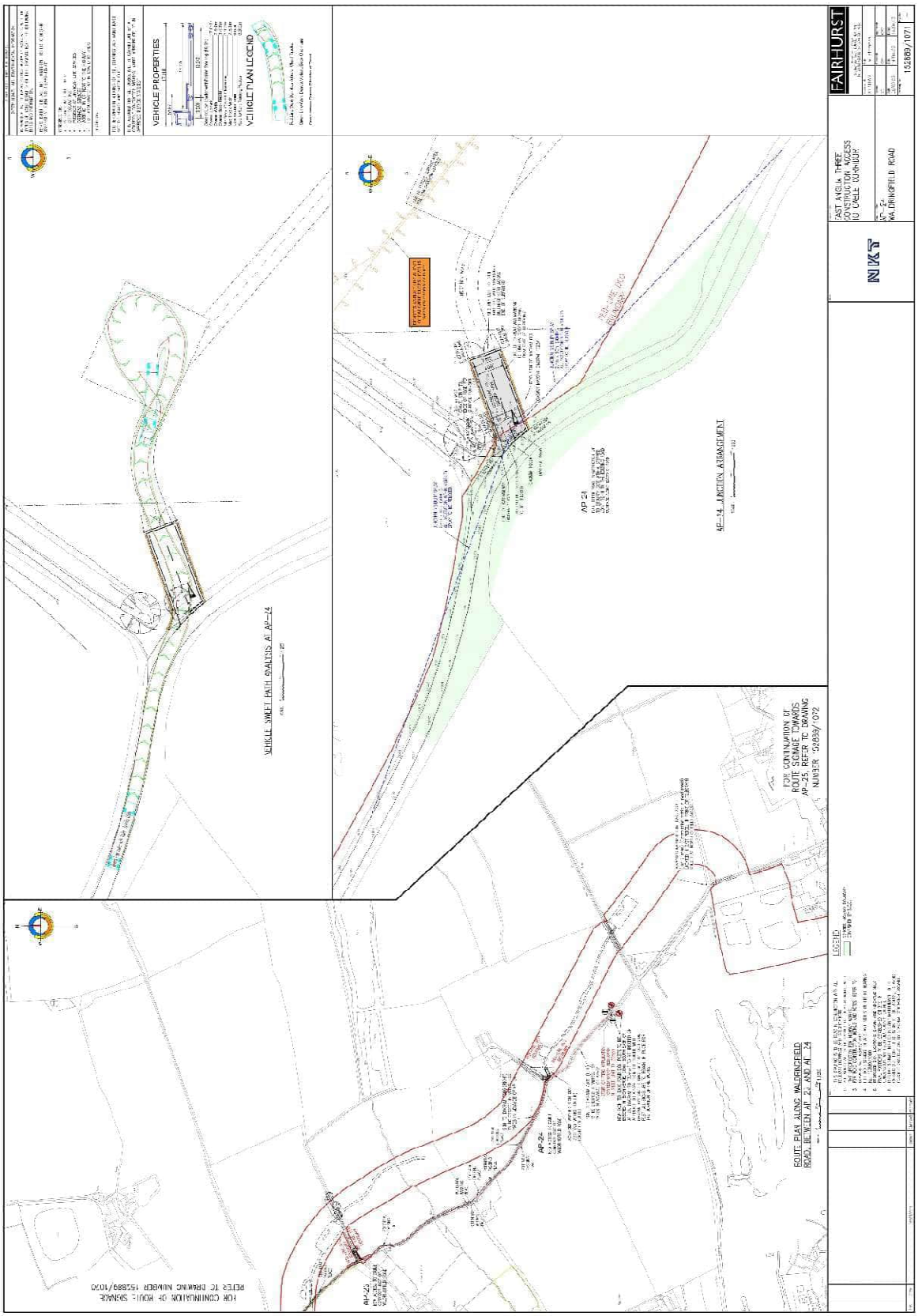
152889-1040	ROAD CONSTRUCTION DETAILS
152889-1068 AP-22	WALDRINGFIELD ROAD
152889-1070 AP-23	WALDRINGFIELD ROAD
152889-1071 AP-24	WALDRINGFIELD ROAD
152889-1072 AP-25	IPSWICH ROAD 152889-1080 ROAD SIGNS

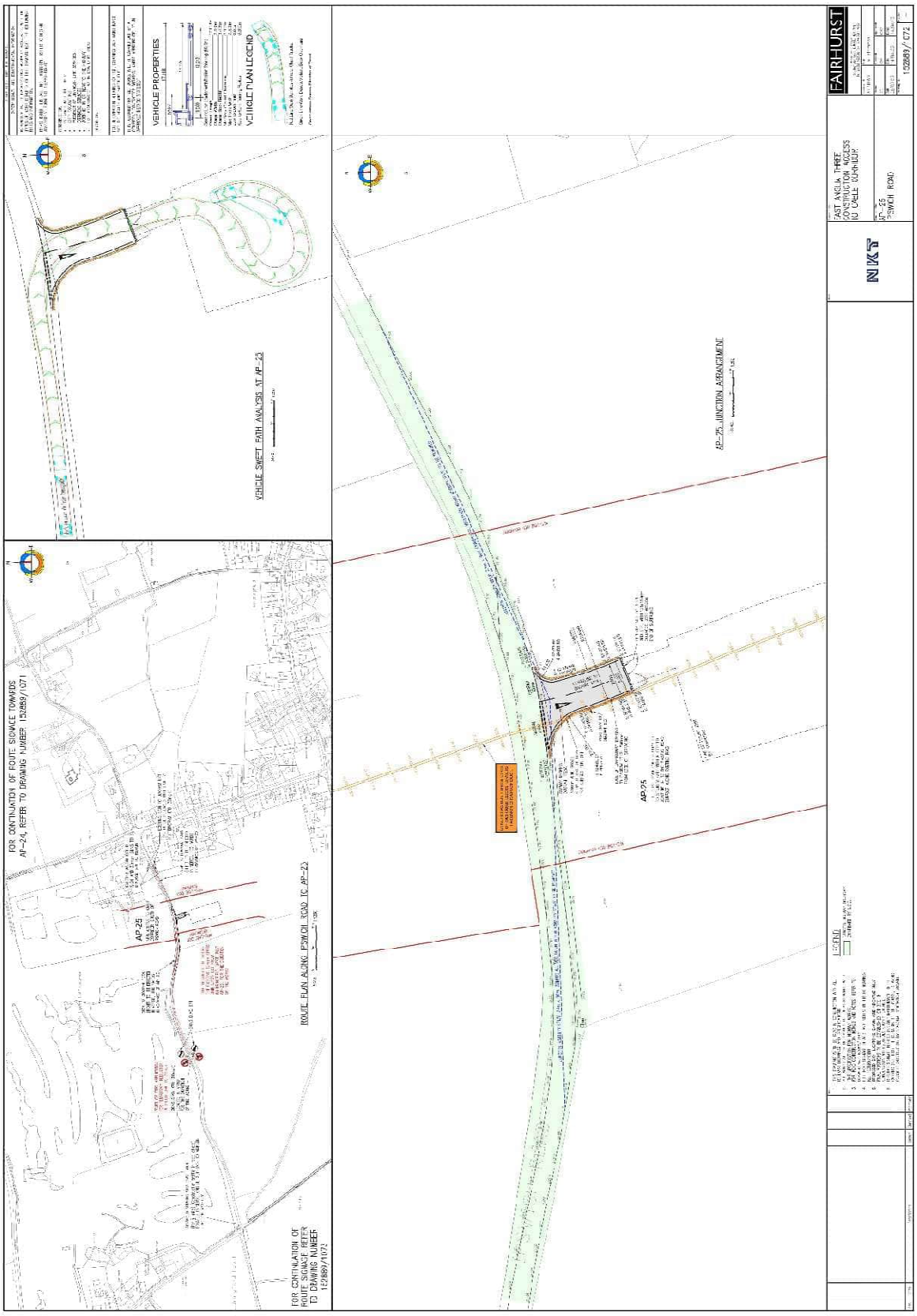
APPENDIX A2

LOCATION PLAN


FAIRHURST
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR
AP-22
WALDRINGFIELD ROAD)
VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
A3-22 JUNCTION ARRANGEMENT
ROUTE PLAN ALONG WALDRINGFIELD
ROAD TO A2-22 AND A3-23
AP-22
A3-22


VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH ANALYSIS AT AP-22
AP-23 JUNCTION ARRANGEMENT
ROUTE PLAN ALONG WILDRIDGE ELD ROAD BETWEEN AP-22 AND AP-23
FAIRHURST
EAST ANGLIA THREE CONSTRUCTION ACCESS TO CABLE CORRIDOR
AP-23 WALDRINGFIELD ROAD
132669/ CTC


FAIRHURST
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR
TF
WALDRINGFIELD ROAD
132689/1071
NKT
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH ANALYSIS AT AP-24
AP-24 JUNCTION ARRANGEMENT
AP-24
AP-22
AP-23
ROUTE PLAN ALONG WALDRINGFIELD
ROAD BETWEEN AP-22 AND AP-24
FOR CONTINUATION OF
ROUTE SIGNAGE TOWARDS
AP-25, REFER TO DRAWING
NUMBER 132689/1072
FOR CONTINUATION OF ROUTE SIGNAGE
REFER TO DRAWING NUMBER 152889/1070
LEGEND


FAIRHURST
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR
AP-25
IPSWICH ROAD
122889/C72
NTS
VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH ANALYSIS AT AP-23
AP-25 JUNCTION ARRANGEMENT
ROUTE PLAN ALONG IPSWICH ROAD TO AP-23
FOR CONTINUATION OF ROUTE SIGNAGE TOWARDS AP-24, REFER TO DRAWING NUMBER 122889/C71
FOR CONTINUATION OF ROUTE SIGNAGE REFER TO DRAWING NUMBER 122889/C072

