

YG-DCO-032-5.3.3F(D)

# Yorkshire Green Energy Enablement (GREEN) Project

**Volume 5**

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## Version History

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Date	Version	Status	Description/Changes
01/11/2022	A	FINAL	First Issue
11/07/2023	B	FINAL	Second Issue, updated in response to ISH4 Action Point 2
28/07/2023	C	FINAL	Third Issue, updated to take account of accepted design changes set out <b>Change Application: Report on Proposed Changes (Document 9.1)</b>
06/09/2023	D	FINAL	Fourth Issue updated in response to ISH Action Point 7, 8 and 9 and in response to ExA Q8.0.2 [PD-015]

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# 1. Introduction

## 1.1 Overview

- 1.1.1 This Construction Traffic Management Plan (CTMP) forms **Appendix 3F (Volume 5, Document 5.3.3F)** in support of **Chapter 12: Traffic and Transport (Volume 5, Document 5.2.12)** of the Environmental Statement (ES) for the Yorkshire Green Energy Enablement (GREEN) Project (hereinafter referred to as Yorkshire GREEN or the 'Project'). This appendix should be read in conjunction with **Chapter 3: Description of the Project (Volume 5, Document 5.2.3)** and **Chapter 12: Traffic and Transport (Volume 5, Document 5.2.12)**.
- 1.1.2 The Project is a proposal by National Grid Electricity Transmission plc (National Grid) to provide a new link on the transmission system by upgrading and reinforcing the electricity transmission system in Yorkshire.
- 1.1.3 The Project would have a direct effect on local roads through crossings of the highway network, works to and adjacent to the highway, and the conveyance of construction traffic on the highway network, resulting in the need for a CTMP.

## 1.2 Purpose of document

- 1.2.1 This CTMP is submitted as a supporting document to the Development Consent Order (DCO) application and would be secured by Requirement 5 of the draft DCO (**Volume 3, Document 3.1**). The document has been updated since an initial draft was prepared to support statutory consultation (as part of the Preliminary Environmental Information Report (PEIR)) and has taken into account design changes and consultation feedback. Engagement has been undertaken with highway authorities whose road networks are affected by the Project, namely North Yorkshire County Council (NYCC), City of York Council (CYC) and National Highways (NH), and engagement is being sought with Leeds City Council (LCC).
- 1.2.2 The purpose of the document is to present the management and mitigation strategy for construction traffic and the road network affected by construction of the Project, with the aim to minimise the likely effects on existing road users during the construction phase. The primary objectives of the 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;
  - ensure the continued monitoring, review and subsequent improvement if required of the CTMP and mitigation measures contained in the CTMP to limit the impacts on the Strategic Road Network (SRN) and Local Road Network (LRN);
  - minimise construction vehicle trips where possible;



- provide a management structure for the management and monitoring of construction traffic; and
- limit the impacts on the natural and built environment.

## 1.3 Structure of the CTMP

1.3.1 The remainder of this 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 CTMP;
- **Section 3: Proposed Accesses** – sets out a description of the proposed accesses during the construction phase and identifies those that will be permanent;
- **Section 4: HGV Routeing Strategy** – sets out the approach to identifying appropriate routeing for construction heavy goods vehicles (HGVs);
- **Section 5: LV Routeing Strategy** – sets out the approach to identifying the routeing of Light Vehicles (LV) during construction;
- **Section 6: Crossing Schedule** – sets out other construction impacts at points where roads are crossed by the Project;
- **Section 7: Mitigation Strategies** – sets out the site-specific mitigation in terms of road closures, diversions and traffic management, and general traffic management/mitigation; and
- **Section 8: Management of the CTMP and enforcements** – sets out the proposed management and monitoring and compliance strategy for the construction of the Project.

## 2. The Project

### 2.1 Introduction

- 2.1.1 This CTMP has been prepared to set out the framework for the management and mitigation of the strategic and local road network related to the construction and implementation works required for the Project, and will be secured by **Requirement 5** of the DCO (**Volume 3, Document 3.1**).

