

# Hornsea Three

Construction Traffic Management Plan  
Broadland District Council Area

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## Document Control

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## Glossary

Term	Definition
Authorised development	As defined by the Hornsea Three Development Consent Order (DCO) 'means the development and associated development described in Part 1 of Schedule 1 (authorised project)'.
Connection works	As defined by the Hornsea Three DCO 'means Work Nos. 6 to 15 and any related further associated development in connection with those works'.
Commencement	As defined by the Hornsea Three DCO 'in respect of any other works comprised in the authorised project, the first carrying out of any material operation (as defined in section 155 of the 2008 Act) forming part of the authorised project other than onshore site preparation works and the words "commencement" and "commenced" must be construed accordingly'.
Onshore site preparation works	As defined by the Hornsea Three DCO means 'operations consisting of site clearance, pre-planting of landscaping works, archaeological investigations, environmental surveys, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, creation of site accesses and the temporary display of site notices or advertisement'.
Relevant planning authority	As defined by the Hornsea Three DCO 'means the district planning authority for the area in which the land to which the relevant provision of this Order applies is situated'.

## Acronyms

Acronym	Definition
AIL	Abnormal Indivisible Load
BDC	Broadland District Council
CoCP	Code of Construction Practice
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
ECR	Export Cable Route
HA	Highway Authority
HDD	Horizontal Directional Drilling
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
HSE	Health and Safety Executive
LPA	Local Planning Authority
NCC	Norfolk County Council
NGET	National Grid Electricity Transmission
NNDC	North Norfolk District Council
ONCS	Onshore Converter Station
PIA	Personal Injury Accident
PRoW	Public Right of Way
SNCB	Statutory Nature Conservation Bodies
SNDC	South Norfolk District Council
WSI	Written Scheme of Investigation

## Units

Unit	Description
km	Kilometre (distance)
m	Metre (distance)

## 1 Introduction

### 1.1 Background

- 1.1.2 The purpose of this Construction Traffic Management Plan (CTMP) is to establish the principles that will be implemented by the principal contractor to minimise the adverse impacts associated with the transport of materials, plant and staff required for construction of the onshore elements of Hornsea Project Three offshore wind farm (hereafter referred to as Hornsea Three), within the Broadland District Council (BDC) area.
- 1.1.3 The Development Consent Order (DCO) (granted 31<sup>st</sup> December 2020) requires that no onshore connection works may commence until written details of a full CTMP has been submitted to and approved by the relevant planning authority in consultation with the relevant Highway Authority.
- 1.1.4 This final CTMP contains details of:
- Proposed vehicle routeing plans;
  - Any abnormal indivisible loads that may be delivered by road, or confirmation that no abnormal indivisible loads will be required for construction of the authorised development;
  - Any highway works proposed (including intervention schemes);
  - Construction personnel travel; and
  - Highway condition surveys.
- 1.1.5 This CTMP is to be read alongside the Code of Construction Practice (CoCP) (Version A, 07792360\_A), which itself is secured through Requirement 17 of the DCO as submitted.
- 1.1.6 The measures set out in this CTMP relate to the areas of onshore construction activity which have been identified in Chapter 7 and Annex 7.1 of the Environmental Statement (Volume 3, Chapter 7: Traffic and Transport) and Volume 6, Annex 7.1: Transport Assessment as potentially leading to significant adverse transport and traffic effects, within the BDC area.
- 1.1.7 This final CTMP has been developed in consultation with Norfolk County Council (NCC) as the Local Highway Authority (LHA) and Highways England (HE), collectively referred to as the Highway Authorities (HAs), prior to submission to the Local Planning Authorities and the HAs for approval.
- 1.1.8 This CTMP also forms part of the Cable Corridor CoCP. The DCO as consented requires that no phase of any works landward of Mean Low Water Springs (MLWS) may commence until, for that phase a final CoCP (which must accord with the principles established in the outline CoCP) has been submitted to and approved by the relevant planning authority, in consultation with the relevant Highway Authority (and if applicable the Marine Management Organisation (MMO)).
- 1.1.9 The onshore elements of Hornsea Three is located within the districts of North Norfolk, Broadland and South Norfolk (the local planning authorities) and NCC as the Local Highway Authority (LHA). Individual full CTMPs will be provided for each of the local planning authorities, along with partial discharge works associated with the delivery of individual highway works as approved by the LHA.
- 1.1.10 This full CTMP focuses on the cable area falling within BDC only and associated Highway intervention works required within the outline CTMP, as applicable to BDC or to the main compound location. This CTMP therefore covers the following Work numbers as set out in the DCO:
- 1.1.11 Work No 8 – onshore connection works consisting of –
- Up to six cable circuits and associated electrical circuit ducts to Work No 11;
  - Onshore construction works;
  - Up to 440 link boxes; and
  - Up to 440 joint bays.

1.1.12 Work No 14 – temporary vehicular access tracks to serve Work Nos. 7, 8, 9, 10, 11, 12, 13 and 15; and

1.1.13 Work No 15 – temporary storage areas to assist with the onshore connection works

## 1.2 Scope of Construction Activities and CTMP

1.1.14 This CTMP considers site set-up, construction activities and site reinstatement for the onshore construction activities of Hornsea Three which includes:

- Onshore cable corridor (within BDC);
- Secondary compounds and storage areas located along the onshore cable corridor;
- Horizontal Directional Drilling (HDD) compounds located along the onshore cable corridor;
- Haul road along the cable corridor and access points and routes off the public highway; and
- Any specific Highway intervention schemes.

1.1.15 The potential adverse effects resulting from the construction activities relating to traffic and transport comprise the following:

- Adverse effects on sensitive receptors such as schools, care homes, hospitals and residential areas with poor footway provision;
- Adverse effect on pedestrian delay, severance, and fear and intimidation due to HGV movements; and
- Adverse effects due to possible increased risk to road users as a result of the passage of construction vehicles along existing roads or at site accesses.

1.1.16 In addition, this CTMP sets out proposed measures to reduce the overall level of travel and the associated emissions resulting from construction activities.

1.1.17 Hornsea Three is confirmed as a single phase operation, with a number of sub set of works and activities as the cable corridor work fronts make their way along the cable route and then potentially by different principal contractors, the works and activities associated with the landfall, or HVDC Converter/HVAC substation and connection to Norwich Main are constructed.

1.1.18 Production of multiple CTMPs will therefore be required to facilitate these construction works separate to this document.

- NNDC CTMP
- BDC CTMP
- SNDC CTMP
- Substation CTMP
- S278 Oulton Highway Works Partial Discharge CTMP
- S278 Cawston Highway Works Partial Discharge CTMP
- S278 Taverham Road Highway Works Partial Discharge CTMP
- Landfall Access Highway Works Partial Discharge CTMP
- B1113 Substation Access Highway Works Partial Discharge CTMP

1.1.19 The following sections are included in this BDC final CTMP:

- Introduction;
- Management of HGV Movements;
- Abnormal Loads;
- Management of Construction Workforce Movement;
- Site Accesses;
- Highway Crossings;
- Management of Highway Safety;
- Implementation and Monitoring of the CTMP; and
- Potential interaction between construction traffic for Hornsea Three and Vattenfall Norfolk Vanguard and how this can be managed and mitigated.



## Horizontal Directional Drilling

- 1.1.20 In order to assist the reader of this CTMP, a definition of HDD is provided below which has been taken from paragraphs 3.7.3.15 – 3.7.3.17 within the Volume 1, Chapter 3: Project Description of the Environmental Statement. Additional information on HDD can be found in the CoCP documents Appendix B Clause 2.2.3):

*"HDD involves drilling a long parabolic borehole underneath the obstacle using a drilling rig located beyond the obstacle in the export cable corridor. The optimum design is for each drill to be carried out in a straight line, with pits dug at both ends of the planned drill to below the level required for the cable so the drilling rig can carry out the drill horizontally, and the ducts can be installed.*

*The process uses a drilling head controlled from the rig to drill a pilot hole along a predetermined profile based on an analysis of the ground conditions and cable installation requirements. This pilot hole is then widened using larger drilling heads until the hole is wide enough to fit the cable ducts. Bentonite is pumped to the drilling head during the drilling process to stabilise the hole and ensure that it does not collapse. Prior to the drilling taking place, an exit pit may be excavated passed the obstacle on the export cable route in order for the HDD profile and ducts to stop at the required installation depth for the cable.*

*Once the HDD drilling has taken place the ducts (within which the cable will be installed) are pulled through the drilled hole. These ducts are either constructed offsite or will be constructed onsite along the export cable route, then pulled through the drilled hole either by the HDD rig or by separate winches."*

## Haul Road

- 1.1.21 In order to assist the reader of this CTMP, a definition of haul road is provided below which has been taken from paragraphs 3.7.2.25 – 3.7.2.27 within the Volume 1, Chapter 3: Project Description of the Environmental Statement:

*"During the installation of the onshore cables a temporary haul road will be constructed. The haul road, up to 6 m wide, and extending up to the full length of the onshore cable corridor (less sections where a HDD only passes through) provides vehicular access along the cable easement off the public highway. Following completion of the works being served by that access point, the haul road will be removed and the land reinstated, unless otherwise agreed with the local planning authority. The access point would also be removed and/or no longer utilised unless otherwise agreed with the local planning authority.*

*The haul road will be utilised during installation and be made up of either: an average of 0.3 m of permeable gravel aggregate with a geotextile or other type of protective matting; or plastic or metal plates or grating.*

*To provide access to the cable corridor and limit damage to the agricultural land, the haul road will be installed as part of the preconstruction cable route works at the start of construction in that locality."*

- 1.1.22 The depth of the sub-base of the haul road will be dependent on the California Bearing Ratio (CBR) of the substrata. The soils encountered along the export cable corridor are variable, ranging from dense sands/gravel providing very high CBR values to silty clays providing moderate to low CBR values. Table 1.1 can be used as a guide to the required thickness of the granular sub-base for typical silty clay soils in reasonable condition and at normal depths.
- 1.1.23 The minimum depth of the haul road will be capped at 200 mm and the likely maximum depth will not exceed 500mm.

**Table 1.1: Granular Sub-base Thickness**

Granular Sub-Base Thickness			
CBR 2%	CBR 3%	CBR 4%	CBR 5%
370mm	310mm	240mm	200mm

### Open Cut Trench

- 1.2.4.1 In order to assist the reader of this CTMP, a definition of open cut trench is provided below which has been taken from Section 3.7.3 within Volume 1, Chapter 3: Project Description of the Environmental Statement:

*“The trenches will be excavated using a mechanical excavator, and the export cables will be installed into the open trench from a cable drum delivered to site via HGV. The cables are buried in a layer of stabilised backfill material that ensures a consistent structural and thermal environment for the cables.*

*The remainder of the trench is then backfilled with the excavated material. Hard protective tiles, protective tape and marker tape are also installed in the cable trenches above the cables to ensure the cable is not damaged by any third party. Once the export cables are installed and the trenches backfilled, the stored topsoil will be replaced and the land reinstated back to its previous use. Each trench section between joint bays is expected to be open for approximately one week.*

## 2 Traffic Management

### 2.1 Management of HGV Movements

#### Vehicle Types

- 2.1.1 A variety of vehicle types will need to access the construction sites. These will include, inter alia: low loaders to deliver plant, construction machinery, ducting and cables, trench and pit support; fencing, welfare facilities and temporary portable cabins; HGVs delivering aggregate for surfacing of compounds and haul road; tankers to deliver water for HDD and for welfare.
- 2.1.2 A list of likely construction vehicles is presented below:
- HGV: Standard 4 axle artic truck with low-loader
  - HGV: Standard 8-wheeler tipper (for aggregate deliveries)
  - HGV: Standard 4 axle artic truck and trailer (curtain side)
  - HGV: Standard 6 axle artic truck and trailer (curtain side)
  - Construction vehicle: swivel dumper (6 ton)
  - Construction vehicle: 180 degree wheeled excavator (i.e. JCB 3CX)
  - LGV: 2 axle transits and delivery vehicles (over 3.5ton and under 7.5 ton)
  - LGV: 2 axle 4x4s, vans, and passenger vehicles up to 3.5 ton
- 2.1.3 The cable drums deliveries will be made with a Scania S650 6x2 tag axle with 2.9 m wheelbase or similar. The cable drums will have the following dimensions: Drum with W 2890 mm and Ø 4650 mm (flange size).