Road Safety Audit - Ferry Road

Export Cable EPCI

Revision	Date	Reason for Issue
1	2023-05-29	IFI

Summary of Changes (latest revision only)
Issued for Information

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE, CONSTRUCTION ACCESS TO CABLE CORRIDOR

PROPOSED ACCESS POINTS AP-30 & AP-31

FERRY ROAD, BAWDSEY, SUFFOLK

REPORT REF: BN/FAIRHURST/23-120

Job no	BN-FAIRHURST-23-120	Issue no	1	Date	May 2023
Prepared by	BN	Verified by	JB	Approved by	BN

Beth Newiss and Associates
Road Safety Consultants

19a Grange Hill
Coggeshall
Essex
CO6 1RE

ROAD SAFETY AUDIT
COMBINED STAGE 1 & 2

EA3 HVDC ROUTE,
CONSTRUCTION ACCESS
TO CABLE CORRIDOR

PROPOSED ACCESS POINTS
AP-30 & AP-31

FERRY ROAD, BAWDSEY, SUFFOLK

May 2023

REPORT REF: BN/FAIRHURST/23-120

Client: FAIRHURST,
Westerton of Craigie
Southampton Road,
Dundee,
DD4 7PN

Report Prepared By:

Beth Newiss MSoRSA

Checked By:

Jason Bown MSoRSA

NB: This report was produced for Fairhurst, for the specific purpose of documenting the combined Stage 1 and 2 Road Safety Audit process undertaken under GG119.

PROJECT DETAILS	
Report Title:	Combined Stage 1 and 2 Road Safety Audit
Date:	May 2023
Document reference and revision:	BN-FAIRHURST-23-120
Prepared by:	Beth Newiss and Associates
Design Organisation:	Fairhurst
Project Sponsor:	NKT UK
Overseeing Organisation:	Suffolk County Council

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
0	Combined Stage 1 and 2 Road Safety Audit drafted for Audit Team discussions.	BN			22/05/2023
1	Combined Stage 1 and 2 Road Safety Audit finalised and issued to the Design Organisation.	BN	JB	BN	24/05/2023

CONTENTS

APPENDICES

DISTRIBUTION

ORGANISATION	CONTACT	COPIES
Fairhurst	Gavin Park	1

1.0 INTRODUCTION

1.1 OVERVIEW:

This report results from a combined Stage 1 and 2 Road Safety Audit (RSA) carried out on the proposed access points AP-30 and AP-31 in Ferry Road, Bawdsey, Suffolk in association with the EA3 HVDC Route – Construction Access to Cable Corridor. The audit was requested by Fairhurst on behalf of NKT UK.

1.2 SCHEME INFORMATION (Taken directly from the Audit Brief):

During construction of the EA1 project, spare cable ducts were laid in the same corridor zone to facilitate the future construction of the EA3 windfarm, and installation of cables. As part of the EA3 works, there is a requirement to gain access to certain parts of the cable corridor in order to construct Jointing Bays to allow the new cables associated with EA3 to be installed within the existing ducts. With regard to access, there was a planning condition for EA1 which required all construction access points to be removed upon completion of the works and roads/verges reinstated to their previous condition. As such, the majority of access points to the cable corridor no longer exist. The Construction Access to the Cable Corridor works will see the reinstatement of seven former access junctions, along with eight new access junctions and the use of fourteen existing/enhanced accesses. It is the new access junctions designated AP-30 and AP-31, which form the basis of this RSA.

1.3 SITE LOCATION (Taken directly from the Audit Brief):

The road network in and around Ipswich, in the area of the proposed access routes, is rural in nature with limited carriageway width. Ferry Road, the location of AP-30 & AP-31 is currently the subject of the National Speed limit.

1.4 THE PROPOSALS:

The proposals to be audited within this report relates to are as follows:

- Access points (known as AP-30 and AP-31) to be introduced on Ferry Road. Both accesses exist. Access point AP-30 will retain the existing farmyard gate. A new security gate will be introduced at AP-31.
- Advanced Warning signs warning drivers of the presence of Construction Traffic will be introduced.
- The existing speed limit to be reduced from National Speed Limit to 30pmh in the vicinity of the proposals.
- A 'Passing Place' is to be introduced between the junction of AP-30 and AP-31.
- Vegetation within visibility splays is to be removed.

1.5 The Road Safety Audit was undertaken during May 2023. The Road Safety Audit Brief was provided on the 4th May 2023 by Gavin Park of the Design Organisation – Fairhurst, on behalf of the Project Sponsor, NKT UK. Audit Team approval has been sought and received from Suffolk County Council.

1.6 The Road Safety Audit comprised of an examination of the Audit Brief and drawings provided as detailed in **Appendix A1** and a visit to site.

1.7 SITE VISIT:

A visit to site was undertaken by the Audit Team, together, on the 17th May 2023 between the hours of 10:00 and 11:00.

During the site visit the weather was dry and warm. The road surface was dry. No vehicular, nor pedestrian traffic were observed. 2 cyclists were noted during the site visit.

1.8 COLLISION DATA (Taken from Audit Brief):

The Audit Team was presented with collision data within the Audit Brief. The information provided shows that there has been one (1) slight collision in October 2020 in the surrounding area, but none in the direct vicinity of AP-30 and AP-31.

1.9 DEPARTURES FROM STANDARD (Taken from Audit Brief):

There are no Departures or Relaxations from Standards for this scheme.

1.10 AUDIT TEAM INFORMATION

The Road Safety Audit has been undertaken by an Audit Team whose qualifications and experience accord with the requirements of the Local Authority.

The Audit Team consists of the following members:

Beth Newiss MCIHT MSoRSA and **Jason Bown** IEng FIHE MICE MSoRSA
Beth Newiss and Associates - 19a Grange Hill, Coggeshall, Essex, CO6 1RE
TEL: 07962349262 Email: bethnewissandassociates@gmail.com

1.11 TERMS OF REFERENCE

The terms of reference of this Road Safety Audit are as described in GG119. This Road Safety Audit has been undertaken based on the Road Safety Audit Team's previous experience and knowledge in undertaking Collision Investigation, Road Safety Engineering and Road Safety Audits. The scheme has been examined and this report compiled, only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other standards or criteria. However, in order to clearly

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1.13 The Designer Organisation Response to the RSA should be formally recorded and reported to the Overseeing Organisation and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion.

2.0 PREVIOUS ROAD SAFETY AUDIT(S)

2.1 The Audit Team have been advised that no previous audit have been undertaken for this scheme.

3.0 SAFETY ISSUES RAISED AT THIS COMBINED STAGE 1 AND 2 ROAD SAFETY AUDIT

3.1. The Audit Team have no comments to raise at this stage.

4.0 AUDIT TEAM, DESIGN TEAM AND OVERSEEING ORGANISATION STATEMENT(S)

4.1 AUDIT TEAM

We certify that this audit has been undertaken in accordance with the principles of GG119.

NB: The Audit Team qualifications and experience accord with the requirements of Suffolk City Council.

Audit Team Leader

Beth Newiss MCIHT MSoRSA

Date: 22nd May 2023

Audit Team Member

Jason Bown IEng FIHE MICE MSoRSA

Date: 24th May 2023

4.2 DESIGN ORGANISATION STATEMENT

On behalf of the Design Organisation, I certify that:

1) The RSA Actions identified in response to the road safety audit problems in this road safety audit have been discussed and agreed with the Overseeing Organisation.

Name: Gavin Park	
Signed: 	
Organisation: FAIRHURST	
Position: Senior Engineer	Date: 25/05/23

4.3 OVERSEEING ORGANISATION STATEMENT

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Name: David Fryett	
Signed:	
Organisation: NKT HVC Ltd	
Position: Project Installation Manager (Onshore)	Date: 25/05/23

APPENDIX A1

INFORMATION PRESENTED FOR AUDIT

INFORMATION PRESENTED FOR AUDIT

Documents:

