

# Yorkshire GREEN Project

Environmental Impact Assessment

Preliminary Environmental Information Report  
Volume three Appendix 12A – Preliminary  
Construction Traffic Management Plan

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nationalgrid



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# 1. Introduction

- 1.1.1 This Preliminary Construction Traffic Management Plan (CTMP) forms **Appendix 12A** in support of **Chapter 12: Traffic and Transport** of the Preliminary Environmental Information Report (PEIR) for the Yorkshire Green Energy Enablement (GREEN) Project (hereinafter referred to as the 'Project'). This appendix should be read in conjunction with **Chapter 3: Description of the Project** and **Chapter 12: Traffic and Transport**
- 1.1.2 This CTMP is the first working draft of what will be an evolving document throughout the Development Consent Order (DCO) application process and will be updated as the elements of the Project are further developed through the ongoing design process and following feedback from statutory consultation. Further engagement will be undertaken with North Yorkshire County Council (NYCC), Leeds City Council (LCC), City of York Council (CYC) and National Highways (NH) to develop a management and mitigation strategy for construction traffic and traffic affected by construction of the Project. An updated version of this CTMP will be submitted in support of the DCO application.
- 1.1.3 This document details the environmental measures which may be implemented in relation to the traffic generated during the construction phase of the Project. The Preliminary CTMP has been prepared to ensure that the proposed management and mitigation measures minimise the likely effects on existing road users during the construction phase. The primary objectives of the Preliminary CTMP are as follows:
- ensure the movement of people and materials in a safe, efficient, timely, and sustainable manner;
  - keep construction traffic to a minimum during peak network periods to reduce the impact on the highway network;
  - ensure that effects and disruption on local communities is minimised;
  - minimise vehicle trips where possible; and
  - limit the impacts on the natural and built environment.
- 1.1.4 The Project is a proposal by National Grid Electricity Transmission to provide a new link on the transmission system by upgrading and reinforcing the electricity transmission system in Yorkshire.
- 1.1.5 The Project will comprise both new infrastructure and works to existing transmission infrastructure and facilities. The new elements of the Project would include a new substation (Overton Substation<sup>1</sup>) approximately 1km south of Shipton by Beningbrough. Three new overhead lines would connect into this substation. To the north a new 400kV overhead line, approximately 2.8km in length, would connect the substation with an existing overhead line to the north. To the south two new 275kV overhead lines (1.5km to 2.1km in length) would connect the substation with an existing overhead line further south. Cable sealing end compounds would be installed to help facilitate the connection of the new overhead lines with the existing overhead lines in the wider area, with two installed approximately 1.5km north-east of Shipton by Beningbrough and two installed approximately 3km south-west of Tadcaster and north-east of the A64/A659 junction. A new substation would also be constructed adjacent to the existing substation

at Monk Fryston approximately 2km south-west of Monk Fryston and located off Rawfield Lane, south of the A63.

- 1.1.6 Works proposed to existing overhead lines in the wider area include replacing existing overhead line conductors, replacement of pylon fittings, strengthening of steelwork and works to pylon foundations. Two overhead lines which currently connect into the existing Monk Fryston substation would be partially realigned to connect into the new substation proposed at Monk Fryston. In addition, a number of pylons on the existing overhead line running between Monk Fryston and Poppleton to the north-west of York would be replaced and the overhead line realigned as follows:
- a 1.5km section of overhead line to the south and south-east of Moor Monkton would be realigned up to 230m south from the current overhead line and the closest pylon to Moor Monkton (340m south-east) removed; and
  - a 1.45km section of overhead line to the west of the existing Monk Fryston substation and south of South Pollums Farm would be realigned to connect to the new Monk Fryston Substation.
- 1.1.7 A 2.35km section of this overhead line would also be permanently removed.
- 1.1.8 The Project also includes minor works at Osbaldwick Substation. Further detail about the Project is provided in **Chapter 3**.
- 1.1.9 During the construction and decommissioning phase, the Project would be supported with Temporary Construction Compounds (TCCs), accesses and on-site haul roads. The Project would have a direct effect on local roads through crossings of the highway network and the conveyance of construction traffic on the highway network, resulting in the need for a CTMP.

## 1.2 Structure of the Preliminary CTMP

- 1.2.1 The remainder of this Preliminary CTMP is set out as follows:
- **Section 2: The Project** – sets out the description of the Project and the components and vehicles that will be needed/used to inform the Preliminary CTMP;
  - **Section 3: Proposed Access Strategy** – sets out the Access Strategy proposed during the construction phase;
  - **Section 4: HGV Access Strategy** – sets out the construction Heavy Goods Vehicle (HGV) Access Strategy;
  - **Section 5: LV Access Strategy** – sets out the Light Vehicles (LV) Access Strategy;
  - **Section 6: Crossing Schedule** – sets out other construction impacts;
  - **Section 7: Potential Mitigation Strategies** - sets out the potential mitigation strategies; and
  - **Section 8: Management of the CTMP and enforcement** – sets out the proposed management structure for the CTMP.

## 2. The Project

### 2.1 Introduction

2.1.1 This Preliminary CTMP has been prepared to set out the framework for the management and mitigation on the strategic and local road network related to the construction and decommissioning works required for the Project.

### 2.2 The Project

2.2.1 The key components of the Project can be summarised as follows:

- Two new substations comprising one substation at Overton and one at Monk Fryston.
- Approximately 2.8km of new overhead line route (YN 400kV overhead line) between the 400kV Norton to Osbaldwick (2TW/YR) overhead line and the new Overton Substation north of York.
- Replacement of one pylon and installation of two CSECs (Shipton North and South) with a 200m section of connecting underground cable to provide a connection between the YN 400kV and the 400kV Norton to Osbaldwick (2TW/YR) overhead line routes.
- Two new sections of 275kV overhead line (two separate lines of pylons) connecting into Overton Substation from the south. To install these sections, works would be undertaken on the existing 275kV Monk Fryston to Poppleton (XC/XCP) overhead line route to form two separate overhead lines: the XC overhead line connecting Monk Fryston and Overton Substations and the SP overhead line connecting Poppleton and Overton Substations. Between Moor Monkton in the west and Skelton in the east the existing XC/XCP overhead line (approximately 5km in length) would be replaced with some pylons permanently removed. The overhead line would be realigned from south-east of Moor Monkton to connect into the new Overton Substation forming the realigned XC Overton to Monk Fryston overhead line. This would require:
  - the permanent removal of 2.35km of the existing XC/XCP overhead line and six pylons between the ECM railway and Woodhouse Farm to the north of Overton;
  - the replacement of four pylons south of the River Ouse and north of Thickpenny Farm along the same overhead line alignment, but in new locations (approximately 25 to 70m east of the existing pylon locations);
  - the replacement of three pylons to the south-east of Moor Monkton and south of Redhouse Wood along a new alignment up to 230m south from the existing overhead line alignment;
  - the permanent removal of the existing pylon closest to Moor Monkton as the realigned overhead line would lie further to the south; and
  - the replacement of pylon XC429 at a location approximately 30m north of the existing pylon.

- South from Moor Monkton to the west of Monk Fryston Substation the existing XC overhead line would be re-conducted.
- South-west of Tadcaster an existing pylon on the existing 275kV XD/PHG overhead line would be replaced. Two CSECs (Tadcaster Tee West and East) and a section of connecting underground cable would be installed.
- At Monk Fryston the existing 275kV Poppleton to Monk Fryston (XC/XCP) overhead line would be reconfigured to connect into the new Monk Fryston Substation with a section of underground cable also installed. The existing 4YS 400kV overhead line would also be reconfigured to connect into the new substation.
- At Osbaldwick Substation a new circuit breaker, gantry and isolator along with associated cabling would be installed, minor works would be implemented for one pylon and an existing gantry would be removed and dismantled to free up space for new equipment. All works would take place within existing operational land.

2.2.2 The draft Order Limits cover the entire area within which development could take place including temporary access roads, construction compounds and laydown areas as well as the new overhead lines, substations and CSECs and the works to the existing infrastructure. These are illustrated in **Figure 2.1** and are presently anticipated as the maximum extent of land in which the Project may take place.

2.2.3 During construction, compounds would be installed at Overton and Monk Fryston Substations as well as at the CSEC locations (eight compounds in total). Temporary construction accesses would be installed comprising either stone or trackway surfacing so that vehicles can access the working areas at the pylons, CSECs and substations. Temporary diversions of the existing overhead lines would be installed to maintain electricity flows whilst new overhead lines are being installed or works take place to the existing overhead lines.

2.2.4 A more detailed description of the Project design and construction methodology can be found in **Chapter 3: Description of the Project** of the PEIR.