#### Vehicle Routeing

- 2.1.4 Vehicle routes between the main Site compound located on The Street, Oulton to each of the proposed works access points in BDC are shown at Appendix 1. All contractors will be required to

comply with the agreed routeing plans and will ensure that all drivers are informed of the need to restrict HGV movements to those specified routes. If in the event that complaints are received that vehicles are not following prescribed routes (or it comes apparent to the project or principal contractors, the project would then consider mechanisms to record vehicle routing, for example applying spot-checks by the developer to ensure that the agreed routes are being adhered to). All reports of drivers not adhering to the prescribed routes will be recorded and followed up on by the site management team, with penalties applied to repeated noncompliance.

- 2.1.5 Where HGV vehicle movements are generated, e.g., haul road aggregate or cable supplier, the respective suppliers will be requested to maintain a log, the purpose of which is to demonstrate compliance with following prescribed access routes and delivery times.
- 2.1.6 During the construction period all access points from the main Compound will have temporary signs posted along the confirmed routes. This may include signs to improve pedestrian awareness of HGV movements along roads where footways are not provided or are limited. The need for such signs, and their proposed locations, would be discussed and agreed with the Highway Authority in advance of construction as individual access permits are secured by the Principal Contractor.

#### **Localised Restrictions**

- 2.1.7 Where there is potential for two HGVs associated with the Hornsea Three works to meet on a section of highway that is of insufficient width to allow the HGVs to pass without reversing or overrunning the edge of the highway, movements of HGVs to and from construction sites will be controlled to ensure that such conflicts between HGVs associated with the Hornsea Three works do not arise. Temporary signage will be placed at specific locations agreed by the LHA as part of the permit process submitted by the principal contractor.
- 2.1.8 The HGV routes for construction of the onshore cable corridor are identified at Appendix I. These generally take into consideration existing HGV restrictions. However, there are some existing restrictions on the passage of HGVs over 7.5 t which will need to be used by Hornsea Three.
- 2.1.9 These are located at the following access route locations:
- Link 105: Hall Road to Reepham Road junction;
  - Link 119: Marl Hill Road and Ringland Lane from A1067 to the onshore cable corridor;
  - Link 125: Taverham Road;
  - Link 165: Bawburgh Road from the onshore cable corridor to B1108;
  - Link 166: Stocks Hill from link 163/164 to B1108;
  - Link 172: Cantley Lane from Station Lane to A47/A11; and
  - Link 181: Gowthorpe Lane.
- 2.1.10 In addition, there are existing signs on the road network stating that the following routes are not suitable for HGVs:
- Links 6 to 9: Sandy Hill Lane;
  - Link 87: B1145 in Reepham; and
  - Link 100: Ketts Lane.
- 2.1.11 The above links pass through or lead up to urban areas with residential properties, other sensitive areas, or are too narrow for accommodating two-way HGV movements and it appears to be for

these reasons that there are 7.5 t weight restrictions in place or they are marked as being unsuitable for HGVs.

- 2.1.12 For construction HGVs serving the project, these restrictions will be temporarily suspended to permit specific construction traffic over the period for which access is required.
- 2.1.13 In these locations, all reasonable endeavours will be made to limit the number of HGV movements on the links and to avoid damage and HGVs meeting on sections of highway where there is insufficient width to allow two HGVs to pass.
- 2.1.14 No HGV movements with a greater weight per axle than 12 tonnes, or greater than 3 m in width will be permitted on Link 88 and 89: B1145 (through Cawston).
- 2.1.15 No HGV movements will be permitted on Cantley Lane, close to the A11/A47 Thickethorn junction
- 2.1.16 No HGV movements will be permitted beyond the Church Lane/Dog Lane/Ringland Road junction.
- 2.1.17 Given the limited visibility at the landfall access onto the A149, specific traffic management measures will be required. These have been identified at drawing reference 2249/03/203A included in Appendix 3.

## 2.2 Local Sensitive Receptors

- 2.2.1 There are a number of local sensitive receptors where specific signage will be placed as required by the LHA. The form of signage will be agreed by the principal contractor as part of the individual access point permits with the LHA.
- 2.2.2 The list of sensitive receptors included are;
  - Universities / Schools / Nurseries;
  - Community facilities;
  - Places of worship; and
  - Doctors and hospitals.
- 2.2.3 The locations of the known sensitive receptors along links utilised by Hornsea Three are described in Table 2.1.
- 2.2.4 All locations will have temporary signage to be provided by the principal contractor advising construction traffic movements, regardless of vehicle type, of a potential high risk area.

**Table 2.1: List of Sensitivity Receptors**

Link ID	Link Description	Sensitive Receptors
1	Sheringham Road (A149) from Foxhills Camping access to NSL/30 mph sign	Place of worship, campsite, store, pub
3	Weybourne Road (A149) allotments to Holway Road (A1082) roundabout	Retail and pub/leisure frontages.
14	Bridge Road from Rugby Club to A148	Rugby Club
29	Plumstead Road from B1149 to Cable Route	Pub/restaurant/hotel
33	A148 through Letheringsett	Pub, place of worship
35	A148 between edge of Holt and B1110/1149 roundabout	High street shops, primary school
46	A149 through Cromer from Sandy Lane to railway bridge	Shops, schools, church
47	A149/140 from railway bridge to Roughton	Caravan site
48	A140 through Roughton	Pub, place of worship, post office, fast food restaurant
52	B1110 through Thornage	Place of worship

Link ID	Link Description	Sensitive Receptors
55	B1354 through Melton Constable and Briston	School, shops, country club
58	B1149 from edge of Holt urban area to Edgefield	Holt Country Park access
59	B1149 through Edgefield	Public park, public house, village hall
66	Station Road and Heydon Road to edge of urban area	School
76	B1149 from Saxthorpe roundabout to Heydon Road junction	Place of worship
78	Aylsham Road B1145 from B1149 to edge of Aylsham roundabout	Hospital
87	B1145 in Reepham	Village centre shops
89	B1145 in Cawston	Primary school, village hall, public house
91	Reepham: Market place, Church Hill and Norwich Road to Reepham Fishery	Place of worship, town centre shops
105	Hall Road to Reepham Road junction	Place of worship
143	A140 between A146 and A47	School, place of worship
169	Little Melton Road and Burnthouse Lane	Rugby club
183	B1108 between A140 and A47	Hospital, university
194	A1065 from B1146 to Massingham Road junction, Weasenham	Caravan park, place of worship

### Timing of HGV Movements

- 2.2.5 For the Hornsea Three onshore cable corridor and substation core working hours are 07.00 to 18.00 on weekdays and 07.00 to 13.00 on Saturdays. Up to one hour before and after for mobilisation ("mobilisation period"), i.e., 06:00 to 19:00 weekdays and 06:00 to 14:00 Saturdays; and Maintenance period 13:00 to 17:00 Saturdays, as agreed with LPA.
- 2.2.6 Mobilisation does not include HGV movements into and out of sites, but suppliers can make use of the wider highway network outside these hours to travel to site. In certain circumstances, specific works may have to be undertaken on a continuous working basis (00:00 to 00:00 Monday to Sunday).
- 2.2.7 All HGV movements which are not planned to arrive at site after any time restrictions would be required to park at an appropriate Approved Lorry Park, Motorway Services and other LHA designated overnight parking locations.
- 2.2.8 Other activities that will require 24-hour operation will be: site security, oil filling of transformers at the substation, some work at jointing pits, some HDD activities and possible remedial works in response to severe weather events. These will be agreed in consultation with the relevant planning authorities. It may also be beneficial to carry out several activities outside of the core working hours to utilise periods such as works within the highway, footpaths and works affecting operational railways. Activities outside of the core working hours will be agreed with the relevant local authority EHO officer in consultation with the LHA. However, it should be noted that not all of these activities will involve HGV movements or would generate only infrequent HGV movements e.g. site security, oil filling of transformers and so are of a different nature to the frequent HGV movements of primary consideration within this CTMP.
- 2.2.9 Within the context of the working hours established in the CoCP as stated in para 2.1.5.1, any further restrictions over and above these associated with the movement of vehicles associated for the project will be limited. However, some limited further restrictions may be placed on the timing of HGV movements through locations with sensitive receptors, for example restrictions on number

of HGV movements during school opening and closing hours where HGVs would travel along routes passing schools where the highway network is constrained.

- 2.2.10 One such location where a restriction will be implemented is in Cawston (see Appendix 7).
- 2.2.11 Depending on the season of construction of individual onshore cable corridor sections or components, during peak holiday seasons (considered to be June to September) the approved routing of HGVs documented, if practical, will avoid routes marked on the NCC Route Hierarchy Map.
- 2.2.12 The principal contractor will engage with NCC to agree HGV levels and movement times on the key tourist links during the peak period from June to September.
- 2.2.13 Reducing the impact of HGV Movements
- 2.2.14 Load sizes are typically maximised and thus vehicle usage is typically minimised by contractors in order to minimise transportation costs and this will be encouraged by the principal contractor.
- 2.2.15 The principal contractor will look to re-use HGVs where practical, such as using vehicles which have delivered material to remove excavated material if this needs to be removed from a site. Where practical, local suppliers will be used to minimise the distance travelled by HGVs.
- 2.2.16 All HGVs transporting fine and loose material will be sheeted to avoid dust and the spillage of materials onto the highway. Dampening of surfaces, such as the haul road in locations where it is close to the public highway, will be undertaken in dry weather where the movement of vehicles or delivery of loads may cause dust.
- 2.2.17 Where there is a risk of mud from the construction works being transported onto the highway network by HGVs, wheel wash facilities will be provided at each construction access point to ensure that HGVs do not deposit mud and dust onto the highway network.
- 2.2.18 In order to minimise environmental impact upon the site and to reduce the need for water, a dry wheel 'wash' facility (rumble grids) will be used where practical, such as 'DriveOn V-Tech' solution
- 2.2.19 The principal contractor will be required to use road cleaners, where it is safe to do so, along public highway in the locality of actively used site access points.

#### **Management of Abnormal Indivisible Loads**

- 2.2.20 It is expected that a number of Abnormal Indivisible Loads (AILs) comprising large components such as the cable drums will be transported to the main construction compound, as well as to specific and pre-identified locations along the onshore cable corridor.
- 2.2.21 The haulage contractor, appointed by the principal contractor, is required to comply with statutory regulations in terms of consulting with the relevant Highway Authority and the police (where required).
- 2.2.22 The notification requirements differ depending on the weight, length and width of the AIL. HEs 'Aide Memoire for Notification Requirements for Movement of AILs' is provided at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/503103/Aide\\_Memoire\\_updated\\_Sep\\_2015.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/503103/Aide_Memoire_updated_Sep_2015.pdf).
- 2.2.23 The timing of AIL deliveries will be discussed and agreed with the Highway Authority to minimise delay for other road users and to minimise risk to highway users. The Highway Authority will determine the timing of AIL deliveries along the highway and this may be during night-time periods.
- 2.2.24 The weight, length and width of AILs will be communicated to the Highway Authority, and the routing of AIL deliveries will be agreed with the Highway Authority prior to any movements on

the local road network following the approved link routing as set out in Appendix 1. Where appropriate, the police and relevant highways and bridge authorities would also be consulted.

- 2.2.25 The delivery all AILs will be undertaken under escort. Where AIL require the full width of the carriageway or for unusual manoeuvres at junctions, appropriate temporary road closures and traffic management will be put in place as appropriate to maintain the safety of other road users and minimise delay.
- 2.2.26 The principal contractor, or their appointed traffic management contractor must ensure all permits and approvals are in place and prior notification of movements issued to all local stakeholders, including parish councils, 14 days before any AIL activity takes place.
- 2.2.27 No AIL movements to or from the main construction compound to the onshore cable corridor will occur during night-time hours (23:00-07:00).