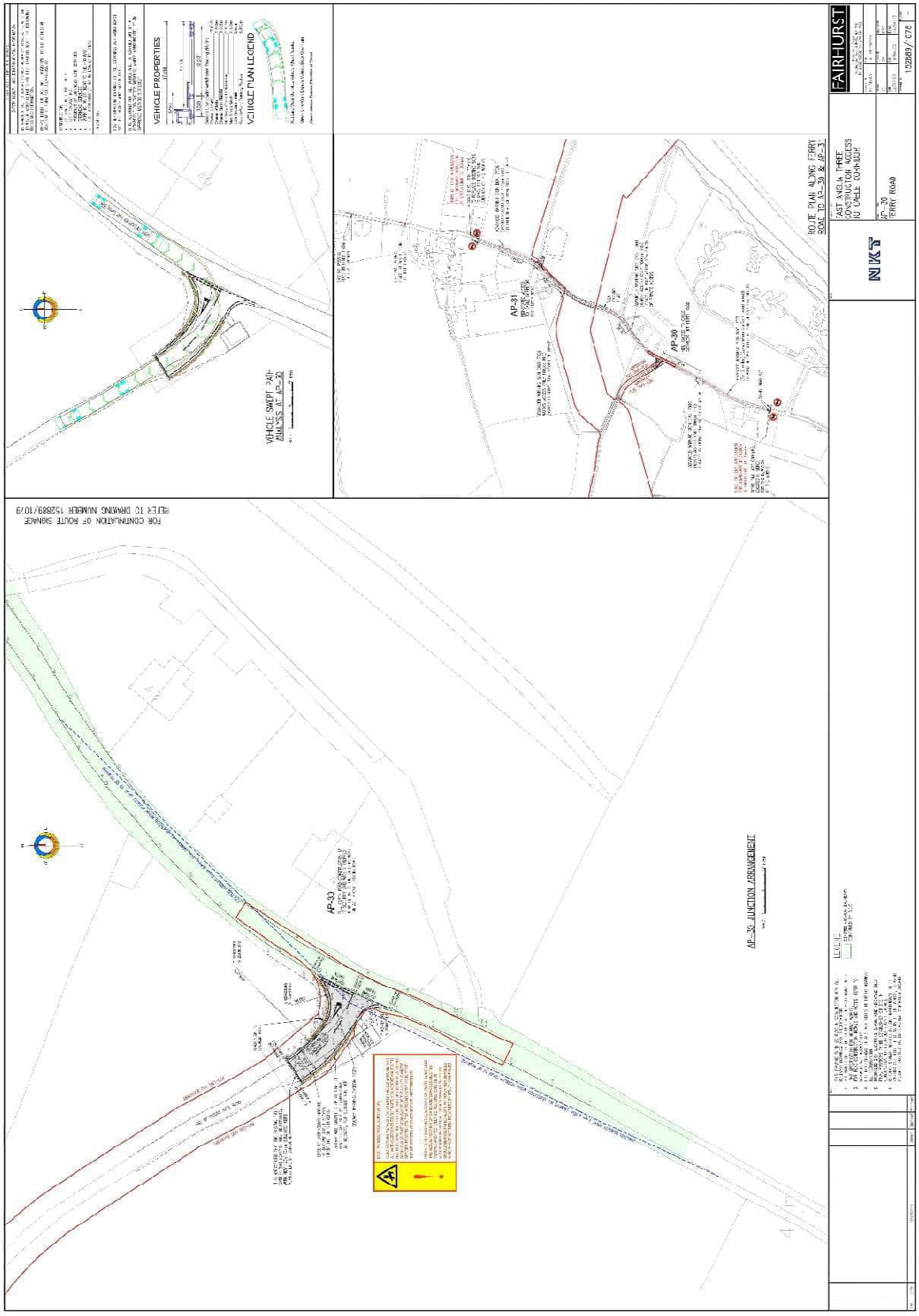
Audit Brief	152889-DOC-05

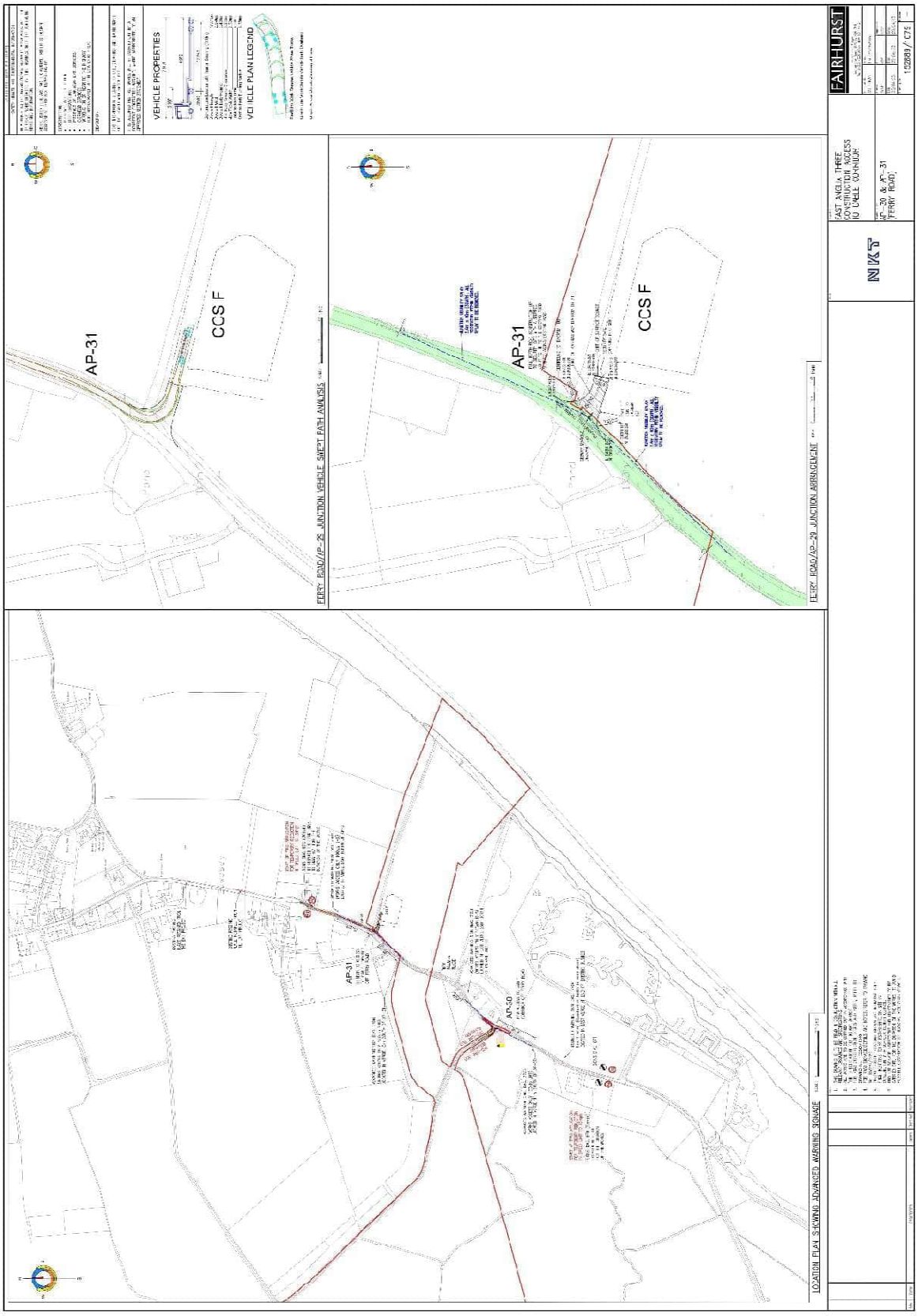
Including Drawings:

152889-1040	ROAD CONSTRUCTION DETAILS
152889-1078	AP-30 FERRY ROAD
152889-1079	AP-31 FERRY ROAD
152889-1080	ROAD SIGNS

APPENDIX A2

LOCATION PLAN


FAIRHURST
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR
AP-30
FERRY ROAD
NKT
ROUTE PLAN ALONG FERRY
ROAD TO AP-30 & AP-31
VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
VEHICLE SWEPT PATH
ANALYSIS AT AP-30
AP-31
AP-30
AP-30 JUNCTION ARRANGEMENT
FOR CONTINUATION OF ROUTE SIGNAGE
REFER TO DRAWING NUMBER 152889/10/9


AP-31
CCS F
FERRY ROAD/AP-28 JUNCTION VEHICLE SWEPT PATH ANALYSIS
AP-31
CCS F
FERRY ROAD/AP-29 JUNCTION ARRANGEMENT
AP-31
AP-30
LOCATION PLAN SHOWING ADVANCED WARNING SIGNAGE
VEHICLE PROPERTIES
VEHICLE PLAN LEGEND
FAIRHURST
EAST ANGLIA THREE
CONSTRUCTION ACCESS
TO CABLE CORRIDOR
AP-30 & AP-31
FERRY ROAD,
122683/C75

609500 610000 610500 611000

246500 246000

TYE LANE

Track

Track

Track

HDD-1E

HDD-1W

Inset Frame

CP-01

JB 1/2

HDD-21E

PRoW 1

Bullen Lane CCS

HDD-21W

AP-1

AP-2

BULLEN LANE

PRoW A

Path (um)

Path (um)

BULLEN LANE

Track

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits

Crossing Point (Road Crossings Numbered)

Public Right of Way

Jointing Bay Hardstanding

Horizontal Direct Drilling Duct Proving Platform

Consolidated Construction Site Compound

Top Soil Strip

Indicative Top Soil Bund

Indicative Subsoil Bund

Stone Haul Road

Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.1 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

610000 610500 611000 611500

247000 246500

Path (um)

BACK LANE (TRACK)

PRoW 2

Track

TYE LANE

TYE LANE

TYE LANE

Track

HDD-1E

HDD-1W

Track

PRoW 1

Track

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits

Public Right of Way

Horizontal Direct Drilling Duct Proving Platform

Top Soil Strip

Indicative Top Soil Bund

Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.2 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

610500 611000 611500 612000

248000 247500

Track
Track
Path (um)
SOMERSHAM ROAD
Track
Track
B 1113
SOMERSHAM ROAD
L'ORAINE WAY
BACK LANE (TRACK)
BACK LANE (TRACK)

AP-5
AP-4
AP-3
HDD-2E
HDD-2W
PRoW 3
PRoW 2
JB 2/3

Inset Frame
IPSWICH

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Public Right of Way
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
Existing Track
HGV Turning
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.3 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

611000 611500 612000 612500

249000 248500

AP-8 AP-7 HDD-19E HDD-19W

Inset Frame

THE BEECHES GP GP WB

POUND LANE

B1113 BRAMFORD ROAD B1113

LORAINE WAY

SOMERSHAM ROAD

Track Track Track Track

Path (um) Path (um)

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.4 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

612000 612500 613000 613500

249500 249000 248500

B 1113 BRAMFORD ROAD Track Path (um) A14 GROVE ORCHARD Path PAPER MILL LANE

Inset Frame IPSWICH

AP-8 AP-7 AP-9 AP-10

JB 3/4 JB 4/5

HDD-19W HDD-19E HDD-4W HDD-4E HDD-5W HDD-5E

CP-05

Paper Mill Lane CCS

PRoW 4 OLD IPSWICH ROAD Posts

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Consolidated Construction Site Compound
- Soil Storage
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