## 2.3 Additional construction phase details

2.3.1 The construction methodology for the Project elements set out in **Section Error!** Reference source not found. is provided below.

### Installation of access routes

2.3.2 Access routes to construction working areas would be implemented prior to any works commencing to provide suitable access for construction plant and traffic. This element of construction would also include vegetation removal and management, construction of bellmouths at access entrances off the public highway, wheel wash/'rumble strip' facilities, where required, to remove excess material before vehicles re-join the highway, fencing and gateways to keep livestock and the public away from construction activities, drainage, and where required culvert crossings and temporary bridges to cross watercourses. Construction works would be phased, and access routes implemented prior to each element or phase of the Project being constructed. Various surfaces would be used for the temporary access tracks depending on ground conditions. Access routes comprise the following:

- Minor Access: Use of existing access routes with minimal, if any, improvements required.



- Panel: These comprise temporary metal or plastic interlocking panels normally laid directly onto the ground which would be delivered to site by HGV which would off-load and layout panels. This form of access would be typically 3m in width and all panels would be removed once construction works are complete.
- Stone: These surfaces are typically formed of imported stone (or crushed rock) on a geotextile membrane. Topsoil is removed and stockpiled, and a geotextile membrane laid to separate the stone from the underlying soil. Stone is delivered via tipper trucks, spread on site and using a vibrating roller compacted to the desired finish. The final finish is generally gently cambered to aid with removal of water and sits just above the existing ground level either side. The stone road is dismantled in the reverse procedure, geotextile membrane recovered and ground reinstated. Stone access routes would be 4.5m - 7.0m wide excluding any soil storage or fencing running along the access.

## Working areas

- 2.3.3 Construction working areas would be established around each element of the Project to provide a secure working area within which works would take place:
- The typical pylon working area for both new and existing pylons would be approximately 50m by 50m, depending on ground conditions and location. For existing pylons, it is assumed that protective panel or stone working areas would be used to provide a stable area for material delivery, storage and handling. The working area would be fenced, and welfare facilities provided.
  - Working areas would also be required at locations where works would be needed to lift equipment onto the pylons, including crane pads for pylon erection and dismantling.
- 2.3.4 **Figure 2.1** sets out the draft Order Limits that has defined the scope of the Preliminary CTMP. The draft Order Limits includes the optionality presented at PEIR Stage and all the specific elements outlined of the Project including temporary construction accesses.

## Working hours and employment proposals

- 2.3.5 Twenty-four hour working would be implemented during the construction works and commissioning for Overton and Monk Fryston Substations and overnight (24 hour) working used to install the overhead lines crossing the East Coast Main Line (ECML) railway, highways and other infrastructure to minimise daytime closures of these transport links. For the remainder of the Project, at this stage it is assumed that construction work would be limited to daytime hours but would take place seven days per week.
- 2.3.6 The construction of the Project is proposed to occur over a construction programme lasting approximately 5 years between 2024 and 2028, although the traffic calculations have been based on a preliminary construction traffic programme between 2025 and 2027. The Project will be operational in 2027.
- 2.3.7 During the construction phase, there would be several phases of works and some of these would have effects on differing elements of the highways network at differing times. It is estimated that the peak of construction works would occur in 2025/2026 as set out in **Chapter 12: Traffic and Transport** of the PEIR.

- 2.3.8 A decommissioning plan and programme will be developed prior to construction and updated during operation of the Project to account for any changes to decommissioning best-practice and developments in technology.

## **2.4 Preliminary CTMP Study Area**

- 2.4.1 The Study Area in the Preliminary CTMP is the same as that which is presented in **Chapter 12: Traffic and Transport** of the PEIR, and is shown in **Figure 2.2**.
- 2.4.2 The spatial scope of the Preliminary CTMP is based on the most probable routes for construction traffic generated by the Project, comprising the movement of deliveries, equipment and of construction staff. Identification of appropriate construction routes takes into consideration the following:
- restrictions such as weight and height limits;
  - existing HGV restrictions; and
  - suitability of routes based on a review of road types and widths.
- 2.4.3 The Study Area includes roads operated and maintained by NYCC, LCC, CYC and NH as local and strategic road authorities.

## 3. Proposed Access Strategy

- 3.1.1 During the construction phase of the Project, temporary construction accesses would be required onto and from the public highway network. There would also be a requirement for permanent access during the operation and maintenance phase to allow routine maintenance and inspection of the CSECs and substations. The management of temporary construction accesses during the construction phase are covered within this Preliminary CTMP.
- 3.1.2 Different temporary construction access designs will be proposed for the Project which will reflect the volume of movements as well as the physical size of the vehicles anticipated to use the respective access points. The construction phase access points would not all be used by significant amounts of traffic as some accesses would only be used for deliveries and removal of scaffolding.
- 3.1.3 At this stage, the worst-case access design has been used at all locations, with visibility splay requirements at each location based on a speed limit of 60mph at all locations. Ongoing assessment may lead to a reduction in the draft Order Limits presented at submission of the DCO application to allow for more appropriate access arrangements following engagement with relevant highways authorities. A standard access bellmouth which provides adequate access provision for construction vehicles is currently proposed for all accesses.
- 3.1.4 The current design for the Project has identified 112 accesses.

### 3.2 Location of proposed temporary construction accesses

- 3.2.1 During the construction phase, temporary construction accesses would be required across the Project which spans a large geographical area across North Yorkshire. Temporary construction accesses would be taken from a range of A, B, C and Unclassified roads as appropriate to ensure access to all locations of the Project. **Figure 3.1** shows all proposed access locations. **Table 3.1** sets out each of the temporary construction accesses including identification (ID) numbers, the type of access required (including what the access is currently like and works required at the access) and the road from which they would be accessed.

**Table 3.1 - Construction Accesses**

ID	Type of access	Road accessed from	ID	Type Of access	Road accessed from
1	<b>Existing Field Gate Access</b> overhead line* Works	A162	57	<b>Existing Field Gate Access</b> overhead line Works	Wighill Lane
2	<b>Access into Field</b> overhead line Works/TCC	Rawfield Lane	58	<b>Existing Bellmouth Access</b> overhead line Works	Wighill Lane

<b>ID</b>	<b>Type of access</b>	<b>Road accessed from</b>	<b>ID</b>	<b>Type Of access</b>	<b>Road accessed from</b>
3	<b>Existing Field Gate Access</b> MF New Substation	Rawfield Lane	59	<b>Existing Bellmouth Access</b> overhead line Works	Wighill Lane
4	<b>Existing Bellmouth Access</b> MF Existing Substation	Rawfield Lane	60	<b>Existing Bellmouth Access</b> overhead line Works	Wighill Lane
5	<b>Access into Field</b> overhead line Works	Rawfield Lane	61	<b>Existing Bellmouth Access</b> overhead line Works	Healaugh Lane
6	<b>Access into Field</b> overhead line Works/TCC	Rawfield Lane	62	<b>Existing Bellmouth Access</b> overhead line Works	B2144 Wetherby Road
7	<b>Existing Field Gate Access</b> overhead line Works/TCC	Rawfield Lane	63	<b>Existing Field Gate Access</b> overhead line Works	Healaugh Lane
8	<b>New Access Required</b> overhead line Works	Rawfield Lane	64	<b>Existing Field Gate Access</b> overhead line Works	B2144 Wetherby Road
9	<b>Existing Bellmouth Access</b> overhead line Works	A63	65	<b>Existing Bellmouth Access</b> overhead line Works	Tockwith Road
10	<b>Existing Bellmouth Access</b> overhead line Works	A63	66	<b>Existing Field Gate Access</b> overhead line Works	Tockwith Road
11	<b>End of Highway</b> overhead line Works	Red Hill Lane	67	<b>Existing Field Gate Access</b> overhead line Works	Tockwith Road
12	<b>Existing Bellmouth Access</b> overhead line Works	Westfield Lane	68	<b>Existing Bellmouth Access</b> overhead line Works	Atterwith Lane
13	<b>Existing Bellmouth Access</b> overhead line Works	Westfield Lane	69	<b>Existing Bellmouth Access</b> overhead line Works	Atterwith Lane
14	<b>Access into Field</b> overhead line Works	Whitcote Lane	70	<b>Existing Bellmouth Access</b> overhead line Works	Marston Lane