### 2.3 Environmental Sensitivity Assessment for New Links

#### Proposed Additional Links

- 2.3.1 A vehicle swept path analysis assessment of the links presented in the OCTMP and Transport Assessment (TA) submitted as part of the DCO demonstrates that several critical works accesses cannot be accessed using the proposed cable drum delivery vehicle via the approved designated DCO links.
- 2.3.2 Therefore, alternative routes have been assessed to facilitate cable drum access to these critical works access locations where the use of the haul road is not possible.
- 2.3.3 This section of the CTMP sets out each new proposed route and provides an environmental sensitivity assessment to justify the route selection.

#### B1149 Horsford

- 2.3.4 The OCTMP routed Hornsea Three construction traffic through Horsford village on Link 116 (B1149). However, the decision has been taken in agreement with the LHA to divert the Hornsea Three vehicle movements from Broadland Northway A1270 north along the A140 Cromer Road, before turning left onto Shortthorn Road, then turning right and continuing on the B1149 Holt Road to the main compound this route is shown in plan form on drawing MLPP/054461/LJ/ ACCESS 2-3 OVERVIEW in Appendix 1.
- 2.3.5 This route will be reversed for vehicles traveling south from the main compound on The Street.
- 2.3.6 The reason for this change is to avoid potential conflict between Hornsea Three traffic and the sensitive receptors within Horsford. Which include a primary school, shop frontages, restaurants, places of worship, Horsford Surgery, and multiple residential frontages.
- 2.3.7 The redirected HOW03 traffic will instead travel between the Norwich Distributor Road (NDR) A1270 and the main Site compound along Links 118 (A140 Cromer Road), and Shortthorn Road. This route has significantly fewer sensitive receptors when compared to the route through Horsford. With sensitive receptors limited to private residential and small industrial use frontages.
- 2.3.8 This routing approach would remove a total maximum two way daily 636 construction vehicles including 188 HGV trips from Horsford.
- 2.3.9 The alternative route should be viewed as an improvement upon previous proposals due to the reduced number of sensitive environmental receptors (as outlined above) impacted.

### **Works Accesses 15 & 16**

- 2.3.10 Following swept path analysis of the consented links to works access points 15 & 16 it is determined that cable drum vehicle access from the north via link 167 is not viable due to highway geometric constraints.
- 2.3.11 Therefore, access will be taken from the south via links 170 (Colney Lane – Back Lane) & 169 (Burnthouse Lane). However, since the OCTMP was approved a housing development has been constructed which stopped up Back Lane.
- 2.3.12 Instead, construction vehicles travelling via the south will need to turn left onto the new Harness Maker Way from Colney Lane, through the northern extent of the residential development and turn right onto Burnthouse Lane. This route is shown in plan form on drawing MLPP/054461/LJ/ACCESS 15-16 OVERVIEW in Appendix 1.
- 2.3.13 Maximum daily construction traffic levels would see a total of 559 two-way movements to works accesses 15 & 16 inclusive of 333 HGV movements.
- 2.3.14 Although there are sensitive receptors in the form of residential property frontages along Harness Maker Way, the carriageway width is approximately 6.3m wide and there are foot/cycleways provided on both sides of the carriageway set back behind grass verges. Dropped kerb pedestrian and cyclist crossing points equipped with tactile paving are also located at regular intervals along Harness Maker Way. Therefore, there is ample separation between pedestrians associated with the residential properties and construction traffic.
- 2.3.15 There is therefore no reason on highways grounds why HOW03 construction traffic should be prevented from utilising this route.

## **2.4 Management of Construction Workforce Movement**

### **Construction Workforce Travel**

- 2.4.1 Hornsea Three recognises the value in managing and reducing the impact of the movement of construction staff. Measures will be implemented that will encourage all workers to make use of sustainable modes where possible. These measures will consider:
- Provision of adequate parking facilities within compounds and site areas to minimise parking on and around construction sites avoiding inappropriate parking on verges or unsuitable highways and to deter construction workers from driving to site unnecessarily;
  - Staff will receive advice on the desired vehicle routing from the strategic road network to work areas, to avoid the use of unsuitable links
  - Measures to increase vehicle occupancy such as incentives to car-share, information/online applications to facilitate car sharing and the provision of minibuses where this would allow construction workers to access sites without the need to come by car;
  - Provision of electric vehicles (EV's) to transport staff from main compounds to site, supervision staff to use EV's at all times. EV charging facilities to be provided at main compounds.
  - The provision of public transport information if this would to assist construction workers to access sites or travel by bus or train to locations where they could be picked up by minibus;
  - Measures to encourage walking and cycling where these modes offer an opportunity for construction workers to access sites, including provision of temporary cycle parking at work sites;
  - Online induction and 'clocking-in/out' applications to be implemented to minimise the need for workforce to travel to main compound before travelling to other work fronts.
  - Welfare facilities will be provided on work sites to reduce the need for construction workers to travel elsewhere in the course of the day; and
  - The proposed core working hours (07:00-18:00 weekdays) avoids construction workers travelling in the peak hours and thus reduces impacts on the local road network during network peak hours.



- 2.4.2 Engagement with Highways England has identified the A47 Taverham Road Honingham junction, A47 Easton Roundabout, A47/A1074 Longwater junction, A47/ A140 junction and B1113/A140 junction as locations which will require measures such as the above, particularly in respect to encouraging staff movements outside of the network peak.
- 2.4.3 Further details are included in the Travel Plan at Appendix 2.

### **3 Site Accesses**

#### **3.1 Design**

- 3.1.1 Access locations are identified at Appendix 3.
- 3.1.2 The final design of all site accesses within BDC will be agreed with NCC prior to the start of construction at each access point.
- 3.1.3 When an access point is in use, signage will be deployed in accordance with The Traffic Signs Manual, Chapter 8, Part 1, Traffic Safety Measures and Signs for Road Works and Temporary Situations, Department for Transport/Highways Agency, 2009, warning road users of the site access. Each access will meet appropriate visibility and design standards. Traffic management measures may be required at some accesses, possible types of which are discussed below.
- 3.1.4 Access design drawings for all works access points in the BDC area are included at Appendix 3.
- 3.1.5 Working areas will be designed to enable plant, materials and waste to be loaded/unloaded, areas will be designated as such and to enable vehicles to enter and exit in forward gear. Contractors/suppliers will not be permitted to wait on or load/unload from the public highway.
- 3.1.6 Working areas will be designed to enable designated parking facilities for construction workers.
- 3.1.7 All site accesses will be provided with appropriate fencing to ensure that work sites are secure. Some accesses would be available to all vehicle types, whilst others will be restricted to construction workforce and light vehicles only. Nevertheless, all site accesses will be designed to eliminate the risk of vehicles queuing back onto the highway by providing sufficient width close to the adjacent highway, which is appropriate to the types of vehicles anticipated to use the access.

#### **3.2 Management and Mitigation**

- 3.2.1 Where there is a risk that vehicles will deposit mud and debris on the highway, in the vicinity of construction site accesses, wheel cleaning facilities will be provided (see paragraph 2.1.5.3 above). The condition of the adjacent highway will be monitored by the site management team and if mud or debris is found to be present, measures such as road sweeping will be put in place by the principal contractor to secure its removal with minimal delay.
- 3.2.2 Appropriate signage will be provided on the approach to construction site accesses to warn of turning and/or slow-moving vehicles. The design and siting of all signage will be agreed with the Highway Authority prior to the start of work at each work site.
- 3.2.3 Signage will be placed at the exit of construction site access points to instruct construction traffic to follow the designated route.
- 3.2.4 Designated routes will be signed to each works access point.
- 3.2.5 Contact numbers of the site management team will be on display for the general public to raise any concerns.
- 3.2.6 Within 28 days of a construction site access being no longer required for the purpose of Hornsea Three construction, or written notice being served unto the Applicant by the Highway Authority,

the access will be removed, and the highway returned to its original condition (including verges), unless otherwise agreed with the HAs.

- 3.2.7 The details of and timescales for the reinstatement will also be agreed with the Highway Authority. It is anticipated that the HAs will inspect the reinstatement works to ensure that there meet appropriate standards.
- 3.2.8 There may be a need to provide traffic management measures at some accesses and at some routes to the accesses. This may be required for various reasons and the type of traffic management measures to adopt will depend upon the location on the highway, the nature and level of traffic on the highway, what is served by the highway, and the alternative routes available.
- 3.2.9 Example traffic management measures include:
- Requisite visibility splays cannot be provided at an access and so traffic on the highway may be temporarily stopped to allow HGVs to exit an access safely;
  - The highway geometries are too narrow to safely accommodate turning HGVs when exiting an access and so traffic on the highway may be temporarily stopped to allow HGVs to exit an access safely;
  - The highway geometries are too narrow to accommodate HGVs passing an oncoming vehicle and so shuttle working may be temporarily installed;
  - The highway geometries are too narrow to accommodate HGVs passing an oncoming vehicle and so the road may be temporarily made one-way and a local diversion put in place;
  - The highway geometries are too narrow to accommodate HGVs passing an oncoming vehicle and so the road may be temporarily closed to through traffic and a local diversion put in place; and
  - The highway geometries are too narrow to accommodate simultaneous turning movements through junctions and so three-way portable signal control may be temporarily installed at T-junctions or four-way portable signal control temporarily installed at crossroads.
- 3.2.10 Details of traffic management measures as required at each works access point is shown in Appendix 3.
- 3.2.11 Where traffic on the highway is stopped, this will be undertaken using temporary traffic signals or manually operated stop/go signs.
- 3.2.12 Whilst the project provides for HDD under all public highways, if works are required on the public highway (such as to identify local utilities) the project will make use of shuttle working arrangements. Shuttle working is where one direction of travel receives priority over the other. This could be via traffic signals or via give way signs.
- 3.2.13 Some example layouts of these traffic management measures and features are shown on Figure 3.1 to Figure 3.6. These examples are extracted from The Traffic Signs Manual, Chapter 8, Part 1, Traffic Safety Measures and Signs for Road Works and Temporary Situations, Department for Transport/Highways Agency, 2009. The extracts are generic in nature, and they are not designed to be specific to any particular location or circumstance but designed to be implemented in accordance with the advice contained within the document.