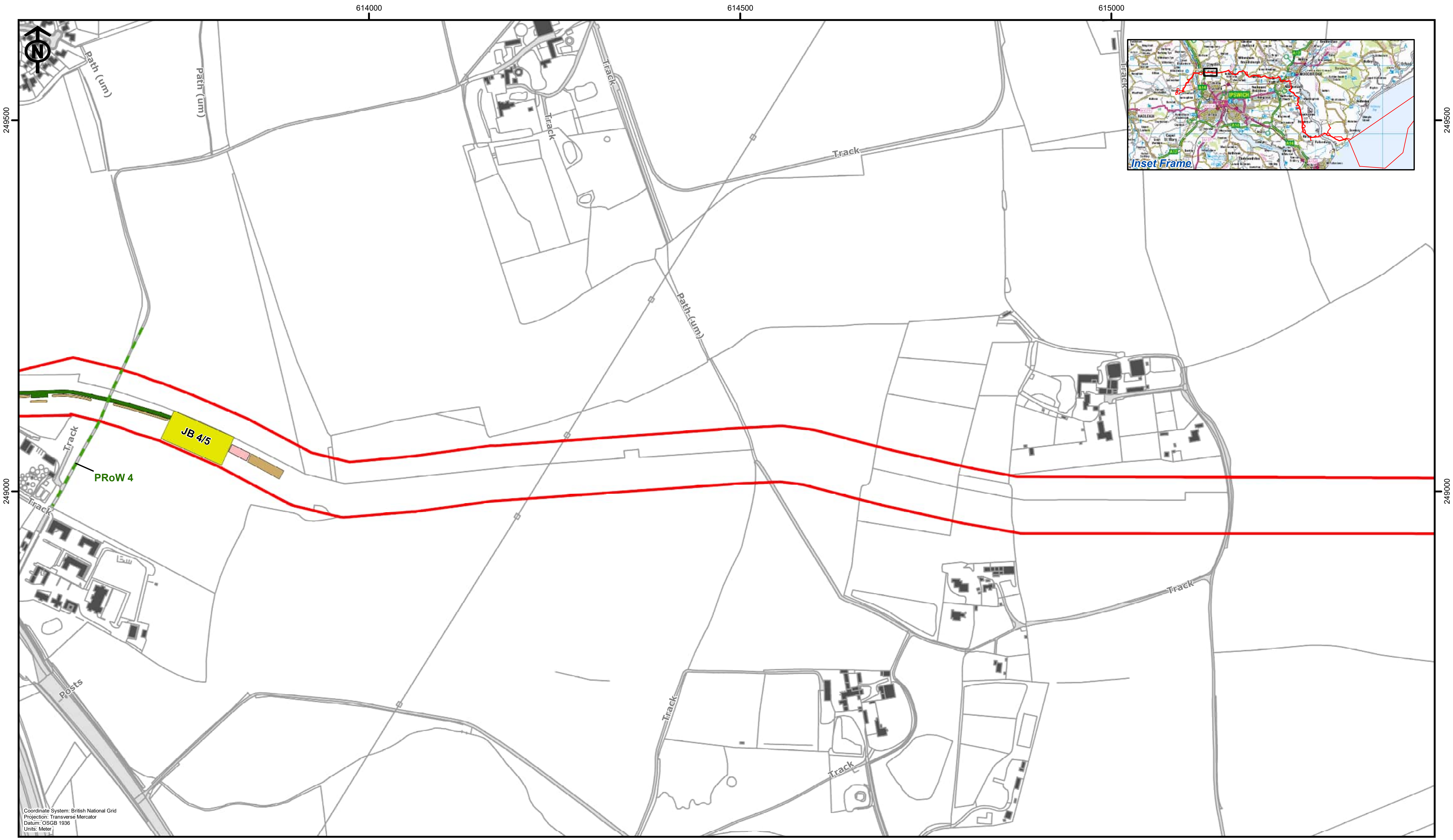
0 100 200 Metres

EA THREE Cable Route

FIGURE 1.5 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd



EA THREE Development Order Limits
Public Right of Way
Jointing Bay Hardstanding
Indicative Top Soil Bund
Indicative Subsoil Bund
Stone Haul Road

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

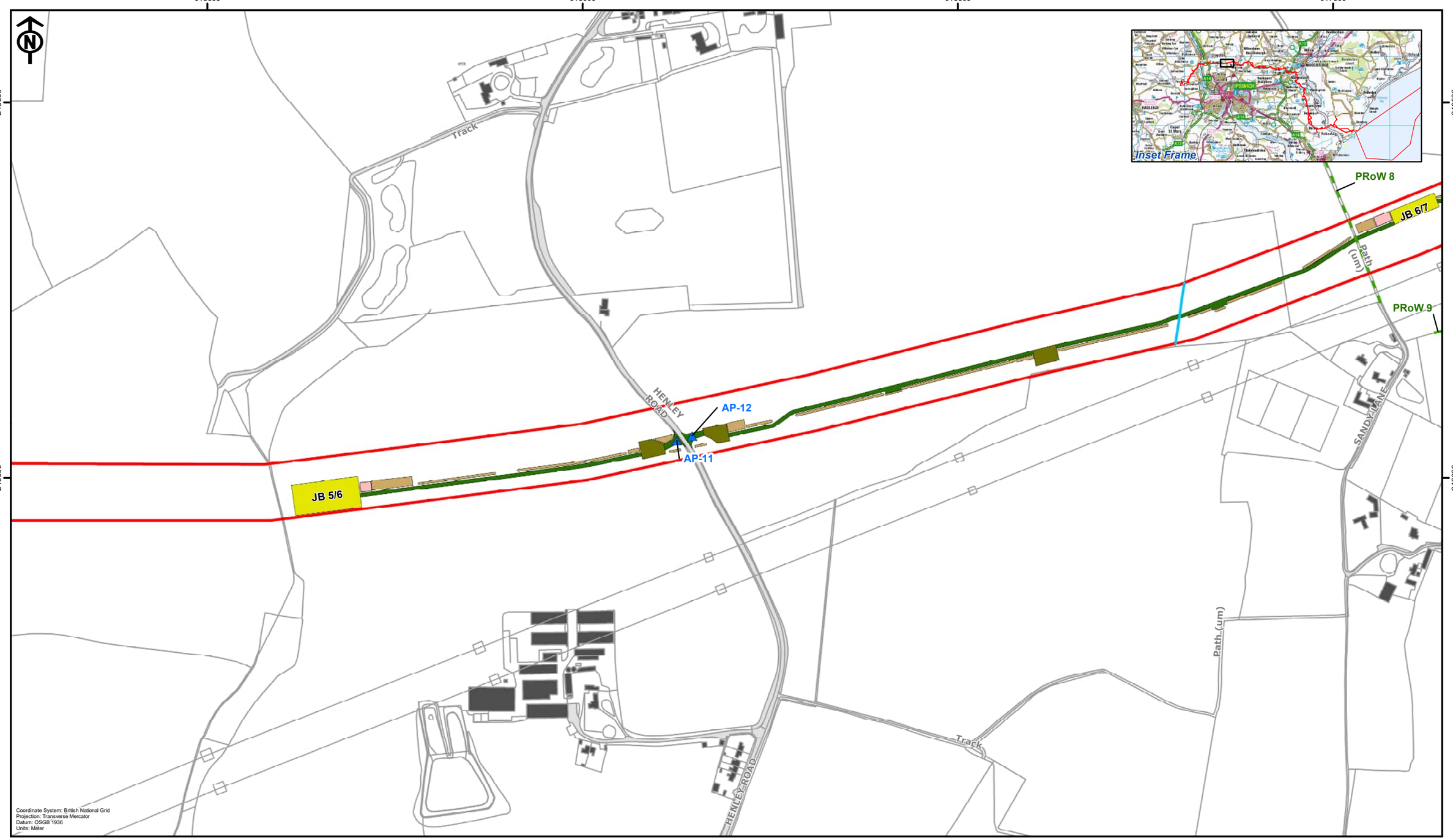
FIGURE 1.6 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

615500 616000 616500 617000

249500 249000



Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- HGV Turning
- Stone Haul Road

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.7 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

617000 617500 618000 618500

249500 249000 248500

PRoW 8 JB 6/7 PRoW 9 PRoW 10 PRoW 11 JB 8/9 JB 7/8 CP-14

Path (um) Path (um) Path (um) Path (um) Path (um)

GOCKFIELD HALL LANE ROSE HILL B 1077 SANDY LANE LANE GOCKFIELD HALL LANE WITNESHAM Track Track Track Track Post

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- HGV Turning
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.8 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

618500 619000 619500 620000

249500 249000

N

TUDDENHAM LANE
Track
Track
Track
CLOPTON ROAD
Track
TUDDENHAM
GP
PRoW 11
Path (um)
JB 8/9
HDD-6W
HDD-6E
Track
Track
JB 9/10
HDD-20W
HDD-20E
AP-14
AP-15
GRUNDISBURGH ROAD
Path (um)
GP
GRUNDISBURGH ROAD
CLOPTON ROAD
Track