### 2.2 The Project

- 2.2.1 The Order Limits form the boundary of the Project for which development consent is being sought and within which all works would take place. For the purposes of describing the Project location it has been split into six sections, which are also shown on **Figure 1.2, Volume 5, Document 5.4.1**. The detail of the Project is shown on **Figures 3.1 to 3.6, Volume 5, Document 5.4.3** and the key components of the Project can be summarised as follows:

- Section A (Osbalwick Substation): Minor works at the existing Osbalwick Substation comprising the installation of a new circuit breaker and isolator along with associated cabling, removal and replacement of one gantry and works to one existing pylon. All substation works would be within existing operational land.
- Section B (North west of York Area): Works would comprise:
  - reconductoring of 2.4km of the 400kV Norton to Osbalwick (2TW/YR) overhead line and replacement of one pylon on this overhead line.
  - the new 400kV YN overhead line (2.8km), north of the proposed Overton Substation.
  - the new Shipton North and South 400kV cable sealing end compounds (CSECs) and 230m of cabling to facilitate the connection of the new YN 400kV overhead line with the existing Norton to Osbalwick YR overhead line.
  - a new substation (Overton 400kV/275kV Substation) approximately 1km south of Shipton by Beningbrough.
  - two new sections of 275kV overhead line which would connect into Overton Substation from the south (the 2.1km XC overhead line to the south-west and the 1.5km SP overhead line to the south-east).
  - works to 5km of the existing XCP Poppleton to Monk Fryston overhead line between Moor Monkton in the west and Skelton in the east comprising a mixture of decommissioning, replacement and realignment. To the south and south-east of Moor Monkton the existing overhead line would be realigned up to 230m south from the current overhead line and the closest pylon to Moor Monkton (340m south-east) would be permanently removed. A 2.35km section of this existing overhead line permanently removed between the East Coast Mainline (ECML) Railway and Woodhouse Farm to the north of Overton.

- Section C (Moor Monkton – Tadcaster): Works proposed to the existing 275kV Poppleton to Monk Fryston (XC) overhead line comprise replacing existing overhead line conductors, replacement of pylon fittings, strengthening of steelwork and works to pylon foundations.
- Section D (Tadcaster Area): Two new CSECs (Tadcaster East and West 275kV CSECs) and approximately 350m of cable would be installed approximately 3km south-west of Tadcaster and north-east of the A64/A659 junction where two existing overhead lines meet. One pylon on the existing 275kV Tadcaster Tee to Knaresborough (XD) overhead line would be replaced.
- Section E (Tadcaster – Monk Fryston): Works proposed to the existing 275kV Poppleton to Monk Fryston (XC) overhead line would comprise replacing existing overhead line conductors, replacement of pylon fittings, strengthening of steelwork and works to pylon foundations.
- Section F (Monk Fryston Area): A new substation would be constructed to the east of the existing Monk Fryston Substation which is located approximately 2km south-west of the village of Monk Fryston and located off Rawfield Lane, south of the A63. A 1.45km section of the 275kV Poppleton to Monk Fryston (XC) overhead line to the west of the existing Monk Fryston Substation and south of Pollums House Farm would be realigned to connect to the proposed Monk Fryston Substation. East of the existing Monk Fryston Substation the existing 4YS 400kV Monk Fryston to Eggborough overhead line, which currently connects to the existing substation, would be reconfigured to connect to the proposed Monk Fryston Substation.

2.2.2 **Figure 1.2** (and **Figures 3.1 to 3.6**) within **Volume 5, Documents 5.4.1 and 5.4.3** illustrate the proposed Order Limits, which is the maximum extent of land within which the Project may be carried out. Authorised development would include, but not be limited to, the following: new overhead lines, substations and Cable Sealing End Compounds (CSECs) as well as access roads; Public Rights of Way (PRoW) diversions; temporary construction compounds (TCCs) and laydown areas; and the works to existing infrastructure.