<b>ID</b>	<b>Type of access</b>	<b>Road accessed from</b>	<b>ID</b>	<b>Type Of access</b>	<b>Road accessed from</b>
15	<b>Access into Field</b> Scaffolding Only	Whitcote Lane	71	<b>Existing Bellmouth Access</b> overhead line Works	Marston Lane
16	<b>Existing Bellmouth Access</b> overhead line Works	B1222	72	<b>Existing Bellmouth Access</b> overhead line Works	Marston Lane
17	<b>Existing Field Gate Access</b> Scaffolding Only	B1222	73	<b>Existing Field Gate Access</b> Scaffolding Only	Marston Lane
18	<b>Existing Bellmouth Access</b> Scaffolding Only	B1223	74	<b>Existing Field Gate Access</b> overhead line Works	Marston Lane
19	<b>Existing Field Gate Access</b> overhead line Works	B1222	75	<b>Existing Field Gate Access</b> overhead line Works	A59
20	<b>Existing Bellmouth Access</b> overhead line Works	B1222	76	<b>Existing Field Gate Access</b> overhead line Works	Church Lane
21	<b>Existing Field Gate Access</b> overhead line Works	Laith Staid Lane	77	<b>Existing Field Gate Access</b> Scaffolding Only	Church Lane
22	<b>Existing Field Gate Access</b> overhead line Works	Laith Staid Lane	78	<b>Existing Field Gate Access</b> overhead line Works	Church Lane
23	<b>Existing Field Gate Access</b> overhead line Works	Coldhill Lane	79	<b>Existing Field Gate Access</b> overhead line Works	Church Lane
24	<b>Existing Field Gate Access</b> overhead line Works	Coldhill Lane	80	<b>End of Highway</b> overhead line Works	Church Lane
25	<b>Access into Field</b> overhead line Works	Coldhill Lane	81	<b>End of Highway</b> overhead line Works	Red House Lane
26	<b>Access into Field</b> Scaffolding Works	Coldhill Lane	82	<b>Existing Bellmouth Access</b> overhead line Works	Common Croft Lane
27	<b>Existing Bellmouth Access</b>	Coldhill Lane	83	<b>End of Highway</b> overhead line Works	Ouse Moor Lane

ID	Type of access	Road accessed from	ID	Type Of access	Road accessed from
	overhead line Works				
28	<b>New Access Required</b> overhead line Works	B1217	84	<b>Existing Field Gate Access</b> overhead line Works	Overton Road
29	<b>Existing Field Gate Access</b> Scaffolding Only	B1217	85	<b>Existing Field Gate Access</b> overhead line Works	Overton Road
30	<b>Existing Bellmouth Access</b> overhead line Works	B1217	86	<b>Existing Field Gate Access</b> Scaffolding Only	Overton Road
31	<b>Existing Bellmouth Access</b> overhead line Works	A659 slip	87	<b>Existing Bellmouth Access</b> overhead line Works	Overton Road
32	<b>Existing Bellmouth Access</b> overhead line Works	Moor Lane	88	<b>Existing Field Gate Access</b> overhead line Works	Overton Road
33	<b>Existing Field Gate Access</b> overhead line Works	Warren Lane	89	<b>Existing Field Gate Access</b> overhead line Works	Overton Road
34	<b>Existing Field Gate Access</b> overhead line Works	Warren Lane	90	<b>Existing Field Gate Access</b> overhead line Works	Stripe Lane
35	<b>Existing Field Gate Access</b> overhead line Works	Warren Lane	91	<b>Existing Field Gate Access</b> overhead line Works	Stripe Lane
36	<b>Existing Field Gate Access</b> overhead line Works	Warren Lane	92	<b>Existing Field Gate Access</b> overhead line Works	Stripe Lane
37	<b>Existing Bellmouth Access</b> overhead line Works	C305	93	<b>Existing Bellmouth Access</b> overhead line Works	A19
38	<b>Existing Field Gate Access</b> overhead line Works	A659	94	<b>Existing Field Gate Access</b> overhead line Works/TCC	Overton Road
39	<b>Existing Field Gate Access</b>	A659	95	<b>Existing Field Gate Access</b>	Overton Road

ID	Type of access	Road accessed from	ID	Type Of access	Road accessed from
	overhead line Works/TCC/CSEC/UG			Overton Substation/overhead line Works/TCC	
40	<b>New Access Required</b> overhead line Works/TCC/CSEC/UG	A659	96	<b>Existing Field Gate Access</b> overhead line Works	A19
41	<b>Existing Bellmouth Access</b> overhead line Works/TCC/CSEC/UG	Garnet Lane	97	<b>Existing Bellmouth Access</b> overhead line Works	A19
42	<b>Existing Field Gate Access</b> overhead line Works	Garnet Lane	98	<b>Existing Field Gate Access</b> overhead line Works	Corban Lane
43	<b>Existing Bellmouth Access</b> overhead line Works	A659	99	<b>Existing Field Gate Access</b> overhead line Works	Corban Lane
44	<b>Existing Field Gate Access</b> overhead line Works	A659	100	<b>Existing Field Gate Access</b> overhead line Works	Corban Lane
45	<b>Existing Field Gate Access</b> overhead line Works	A659	101	<b>Existing Field Gate Access</b> overhead line Works	Corban Lane
46	<b>Existing Field Gate Access</b> Scaffolding Only	A660	102	<b>Existing Field Gate Access</b> overhead line Works	U1720
47	<b>Existing Bellmouth Access</b> overhead line Works	A659	103	<b>Existing Field Gate Access</b> overhead line Works	U1720
48	<b>Existing Bellmouth Access</b> overhead line Works	A659	104	<b>Existing Field Gate Access</b> overhead line Works/TCC/CSEC/UG	U1720
49	<b>Existing Bellmouth Access</b> overhead line Works	A659	105	<b>Existing Bellmouth Access</b> overhead line Works/TCC/CSEC/UG	U1720
50	<b>Existing Field Gate Access</b>	Croft Lane	106	<b>Existing Bellmouth Access</b>	Bull Lane

ID	Type of access	Road accessed from	ID	Type Of access	Road accessed from
	overhead line Works			overhead line Works	
51	<b>Existing Field Gate Access</b> overhead line Works	Church Lane	107	<b>Existing Bellmouth Access</b> overhead line Works	Plainville Lane
52	<b>Existing Field Gate Access</b> overhead line Works	Church Lane	108	<b>Existing Field Gate Access</b> overhead line Works	Plainville Lane
53	<b>Existing Field Gate Access</b> overhead line Works	Church Lane	109	<b>Existing Bellmouth Access</b> overhead line Works	B1363 Sutton Road
54	<b>Existing Field Gate Access</b> Scaffolding Only	Church Lane	110	<b>Existing Field Gate Access</b> overhead line Works	B1363 Sutton Road
55	<b>Existing Field Gate Access</b> overhead line Works	Church Lane	111	<b>Existing Field Gate Access</b> overhead line Works	Murton Way
56	<b>Existing Bellmouth Access</b> overhead line Works	Church Lane	112	<b>Existing Bellmouth Access</b> Osballdwick Substation	Murton Way

\* Overhead line

3.2.2 In developing the temporary construction access strategy, a balance has been struck between the need to access each construction location, and the desire to avoid the over-provision of new accesses onto the highway network, and/or provide numerous accesses onto the same section of road. All proposed accesses for PEIR are within the draft Order Limits.

### 3.3 Standard access design and access types

3.3.1 **Table 3.1** above sets out that there are five different types of existing accesses, as discussed below.

#### Existing field gate access

3.3.2 Where access is proposed via an existing field gate, the standard bellmouth design has been applied. Design improvements to widen the access to accommodate construction vehicles and an appropriate visibility splay would be made if necessary.

#### Existing bellmouth access

3.3.3 Where access is proposed via an existing bellmouth, the standard bellmouth design has been applied. Design improvements to widen the access to accommodate construction vehicles and an appropriate visibility splay would be made if necessary.



## Access into field

3.3.4 This type of access specifically relates to locations where no kerb or hedgerow exists between the highway and the field to be accessed. At these locations the standard bellmouth design has been applied to provide an adequate access suitable for construction vehicles.

## New accesses

3.3.5 New accesses are required where access is proposed but no current access exists; many of which are at the edges of agricultural fields and require the removal of hedgerow or other vegetation. At these locations the standard bellmouth design has been applied with suitable visibility splays.

## End of highway

3.3.6 In addition to the access types set out above, several construction sites to be used for the Project require extensions to the end of the existing road network (for example, where the highway terminates and forms a private road/track). It is not envisaged that significant works would be required where access is taken from the end of the highway. Any locations where access improvements are required would also be included in the Order Limits for the Project.