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway
- Trackway Crane Pad

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

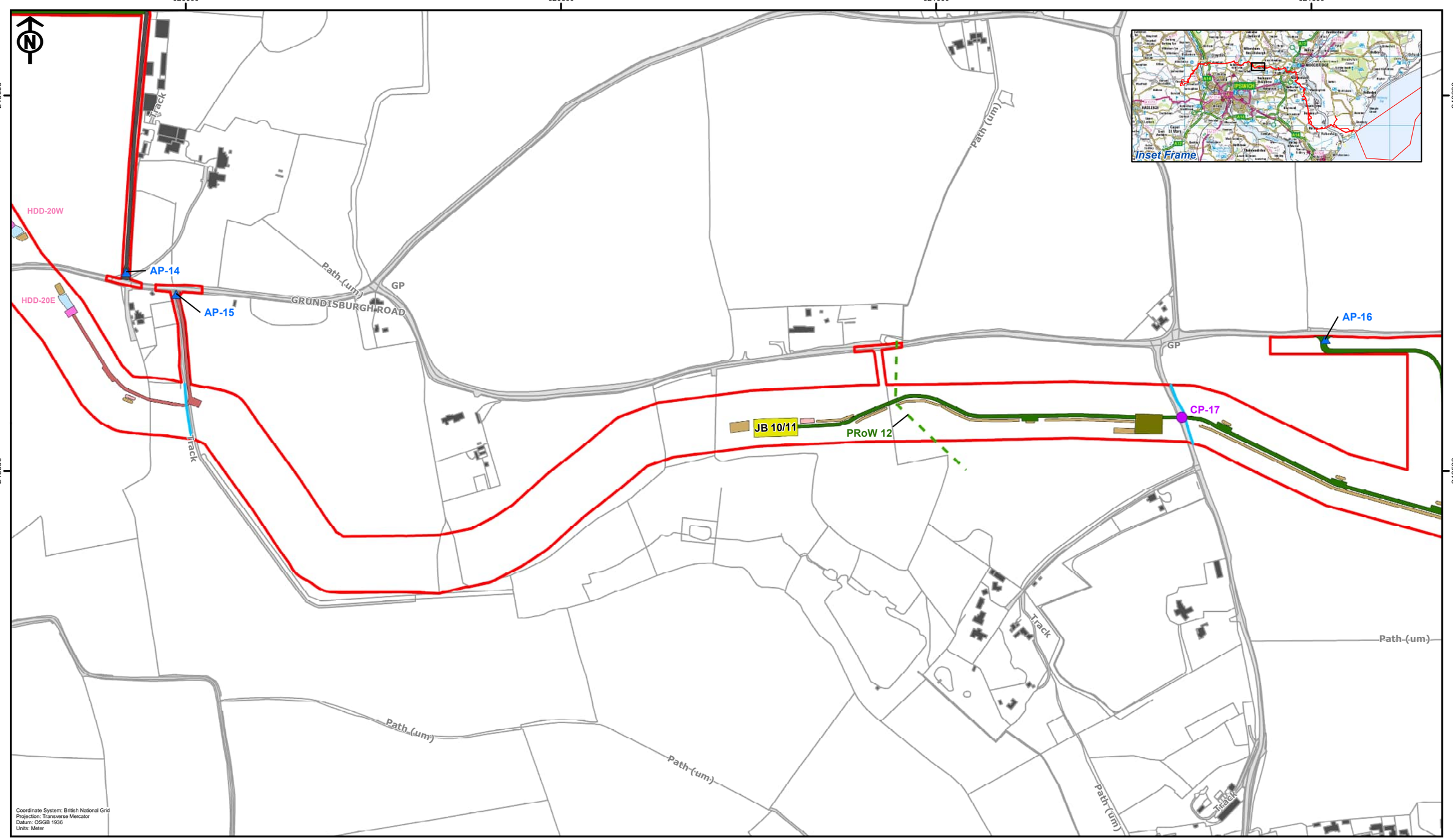
FIGURE 1.9 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

620000 620500 621000 621500

249000 248500



- EA THREE Development Order Limits
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

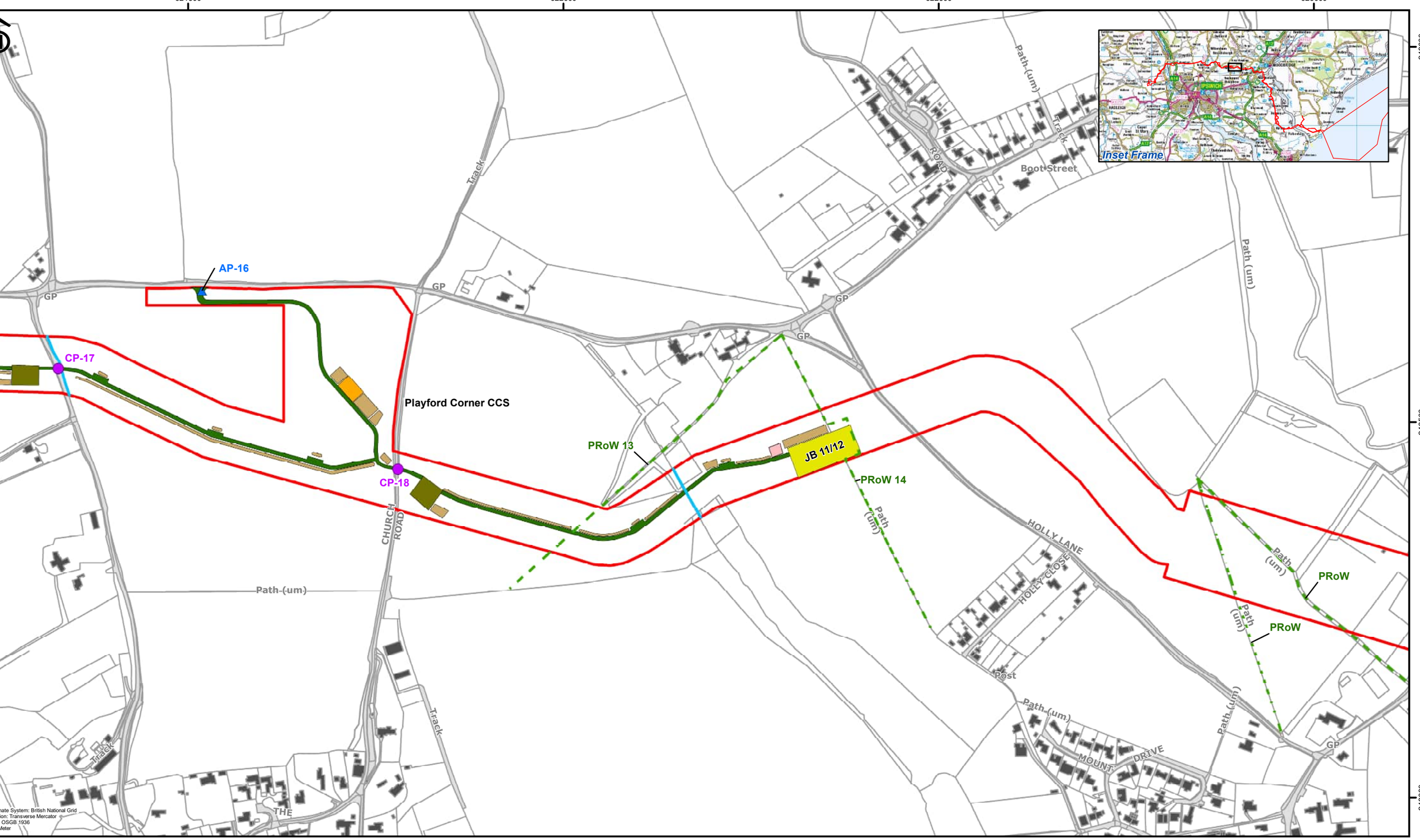
FIGURE 1.10 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

621500 622000 622500 623000

249000 248500 248000



EA THREE Development Order Limits

Crossing Point (Road Crossings Numbered)

Public Right of Way

Watercourse within the DOL

Jointing Bay Hardstanding

Consolidated Construction Site Compound

Indicative Top Soil Bund

Indicative Subsoil Bund

HGV Turning

Stone Haul Road

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.11 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

623500 624000 624500

249000 248500 248000

Track
Tk
GP
ROSERY LANE
Track
LOWER STREET
ROSERY LANE
GP
GP
ORCHARD LANE
LODGE ROAD
Track
Path
Track
Path

Inset Frame
IPSWICH

AP-17
AP-18
PRoW 18
JB 13/14
HDD-7W
CP-22
HDD-7E
JB 12/13
PRoW
PRoW 19
PRoW 19
PRoW 20
HDD-8W

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Crossing Point (Road Crossings Numbered)
Public Right of Way
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
Existing Track
HGV Turning
Stone Haul Road
Trackway
Trackway Crane Pad

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.12 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

625000 625500 626000 626500

248000 247500

JB 13/14
PRoW 19
PRoW 19
HDD-8W
PRoW 20
CP-26
HDD-8E
PRoW 42
PRoW 21
JB 14/15
Top Street CCS
AP-19
HDD-9E
AP-20
HDD-10E
JB 15/16
AP-21
HDD-10W
PRoW 22
Inset Frame

A12
B 1438
IPSWICH ROAD
CHRISTCHURCH DRIVE
SECKFORD HALL ROAD
THE LANCERS
PINEWOOD
MEADOW
CALIFORNIA
BRIARWOOD ROAD
BROOMHEATH
CLAYTON COURT
FLYNN ROAD
TURNER CLOSE
DUKE'S PARK
SANDY LANE
TOP STREET
THE STREET
BEALINGS ROAD
BROCK
Lay-by
Tunnel
Path (um)
Track

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Crossing Point (Road Crossings Numbered)
Public Right of Way
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Consolidated Construction Site Compound
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.13 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