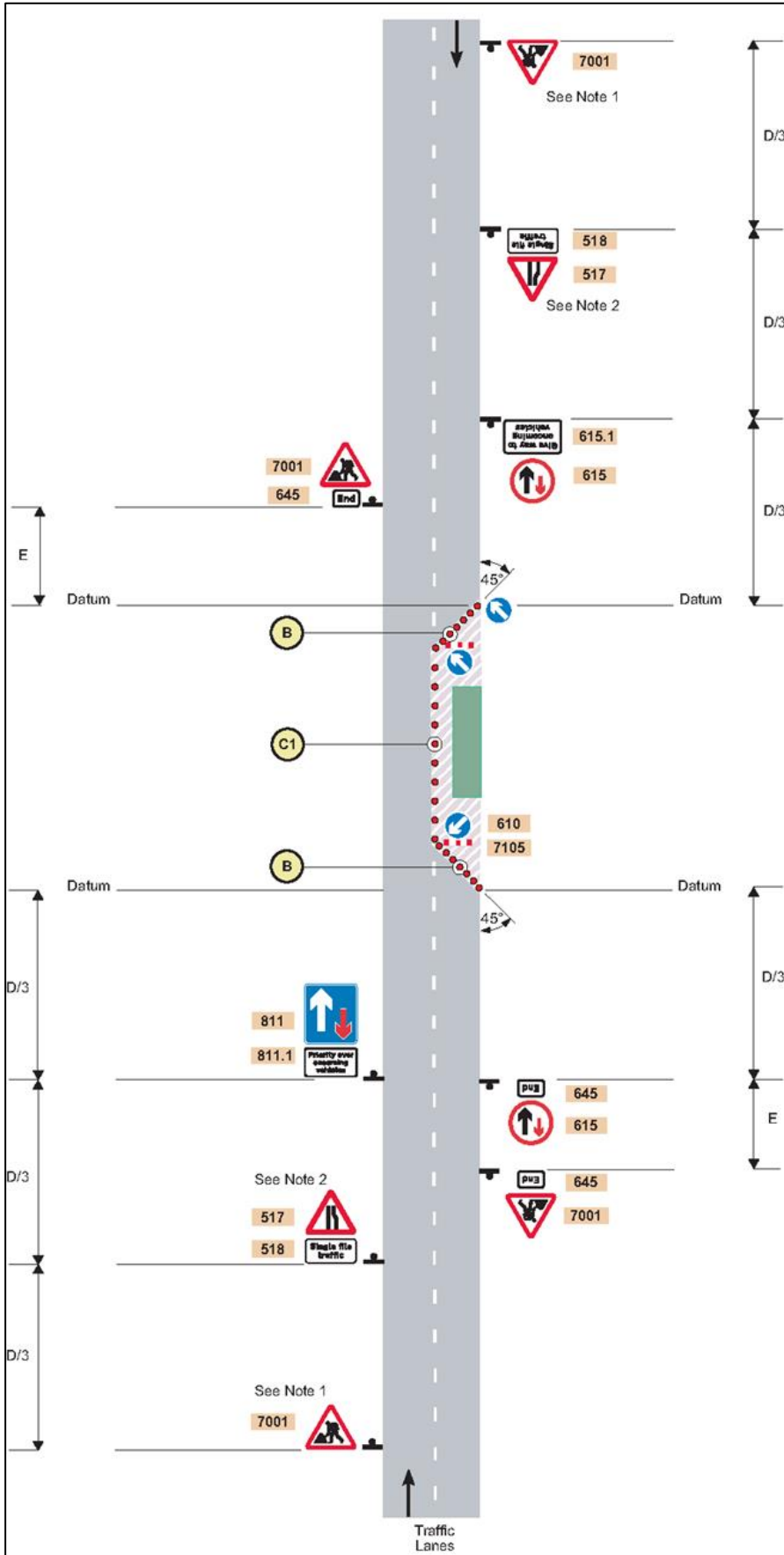


Figure 3.1: Priority signs on a two-lane single carriageway road

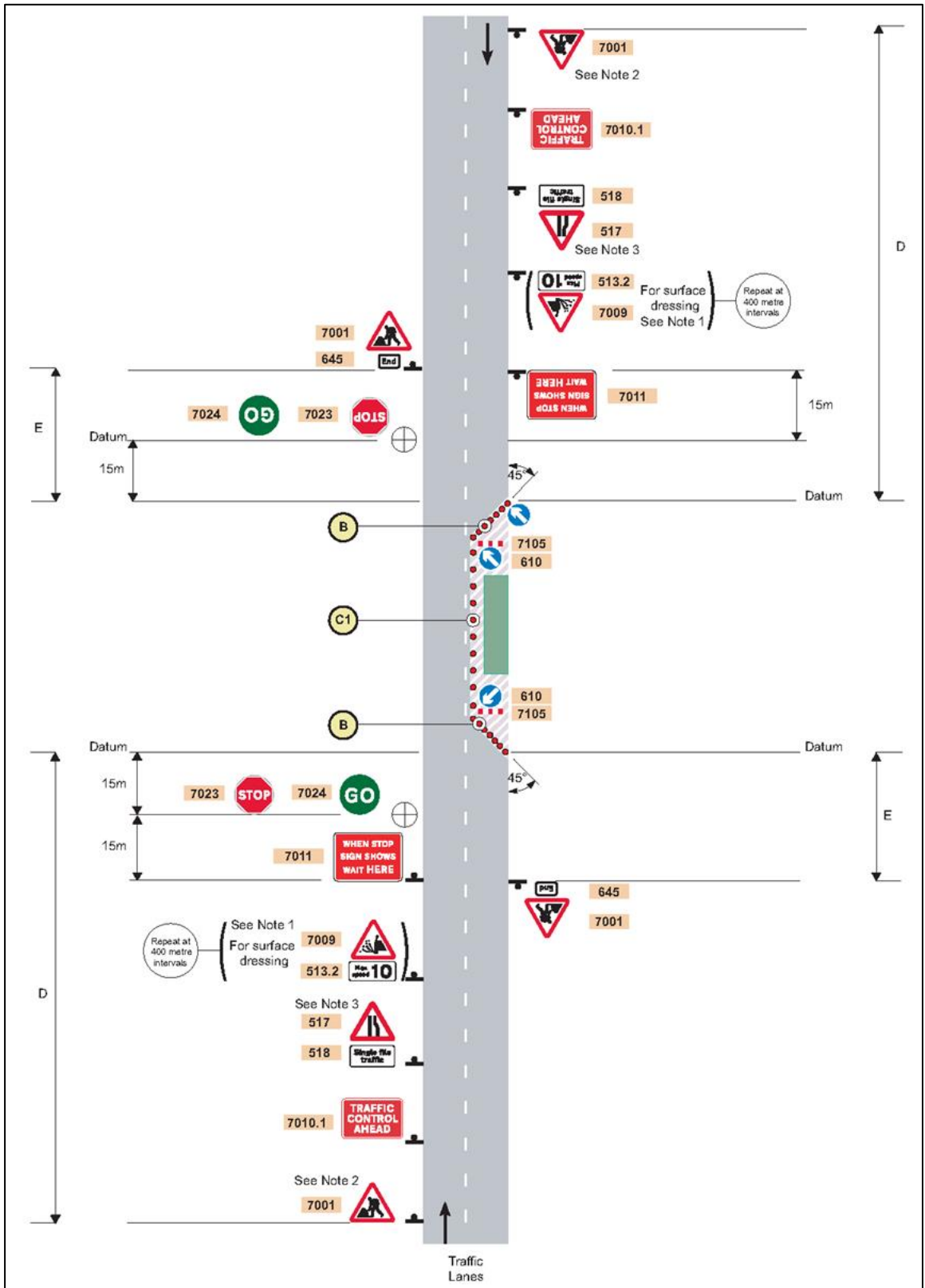


Figure 3.2: STOP/GO signs on a two-lane single carriageway road.