## 3.4 Temporary construction access

3.4.1 Temporary construction accesses will be designed to follow standard construction practice as set out in Design Manual for Road and Bridges (DRMB) and to meet relevant local highway authority requirements, details of which are provided in the following section. The final specific access arrangements for temporary construction accesses will be discussed with NYCC, LCC and CYC. Access is not proposed from the strategic road network and therefore there will not be a requirement to consult with NH. At this stage, the following is assumed for the types of access:

- Where it is proposed to use existing tracks/private farm accesses which are already provided with suitable visibility splays, no changes to the existing access layouts would be made but the access would be supplemented with traffic management and signage.
- Where it is proposed to use an existing field gate access or farm tracks where there is no existing visibility splay, a visibility splay in accordance with Figure 3.3 of DMRB, CD123 Geometric Design of At Grade Priority and Signal Controlled Junctions, August 2020 would be provided by coppicing vegetation to below 1m. At this preliminary stage, visibility splay requirements are based on 60mph speed limits. This assumption would be reconsidered in light of any site specific visibility requirements based on speed surveys, proposed to be undertaken to inform the DCO application submission.
- Where it is proposed to use an existing field gate access or farm tracks where there is no existing visibility splays or where visibility splays are not appropriate (for example for ecological reasons such as the presence of woodlands) then these would be managed through traffic management measures.
- Where temporary construction access is taken from the end of a highway leading directly into a private farm track there would not be a need for a visibility splay.

- Where a new temporary construction access is proposed, a standard bellmouth access design would be used with implementation of a full visibility splay.
- Post-construction it is likely that temporary construction accesses would be removed or reinstated to existing layouts/condition (unless these are required for access during the operation and maintenance of the Project). In addition, should the landowner wish to retain an improved access then this would be discussed with the relevant highways authority.

### **3.5 PEIR draft Order Limits and visibility standards**

- 3.5.1 Each of the identified temporary construction accesses has been included in the PEIR draft Order Limits. The PEIR draft Order Limits includes access tracks to the highway with an allowance for a temporary construction access as well as the required visibility splays, to ensure any clearance works required to achieve these splays can be undertaken. It is assumed that coppicing of hedgerows, pushing hedgerows back or removal of hedgerows will be required depending on the site specific issues to facilitate temporary construction accesses from the carriageway along with using traffic management as well as standard hedgerow maintenance.
- 3.5.2 It is assumed that visibility splays would be based on the guidance and standards set out the DMRB.
- 3.5.3 Prior to submission of the DCO application, visibility splay requirements would be agreed with highways authorities on a case-by-case basis, based upon individual temporary construction and operational access sites, likely traffic demands and durations, and site-specific speed surveys.

#### **3.5.4**

3.5.5 **Table 3.2** sets out the stopping sight distances based on design speed of the road which is used to determine the visibility “y” distance. The “y” distance is the distance from the temporary construction and operational access to the kerb edge in either direction that can be seen.

**Table 3.2 – Visibility standards**

<b>Design speed of road (KPH)</b>	<b>Signed speed limit of road (MPH)</b>	<b>Visibility “Y” distance (m)</b>
50	20	70
60	30	90
70	40	120
85	50	160
100	60	215
120	70	295

**3.5.6** At this preliminary stage, the visibility splays included in the draft Order Limits have been provided to include an “x” distance of 2.4m (the setback distance from the edge of the existing carriageway) which is compliant with DMRB standards and a “y” distance as set out in



3.5.7 **Table 3.2** based on the speed limit of the road. These visibility splays have been provided for all construction accesses other than the following:

- 11,80, 81 and 83 – end of highway access;
- 33, 34, 35, 36, 27 – access included at PEIR for the XD overhead line where works may not be needed so no visibility splays included at this stage; and
- 111 and 112 – Existing accesses to Osbaldwick Substation with existing suitable visibility splays.

## 3.6 Vehicle classification

3.6.1 A number of vehicle types will be used for the construction of the Project. **Table 3.3** provides a list of the types of vehicles required during construction of the elements of the Project, outlined by classification.

**Table 3.3 – Vehicle classifications**

Light Vehicles (LVs)	Heavy Goods Vehicles (HGVs)
4x4/Pickup	Fuel Tanker
Crewe Minibus	Grab Wagon
Welfare Van	20tonne Tipper
Maintenance Van	Low Loader
Staff Cars	Concrete Mixer
Security Vans	HIAB Wagon
Tractor	Skip Wagon
Towed Elements	Small Crane
ATV	Medium Crane
	Large Crane
	Road Sweeper
	Abnormal Indivisible Loads (AILs)

3.6.2 The list of vehicle types provided in **Table 3.3** is not exhaustive and has been based on projects of a similar type/scale/complexity. Construction machinery and onsite plant, vehicles and generator fuel tanks would be re-fuelled on site.

## 3.7 Abnormal Indivisible Loads

3.7.1 During the construction phase, there is a requirement for delivery of abnormal loads to the substations, which include Super Grid Transformers (SGTs). In addition to this there is a need for AILs for cable drums to be delivered to the CSEC sites, Overton Substation and Monk Fryston Substation. These abnormal loads would constitute AILs

as they cannot be broken down into smaller loads for transport. The requirements for AIL deliveries are as follows:

- SGT and cable drums to Monk Fryston Substation – access via A1(M) – A63 – Rawfield Lane;
- SGT and cable drums to Overton Substation – access via A1(M) – A64 – A1237 – A19 – Overton Road;
- Cable Drum delivery to the Tadcaster CSEC – access via A1(M) – A63 – A659; and
- Cable Drum delivery to the Shipton CSEC – access via A1(M) – A64 – A1237 – B1363 – Corban Lane.

3.7.2 An assessment of the AIL and delivery vehicle movements has been presented in four separate access studies which are appended to this Preliminary CTMP as **Annexes A to D**.

# 4. HGV Routeing Strategy

## 4.1 Introduction

4.1.1 The Project requires construction HGVs to route through urban and rural locations to access the numerous site areas, both of which present challenges in terms of traffic levels, road widths, pedestrian and cyclist numbers, etc. An HGV Routeing Strategy has been developed to minimise the impact of HGVs during the construction of the Project. **Section 4.2** sets out how the HGV Routeing Strategy has been developed.

## 4.2 Overview of HGV Routeing Strategy

4.2.1 To aid development of the HGV Routeing Strategy, two types of routes have been considered as follows:

- **Strategic** – the Strategic Road Network (SRN) routes which link with the transport Study Area for the Project comprise the M1, A1(M) and A64. These routes are managed and maintained by NH; and
- **Local** – the local roads that link to the construction and operational accesses are managed and maintained by NYCC, LCC and CYC.

4.2.2 Access to each of the temporary construction accesses would utilise strategic routes on the road network as far as practically possible before routing onto local roads.

## 4.3 Strategic routes

4.3.1 The A1(M) and the A64 are the two key SRN routes within the Study Area. The A1(M) is a north-south road in England that, along with the M1, routes between London and Newcastle. The A64 connects Leeds to Scarborough via York on an east-west alignment.

4.3.2 Within the Study Area the A64 has junctions with the local road network at several locations:

- A1(M)/A64/Paradise Way –Links the two SRN routes within the Study Area;
- A64/A659 (two junctions east and west of Tadcaster) - Access to Tadcaster;
- A64/A1237 – Junction that provides access to the York ring road to the west and north;
- A64/A1036 – Access to York from the south;
- A64/A166/A1079 – Access to York from the west (and Osbaldwick);

4.3.3 Within the Study Area the A1(M) has junctions with the local road network at several locations as follows:

- A1(M)/M62 –Junction which links the SRN;
- A1(M)/A63 – Access to Monk Fryston and Selby;
- A1(M)/M1 – Junction between two elements of the strategic road network;

- A1(M)/A64/Paradise Way – Junction which links the SRN routes within the Study Area;
- A1(M)/A168/A659 – Access to Boston Spa and Wetherby;
- A1(M)/B1224 – Access to Wetherby; and
- A1(M)/A59 – Links to York to the east and Knaresborough and Harrogate to the west.

4.3.4 From these two strategic routes, there are four strategic access routes into the Study Area:

- A1(M) North strategic access route;
- M1 West South strategic access route;
- A1(M) South strategic access route; and
- A64 East strategic access route.

4.3.5 The strategic access routes described are illustrated in **Figure 4.1**.

## 4.4 Local routes

4.4.1 From the SRN there are a series of main routes on local roads that provide access to the Project construction site areas.

4.4.2 These local routes have been identified as suitable for construction HGVs through evaluation of the parameters listed below. The routes with the least constraints have been chosen for the HGV Routing Strategy where possible.

- height restrictions;
- weight restrictions;
- road classification;
- road layout;
- existing pedestrian crossing facilities;
- existing traffic calming measures;
- sensitive receptors adjacent to the public highway;
- visibility constraints;
- speed limits and traffic speeds;
- areas prone to congestion;
- significant changes in gradient; and
- vulnerable road users (pedestrians, cyclists and equestrians).