2.2.3 During construction, TCCs would be installed at Overton and Monk Fryston Substations as well as at the CSEC locations (seven compounds in total). Access points are required so that vehicles can access the working areas at the pylons, and new permanent access routes would be provided for the construction and operation of the CSECs at Shipton and Tadcaster and the Overton Substation. Temporary diversions of the existing overhead lines would be implemented 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, Volume 5, Document 5.2.3** of the ES.

## 2.3 Construction information relevant to CTMP

2.3.1 The construction methodology for the Project relevant to the CTMP is provided below.

### Installation of access routes

2.3.2 Access routes to work sites would be implemented prior to the commencement of works to provide suitable access for construction plant and traffic. This element of construction would comprise vegetation removal and management if required, construction of access



points off the public highway, inclusion of 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 or temporary bridges to cross watercourses. Various surfaces would be used for the temporary access tracks depending on ground conditions. The types of access routes comprise the following:

- Existing: Use of existing access routes with minimal improvements, such as resurfacing and/or vegetation clearance, if required.
- Panels: 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 lay out panels. This form of access would be typically 3m (with wider areas for passing places two to three panels wide) 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 typically be 4.5m wide, widening to 9m in locations where passing places are required, all within a 12m swathe that accommodates drainage and soil storage.

### **Installation of 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 panels would be used, and for new pylons stone working areas will be used to provide a stable area for material delivery, storage and handling. The working area would be demarcated, and welfare facilities provided as required.
- 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.

### **Working hours and employment proposals**

2.3.4 The core working hours of the project would be as follows:

- 07:00 – 19:00 Monday to Friday;
- 08:00 – 17:00 – Saturday, Sunday and Bank Holidays.

2.3.5 Piling operations will take place only between 0800 and 1700 on Mondays to Fridays and 0900 to 1400 on Saturdays.

2.3.6 The following operations may take place outside the core working hours:

- the jointing of underground cables, with the exception of cable cutting which will take place only during core working hours;
- installation and removal of conductors, pilot wires and associated protective netting across highways, railway lines or watercourses;
- the completion of operations commenced during the core working hours which cannot safely be stopped;
- any highway works requested by the relevant highway authority to be undertaken on a Saturday or a Sunday or outside the core working hours;
- oil processing of transformers or reactors in substation sites;
- the testing or commissioning of any electrical plant installed as part of the authorised development;
- the completion of works delayed or held up by severe weather conditions which disrupted or interrupted normal construction activities;
- start up and close down activities, which may take place one hour immediately prior to or one hour immediately after the core working hours; and
- security monitoring.

2.3.7 The construction of the Project is proposed to occur over a construction period lasting approximately 4.5 years between 2024 and 2028 inclusive.

2.3.8 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 and 2026 as set out in **Chapter 12: Traffic and Transport** of the ES (**Volume 5, Document 5.2.12**).

## 2.4 CTMP Study Area

2.4.1 The Study Area in the CTMP is the same as that presented in **Figure 3F.1** of this document.

2.4.2 The spatial scope of the CTMP is based on the proposed routes for construction traffic generated by the Project, comprising the movement of deliveries, equipment and of construction staff.

2.4.3 Identification of appropriate construction routes takes into consideration the following:

- route restrictions such as weight and height limits;
- existing HGV restrictions; and
- suitability of routes based on a review of road types and widths.

## 3. Proposed Accesses

- 3.1.1 During the construction phase of the Project, temporary access would be required from the public highway network. Some of these will be retained as permanent access points during the operation and maintenance phase to allow routine maintenance and inspection of the CSECs and substations. The management of temporary access during the construction phase is covered within this CTMP.
- 3.1.2 Different construction access designs are proposed for the Project which reflect the volume of traffic movements as well as the physical size of the vehicles anticipated to use the respective access points.
- 3.1.3 Detailed discussions have taken place with NYCC and CYC with regards to the access designs, including the required visibility splays that would need to be provided at the access points which are shown in the **Access, Rights of Way and Public Rights of Navigation Plan (Volume 2, Document 2.7.1 – 2.7.6)**. The approach to access point design is set out in the following sections.