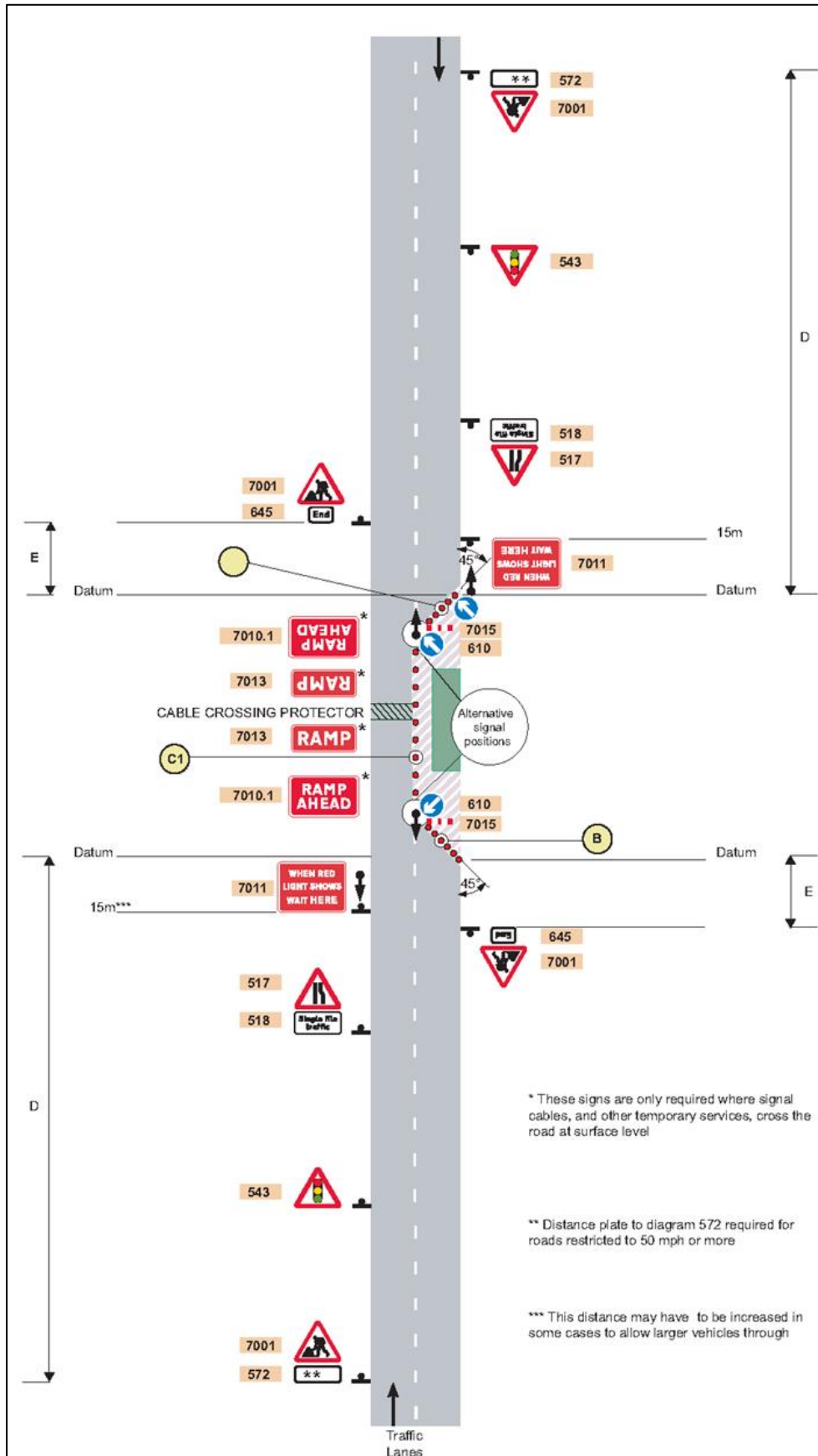


Figure 3.3: Portable Traffic Signals on a Two-lane Single Carriageway Road



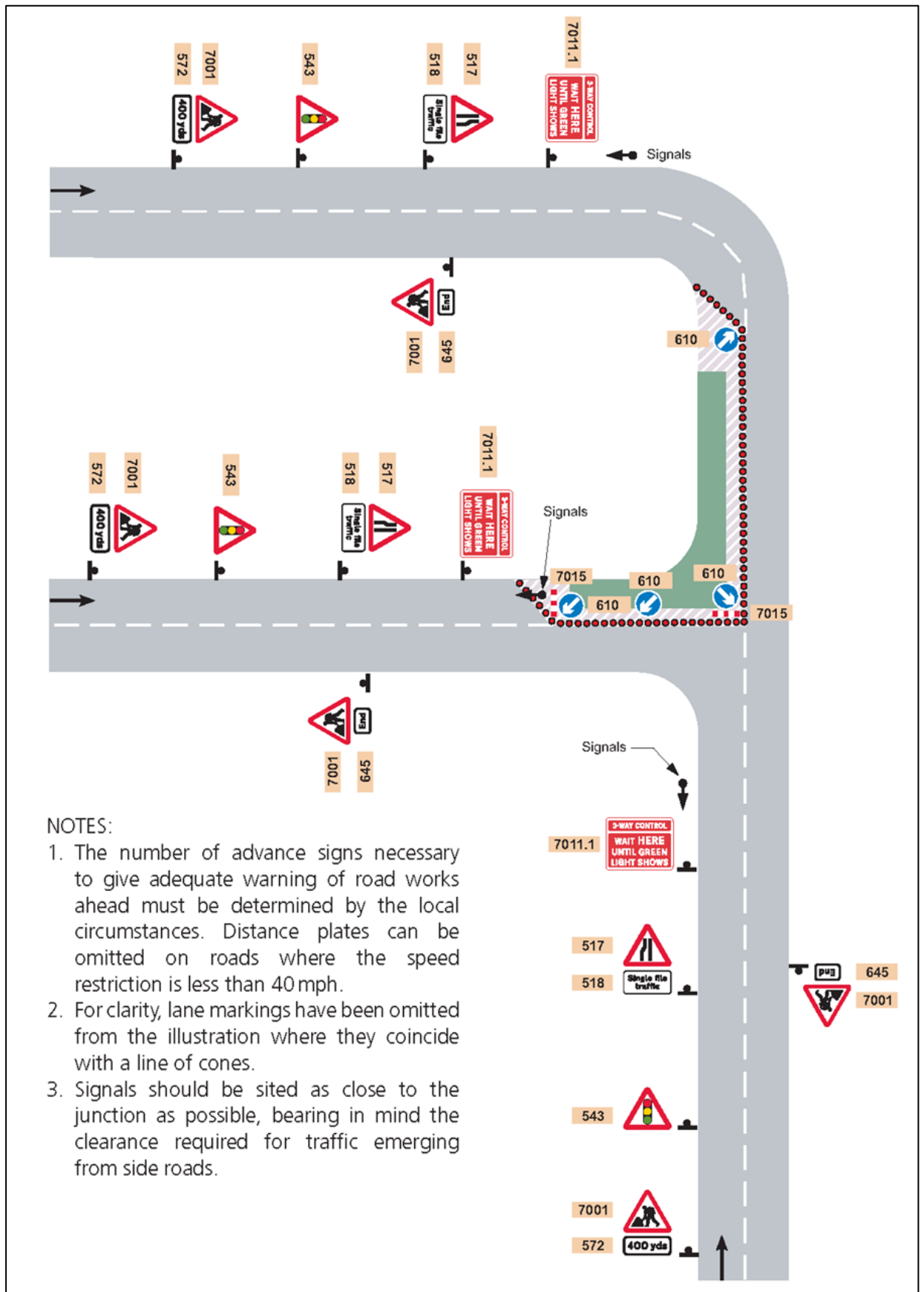


Figure 3.6: Road Works at a T-Junction – Traffic Control by Means of Portable Traffic Signals.

## 4 Highway Crossings

### 4.1 Onshore Cable Corridor Highway Crossing Locations and Operation

- 4.1.1 All crossings of the public highway will be undertaken using HDD; the details of HDD techniques and the locations of crossings are set out within the following documents which form part of the Environmental Statement:
- Volume 1, chapter 3: Project Description;
  - Volume 4, annex 4.3.5: Crossing Schedule (Onshore); and
  - Figure 1.2 at volume 6, annex 7.8: Traffic and Transport Figures.
- 4.1.2 This method of cable laying means that during the HDD operation there is no disturbance (i.e. no shuttle working nor road closures) to other users of the road with the exception of material delivery and arrival/departure of construction staff.
- 4.1.3 There will be some locations whereby the haul road crosses the public highway and where traffic management will be required or where works are required to expose existing utilities. The traffic management methods to be used will depend on the location of the highway crossing, the nature and level of traffic on the highway link being crossed, what is served by the highway link and the alternative routes available. Methods may include temporary shuttle working, crossings, or temporary closure.
- 4.1.4 Detailed traffic management plans for the vehicle crossings located in the BDC area to be provided in Appendix 3.

### 4.2 Agreement, Management and Advance Notification

- 4.2.1 Where traffic management measures are required, these will be agreed in advance with the HAs by the principal contractor through the Street Manager permit process.
- 4.2.2 Any temporary road closures/introduction of one-way roads and any diversions will be advertised in advance and alternative routes indicated through signage by the principal contractor in line with the Street Manager permit process
- 4.2.3 Where such speed restrictions are required, temporary speed reductions to 30 mph will be sought through Temporary Traffic Regulation Orders (TTRO).
- 4.2.4 Measures will be put in place to ensure that no unauthorised access is gained to the onshore cable corridor from the highway at crossing points and that the adjacent works sites are secure.
- 4.2.5 Any works within the highway will be reinstated to a standard commensurate to prior to the commencement of the works, unless otherwise agreed with the HAs. The details of and timescales for reinstatement will also be and agreed with the HAs. It is anticipated that the HAs will inspect the reinstatement works to ensure that they meet appropriate standards.

### 4.3 Haul Road and its Crossings with the Highway

- 4.3.1 A temporary haul road will be constructed along the majority of the Hornsea Three onshore cable corridor to facilitate HGV access to undertake trenching works and install the cables, with gaps only at some HDD locations and road crossings. The haul road will enable vehicles to move along sections of the Hornsea Three onshore cable corridor and relieve the need for construction traffic to rely on some localised longer sections, of the local road network or avoid sensitive environmental receptors during construction.
- 4.3.2 The haul road would operate with a 10mph speed limit to ensure the safety of workforce and plant operatives in the vicinity and where relevant, minimise disturbance to noise sensitive



ecological receptors. Where the haul road crosses existing highway links, traffic management would be used to ensure that safe crossing by highway traffic and haul road vehicles.

- 4.3.3 Details are set out Appendix 3 where required for crossover access points. The haul road will be of restricted access for Hornsea Three construction traffic only.

#### 4.4 Public Rights of Way

- 4.4.1 Several Public Rights of Way (PRoW) and areas of land with informal public access will potentially be affected by the construction of the onshore elements of the Hornsea Three. Focus will be to avoid any stopping up of PRoW by the provision of traffic/route management and/or localised diversion of a PRoW (or area where informal public access). The project will agree measures, in accordance with the principles set out in the CoCP Appendix 7: Public Rights of Way Management Plan, to manage the interface between the Hornsea Three works and PRoW with the relevant PRoW officer at NCC.

## 5 Planned Highway Intervention Schemes

- 5.1.1 The need for physical intervention measures has been identified at three locations (Oulton, Taverham Road and Cawston) during the construction phase of Hornsea Three.
- 5.1.2 For the purpose of the Outline CTMP, outline schemes had been prepared, each of which have been subject to consultation with the relevant highway authorities (NCC and Highways England) as well as local stakeholders (including Cawston Parish Council and Oulton Parish Council).
- 5.1.3 The highway intervention schemes have been developed and approved by the HAs. A broad description of the planned works at each location are detailed below, each highway intervention scheme is subject to a separate partial discharge CTMP to allow the physical highway works to be completed within the highway in line with the HAs agreement and road space booking.
- 5.1.4 This section sets out the proposals for Hornsea Three only.

### 5.1 Oulton

- 5.1.5 A series of road improvements and mitigation measures are to be implemented prior to the commencement of any use of the Hornsea Three main construction compound on The Street and its junctions with the B1149 (link 208) and the main construction compound access.
- 5.1.6 The approved drawings contained in Appendix 5, confirm the highways scheme which comprise the following key components:
- Improvement of existing bellmouth junction between The Street and the B1149 (Holt Road);
  - Up to eight Passing places along The Street for HGV opposing traffic (using Grasscrete paving) resulting in an overall carriageway width of 6.0m;
  - Widening of The Street near Dorking farm access (using full carriageway construction);
  - Trimming, but no removal, of vegetation and trees along The Street;
  - A means of priority work for southbound vehicles in the vicinity of The Old Railway Gatehouse with a view to minimising the potential for two opposing HGVs to pass by this property simultaneously while also serving as a means of speed attenuation and mitigation to improve noise and vibration risk);
  - Improved visibility at the Compound access;
  - Temporary lowering of the existing 60mph speed limit to 30mph from the B1149 junction to the Hornsea Three main construction compound access;
  - Temporary signage along the B1145 and The Street as agreed with the Highway Authority to provide driver awareness and enforcement;
  - Regrading of existing road hump on The Street in the vicinity of the Old Railway Gatehouse to minimise noise and vibration impacts on the Old Railway Gatehouse; and
  - Filter trench drainage of The Street along the regrading of the existing road hump.

- 5.1.7 The Applicant will maintain the works to the roadway (through video condition surveys, see Section 7) or visual inspections as appropriate) for the duration of the use of the main construction compound.
- 5.1.8 It has been agreed that all physical intervention works to the highway are temporary in nature and removed once the use of the main Hornsea Three construction is complete (unless otherwise agreed with the relevant Highway Authority, in consultation with Oulton Parish Council (OPC).
- 5.1.9 The only exceptions to this are the junction improvements at The Street/B1149 junction and regrading of the road hump which would be permanent as they represent an improvement to general highway safety. All signage associated with the construction works would also be removed once the use of the main Hornsea Three construction is complete (unless otherwise agreed with the relevant Highway Authority, in consultation with OPC).
- 5.1.10 A number of additional management measures will also be implemented at this location:
- No outbound left movements from the main construction compound access to The Street for all Hornsea Three traffic;
  - No inbound right movements from The Street to the main construction compound access for all Hornsea Three traffic;
  - Monitoring and recording the number of Hornsea Three construction vehicle movements into and out of the main construction compound during active use;
  - Provision of acoustic glazing on all façades of Old Railway Gatehouse (with landowner agreement);
  - Provision of acoustic glazing to the existing skylight at the Old Railway Gatehouse (with landowner agreement);
  - Installation of a 2m high acoustic barrier (wall) along the south-eastern boundary of the property (along the boundary to the garden) at the Old Railway Gatehouse, together with a 90 degree turn at the garden end for a minimum of 10m along the southern property boundary (to be located within the highway boundary or on the landowner's property) (with landowner agreement);
  - Monitoring of the noise levels at the Old Railway Gatehouse for the duration of three months of the main construction compound use. This would be to verify the effectiveness of the mitigation proposed and to ensure that noise levels do not reach a level which would be considered a significant effect (>3dB above baseline noise, the baseline noise level will be determined immediately prior to commencement of the use of this link). Should an exceedance be identified, additional traffic management measures would be discussed and agreed with NCC and BDC's environmental health officer;
  - Consultation with NCC regarding events at Blickling Hall which may necessitate additional traffic management measures to be applied on specific days; and
  - Notification of any known abnormal load movements (outside of core working hours) and any changes to the proposed duration of active use of the main construction compound to OPC and The Old Railway Gatehouse.
- 5.1.11 The planned intervention works have been fully consulted and agreed with the LHA via a S278 Agreement.

## 5.2 Taverham Road

- 5.2.1 A series of highway improvements and mitigation measures are to be implemented on Taverham Road and the A47 junction (link 125) prior to the commencement of any use of Taverham Road by HGVs associated with the construction of Hornsea Three.
- 5.2.2 The measures to be implemented are shown in the drawings included at Appendix 6 and comprise the following key components:
- Improvement to the Taverham Road bellmouth junction to provide a 15m exit and entry radii;

- Widening of Taverham Road in the vicinity of the A47 to allow HGV opposing traffic to manoeuvre (using full carriageway construction);
- Installation of a single, 35m long passing bay on Taverham Road to the north of the bridge above the River Tun and give way priority system to be implemented, with priority given to traffic turning off of the A47 (using Grasscrete construction);
- Temporary closure of Blind Lane access off the A47;
- Implementation of temporary diversions to account for above temporary road closures during the construction phase;
- No right turning movements from Taverham Road onto the A47 (for all traffic);
- No right turning movements for westbound traffic along the A47 onto Taverham Road suspended (via signing and road marking); and
- Temporary signage as agreed with the Highway Authorities to provide driver awareness and enforcement.

5.2.3 At the time of the BDC CTMP submission the Taverham Road intervention works are subject to agreement with the HAs via a S278 Agreement and a final scheme approval will be supplied prior to this CTMP approval.

5.2.4 The principal contractor will maintain the works to the roadway (through video condition surveys, see Section 7 or visual inspections as appropriate) for the duration of the use of Taverham Road for construction traffic movement.

5.2.5 It has been agreed that all physical intervention works to the highway would temporary in nature and removed once the Hornsea Three construction is complete (unless otherwise agreed with the relevant Highway Authority). All signage associated with the construction works would also be removed once the use of the main Hornsea Three construction is complete (unless otherwise agreed with the relevant highway authorities). Temporary and permanent works would mostly like be carried out by the Applicant's contractors under licence from the relevant HA.