4.4.3 Based on the parameters outlined above, relevant embedded environmental measures outlined in **Chapter 12: Traffic and Transport (Table 12.10)** have been incorporated into the design of the Project as follows:

- The proposed HGV routing during the construction period to individual accesses would be developed to avoid major settlements such as Sherburn in Elmet, South

Milford, Micklefield, Saxton, Bramham, Clifford, Boston Spa, Tadcaster Centre, Healaugh, Tockwith, Long Marston, Rufforth, Askham, Angram, Nether Poppleton, Central York and Haxby. This measure would limit the impacts of Proposed Development in local villages and settlements.

- 4.4.4 The resultant HGV Routeing Strategy, considering all the local constraints, access locations and embedded environmental measures, comprises 26 local HGV routes which are illustrated in **Figure 4.2** and set out in **Table 4.1**. The locations of the construction accesses are set out in **Section 3.2**.

**Table 4.1 – Local road routes to construction accesses**

Local road route number	Route via local road network	Construction access
1	A1(M) – A63 East – Rawfield Lane	2, 3, 4, 5, 6, 7, 8, 9, 10
2	A1(M) – A63 East – Butts Lane	9,10,11
3	A1(M) – A63 East – A162	1, 9, 10
4	A1(M) – A63 West – B1222 – Westfield Lane	12,13
5	A1(M) – A63 West – B1222 – Whitecote Lane	14, 15
6	A1(M) – A63 West – B1222 – St Johns Lane – Laith Staid Lane	16, 17, 18, 19, 20, 21, 22
7	A1(M) - M1 – B1217 – Copley Lane	23, 24
8	A1(M) - M1 – B1217 – Copley Lane – Coldhill Lane	25, 26, 27
9	A1(M) - M1 – B1217	28, 29, 30
10	A1(M)/A64 Junction – Paradise Way – Spen Common Lane – Warren Lane	33, 34, 35, 36
11	A1(M) – A64 – A659 – Croft Lane	31, 38, 39 40, 43, 44, 45, 46, 47, 48, 49, 50
12	A1(M) – A64 – A659 – Unnamed Road West of Garnet Lane	31, 37, 38,39, 40
13	A1(M) – A64 – A659 – Garnet Lane – Moor Lane	31, 32, 38, 39, 40
14	A1(M) – A168 – Walton Road – Wetherby Road – Wighill Lane – Church Lane (South)	51, 52, 53, 54, 55, 56



Local road route number	Route via local road network	Construction access
15	A1(M) – A168 – Walton Road – Wetherby Road – Wighill Lane – Church Lane (North) – Wighill Lane	57, 58, 59, 60
16	A1(M) – B1223 – York Road – Healaugh Lane	61, 62, 63, 64
NOTE – HGV Access from the A59 can be routed from either the east (from the A64 and A1237) or the west (from the A1(M))		
17	SRN – A59 – Marston Lane – Atterwith Lane – Tockwith Road	65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75
18	SRN – A59 – Church Lane – East Lane	76, 77, 78, 79, 30
19	SRN – A59 – Church Lane – Red House Lane	81
20	SRN – A59 – Newlands Lane – Cinder Lane	82, 83
21	A1(M) – A64 – A1238 – A19 – Overton Road	84, 85, 86, 87, 88, 89, 93, 94, 95, 96, 97
22	A1(M) – A64 – A1238 – A19 – Stripe Lane	90, 91, 92
23	A1(M) – A64 – A1238 – B1363 – Corban Lane	98, 99, 100, 101, 102, 103, 104, 105
24	A1(M) – A64 – A1238 – B1363 – Corban Lane – Plainville Lane	106, 107, 108
25	A1(M) – A64 – A1238 – B1363	109, 110
26	A1(M) – A64 – A1079 – Osbaldwick Road – Murton Way	111, 112

## 4.5 HGV local road routes issues/constraints

- 4.5.1 The local road routes encompass the HGV routes to be used between the Project and the SRN. A number of common issues and constraints have been identified that are consistent across these routes and details of the mitigation proposed are set out in **Table 4.2**.

**Table 4.2 – Issues and constraints management of HGV local road routes**

No.	Issue/constraint	Mitigation
1	Sensitive, built up areas (villages, towns) to be avoided by temporary construction traffic due to impacts on congestion, highway safety and air and noise pollution.	The HGV Routeing Strategy and the temporary construction access locations and onsite haul roads have ensured that several settlements would be avoided by construction HGV traffic. These settlements include South Milford, Micklefield, Saxton, Bramham, Clifford, Boston Spa, Tadcaster Centre, Healaugh, Tockwith, Long Marston, Rufforth, Askham, Angram, Nether Poppleton, Central York, Shipton and Haxby.
2	Avoidance, if possible, of built-up areas to minimise conflict with parking areas, local roads and streetscapes.	The HGV Routeing Strategy and the temporary construction access locations and onsite haul roads have ensured that several settlements would be avoided by construction HGV traffic. These settlements include the built-up urban centres of Tadcaster, Wetherby, Monk Fryston, York, Boston Spa and Sherburn in Elmet.
3	Avoidance of narrow rural roads.	<p>The HGV Routeing Strategy approach has been to avoid the use of small single-track roads as much as possible. The only elements of single-track roads required for construction HGV access are as follows:</p> <ul style="list-style-type: none"> <li>● 479m of Westfield Lane;</li> <li>● 2.1km of Laith Staid Lane;</li> <li>● 2.3km of Spen Common Road/Warren Lane;</li> <li>● 358m of Croft Lane;</li> <li>● 1.1km of Heaugh Lane;</li> <li>● 341m of Red House Lane;</li> <li>● 1.8km of Newlands Lane</li> <li>● 244m of Cinder Lane;</li> <li>● 2.1km of Overton Lane; and</li> <li>● 718m of Stripe Lane.</li> </ul>

No.	Issue/constraint	Mitigation
4	Limited visibility at temporary construction access junctions.	Selected temporary construction accesses will have appropriate visibility splays.
5	Impacts on pedestrians (PRoW), cyclists (National Cycle Network, Sustrans and local routes) and equestrians (local routes).	A Preliminary Public Rights of Way Management Plan (PRoWMP) has been prepared and is provided as <b>Appendix 12B</b> in support of <b>Chapter 12: Traffic and Transport</b> .
6	Construction traffic impacts on capacity of junctions and links on the construction routes (SRN and local highway network).	The assessment of construction traffic generation from the Project on 23 highways links has been set out in <b>Chapter 12: Traffic and Transport</b> . The environmental measures required to mitigate the impact of construction traffic are also provided.
7	Environmental effect on A659 in Tadcaster	<b>Chapter 12: Traffic and Transport</b> has set out that there is predicted to be a significant effect on the A659 in Tadcaster north of Station Road. As such it is proposed that an HGV ban for construction HGVs on this route is introduced, limiting the construction traffic on this route at certain times of the day around school drop off and pick up when the issue would be most prevalent in the area. It is proposed that there would be a Project HGV ban through Tadcaster between 08:00 – 09:00 and 15:00 – 16:00 every school day.

# 5. LV Routeing Strategy

## 5.1 Introduction

- 5.1.1 The Project would generate two types of construction LV traffic as follows:
- LV construction staff traffic; and
  - LV construction traffic including vans and smaller delivery vehicles.
- 5.1.2 **Section 5** sets out how the LV Routeing Strategy has been developed.
- 5.1.3 It should be noted that for the purpose of the PEIR, traffic generation has been assessed with all traffic (HGV and LV) routing from the SRN direct to work sites. As the Project evolves post-PEIR, traffic calculations will be revised to understand the detailed interaction between Temporary Construction Compounds (TCCs) and individual site accesses.

### LV construction staff traffic

- 5.1.4 This element of the LV construction traffic generation would comprise staff travelling to and from their home/overnight accommodation to one of the temporary construction compounds to commence work for the day, which would be required across the entire construction phase.
- 5.1.5 These trips would take place in private cars/work vans/minibuses. When the Project commences construction, staff would gather in teams at the temporary construction compounds and then, following sufficient work briefings and collection of materials/plant, would travel to the relevant area of construction works related to the Project corridor in teams using minibus, work vans or other site/work related vehicles. Some staff may arrive directly at sites during some stages of the programme such as for the line survey, and where staff would route directly to the substation sites and stay onsite for the workday before leaving at the end of the workday and travelling home or to overnight accommodation.