### 3.2 Vehicle classification

- 3.2.1 To understand the nature, type and location of accesses it is key to understand the nature of vehicles that will need to access the Project working areas. A number of vehicle types will be used for the construction of the Project, as set out in **Table 3.1**.

**Table 3.1 – Vehicle classifications**

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



3.2.2 The list of vehicle types provided in **Table 3.1** 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.

### 3.3 Description of Access Point Types

3.3.1 Access points for the construction of the Project would be taken from a range of 'A', 'B', 'C' and Unclassified roads as appropriate to ensure access to all construction locations of the Project. There are two main categories of access point as summarised below.

- Major Construction Access Points – full construction access points which are needed for an extended period of time and will accommodate numerous HGV movements. This includes those access points needed at the new CSECs at Shipton and Tadcaster, the new Monk Fryston and Overton Substations and new overhead line works areas. Some access points will be permanent and where access points have been created through hedge or fence removal hedge reinstatement would not take place but be replaced with 4m gate or fence.
- Minor Construction Access Points – access required to allow for more minor works on the Project such as the delivery and erection of scaffolding, minor earthing works, reconductoring works and other smaller work such as drainage.

3.3.2 There are five main types/designs of construction access point which are described in the following sections. All types of access will need to comply with the required design standards for visibility splays for the speed of road, or temporary traffic management will be required if the standard cannot be achieved. The design standards to be achieved are set out in Design Manual for Road and Bridges<sup>1</sup> (DMRB). Proposals for the access are shown in the **Access, Rights and Way and Public Rights of Navigation Plan, Volume 2, Document 2.7.1 – 2.7.6**. All proposed accesses are within the Order Limits.

#### Existing field gate access

3.3.3 There will be two types of access via an existing field gate:

- For Major Construction Accesses, a bellmouth access will be constructed which will be temporary with the exception of the access routes to the CSECs at Shipton and Tadcaster and the access route to Overton 400/275kV Substation which require permanent access for maintenance access during the operational phase. The existing bellmouth at Monk Fryston will also be modified and widened. **Figure 3F.2** shows the illustrative design for a standard bellmouth which is based on a two-way traffic flow (allowing for simultaneous in and out movements). Smaller one-way bellmouths may also be used where appropriate, such as where there are low construction traffic volumes and and/or there is active management of the access point to control traffic movements in and out of the access. If the access point is to be retained for maintenance to all other aspects, then the bellmouth will be removed, and land reinstated with just a gate retained for access and therefore hedgerow not reinstated.
- For Minor Construction Accesses, existing field gates will be used with minor widening if required.

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<sup>1</sup> Standards For Highways (2022). Design Manual for Roads and Bridges (DMRB). (online) Available at: <https://www.standardsforhighways.co.uk/dmrb/> (Accessed August 2022).

### Existing bellmouth access

3.3.4 Where required, access can be achieved via an existing bellmouth. All of these existing accesses have been reviewed and confirmed as being suitable to accommodate the proposed vehicle types at the time of assessment.

### Access into field

3.3.5 This type of access specifically relates to locations where there is not a field gate, but there is no constraint for access, such as a no kerb or hedgerow, between the highway and the field to be accessed. There will be two types of access dependent on the category:

- for Major Construction Accesses, a bellmouth will be provided based on the illustrative standard design shown in **Figure 3F.2**; or
- for Minor Construction Accesses, vehicles will drive off the public highway into the field.

### New access

3.3.6 New accesses are required where there is no existing access and there is a constraint, such as hedgerow or other vegetation that will need to be removed. At these locations, a bellmouth access will be constructed.

### End of highway

3.3.7 Several of the proposed 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. Locations where access improvements are required are included in the Order Limits for the Project.