625500 626000 626500 627000

247500 247000 246500

THE STREET
Track
Path (um)
Track
Track
Path (um)
Path (um)
PRoW 22
Path (um)
Inset Frame
IPSWICH
SCHOOL LANE
Path (um)
Track
HDD-11E
VIKING CLOSE
PRoW 23
Path (um)
Track
SCHOOL LANE
CHURCH LANE
Path (um)
PRoW 24
Track
Track
THREE STILES LANE (TRACK)
Lay-by
JB 16/17
PRoW 25
Track
WALDRINGFIELD ROAD
Path (um)
Track
PRoW 26
MILL LANE (TRACK)
Path (um)
Track

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Public Right of Way
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.14 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

626000 626500 627000 627500

246000 245500

AP-22 PRoW 26 AP-23 AP-24 CP-31 JB 17/18 JB 18/19 HDD-12W HDD-12E HDD-13W HDD-13E

WALDRINGFIELD ROAD NEWBOURNE ROAD Path (um) Track Track Track Track WALDRINGFIELD ROAD NEWBOURNE ROAD WALDRINGFIELD ROAD Track

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway

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Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.15 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

627000
627500
628000
245500
245000
244500

N

JB 18/19
JB 19/20
AP-25

WAUDRINGFIELD ROAD
Path (um)
Track
WOODBRIDGE ROAD
FISHPOND ROAD
SANDY LANE
IPSWICH ROAD
NEWBOURNE ROAD
SULLIVAN PLACE
SCHOOL ROAD
SUNNYHILL
GP
DEBENHAM'S
CLIFF MEADOWS
CLIFF ROAD
MILL ROAD

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Stone Haul Road
Jointing Bay Hardstanding
Indicative Top Soil Bund
Indicative Subsoil Bund

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Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

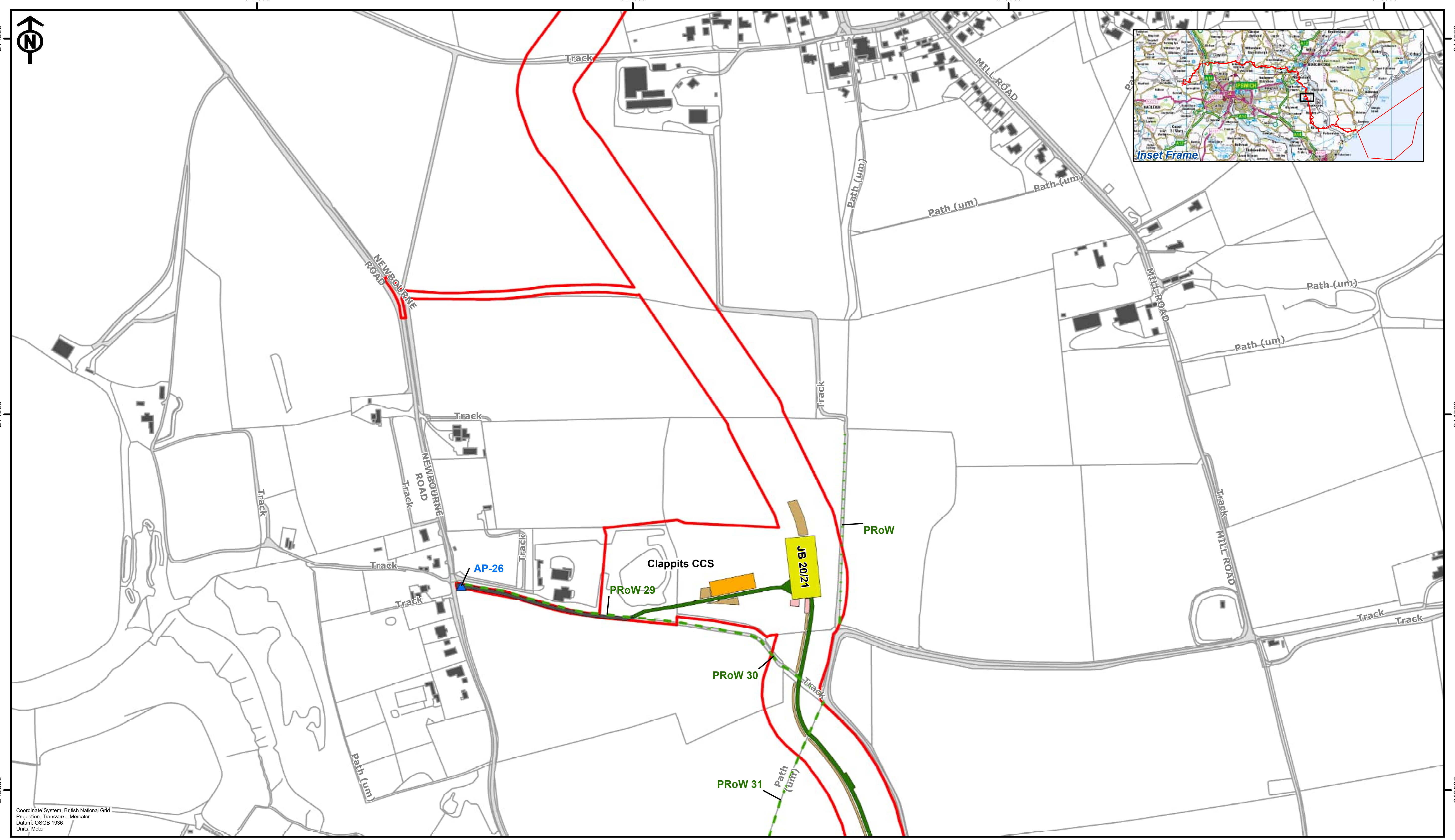
0 100 200 Metres

EA THREE Cable Route

FIGURE 1.16 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023.05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd



Legend	
EA THREE Development Order Limits	Consolidated Construction Site Compound
Public Right of Way	Indicative Top Soil Bund
Jointing Bay Hardstanding	Indicative Subsoil Bund
Stone Haul Road	Existing Track

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Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.17 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

627500
628000
628500
243500
243000

PRoW 31
Path (um)
Path (um)
WOODBRIDGE ROAD
Track
FERN LANE
THE STREET
GP
CP-36
Guide Post
Track
IPSWICH ROAD
GP
Track
Track
Track
Track
Track
CHURCH LANE
Inset Frame
IPSWICH
Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Crossing Point (Road Crossings Numbered)
Public Right of Way
Indicative Top Soil Bund
HGV Turning
Stone Haul Road

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Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