### 5.3 Cawston

5.3.1 A series of road improvements and mitigation measures have been fully agreed with the LHA and are to be implemented in Cawston (link 88 and 89) and in the vicinity of the village on the B1145 prior to the commencement of any use of the B1145 where it passes through Cawston (Link 89) by HGVs associated with the construction of Hornsea Three.

5.3.2 In March 2019 Create Consulting Engineers prepared a 'High Street, Cawston – Highway Intervention Scheme' (HIS) document. This document set out a series of measures proposed to be introduced through the village of Cawston, to mitigate the localised impact of the HGV traffic associated with the construction of Hornsea Three alone and cumulatively with the Norfolk Vanguard and Boreas schemes which utilise the same route for access.

5.3.3 In January 2020, Royal Haskoning, as part of the Boreas DCO inquiry, produced 'Technical; Note Revised Cawston Highway Intervention Scheme' (HIS) on behalf of Vattenfall which was produced in response to the Action Point 1 from Issue Specific Hearing 3 of the Norfolk Boreas Limited DCO Examination. The Vattenfall document sets out an alternative mitigation scheme to what was identified in Create's 2019 document, following on from the same principles established.

5.3.4 The Cawston HIS produced by Royal Haskoning has been approved by the LHA for all Hornsea Three construction movements through Cawston as well as Vattenfall's Norfolk Vanguard and Norfolk Boreas projects.

5.3.5 The approved measures to be implemented are shown on drawings contained in Appendix 7 and comprise the following key components for Hornsea Three construction vehicles;

- Driver induction and awareness of specific traffic management requirements relating to the High Street;
- Prohibition of HGV deliveries during term time school pick up and drop off times (7:30am – 9:00am and 3:00pm – 4:00pm, Monday to Friday);

- Prohibition of HGV deliveries from 6pm to 9am (in line with parking restrictions);
  - Implementation of a 20mph limit through the village;
  - Hazard warning signage to inform of 'pinch points' and 'pedestrians in the road';
  - Controlled kerbside parking denoted by broken line box road markings;
  - Parking controls to include a 'Limited Waiting' order (9:00am – 6:00pm Monday to Friday) and associated single yellow line road markings and supplementary traffic signs;
  - High Street carriageway re-alignment adjacent to Chapel Street;
  - Resurfacing of the High Street, reinstatement of surface depressions (e.g. old utility trenches) repair and raising to level carriageway 'ironwork';
  - Ongoing vegetation maintenance programme to protect roadspace and visibility;
  - Development and support for an improved Cawston C of E Primary School 'School Travel Plan';
  - Improvements to the Cawston C of E Primary School pedestrian crossing; and
  - Managed cumulative traffic demand to no greater than 239 daily HGV deliveries.
- 5.3.6 The principal contractor will maintain the works to the roadway (through video condition surveys) for the duration of the use of link 89 for construction traffic movement (expected to be limited to the construction phase for cable sections 9 and 10).
- 5.3.7 It is agreed that HGV operations through Cawston will be over 5 days (Monday to Friday, no HGV movements on a Saturday). This working week does not apply to non-HGV movements through Cawston and does not change the daily peak traffic levels.
- 5.3.8 To ensure that the CTMP can be effectively enforced, the following non-compliances of the CTMP would constitute a breach whereby corrective measures would be required:
- 1) Failure to implement or use the agreed traffic management measure;
  - 2) Failure to follow the agreed delivery routes;
  - 3) Failure of the HGV to display its unique identifier;
  - 4) Dangerous driving; and
  - 5) Failure to record deliveries and departures for plant and materials within the booking system.
- 5.3.9 On receipt of a report of a potential breach, the Applicant would investigate the circumstances and compile a report to the relevant authorities as soon as practicable.
- 5.3.10 If the breach is found to be material, Orsted would take appropriate action within the jurisdiction of the contract and report back to the relevant local authority and the Highway Authority.
- 5.3.11 Individual employee breaches would be addressed through UK employment law whereby the process outlined above would form the basis for disciplinary proceedings.
- 5.3.12 As part of the Highway Intervention Scheme existing vegetation is to be cut back within the highway boundary to protect road-space and visibility. The vegetation cutback regime would comply with NCC policy for the grass cutting visibility splays. The policy sets out a maintenance regime of five cuts between May and September in urban areas (defined as roads subject to a speed limit of less than 40mph).
- 5.3.13 The clearance in the very eastern extent of the Cawston Conservation Area, affects a tree noted as a 'significant tree' (though not subject to a tree preservation order), numbered CA6 – Common Walnut within Appendix D of the Cawston Conservation Area Character Appraisal (2009). Any proposed lopping of branches of this tree would need to be discussed and agreed with the appropriate BDC Officer in advance of the works.
- 5.3.14 Cawston High Street would be subject to a speed monitoring regime post HIS implementation to evaluate the effectiveness of the measures for a period of 1month and reporting provided to the

LHA. Should the 85<sup>th</sup> percentile speeds exceed the 20mph limit, the LHA can intervene and require further measures to be provided.

- 5.3.15 Hornsea Three will deliver the full scheme of mitigation and the final project would be responsible for removing the measures once all project's construction phases are complete.
- 5.3.16 It has been agreed that all intervention works to the highway would be temporary in nature and removed or returned to the pre-construction arrangement once the Hornsea Three/Boreas construction is complete (unless otherwise agreed with the relevant Highway Authority, in consultation with Cawston Parish Council).
- 5.3.17 The implementation of the 20mph zone and works can be implemented, as permanent, by the LHA at any time during the construction use.
- 5.3.18 If not implemented as permanent, all signage associated with the construction works would also be removed once the use of the main Hornsea Three/Boreas construction is complete.
- 5.3.19 A wide range of activities are associated with the construction of Hornsea Three, of which HGV movements associated with the transportation of cable drums form only a minor component of overall levels of traffic generation.
- 5.3.20 The traffic generation for the construction of cable sections 9 & 10 associated with Hornsea Three have been broken down further into constituent components for the following construction activities
- Temporary Site Compounds;
  - Site facilities and equipment;
  - Fencing and temporary Roadway construction along cable route;
  - Trench Construction;
  - Tilt loads;
  - Cable and ducting deliveries;
  - TT (HDD/Thrust Bore) Sites;
  - Drainage Pipe; and
  - Link Boxes.
- 5.3.21 Through a refinement of the construction of Cable Sections 9/10 Hornsea Three confirms the following maximum HGV traffic flows and durations:
- |   |                    |
|---|--------------------|
| • Primary peak does not exceed 128 daily HGV movements: | Duration: 1 month  |
| • Secondary peak: 68 daily HGV movements:               | Duration: 1 month  |
| • Average over remaining period: 62 daily HGV movements | Duration: 9 months |
| • Cable drum maximum diameter size                      | 2.95m load width   |
- 5.3.22 As stated it has been confirmed a 2.95 m load width cable drum size would be the largest diameter drum to travel through Cawston.
- 5.3.23 Should Hornsea Three and Norfolk Vanguard utilise link 88 and 89 at the same time, monitoring of the noise levels at a representative location within Cawston would be undertaken for the duration of the cumulative impact.
- 5.3.24 This would be to verify the effectiveness of the mitigation proposed and to ensure that noise levels do not reach a level which would be considered a significant effect (>3dB above baseline, the baseline noise level will be determined immediately prior to commencement of the use of this link). Should an exceedance be identified, additional traffic management measures would be discussed

and agreed with NCC and BDC's environmental health officer. Further details on the interaction with other projects, including Norfolk Vanguard is set out in section 9.

#### 5.4 Cawston Monitoring Methodology

- 5.4.1 Measures to monitor construction traffic through Cawston will be implemented prior to first use by the principal contractor and sub-contractors for all site vehicles regardless of vehicle size.
- 5.4.2 To mitigate the impact of construction traffic through Cawston, a series of movement restrictions has been agreed with the LHA which includes the following restrictions:
- Prohibition of HGV deliveries during term time school pick up and drop off times (7:30am – 9:00am and 3:00pm – 4:00pm, Monday to Friday);
  - Prohibition of HGV deliveries from 6pm to 9am (in line with parking restrictions);
  - A 20 mph speed restriction; and
  - Restriction on abnormal loads movement time through the centre of Cawston.
- 5.4.3 The Outline CTMP notes the recommendations of the Road Safety Audit of the Cawston HIS to "review the compliance of drivers [and] introduce further measures if necessary" and sets out a tailored monitoring regime as follows:

Initially, continuous monitoring cameras would be installed along the B1145 High Street and daily capture would be shared with NCC. These cameras would provide 'real-time' information and monitor continuously during the delivery times [7am to 7pm] for a minimum period of three months from the commencement of use along the B1145 and three months from the commencement of a cumulative traffic overlap between Norfolk Boreas and Hornsea Project Three.

After a period of three months, the monitoring regime would be reduced to a frequency to be agreed with NCC (utilising the data from the continuous monitoring to identify peak traffic periods).

- 5.4.4 Discussion are currently ongoing with the LHA and Cawston Parish Council to identify the most suitable method to capture the data required which is expected to be a form of CCTV and colour coded vehicle identification. A final solution will be approved with the LHA prior to the approval of the CTMP.

#### 5.5 Landfall

- 5.5.1 Hornsea Three construction traffic will take access into the Landfall Site via the existing Muckleburgh Military Collection Museum access road and a proposed new access track which takes access off the museum access junction onto the A149.
- 5.5.2 Detailed drawings showing the Landfall access strategy are included in Appendix 8. The design drawings included at Appendix 8 are subject to change but are current as of 12<sup>th</sup> October 2022. Agreement with the LHA is through a small works agreement and will be approved prior to the approval of the CTMP.
- 5.5.3 The access strategy will deliver a new access track off the western side of the existing Muckleburgh Military Collection Museum access road, mirroring the Foxhills Camping Site access to the east.
- 5.5.4 The strategy would introduce temporary traffic signals on both the existing museum access and the proposed temporary access track. The temporary signals at the museum access would be

controlled/monitored by suitably trained operatives to ensure museum traffic is restricted when abnormal load vehicles exiting the site via the temporary access track.

- 5.5.5 The temporary signals at the temporary access would be controlled/monitored by suitably trained operatives until museum traffic entering and exiting is restricted.
- 5.5.6 Traffic on the A149 is to be held either side of the Muckleburgh Military Collection Museum access point at locations specified on drawing 2249/03/050. Traffic is to be held on the A149 until abnormal load vehicles have entered/exited the landfall site access. This avoids collisions between A149 traffic and Hornsea Three traffic.
- 5.5.7 This will be controlled by suitably trained operatives of a certified traffic management company permitted to control movement on the highway. 'KEEP CLEAR' markings will be added to the A149 highway adjacent to the Muckleburgh Military Collection Museum access to allow access and egress for construction vehicles.