## 3.4 Access Locations and Type

3.4.1 **Figure 3F-1** shows all proposed access locations which are also shown in the Access, Rights of Way and Public Rights of Navigation Plan (**Volume 2, Document 2.7.1 – 2.7.6**). **Table 3.2** provides a summary of the access point proposals in terms of access type (whether new or existing), the access category, the works for which access is required, the road access would be taken from and whether a TRO is required. TROs have been included on all new/improved bellmouths and any location with a visibility splay. Existing bellmouths/access points with no proposed modifications and no visibility splays do not require a TRO.

3.4.2 As detailed in **Table 3.2**, it is proposed that HGV access via AP93 during the construction period associated with the construction of pylon SP005 would be limited to six two-way movements over a five day period for the installation of a temporary bridge and a further six two-way movements over another five day period for the removal of a temporary bridge over Hurns Gutter. During the construction period, access for LV trips will also be limited to 15 two way movements over a five day period relating to the installation of the temporary bridge and 15 two way movements over a five day period for the removal of the temporary bridge. The majority of construction traffic relating to the construction of pylon SP005 would instead route via access AP89 and through Overton Substation. Access AP93 would be retained for maintenance purposes during the operational phase of the Project.

**Table 3.2 - Construction Accesses**

<b>Access Point ID</b>	<b>Access Type</b>	<b>Access Category</b>	<b>Works Requiring Access</b>	<b>Road accessed from</b>
AP1	<b>Existing Field Gate</b>	Minor	Pylon earthing works	A162
AP2	<b>New Access Required</b>	Major	Overhead line works/TCC	Rawfield Lane
AP3	<b>Existing Bellmouth</b>	Major	Monk Fryston existing substation works	Rawfield Lane
AP4	<b>Existing Field Gate</b>	Major	Monk Fryston proposed new substation	Rawfield Lane
AP5	<b>New Access Required</b>	Major	Overhead line works/TCC	Rawfield Lane
AP6	<b>Existing Bellmouth</b>	Major	Overhead line works	A63
AP7	<b>Existing Bellmouth</b>	Major	Overhead line works	A63
AP8	<b>End of Highway</b>	Major	Overhead line works	Red Hill Lane
AP9	<b>Existing Bellmouth</b>	Major	Overhead line works	Westfield Lane
AP10	<b>Existing Bellmouth</b>	Major	Overhead line works	Westfield Lane
AP11	<b>Access into Field</b>	Major	Overhead line works	Whitecote Lane
AP12	<b>Access into Field</b>	Minor	Scaffolding erection	Whitecote Lane
AP13	<b>Existing Bellmouth</b>	Major	Overhead line works	B1222
AP14	<b>Existing Field Gate</b>	Major	Overhead line works	B1222
AP15	<b>Existing Bellmouth</b>	Minor	Scaffolding erection	B1223
AP16	<b>Existing Field Gate</b>	Major	Overhead line works	B1222
AP17	<b>Existing Bellmouth</b>	Major	Overhead line works	B1222
AP18	<b>Existing Field Gate</b>	Major	Overhead line works	Laith Staid Lane
AP19	<b>Existing Field Gate</b>	Major	Overhead line works	Laith Staid Lane
AP20	<b>Existing Field Gate</b>	Major	Overhead line works	Coldhill Lane
AP21	<b>Existing Field Gate</b>	Major	Overhead line works	Coldhill Lane
AP22	<b>Access into Field</b>	Major	Overhead line works	Coldhill Lane
AP23	<b>Access into Field</b>	Minor	Scaffolding erection	Coldhill Lane