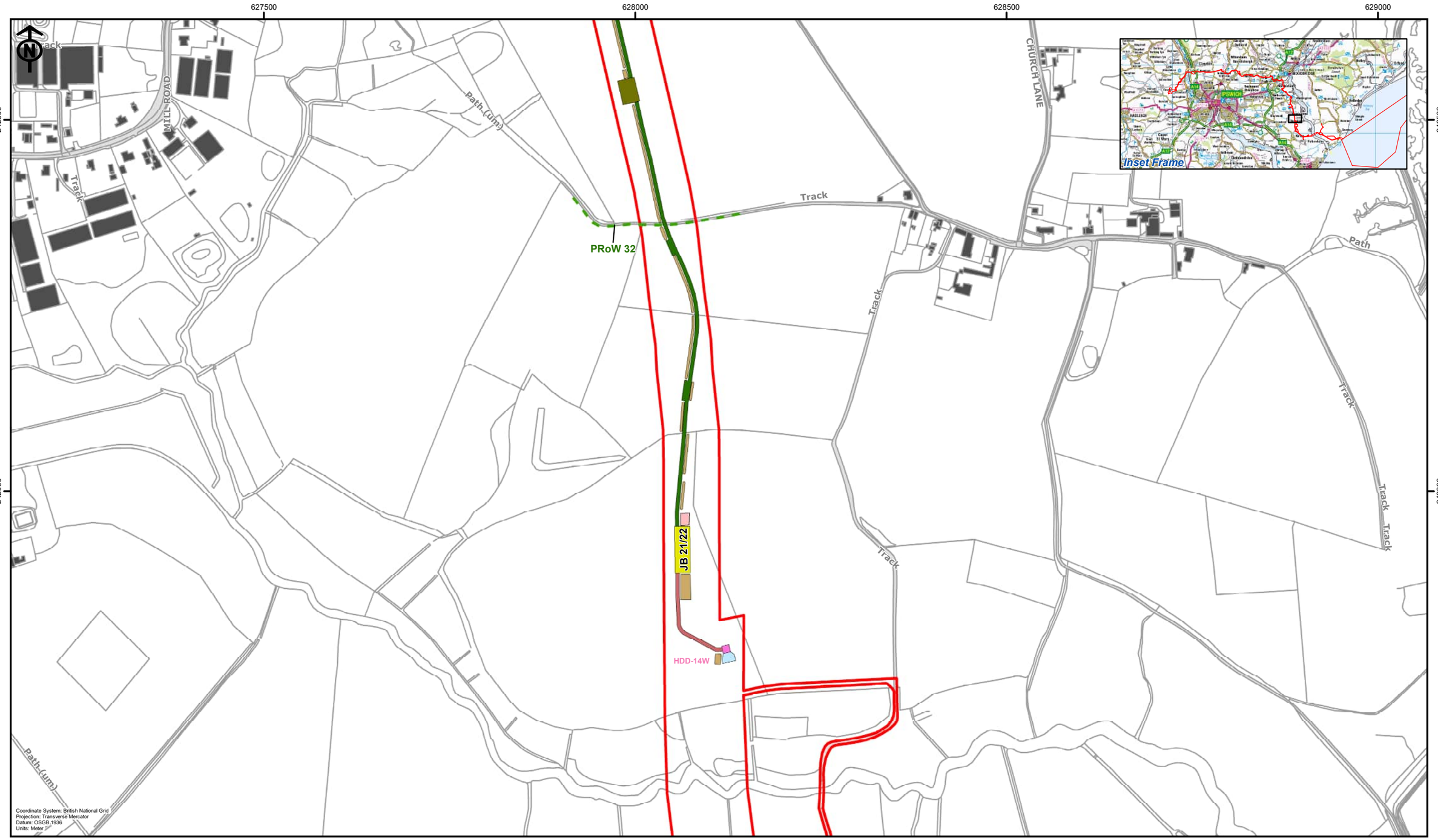
0 100 200 Metres

EA THREE Cable Route

FIGURE 1.18 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd



EA THREE Development Order Limits

Public Right of Way

Jointing Bay Hardstanding

Horizontal Direct Drilling Duct Proving Platform

Top Soil Strip

Indicative Top Soil Bund

Indicative Subsoil Bund

HGV Turning

Stone Haul Road

Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

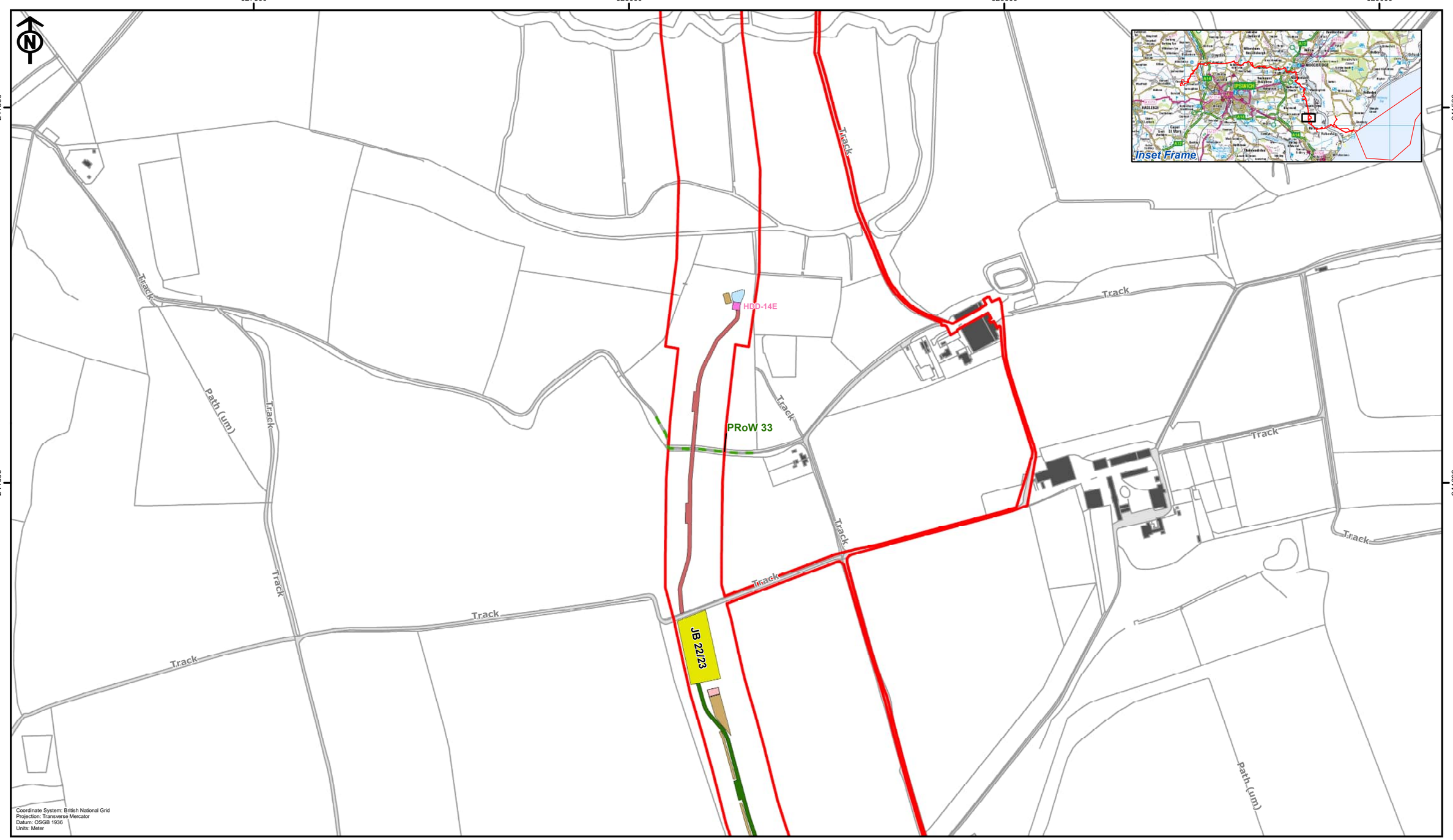
FIGURE 1.19 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

627500 628000 628500 629000

241500 241000



- EA THREE Development Order Limits
- Public Right of Way
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Stone Haul Road
- Trackway

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

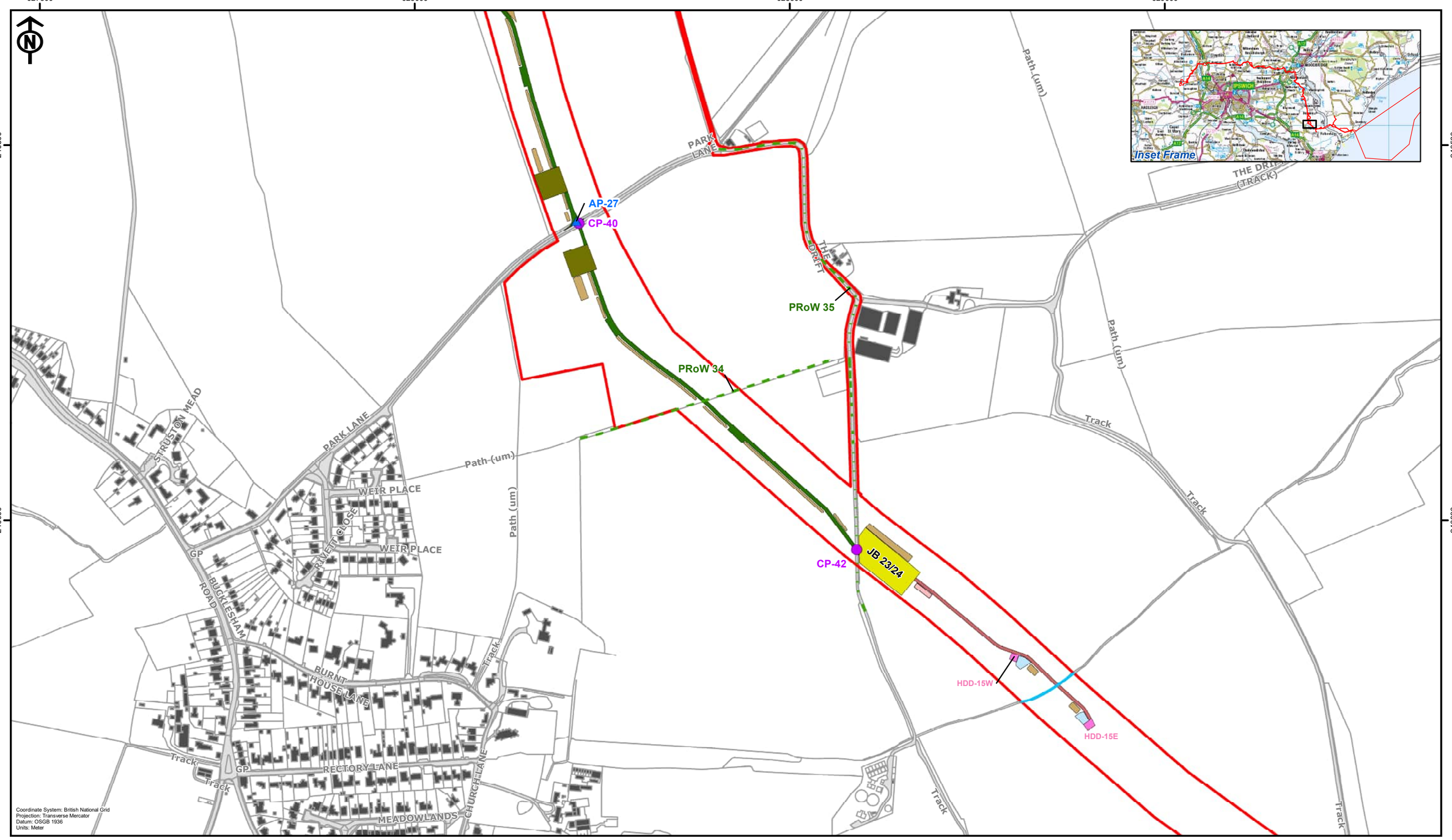
FIGURE 1.20 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

627500 628000 628500 629000

240500 240000



EA THREE Development Order Limits
Crossing Point (Road Crossings Numbered)
Public Right of Way
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
HGV Turning
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