## 6 Management of Highway Safety

### 6.1 Existing Accident Record

- 6.1.1 Within section 1.4.2 of Annex 7.1 – Transport Assessment of the ES, an analysis of existing Personal Injury Accident (PIA) data has been undertaken using a two-stage process. Initially, the injury accident rate of identified links was calculated and if 25% higher than the national average injury accident rate further analysis was undertaken. The further analysis looked at severity, clustering and reasons for accidents and no issues in relation to the existing highway layout or geometries were discovered to be the cause of the incidents.
- 6.1.2 Within Volume 6, Annex 7.8 – Traffic and Transport Figures in the Environmental Statement, Figures 1.5 – 1.12 present personal injury accident data for 8 locations.
- 6.1.3 The data presented in the TA was recorded between 2012 and 2017. Therefore, as part of this CTMP the personal injury accident data at the locations identified within the TA that are still proposed for use by Hornsea 3 construction traffic has been updated with the latest 5-year data available up to 2021 on Crashmap.co.uk.
- 6.1.4 This data is presented at Appendix 4 of this CTMP.
- 6.1.5 A comparison of the personal injury accident data presented in the TA and the most recent data is presented in Table 6.1 below:

**Table 6.1. Personal Injury Accident Data Comparison**

Location/Date	Slight PIA	Serious PIA	Fatal PIA
A11/A47 Junction/2012-2017	29	2	0
A11/A47 Junction/2017-2021	22	0	0
A47 between Sandy Lane and B1535/2012-2017	16	4	1
A47 between Sandy Lane and B1535/2017-2021	7	3	0
A47/A146 Junction/2012-2017	21	3	0
A47/A146 Junction/2017-2021	17	2	0
B1145 – Reepham to B1149/2012-2017	14	1	0

Location/Date	Slight PIA	Serious PIA	Fatal PIA
B1145 – Reepham to B1149/2017-2021	3	1	1
Aylsham B1145 and A140/2012-2017	23	8	0
Aylsham B1145 and A140/2017-2021	8	6	0
B1149 – Holt to Oulton/2012-2017	11	5	1
B1149 – Holt to Oulton/2017-2021	3	2	0
B1149 – Holt to Oulton/2012-2017	7	1	1
B1149 – Holt to Oulton/2017-2021	6	3	1

6.1.6 Table 6.1 above demonstrates that the accident record at the selected junctions has improved since the writing of the OCTMP and therefore the findings of the OCTMP stand.

## 6.2 Monitoring and Mitigation for Hornsea Three

6.2.1 HGV injury accidents and near misses associated with the Hornsea Three construction vehicles will be monitored to identify whether there are any safety deficiencies in the highway network due to the increased level of HGV traffic associated with the construction works.

6.2.2 If localised mitigation measures are required, these will be agreed with the LPA and implemented without delay.

6.2.3 Maximum Construction Traffic Levels

6.2.4 In agreement with the LHA, maximum construction traffic levels for Hornsea Three construction (in all directions) have been defined in Table 6.2 below on a link basis, which would not be exceeded without agreement with the LHA, unless in the case of an emergency.

6.2.5 Table 6.2 defines the key construction routes and the maximum permitted daily construction traffic movements (total, i.e., includes outbound and inbound movements). The full table contents will be amended prior to the approval of the CTMP by the LPA.

**Table 6.2: Link maximum levels for Hornsea Three construction traffic**

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
1	Sheringham Road (A149) from Foxhills Camping access to NSL/30 mph sign	210	78
2	Sheringham Rd (A149) from NSL/30 sign to Weybourne Rd (A149) allotments	210	78
3	Weybourne Road (A149) allotments to Holway Road (A1082) roundabout	210	78
4	Holway Road (A1082) to edge of urban area (30 mph/50 mph sign)	210	78
5	Holway Road (A1082) edge of urban area (30 mph/50 mph sign) to A148 junction	210	78
10	Holt Road to edge of urban area		30



Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
11	Holt Road from edge of urban area to Kelling Heath		30
12	Holgate Hill to junction with Bridge Road		30
13	Bridge Road from junction with Holgate Hill to Holt Rugby Club		20
16	Kelling Road		46
17	Manor Hill Road to junction with Kelling Road		46
19	High Kelling Road and Church Road from junction with Kelling Road to Manor House Road Junction		0
20	Manor House Road from Kelling Road to Church Road		0
21	Hempstead Road from A148 to footpath E of Heath Drive		52
22	Hempstead Road from Heath Drive to junction with Selbrigg Road/The Street		52
23	Hempstead Road from junction with Selbrigg Road/The Street to 30 mph sign in Baconsthorpe		52
25	The Street from Hempstead Road to Marlpit Road junction		52
27	Marlpit Road		0
28	Hole Farm Road to B1149		26
29	Plumstead Road from B1149 to Cable Route		44
31	A148 from edge of study area to B1354 junction	296	156
32	A148 from B1354 Junction to Letheringsett	296	156
33	A148 through Letheringsett	296	156
34	A148 between Letheringsett and edge of Holt	296	156
35	A148 between edge of Holt and B1110/1149 roundabout	296	156
36	A148 Holt Bypass	206	122
37	A148 between Holt and Bridge Road junction	206	122
38	A148 between Bridge Road and end of urban area	386	142
39	A148 between urban area and Bodham	386	142
40	A148 in Bodham	386	142
41	A148 between edge of Bodham and A1082 Holway Road	386	142

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
42	A148 between A1082 Holway Road and Church Road	472	150
43	A148 between Church Road and B1436	472	150
44	A148 between B1436 and Rail Bridge		192
45	A148 between Rail Bridge and Sandy Lane		192
46	A149 through Cromer from Sandy Lane to Railway Bridge		192
47	A149/140 from Railway Bridge to Roughton		192
48	A140 through Roughton		192
49	A140 from Roughton to Aylsham South/B1145 roundabout	472	150
50	B1354 from A148 to B1110	0	0
55	B1354 through Melton Constable and Briston	0	0
57	B1149 from Holt A148 roundabout to edge of urban area	292	154
58	B1149 from edge of Holt urban area to Edgefield	292	154
59	B1149 through Edgefield	292	154
60	B1149 to B1354 Junction	394	162
66	Station Road and Heydone Road to edge of urban area		40
68	Valley Road, Horseshoe Lane, Wood Dalling Road to junction with Blackwater Lane		40
69	Blackwater Lane to Heydon Road		0
70	Red Pits Lane		0
71	Red Pits, Crabgate Lane North to junction with Heydon Lane		0
72	Crabgate Lane North to Heydon Road		0
73	Heydon Road from junction with Crabgate Lane North to The Street junction		48
75	Heydon Road from the Street to Holt Road B1149		48
76	B1149 from Saxthorpe Roundabout to Heydon Road junction		264
77	B1149 from Heydon Road junction to Aylsham Road B1145 crossroads		264

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
78	Aylsham Road B1145 from B1149 to edge of Aylsham Roundabout	82	0
79	B1145 around Aylsham	82	0
81	A1067 from outskirts of Fakenham to Guist	158	86
82	B1110 Guist to B1354	0	0
83	A1067 from Guist to B1145 Bawdeswell	158	86
84	B1145 in Bawdeswell	0	0
85	A1067 Fakenham	158	86
86	B1145 between Bawdeswell and Reepham	0	0
88	B1145 between Reepham and Cawston	370	128
89	B1145 in Cawston	370	128
90	B1145 between Cawston and B1149	370	128
95	Norwich Road and Reepham Road from stream bridge to Kett's Lane		76
96	Church Road between Norwich Road and Eastgate		142
97	Buxton Road from Eastgate to B1149	162	66
99	Church Farm Lane to Cable Route		0
103	Reepham Road from Kett's Lane to Hall Road Junction		50
105	Hall Road to Reepham Road junction	82	34
108	The Street		22
109	A1067 from Bawdeswell to Great Witchingham	158	86
110	A1067 through Great Witchingham and Attlebridge	268	90
111	A1067 from Attlebridge to outskirts of Norwich / Beech Avenue	380	104
114	B1149 between B1145 and Buxton Rd	586	170
115	B1149 between Buxton Rd and Shortthorn Road	636	188
116	B1149 between Shortthorn Road and A140	636	188
118	A140 from Aylsham to B1149 roundabout	432	150
119	Marl Hill Road and Ringland Lane from A1067 to cable route		98
121	Weston Road from Honingham Road to Cable Route		24

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
124	Honingham Lane from cable route to Taverham Road		10
125	Taverham Road from Honingham Lane to A47	140	68
126	Weston Road/Ringland Road from Honingham Lane to Church Lane		0
127	Church Lane to A47		44
128	A47 west of B1535 Wood Lane	336	176
129	A47 between B1535 and Taverham Road	336	176
130	A47 between Taverham Road and Church Lane/Dereham Road roundabout		10
131	A47 between Church Lane/Dereham Road roundabout and A1074 junction		106
137	A47 east from Norwich	438	38
139	A47 between A1042 junction and A146 junction	630	184
140	A146 between A47 and A1054 junction		106
141	A146 from A47 SE	114	20
142	A146 between A1054 and A140 junctions		106
143	A140 between A146 and A47	520	202
144	A47 between A140 and A146	570	160
145	A140 south from A47	146	40
146	B1113 between A140 and Swardeston	520	202
147	A47 between A140 and A11	622	206
149	A140 between A146/A1056 and A11		106
152	A11 between A140 and A47		106
153	A11 SW from Norwich		42
154	B1172 SW from A11/A47	284	64
155	A47 between A11 and B1108	436	178
156	B1108 west from the A47	212	64
157	A47 between B1108 and A1074	352	176
158	Church from Dereham Road to Cable Route		30
159	Dereham Road to junction with Dereham Rd/Church Lane		30

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
160	Dereham Road and Marlingford Rd from A47 roundabout to edge of urban area		54
161	Broom Lane		0
162	Marlingford Road from Easton to Cable Route		24
163	Bawburgh Road to junction with Harts Lane		0
164	Long Lane from junction with Hars Lane to A47 junction		0
168	Green Lane and School Lane to Mill Road		46
170	Back Lane and Colney Lane to B1172		74
171	Station Lane		42
172	Cantley Lane from Station Lane to A47/A11		42
173	Intwood Road from A11 to A47 bridge		0
174	Intwood Road from A47 bridge to Intwood Lane		30
175	Intwood Road from Lilac Plantation to Cable Route		0
176	Intwood Lane between Intwood Road and Ford		30
182	Intwood Road from Intwood Lane to Lilac Plantation		0
184	The Grove from Reepham Road to Cable Route		0
186	Colney Lane between Back Lane and cable corridor		14
188	Station Road between Reepham Road and Marriott's Way	132	62
189	Station road between Marriott's Way and A1067	66	32
190	B1436 between the A148 and Metton Road	472	150
191	B1436 between Metton Road and A140	472	150
192	Station Lane		28
193	A1065 from A148 to B1146	218	124
194	A1065 from B1146 to Massingham Road junction, Weasenham	218	124
195	A1065 between Massingham Road, Weasenham to B1145	218	124
196	A1065 between B1145 and Netwon Road junctions	218	124
197	A1065 between Newton Road and A47 junction	218	124
198	A148 between A1067 and A1065 junction	456	242

Link ID	Link Description	Link Maximum Two Way Traffic Movements for Hornsea Three	
		Totals	HGVs
199	A1270 between A1067 and Fir Covent Road	380	104
200	A1270 between Fir Covent Road and B1149/New Drayton Lane roundabout	380	104
201	NDR: A1270 between B1149/New Drayton Lane roundabout and the A140	1016	292
202	A1270 between A140 and B1150	656	190
203	A1270 between B1150 and A1151	656	190
204	A1270 between A1151 and A47 junction	656	190
206	Wood Dalling Road between B1145 and World's End Lane		68
207	Wood Dalling Road between World's End Lane and cable corridor		68
208	The Street between the A1149 and Oulton airfield access	248	118
209	A47 between A1065 and Tuns Road, Necton	336	176
210	A47 between Tuns Road, Necton and Little Fransham	336	176
211	A47 at Little Fransham	336	176
212	A47 east of Little Fransham to Dereham grade-separated junction	336	176
213	A47 from Dereham to B1147 junction	336	176
214	A47 between B1147 to B1535 junctions	336	176

- 6.2.6 Periodic daily checks will be completed by the principal contractor during the highway link use to ensure the maximum traffic levels are not exceeded. A minimum of 10 CCTV link checks should be provided to the LHA per month during the construction period to ensure compliance.
- 6.2.7 If construction traffic levels are exceeded in respect of any link, any increase will be subject to a full IEMA Transport Environmental Link Assessment and will be agreed with the Highway Authority, with any additional measures implemented.