<b>Access Point ID</b>	<b>Access Type</b>	<b>Access Category</b>	<b>Works Requiring Access</b>	<b>Road accessed from</b>
AP24	<b>Existing Bellmouth</b>	Major	Overhead line works	Coldhill Lane
AP25	<b>Existing Bellmouth</b>	Minor	Scaffolding erection	B1217
AP26	<b>Existing Field Gate</b>	Minor	Scaffolding erection	B1217
AP27	<b>Existing Bellmouth</b>	Major	Overhead line works	B1217
AP28	<b>Existing Bellmouth</b>	Major	Overhead line works	A659 slip
AP29	<b>New Access</b>	Major	Overhead line works	A659
AP30	<b>New Access</b>	Major	Overhead line works/TCC/Cable Sealing End Compound/ Underground Cable	A659
AP31	<b>Existing Bellmouth</b>	Major	Overhead line works	A659
AP32	<b>New Access</b>	Major	Overhead line works	A659
AP33	<b>Existing Field Gate</b>	Major	Overhead line works	Garnet Lane
AP34	<b>Existing Bellmouth</b>	Minor	Cable Sealing End Compound/ Underground Cable	Garnet Lane
AP35	<b>Existing Bellmouth</b>	Minor	Proposed closure and reinstatement of existing wayleave	Garnet Lane
AP36	<b>Existing Field Gate</b>	Minor	Overhead line works	Warren Lane
AP37	<b>Existing Field Gate</b>	Minor	Pylon earthing works	Warren Lane
AP38	<b>Existing Field Gate</b>	Minor	Scaffolding erection	Warren Lane
AP39	<b>Access into Field</b>	Minor	Scaffolding erection	C305
AP40	<b>Existing Bellmouth</b>	Major	Overhead line works	A659
AP41	<b>Existing Field Gate</b>	Major	Overhead line works	A659
AP42	<b>Existing Field Gate</b>	Minor	Scaffolding erection	A659
AP43	<b>Existing Field Gate</b>	Minor	Scaffolding erection	A659
AP44	<b>Existing Bellmouth</b>	Major	Overhead line works	A659
AP45	<b>Existing Bellmouth</b>	Major	Overhead line works	A659

<b>Access Point ID</b>	<b>Access Type</b>	<b>Access Category</b>	<b>Works Requiring Access</b>	<b>Road accessed from</b>
AP46	<b>Existing Field Gate</b>	Minor	Scaffolding erection	A659
AP47	<b>Existing Bellmouth</b>	Major	Overhead line works	A659
AP48	<b>Existing Field Gate</b>	Major	Overhead line works	Wighill Lane
AP49	<b>Existing Field Gate</b>	Major	Overhead line works	Wighill Lane
AP50	<b>Existing Field Gate</b>	Major	Overhead line works	Wighill Lane
AP51	<b>Existing Field Gate</b>	Minor	Scaffolding erection	Wighill Lane
AP52	<b>Existing Field Gate</b>	Major	Overhead line works	Wighill Lane
AP53	<b>Existing Field Gate</b>	Major	Overhead line works	Wighill Lane
AP54	<b>Existing Bellmouth</b>	Major	Overhead line works	York Road
AP55	<b>Existing Bellmouth</b>	Major	Overhead line works	Wighill Lane
AP56	<b>Existing Bellmouth</b>	Major	Overhead line works	Wighill Lane
AP57	<b>Existing Bellmouth</b>	Major	Overhead line works	Wighill Lane
AP58	<b>Existing Bellmouth</b>	Major	Overhead line works	Healaugh Lane
AP59	<b>Existing Field Gate</b>	Major	Overhead line works	Healaugh Lane
AP60	<b>Existing Bellmouth</b>	Major	Overhead line works	B2144 Wetherby Road
AP61	<b>Existing Field Gate</b>	Major	Overhead line works	B2144 Wetherby Road
AP62	<b>Existing Bellmouth</b>	Major	Overhead line works	Tockwith Road
AP63	<b>Existing Field Gate</b>	Major	Overhead line works	Tockwith Road
AP64	<b>Existing Field Gate</b>	Major	Overhead line works	Tockwith Road
AP65	<b>Existing Bellmouth</b>	Major	Overhead line works	Atterwith Lane
AP66	<b>Existing Bellmouth</b>	Major	Overhead line works	Atterwith Lane
AP67	<b>Existing Bellmouth</b>	Major	Overhead line works	Marston Lane
AP68	<b>Existing Bellmouth</b>	Major	Overhead line works	Marston Lane
AP69	<b>Existing Bellmouth</b>	Major	Overhead line works	Marston Lane
AP70	<b>Existing Field Gate</b>	Minor	Scaffolding erection	Marston Lane