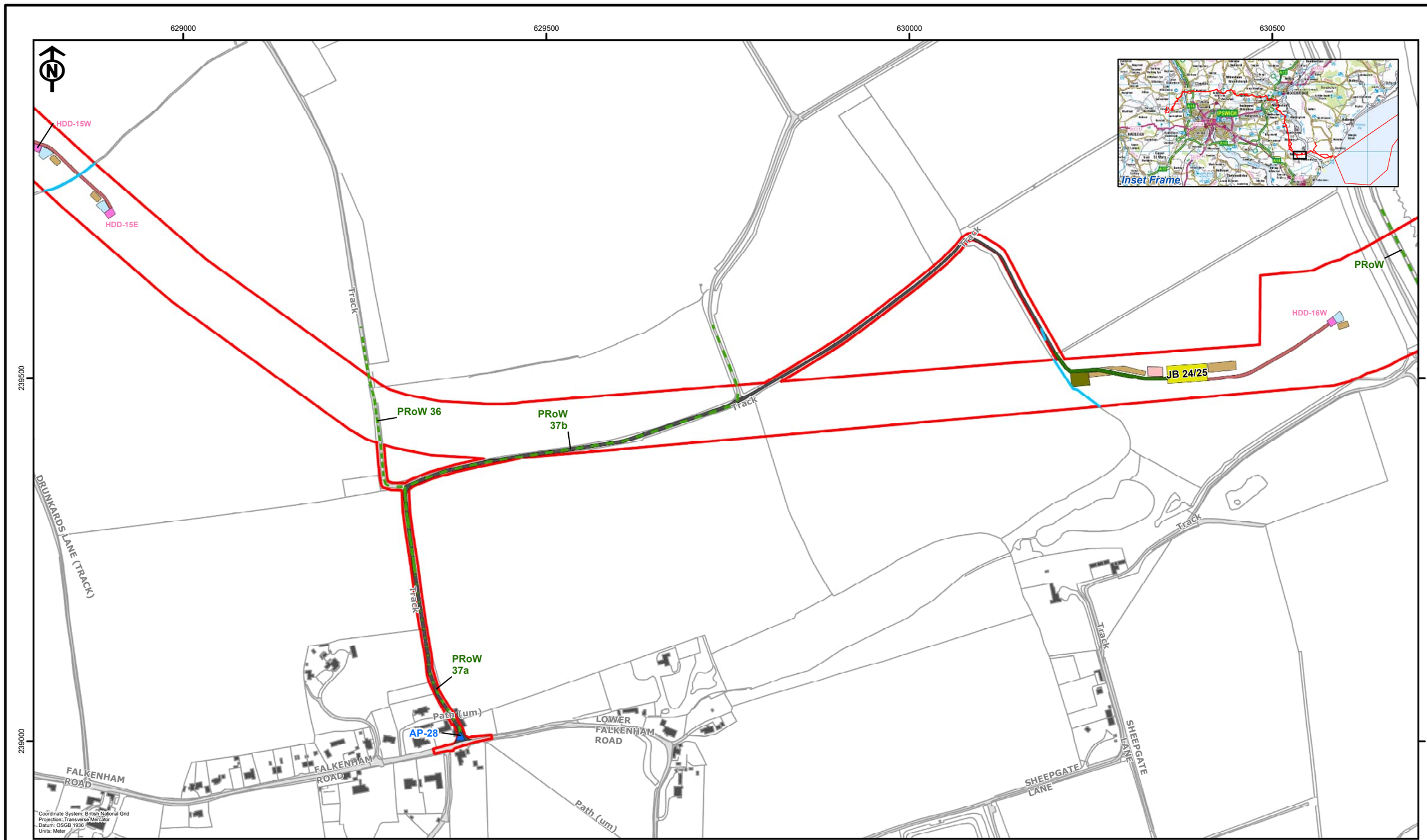
0 100 200 Metres

EA THREE Cable Route

FIGURE 1.21 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd



EA THREE Development Order Limits
Public Right of Way
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
Existing Track
HGV Turning
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.22 Site Context Plan

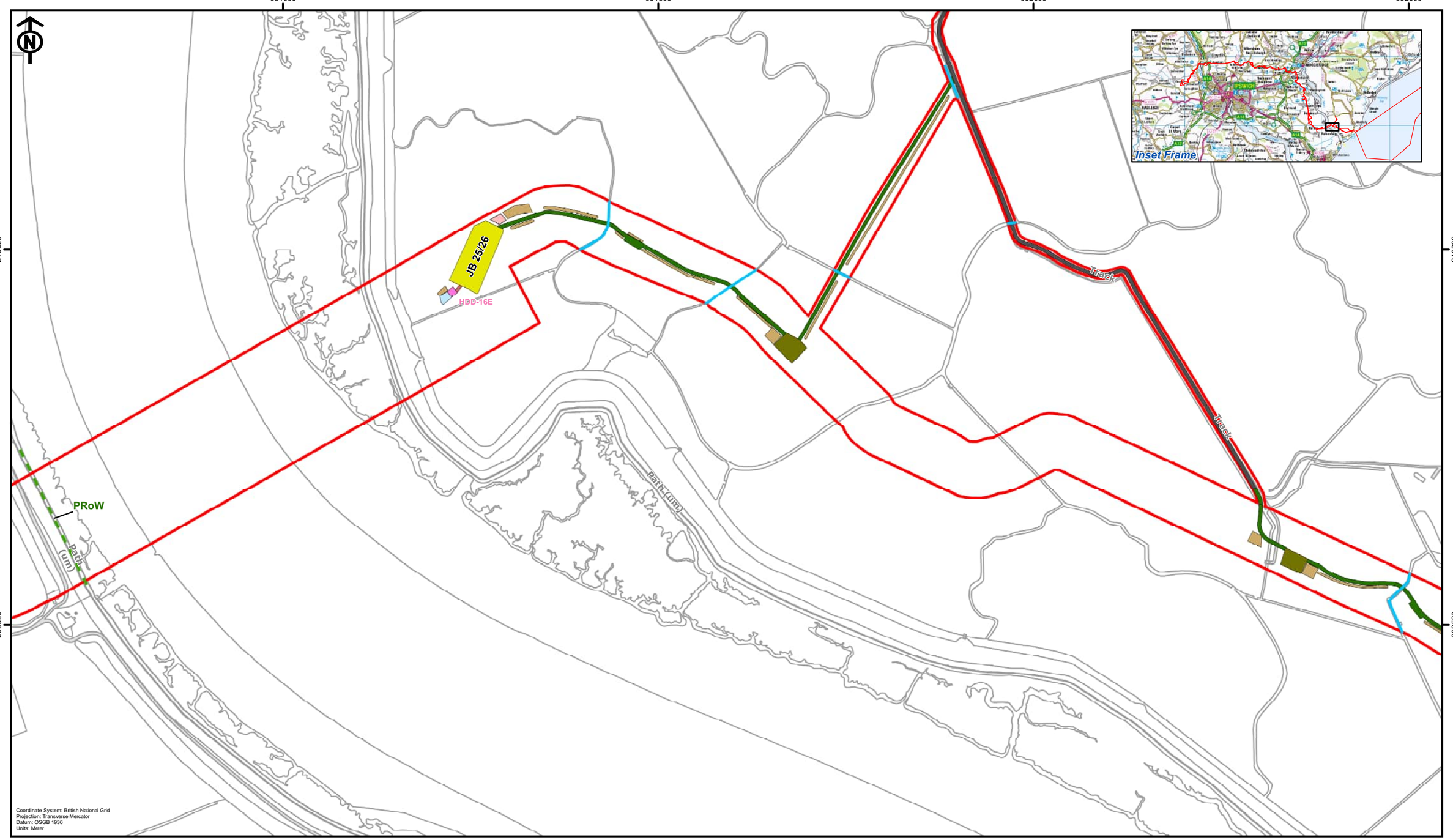
Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

631000 631500 632000 632500

240000

239500



Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.23 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

631500 632000 632500 633000

241000 240500

AP-29

GP

PRoW 39

Path (um)

Track

DUKE'S LANE (TRACK)

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits

Public Right of Way

Existing Track

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Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.24 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

632500 633000 633500 634000

239500 239000

JB 26/27

HDD-17W

HDD-17E

Track

Path (um)

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

EA THREE Development Order Limits
Watercourse within the DOL
Jointing Bay Hardstanding
Horizontal Direct Drilling Duct Proving Platform
Top Soil Strip
Indicative Top Soil Bund
Indicative Subsoil Bund
HGV Turning
Stone Haul Road
Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.25 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

634000 634500 635000 635500

239500 239000

Track
FERRY ROAD
PRoW 41
AP-31
Track
Track
Landfall CCS
Transitional Jointing Bays
PRoW 40
Track
JB 27/28
CP-49
AP-30
FERRY ROAD
Path (um)

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

- EA THREE Development Order Limits
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Watercourse within the DOL
- Transition Jointing Bays
- Jointing Bay Hardstanding
- Consolidated Construction Site Compound
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway

GoBe consultants

Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

0 100 200 Metres

EA THREE Cable Route

FIGURE 1.26 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\1 Site Context Plan\404.5356.00006.0001.0 Site Context.mxd

610000 615000 620000 625000 630000 635000

250000 245000 240000

Paper Mill Lane CCS
Bullen Lane CCS
Playford Corner CCS
Top Street CCS
Clappits CCS
Landfall CCS

AP-1 AP-2 AP-3 AP-4 AP-5 AP-7 AP-8 AP-9 AP-10 AP-11 AP-12 AP-14 AP-15 AP-16 AP-17 AP-18 AP-19 AP-20 AP-21 AP-22 AP-23 AP-24 AP-25 AP-26 AP-27 AP-28 AP-29 AP-30 AP-31

Inset Frame

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936 (N)
Units: Meter

EA THREE Development Order Limits
Construction Access Route
Access Point
Consolidated Construction Site Compound Location

GoBe consultants

Rev	Date	By	Comment
A	20/11/2023	PW	First Issue

Original A3 Plot Scale 1:75,000

0 1 2 Kilometres

EA THREE Cable Route

FIGURE 2 Construction Access Routes

Drg No	404.5356.00006.0022.0
Rev	0
Date	20/11/2023
Layout	N/A

Document Path: P:\05356 - GoBe Consultants Ltd\00006 East Anglia Three\Tech\GIS\Dwgs\Wking\EA3\2023 05 EA THREE Cable Route\16 Traffic Management Plan\404.5356.00006.0022.0 Construction Access Routes.mxd