### LV construction traffic

- 5.1.6 Although not considered in the traffic generation calculations at this stage, this element of the LV construction traffic generation would comprise construction staff leaving the TCCs in teams and travelling to a proposed individual work site for their workday and then returning to the TCC at the end of the day.
- 5.1.7 These trips would take place in Light Goods Vehicles (LGV) predominantly however may also be undertaken in 4X4 vehicles and private cars (for management staff). Where required, these works vehicles would pick up materials and plant.

## 5.2 Overview of LV Routeing Strategy

### LV construction staff traffic

- 5.2.1 To aid development of the LV Routeing Strategy, a preliminary estimation of the construction traffic generated by the Project has been carried out. The construction

traffic generation estimation has been applied to the preliminary construction traffic programme for the three-year construction schedule. This has resulted in construction vehicle movement predictions per vehicle type on a weekly basis per access point, split into HGVs and LVs.

- 5.2.2 The detailed methodology and construction traffic calculations undertaken to inform this output are presented in **Chapter 12: Traffic and Transport** which sets out the detailed construction traffic generation methodology, assumptions, materials required and other matters that have informed the construction traffic generation output.
- 5.2.3 As set out above, at this stage the movement of LVs between TCCs and individual sites for construction has not been defined within the traffic calculations. However, consideration of the routes these movements would need to undertake when defined has been provided for the purpose of an LV access strategy at PEIR. The LV Routing Strategy provides details on two types of LV construction traffic:
- **LV construction staff traffic** – This has been calculated from journey to work data from the 2011 Census for three local areas associated with the three sections of the Project. **Figure 5.1** sets out the locations of the three sections used to inform construction staff distribution; and
  - **LV construction traffic** – Understanding the most appropriate routes of LV construction traffic between the temporary construction compounds and proposed works site temporary construction accesses along the Project corridor set out in **Table 3.1**. This was undertaken using journey planning software and considering any local constraints.

### **Construction staff traffic distribution**

- 5.2.4 For construction staff traffic movements into and out of the temporary construction accesses per day, a detailed distribution matrix has been required. This has been based on journey to work data from the 2011 Census for three local areas associated with the three sections of the Project. **Figure 5.1** sets out the locations of the three local areas used to inform construction staff distribution.
- 5.2.5 The three areas have been selected to allow for an appropriate distribution of LV traffic across the draft Order Limits. The distribution of traffic in the Monk Fryston area would be different to that from work sites around York.
- 5.2.6 The resultant LV construction staff traffic distribution and assignment onto the road network within the Study Area that has been applied is set out in **Table 5.1** for the three sections of the Project. **Figure 5.2** sets out the geographical scope of the exit points from the highways network Study Area.



**Table 5.1 – LV construction staff traffic distribution and assignment onto road network**

Entry/exit points from highways network Study Area scope	Construction staff traffic distribution by temporary construction compound/accesses		
	Section 1	Section 2	Section 3
	Monk Fryston Substation TCC	Tadcaster CSECs TCC	Shipton CSECs and Overton Substation TCC
	Accesses 1-30	Accesses 31-64	Accesses 65-112
A1 (M) north	0.6%	2.8%	2.5%
A19 North	0.5%	0.2%	6.2%
M1 West	15.4%	16.2%	5.3%
A59 West	1.0%	1.7%	6.5%
A64 East	0.8%	1.5%	5.1%
A1079 East	0.8%	2.3%	5.6%
A19 South	0.0%	1.3%	5.3%
A1 (M) south	30.8%	5.8%	3.6%
B1363 York	0.8%	3.1%	11.5%
A59 York	0.4%	2.5%	25.0%
A19 York	0.4%	1.9%	4.2%
Murton Way	0.4%	1.0%	1.3%
A63 East	19.9%	7.0%	0.0%
A63 West	0.0%	0.0%	0.0%
A64 West	2.9%	8.1%	2.3%
B6164 North	0.9%	1.9%	0.3%
B1224 West	0.3%	0.0%	0.5%
A166 East	0.3%	1.1%	1.0%
A1036 York	2.5%	8.5%	9.0%
Tadcaster	5.4%	25.7%	3.8%
Sherburn in Elmet	14.3%	6.2%	0.7%
Boston Spa	0.8%	1.0%	0.3%
A659 West	0.5%	0.0%	0.0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

5.2.7 The staff construction traffic would not have a defined route to sites and TCCs and staff vehicles are proposed to be permitted to access sites at their own discretion based on the day's work schedule (may be at multiple sites), local traffic conditions, weather and other work-based factors as would be expected for any LV construction staff traffic routing to and from their place of work.

### LV construction traffic

5.2.8 A LV route has been identified for each of the TCCs to the proposed construction accesses as illustrated in **Figure 5.3** and summarised in Error! Reference source not found..

**Table 5.2 - LV construction traffic distribution**

Temporary construction compound	Route	Construction access
Section 1 – Monk Fryston (Accesses 1-30)		
Monk Fryston Substation TCC (Two Options at Access 2 or 6 on Rawfield Lane)	Rawfield Lane – A63 – A162	1
	All accessed from another location on Rawfield Lane	2,3,4,5,6,7,8
	Rawfield Lane – Butts Lane	11
	Rawfield Lane – A63 – Westfield Lane	9, 10, 12, 13
	Rawfield Lane – A63 – B1222 – Whitecote Lane	9, 10, 14, 15
	Rawfield Lane – A63 – B1222 – St John's Lane, Laith Staid Lane	9, 10, 16, 17, 18, 19, 20, 21, 22
	Rawfield Lane – A63 - A656 – B1217 – Copley Lane	9, 10, 23, 24
	Rawfield Lane – A63 - A656 – B1217 – Copley Lane	9, 10, 25, 26
	Rawfield Lane – A63 - A656 – B1217	9, 10, 27, 28, 29, 30
Section 2 – Tadcaster (Accesses 31 – 64)		
Tadcaster CSECs TCC (Two Options at Access 39 or 40 on the A659)	All Accessed from another location the A659	31, 38, 39, 40, 43, 44, 46, 46, 47, 48, 49
	A659 – Croft Lane	50
	A659 – Garnet Lane – Moor Lane	32, 41, 42
	A659 – Unnamed Road North of Garnet Lane –	33, 34, 35, 36, 37

Temporary construction compound	Route	Construction access
	Toulston Lane – Warren Lane	
	A659 – A64 – A1(M) North – A168 – Wetherby Road – Wighill Lane – (Church Lane)	51, 52, 53, 54, 55, 56, 57, 58 59, 60
	A659 – A64 – A1(M) North – B1224 – Healaugh Lane	61, 62, 63, 64
Section 3 – York (Accesses 65 -112) – <i>Note there are two compound locations in the area. No definitive assessment of which TCC would service which access has been made at this stage. However, for robust assessment it is assumed that Overton Substation TCC would service accesses 65 – 97 and Shipton TCC would service accesses 98 to 112.</i>		
Overton Substation TCC (two options at access 94 and 95 both from Overton Road)	All accessed from another location on Overton Road	84, 85, 86, 87, 88, 89, 94, 95,
	Overton Road – Stripe Lane	84, 85, 86, 87, 88, 89, 90, 91, 92 94, 95,
	Overton Road – A19 – A59 - A1237 – Newlands Road – Cinder Lane	82, 83, 93, 97, 96
	Overton Road – A19 – A1237 – A59 – Church Lane (Red House Lane)	76, 77, 78, 79, 80, 81, 93, 97, 96
	Overton Road – A19 – A1237 – A59 – Marston Lane – Atterwith Lane – Martston Road	65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75
Shipton CSEC TCC (two options at 104 and 105 from Unnamed Road north of Corban Lane)	All accessed from another location on the unnamed road north of Corban Lane	100, 102, 103, 104
	Corban Lane – Plainville Road	98, 99, 101, 106, 107, 108
	Corban Lane – B1363 North	98, 99, 101, 109, 110
	Corban Lane – B1363 North – A1237 – A64 – A1079 – Osbaldwick Link Road – Murton Way	98, 99, 101, 111, 112

5.2.9 The routes provided in **Table 5.2** generally follow the construction HGV access routes, which assists in limiting traffic related to the Project to a limited number of roads across North Yorkshire. This ensures that any effects on other roads outside those already used for HGV construction traffic would be limited.

# 6. Crossing schedule

## 6.1 Introduction

- 6.1.1 In addition to the HGV and LV construction traffic routing, this CTMP considers the impacts of all overhead line crossings of the local and strategic highways network as well as proposals for rail crossings. There are no underground cable elements of the Project that need to cross the road or rail network.
- 6.1.2 It should be noted that in addition to the impacts on the adopted public highway and rail networks the Project would also impact upon the PRow network. This is covered in a separate Preliminary PRowMP appended to **Chapter 12: Traffic and Transport** which sets out the scale and nature of these impacts together with a draft management strategy.