## 7 Highway Condition

- 7.1.1 Video surveys will be undertaken of those local roads links set out in Table 6.2 prior to use by any Hornsea Three traffic..
- 7.1.2 The schedule of highways to be surveyed is agreed with the LHA. This agreement will be in accordance with requirements under Section 59 of the Highways Act 1980.
- 7.1.3 Once construction activities have ceased at a given location the video survey of the associated highway links will be repeated to identify any significant changes in highway condition.
- 7.1.4 The results will be discussed with the HAs and where it is agreed that damage has resulted from the passage of HGVs associated with construction work from Hornsea Three the principal contractor will be reasonable for repairing the damage that is agreed to have resulted from vehicle movements associated with Hornsea Three.
- 7.1.5 Where appropriate, visual inspections of highway condition may also be undertaken to provide early identification of any diminishing conditions, or to verify any complaints received from the local community.
- 7.1.6 The condition surveys for BDC are scheduled to be undertaken at a time closer to the commencement of works. However, an example condition survey report is included at Appendix 9, with the accompanying video recording file available upon request.

### 7.2 Structures Condition Survey

- 7.2.1 A non-intrusive visual inspection of bridge structures on the planned routes has been undertaken by Create for the purposes of assessing their general condition and carriageway traffic loading modification factors in accordance with National Highways Standard CS 454, the full survey report is included at Appendix 10.
- 7.2.2 The bridges to be inspected and methodology as outlined at Appendix 10 have been agreed with NCC Bridges Department.
- 7.2.3 For each bridge inspected a separate bridge inspection report is provided in Appendix 10; only a summary of the bridge condition, the calculated Load Modification Factor and risk rating is provided here.
- 7.2.4 The scope of the inspection was limited to that necessary to calculate the load modification factors and is not a full compliant bridge inspection in accordance with the standard CS 454.
- 7.2.5 To provide the necessary comfort of adequacy the likely change or impact on the bridge structure is assessed by calculating the bridge's combined load modification factor in accordance with CS 454. This is converted to a risk rating, Low, Medium or High risk. A Low risk would suggest the structure is satisfactory and no further action is necessary. Medium or High risk may indicate further investigation, assessment or remedial measures are necessary. Refer to the inspection report in Appendix 10 for an explanation on how risk is calculated.
- 7.2.6 This summary must be read in conjunction with the full report.

### 7.3 Bridges Inspected

- 7.3.1 Four bridges in the Broadland District have been identified as needing inspection, these are: -
  - Bridge 15 located on the B1149 Holt Road crossing the Marriot's Way;
  - Bridge 17 located on Cawston Road, near Cawston, crossing the Marriot's Way;
  - Bridge 18 located on Norwich Road, crossing a tributary of the River Wensum near Reepham and Booton; and
  - Bridge 27 located at Taverham Road, crossing the River Tud, near Honingham.

7.3.2 The inspection findings and calculated risk for each bridge are detailed below.

#### **Bridge 15**

- The bridge is a single span brick masonry arch structure spanning over an abandoned railway line now part of the footpath and cycle route the Marriot's Way
- Generally, having undergone past repairs, the structure is in fair condition, although in need of on-going repairs for spalling bricks and crack damaged brickwork and crack damaged parapet.
- Cracking of the arch soffit is present.
- The road surface category is considered poor due to the vertical hogging profile and evidence of vehicle axle lift-off which increases the load impact factor.
- The risk level based on the calculated combined load modification factor with high impact figure and high traffic flow category is HIGH RISK.
- Therefore, discussions are to be held with the LHA and agreement to a mitigation strategy will be approved prior to the approval of the CTMP.

#### **Bridge 17**

- The bridge is a single span masonry brick arch structure over an abandoned railway line now part of the cycle and footpath route known as Marriot's Way.
- Abutments, wing walls and parapets are solid brick masonry construction.
- Generally, the condition of structure is mixed, with abutments, wing walls in good condition but the arch soffit in poor condition needing repairs for potential separation of the arch barrel from the arch with cracked and damaged brickwork.
- There appear to be some poorly executed past repairs.
- There are significant leachates originating from water and salts percolating through from the road surface present on the spandrels, resulting in a stalactite on the west elevation intrados.
- The brick voussoirs on each elevation are in good condition.
- The abutments and springing are in good condition. Weep holes are present at ground level on the south abutment, however, those assumed to be located on the north have been buried below soil placed to form the cycle way / footpath.
- The spandrels appear to be in good condition.
- Wing walls appear to be in good condition, although wing walls are partly obscured by vegetation growing in front of and over the structure.
- Brick masonry parapets both sides of the carriageway are in relatively good condition although a past vehicle strike has resulted in the southeast pilaster having been removed and the gap infilled with metal pedestrian open railing.
- The risk level based on the calculated combined load modification factor is MEDIUM RISK.

#### **Bridge 18**

- The bridge is a single span masonry brick arch structure spanning over a tributary of the river Wensum.
- Generally, the structure is in fair to satisfactory condition although needing non-urgent repairs for spalling brickwork to the spandrels, parapets and pilasters, some localised spalling of bricks is approx. 75-100 deep.
- The arch structure may have undergone past repairs relatively recently; the brick voussoirs on both elevations are in good condition and appear as if they may have been repaired/reconstructed relatively recently, the arch soffit has been rendered (or sprayed concrete applied), as well as the addition of scour protection to the arch springers and wing walls.
- The risk level based on the calculated combined load modification factor is LOW RISK.

#### **Bridge 27**

- The bridge is a single span reinforced concrete beam structure over the River Tud. The bridge beams are supported on bearings on a concrete bearing shelf and brick masonry abutment.



- The restraint system consists of open railing, comprising 3 kee-clamp rails between steel posts bolted at the base to the bridge edge beams.
- Generally, the structure overall is in good condition although needing very minor repairs to the pedestrian railings and some very local minor repointing to the north brick abutment.
- The pedestrian barrier top rail on the east elevation south side has become disconnected and should be repaired.
- The risk level based on the calculated combined load modification factor is LOW RISK.

## 8 Compliance and Monitoring of the CTMPs

### 8.1 Compliance and Monitoring

- 8.1.1 Compliance the final CTMP will be monitored by the principal contractors Highway Manager. The Highway Manager will ensure that all contractors are aware of the requirements of the final CTMP and of the monitoring obligations.
- 8.1.2 A central point of contact for the project (Highway Manger) will be appointed to all monitoring processes during the construction phase and will liaise with the relevant Local Planning Authorities and Highway Authority throughout the works onshore.
- 8.1.3 Establishing this central point of contact will help to ensure that compliance for all traffic management in a given location at a given time will be the responsibility of a single individual to ensure clarity of responsibility and to facilitate effective communication between the project, Local Planning Authorities and Highway Authority.
- 8.1.4 The Contractor's Highways Manager will be James Darwent (Contact Details: [REDACTED]@volkerfitzpatrick.co.uk, [REDACTED])
- 8.1.5 Monitoring of all vehicle movements will be achieved by the following procedure:
- Notification of the CTMP to all suppliers as a part of their agreements;
  - All suppliers to agree a schedule of HGV movements and deliveries with the Highways Manager, to be provided a minimum of 7 days prior to delivery;
  - Highways Manager to review in line with agreed vehicle movements contained within the CTMP, Highways Manager to report to wider site team on live comparison to CTMP on a weekly basis;
  - At all Access Points proof of delivery will be obtained from the supplier by Works Supervisor. Works Supervisors to submit proof of delivery to Highways Manager for verification with agreed schedule; and
  - Compliance reports to be contained within Contractor's monthly progress reports to Orsted.

## 9 Interaction between Hornsea Three and Other Projects

### 9.1 Interaction between Hornsea Three and the A47 Improvement Scheme

- 9.1.1 National Highways have improvement works at the A47/A11 Thickthorn interchange, the A47 at Easton and A47 at Swardeston which will seek to increase capacity by re-routing traffic away from the existing junction via two new interchange roads to relieve congestion, reduce journey times,

and encourage economic growth. The scheme will look to improve facilities for pedestrians, and cyclists, by upgrading pedestrian crossings and footpaths.

- 9.1.2 A collaboration agreement is in place between National Highways and Orsted, for these works
- 9.1.3 The broader management of the traffic management interactions between the two projects will be discussed and agreed with National Highways as the A47 works progress to implementation following specific measures set out within the collaboration agreement.

## **9.2 Interaction between Hornsea Three and the A11 Thickthorn Improvement Scheme**

- 9.2.1 National Highways have improvement works at the A11 Thickthorn Interchange which will interact with routes to the cable access. This would require traffic management and potential highway intervention scheme to be implemented by the HAs to Cantley Lane South and Station Road to re-join construction traffic back to the A11 as a result of the closure of Cantley Lane South during the A11 Thickthorn construction works
- 9.2.2 The broader management of the traffic management interactions between the two projects will be discussed and agreed with National Highways as the A11 works progress to implementation.

## **9.3 Interaction between Hornsea Three and the Norwich Western Link Road**

- 9.3.1 Norfolk County Council have proposed the Norwich Western Link Road which will interact with routes to the cable access. This would require traffic management and potential highway intervention scheme to be implemented by the LHA to mitigate the risk of traffic from both construction projects.
- 9.3.2 The broader management of the traffic management interactions between the two projects will be discussed and agreed with Norfolk County Council as the works progress to implementation.

## **9.4 Interaction between Hornsea Three and Vattenfall Norfolk Vanguard**

- 9.4.1 Vattenfall have DCO approval for its Norfolk Vanguard and Boreas offshore wind farms. Its proposed landfall is at Happisburgh South on Norfolk's eastern coast and the 60km cable corridor routes west to a substation to the east of Necton. The two export cable corridors cross at land near Reepham. It is noted that Hornsea Three and Norfolk Vanguard propose to utilise various common road links during their respective construction phases; these include The Street in Oulton and link 88 and 89 through Cawston (both of which are subject to intervention measures as set out in Section 5).
- 9.4.2 To manage these interactions, the traffic and transport cumulative environmental impacts with other major projects (namely, Norfolk Vanguard) are managed to levels such that they are acceptable by Norfolk County Council as the local Highway Authority with measures to be in place both physically and through management of movements.
- 9.4.3 Section 5 sets out how any interactions in the implementation, maintenance and removal of intervention measures at The Street in Oulton, and link 88 and 89 through Cawston would be managed between the projects.
- 9.4.4 Appendix A of the Hornsea Three CoCP includes a Communication Plan Framework, which sets out the provision for a Communication Plan which will be managed and implemented by the Stakeholder Manager for Hornsea Three.
- 9.4.5 That Communication Plan will set out the process of continued engagement between the Applicant, the Local Highway Authority and other major projects (namely, Norfolk Vanguard). This will ensure that as construction programmes are refined and information is regularly shared between parties, particularly traffic demand on shared road links.
- 9.4.6 This will ensure that commitments to manage cumulative construction traffic demand are fully delivered; for example, on a given road the two projects may have committed to programme works that ensure each scheme's peak traffic does not overlap. Regularly programmed sharing of

information will ensure that the final approved CTMPs accurately reflect the expected construction traffic demand of both projects and provide certainty to the Local Highway Authority that commitments remain feasible and deliverable.

- 9.4.7 It has been agreed for three specific links that the cumulative traffic effects from Hornsea Three and Norfolk Vanguard should be monitored to ensure construction traffic levels are not exceeded in the event of the two projects carrying out construction activities simultaneously.
- 9.4.8 The links and maximum cumulative traffic levels not to be exceeded without a full IEMA Transport Environmental Link Assessment and agreement with the HAs are defined below;
- **Link ID 89: B1145 through Cawston** - 396 total (outbound and return i.e., two-way) movements per day, of which up to 152 can be HGVs;
  - **Link ID 59: B1149 Edgefield to Heydon** - 515 total (outbound and return i.e., two-way) movements per day, of which up to 337 can be HGVs; and
  - **Link ID 208: The Street, Oulton** - 424 total (outbound and return i.e., two-way) movements per day, of which up to 214 can be HGVs.
- 9.4.9 Monitoring will be completed by the principal contractor of both projects and should the link be jointly used by both construction projects. This will take place at all Access Points which use Links 89, 59, 208, proof of delivery will be obtained from the supplier by the Works Supervisor.
- 9.4.10 Works Supervisors to submit proof of delivery to each projects Highways Manager for verification with the agreed schedule and to provide a weekly movement record to the LHA, should the traffic levels exceed the above maximum traffic combined traffic levels further measures may be required by the LH.