## 6.2 Highways crossing schedule

- 6.2.1 A total of 34 highways crossing locations have been identified within the draft Order Limits where an overhead line is proposed to be installed (including reconductoring) or dismantled across the highway.
- 6.2.2 It is proposed that all crossings would be undertaken using scaffolding and protected crossings of the road. This construction method prevents the disturbance of the road during the crossing installation. This removes the need for shuttle working, road closures and/or traffic management.
- 6.2.3 The only location where this is not proposed is at Stripe Lane where conductor works may not be required. As such, at this stage, traffic management has been identified.
- 6.2.4 **Table 6.1** below details all 34 crossing locations as shown in **Figure 6.1** and the roads which they affect. **Table 6.1** also outlines the Crossing Schedule Reference Number, type of crossing method required at each crossing location and which local highway authority area the crossing falls within.

**Table 6.1 – Management of highway crossings**

Crossing Point	Road Name	Crossing Management	Local Authority
1	Rawfield Lane, U1038	Scaffold and netting	North Yorkshire
2	Rawfield Lane, U1038	Scaffold and netting	North Yorkshire
3	Rawfield Lane, U1038	Scaffold and netting	North Yorkshire
4	A63	Scaffold and netting	North Yorkshire
5	A63	Scaffold and netting	North Yorkshire

<b>Crossing Point</b>	<b>Road Name</b>	<b>Crossing Management</b>	<b>Local Authority</b>
6	Westfield Lane, U1288	Scaffold and netting	North Yorkshire
7	Whitecote Lane, C230	Scaffold and netting	North Yorkshire
8	B1222	Scaffold and netting	North Yorkshire
9	U1092	Scaffold and netting	North Yorkshire
10	Coldhill Lane, C311	Scaffold and netting	North Yorkshire
11	Coldhill Lane, U785	Scaffold and netting	North Yorkshire
12	B1217	Scaffold and netting	North Yorkshire
13	Warren Lane	Scaffold and netting	Leeds City
14	A64	Scaffold and netting	North Yorkshire
15	Leeds Road, A659	Scaffold and netting	North Yorkshire
16	Leeds Road, A659	Scaffold and netting	North Yorkshire
17	Garnet Lane, C305	Scaffold and netting	North Yorkshire
18	Roman Road, A659	Scaffold and netting	North Yorkshire
19	A659	Scaffold and netting	North Yorkshire
20	Wighill Lane, C288	Scaffold and netting	North Yorkshire
21	Main Street, C286	Scaffold and netting	North Yorkshire
22	Wetherby Road, B2144	Scaffold and netting	North Yorkshire
23	Tockwith Road, C273	Scaffold and netting	North Yorkshire
24	Roman Road, A59	Scaffold and netting	North Yorkshire
25	Church Lane, U3396	Scaffold and netting	North Yorkshire
26	Overton Road, U1724	Scaffold and netting	North Yorkshire
27	Stripe Lane, U1724	Stop/Go boards if required	North Yorkshire
28	Overton Road, U1724	Scaffold and netting	North Yorkshire
29	A19	Scaffold and netting	North Yorkshire
30	Corban Lane	Scaffold and netting	York City
31	U1720	Scaffold and netting	North Yorkshire
32	Plainville Lane	Scaffold and netting	York City
33	Sutton Road, B1363	Scaffold and netting	York City



Crossing Point	Road Name	Crossing Management	Local Authority
34	Rawfield Lane, U1038	Scaffold and netting	North Yorkshire

### 6.3 Rail network crossing schedule

- 6.3.1 All rail crossings are proposed to be managed through scaffolded crossings during conducting works which should allow for the continued use of the rail lines during these periods.
- 6.3.2 The alignment of the Project requires a crossing of the rail network at five locations. The five locations are shown in **Figure 6.2**.
- 6.3.3 Engagement with Network Rail will take place to discuss the proposed overhead line crossings of the rail network. It is expected that there will be no additional management requirements of the rail network crossings during the construction of the Project.
- 6.3.4 **Table 6.2** provides details on the five rail crossings.

**Table 6.2 – Management of rail crossings**

Crossing Point	Grid Reference	Crossing Management	Rail Line Between
1	455524,457207	Scaffold and netting	York to Northallerton
2	456154,456054	Scaffold and netting	York to Northallerton
3	450769,454702	Scaffold and netting	York to Harrogate
4	447085,433164	Scaffold and netting	Leeds to York
5	447075,432123	Scaffold and netting	Selby to Leeds

### Navigable watercourse crossing schedule

- 6.3.5 All navigable watercourse crossings are all proposed to be managed through scaffolded crossings during conducting works which should allow for the continued use of the watercourse during these periods.
- 6.3.6 The alignment of the Project requires two crossings of the River Ouse between XCP008 and XCP009 where the existing line is to be removed and the new line to be constructed.
- 6.3.7 Consultation and engagement with the Canals and River Trust will take place to discuss the requirements of the proposed overhead line crossings of the River Ouse up to and beyond DCO application submission. It is expected that there would be no additional management requirements of the River Ouse during the construction of the Project.

## 7. Potential mitigation strategies

- 7.1.1 This section of the CTMP explains the types of traffic management measures that may be required across the Project to allow for safe and convenient working practices and access to construction sites.
- 7.1.2 National Grid would implement a number of the mitigation measures as set out below but discussion with NH, CYC, NCC and LCC will be undertaken to inform consideration of detailed traffic management and if required road closures and diversions.
- 7.1.3 The proposed traffic related mitigation measures relating to the construction phase of the Project are detailed in the following sections. These measures cover site specific issues that will be developed to support the DCO application, as well as general traffic management and mitigation proposals.

### 7.2 Site specific mitigation

#### Potential road closures and diversions

- 7.2.1 Due to the proposals set out above in the crossing schedule it is not currently proposed that any road closures and any associated diversions would be required.

#### Locations requiring traffic management

- 7.2.2 Temporary traffic management would be deployed throughout the construction programme at various locations above and beyond the highways crossings. Construction activities that may require temporary traffic management include but are not limited to:
  - proposed access locations;
  - around proposed construction compounds and substations; and
  - roads being used for the delivery of materials to the work areas.
- 7.2.3 The type of temporary traffic management deployed would vary and could include temporary traffic signals, manned stop/go boards, road narrowing/widening and temporary speed restrictions.
- 7.2.4 All temporary traffic management implementation plans would need to be approved by NH, CYC, NCC and LCC (location dependant), and will be applied in accordance with guidance and procedures set out within Section 14 of the Road Traffic Regulation Act 1984 (as necessary).
- 7.2.5 Temporary traffic management arrangements would be included as part of the detailed design submission for each of the construction sites and compounds, which would also be subject to approval by the relevant highway authority.
- 7.2.6 The PEIR chapter has also indicated the need for a temporary construction traffic ban though Tadcaster.

## 7.3 General construction traffic management/mitigation

### Traffic signage

- 7.3.1 Where traffic management measures are required, these will be agreed in advance with relevant highway authorities. Any temporary road closures/diversions will be advertised in advance and alternative routes indicated through signage. Where required, temporary speed restrictions may be sought, either through the DCO or by way of Temporary Traffic Regulation Orders.
- 7.3.2 Any works within the highway would be reinstated to a standard commensurate prior to the commencement of the works and agreed with NH, CYC, NCC and LCC where appropriate.

### Access route and point signing

- 7.3.3 Temporary signage would be erected along construction traffic routes on the local road network to provide directional routing information for construction vehicles, to ease navigation between the SRN and the construction sites and compounds.
- 7.3.4 Temporary signage warning other road users of the likely presence of construction vehicles would also be provided in the vicinity of each construction access location.
- 7.3.5 Where necessary warning signs at “short cuts” and “rat runs” would be erected to remind construction LV drivers to utilise the prescribed construction traffic routes.

### Access road signage

- 7.3.6 In addition to the above, temporary signage would be erected along the proposed onsite construction access roads where necessary. The signage would provide construction vehicle drivers with information on the distances to construction sites (destinations) and warning (hazard) information related to potential vehicle conflict or pedestrian conflict areas. Further information on the strategy for signage of pedestrian crossing areas is contained within the Preliminary PRowMP.

### Other signage

- 7.3.7 All signage would be provided in accordance with Traffic Signs Regulations and General Directions (TSRGD) published by the DfT. Signage to be erected includes:
- Traffic warning signs for road closures;
  - Traffic warning signs with contact details of the relevant contractors so the public can request information/updates; and
  - Advanced warning signs of road closures.

### Core working hours

- 7.3.8 Construction work would take place in accordance with set “construction hours” which will be secured in the DCO within the outline Construction Environmental Management Plan (CEMP).
- 7.3.9 Except in the case of emergency, any work required to be undertaken outside of the core working hours (not including repairs or maintenance) would be agreed with the highways authorities prior to undertaking the works.

7.3.10 Twenty-four hour working would be implemented during the construction works and commissioning for Overton and Monk Fryston Substations and overnight (24 hour) working used to install the overhead lines crossing the ECML railway, highways and other infrastructure to minimise daytime closures of these transport links. For the remainder of the Project, at this stage it is assumed that construction work would be limited to daytime hours but would take place seven days per week.

7.3.11 Details on exceptions circumstances are set out below in paragraph 7.3.18.

#### HGV and LV construction vehicle records

7.3.12 All HGV and LV construction vehicle movement associated with the Project would be recorded and timed as vehicles enter and leave all construction compounds and sites as part of a delivery management system (DMS). DMS records would be compiled and stored centrally so that any complaints received concerning driver/vehicle conduct can be first referenced against the DMS to confirm whether the vehicle in question is associated with the Project. Poor conduct/management by the contractor will be addressed.

#### HGV emissions

7.3.13 All road-based vehicles used in the construction of the Project would be to a EURO standard V class or better.

#### Banksmen or presence of qualified personnel at the access

7.3.14 Qualified personnel (banksmen) would be placed at key locations when necessary, during the construction of the Project. Key locations are likely to include construction accesses at key parts of the Project/highways network and at the PRoW crossing points during busy periods. Further information on how this process would be managed is contained within the PRoWMP. Qualified personnel can also be provided at other sensitive locations where conflict with the construction vehicles may arise.

#### Timing of HGV movements

7.3.15 HGV movements associated with the Project would normally take place during the core working hours as set out in **Section 2** of this Preliminary CTMP and for the hour before and after these core working hours due to the distances involved in reaching some of the remote construction sites.

7.3.16 A booking system (included in the DMS) would be used to ensure deliveries to the sites are spread across the working day (where feasible). This would minimise the impact of HGV traffic during the peak periods. The booking schedule would also form part of and inform the monitoring processes of the CTMP.

7.3.17 Exceptional circumstances

7.3.18 There may be exceptional circumstances when traffic routes on the SRN or the local road network are compromised which would impact on construction vehicles not being able to use these routes. Exceptional circumstances are defined as one or more of the following:

- where continuous periods of construction work are required, such as concrete pouring or directional drilling, and local highways authorities have been notified prior to such works 72 hours in advance;

- for the delivery of AILs to the connection works, which may cause congestion on the local road network, where the relevant highway authority has been notified prior to such works 72 hours in advance;
- instances where it would be preferable to undertake highway improvement works outside of the key working hours (or overnight) where the traffic flows are minimal;
- as otherwise agreed in writing with relevant highway authorities;
- where a traffic accident or other similar incident on the road network disrupts the normal operation of the highway network or results in a road closure;
- where a breakdown of a LV/HGV enroute to a construction site or compound occurs and then arrives later due to time critical reasons;
- where work is requested to be completed out of hours by highway authorities;
- where there is a need for emergency health and safety requirements (incident);
- where there is a need to implement urgent mitigation activities such as emergency flood prevention works.

7.3.19 In the event of an exceptional circumstance, the following impacts need to be considered with regards to highways and construction safety of the Project:

- Incidents on the road network could result in stoppage (at previously agreed locations) or rescheduling of deliveries;
- Incidents on the road network causing delays, resulting in construction vehicles travelling outside of approved movement hours; and
- Impacts of deliveries not being made, which could have impacts on health and safety due to a lack of equipment or materials or require a stop to construction works leading to delays to construction programme.

### Abnormal Indivisible Loads

7.3.20 For the construction of the substations AIL vehicles are required to deliver large components such as SGTs. This detail and the specific routes required for AIL deliveries and the mitigation required are set out in **Annexes A to D** of this Preliminary CTMP. These documents will be reviewed post PEIR and will likely be appended to the updated CTMP for DCO submission to allow for a comprehensive traffic management solution.

### Cleaning of vehicles

7.3.21 Vehicles exiting from an access bellmouth would be checked and wheels cleaned, if necessary, prior to using the public highway to prevent debris from being transferred off the site onto the road. If required, a road sweeper would be utilised to further ensure that the local road network remains safe and clear of debris.

### Highway condition surveys

7.3.22 Highway condition surveys of access points would be undertaken before first use, at intervals during the construction programme and following final use, to ensure that the surface of the highway remains in good repair and highway safety is maintained. The condition survey inspections would also enable any repairs to be made in a timely manner throughout the construction period.

7.3.23 At the end of the construction period, the accesses and crossing points shall be inspected and a programme of works to restore them to the condition they were in before the construction period began would be agreed with the relevant local and strategic highway authority.

### Delivery management systems

- 7.3.24 The contractor will be required to have a Delivery Management System (DMS) to be agreed with National Grid. The objectives of the DMS will be to:
- Control the delivery of materials and equipment in line with the construction programme;
  - Minimise the number of construction vehicles on the road network (which will be scheduled to meet/adhere to any agreed restrictions); and
  - Ensure construction vehicles do not exceed any agreed restrictions i.e. peak period travelling through certain towns/villages/junctions.

### Information packs and communication

- 7.3.25 It is assumed that information packs will be provided to all contractors which will form part of the contractual agreement between the contractors and National Grid. The information pack may contain the details of the following CTMP requirements:
- HGV restrictions;
  - Construction routes;
  - Non-compliance guidance;
  - Complaints procedure;
  - CTMP protocols and indications required for all contractors including a code of good practice;
  - Guidance on standard communication procedures between contractors and site;
  - CTMP contacts (emergency and non-emergency).
- 7.3.26 Information packs and communications details will be shared with relevant highway authorities ahead of any construction works.



# 8. Management of CTMP and enforcements

## 8.1 Introduction

- 8.1.1 It is important that a strong management structure is in place to ensure the Preliminary CTMP objectives are met, and that it is continually monitored and reviewed.
- 8.1.2 A transport coordination officer (TCO) will be appointed by the contractors to implement the CTMP (approved by the relevant local planning authorities in consultation with all relevant highway authorities). As several contractors will be appointed to undertake the varying construction works, it is unknown whether one TCO will be required for the entire Project, or each contractor will appoint an individual TCO. This will be agreed as part of the CTMP process and it is likely that a single TCO will be expected to co-ordinate and oversee all TCOs should there be a need for multiple TCOs.
- 8.1.3 The TCO will be employed prior to commencement of the works and will have the following transport related responsibilities:
- monitor contractor obligations under the Preliminary CTMP;
  - liaise with and report to the local highway authorities and NH on mitigation and remedial measures as required;
  - update the CTMP as required; and
  - resolve issues and problems through the liaison with relevant stakeholders.

## 8.2 Monitoring and review

### Monitoring strategy

- 8.2.1 The TCO/TCOs appointed by the contractors will undertake monitoring as necessary to ensure compliance with the requirements of the CTMP and this will include the maintenance of records of the traffic management measures that have been implemented.
- 8.2.2 Review
- 8.2.3 The TCO will monitor and review the CTMP. These reviews are required to ensure that the CTMP delivers on the commitments and achieves the agreed goals as set out in this document.

### Compliance

- 8.2.4 As part of the CTMP a series of mechanisms will be established to provide all parties with a clear understanding of the enforcement procedures that will be applied if the requirements contained within this CTMP are not achieved. It is anticipated that these mechanisms will be determined prior to construction and will include:
- Risk Assessment Method Statement (RAMS) procedures – The contractor, through the TCO, will implement the CTMP, adhere to the requirements and meet the goals through management practices. This will include site inductions for contractors,

briefing on the obligations of the National Grid standards, induction and adherence to RAMS procedures, DMS briefing, driver inductions and compliance guidance.

- Contractual conditions – to be employed as part of the CTMP compliance methodology and will be built into the contractors' contract, this will be subject to a performance review by National Grid.
- Actions – To be employed if the commitments of the CTMP are breached.

### Enforcement and corrective measures

- 8.2.5 National Grid will ensure that appropriate measures are taken to ensure contractor behaviour and performance is monitored and where appropriate corrective measures are taken to resolve, redress and enhance service performance, which is in breach of the standard within the Preliminary CTMP.
- 8.2.6 National Grid will require that the appointed contractor's disciplinary procedures incorporate the Project commitments, including this Preliminary CTMP, and these items are reflected in the contract between National Grid and the relevant contractor. National Grid will have the power to remove person(s) should it be required and deemed appropriate.

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