<b>Access Point ID</b>	<b>Access Type</b>	<b>Access Category</b>	<b>Works Requiring Access</b>	<b>Road accessed from</b>
AP71	<b>Existing Field Gate</b>	Major	Overhead line works	Marston Lane
AP72	<b>Existing Field Gate</b>	Major	Overhead line works	A59
AP73	<b>End of Highway</b>	Major	Overhead line works	Red House Lane
AP74	<b>Existing Field Gate</b>	Major	Overhead line works	Church Lane
AP75	<b>Existing Field Gate</b>	Minor	Scaffolding erection	Church Lane
AP76	<b>Existing Field Gate</b>	Major	Overhead line works	Church Lane
AP77	<b>Existing Field Gate</b>	Major	Overhead line works	Church Lane
AP78	<b>Existing Bellmouth</b>	Major	Overhead line works	Common Croft Lane
AP79	<b>Existing Field Gate</b>	Minor	Pylon earthing works	Stripe Lane
AP80	<b>Existing Field Gate</b>	Major	Overhead line works	Stripe Lane
AP81	<b>Existing Field Gate</b>	Major	Overhead line works	Stripe Lane
AP82	<b>Existing Bellmouth</b>	Major	Overhead line works	Overton Road
AP83	<b>Existing Field Gate</b>	Minor	Scaffolding erection	Overton Road
AP84	<b>Existing Field Gate</b>	Major	Overhead line works	Overton Road
AP85	<b>Existing Bellmouth</b>	Major	Overhead line works	Overton Road
AP86	<b>Existing Field Gate</b>	Major	Overhead line works	Overton Road
AP87	<b>New Access</b>	Major	Overhead line works	Overton Road
AP88	<b>Existing Field Gate</b>	Major	TCC – Exit only to south on Overton road for Overhead Line Works	Overton Road
AP89	<b>Existing Field Gate</b>	Major	Overton Substation/ Overhead line works/TCC	Overton Road
AP90	<b>Access into Field</b>	Major	TCC	Overton Road
AP91	<b>Existing Field Gate</b>	Major	Overhead line works	A19
AP92	<b>Existing Field Gate</b>	Minor	Minor drainage works	A19

<b>Access Point ID</b>	<b>Access Type</b>	<b>Access Category</b>	<b>Works Requiring Access</b>	<b>Road accessed from</b>
AP93	<b>Existing Bellmouth</b>	Major	Temporary bridge installation/removal <sup>2</sup>	A19
AP94	<b>Existing Field Gate</b>	Major	Overhead line works	Corban Lane
AP95	<b>Existing Field Gate</b>	Major	TCC/Overhead line works	Corban Lane
AP96	<b>Access into Field</b>	Major	Overhead line works	U1720
AP97	<b>Access into Field</b>	Major	Overhead line works	U1720
AP98	<b>New Access</b>	Major – permanent Bellmouth	Overhead line works/TCC/Cable Sealing End Compound/Underground Cable	U1720
AP99	<b>Existing Bellmouth</b>	Minor	Pylon earthing works	U1720
AP100	<b>Existing Bellmouth</b>	Major	Overhead line works	Bull Lane
AP101	<b>Existing Bellmouth</b>	Major	Overhead line works	Plainville Lane
AP102	<b>Existing Field Gate</b>	Minor	Pylon earthing works	Plainville Lane
AP103	<b>Existing Field Gate</b>	Minor	Pylon earthing works	Murton Way
AP104	<b>Existing Bellmouth</b>	Major	Existing Osbaldwick Substation works	Murton Way

### 3.5 Order Limits and visibility standards

3.5.1 Following statutory consultation, detailed design meetings were undertaken with CYC and NYCC to agree the design of the access points including compliance with the design standards set out in the DMRB and the locations where these are required. It was agreed with both highways authorities that it would be appropriate to define visibility splay lengths based on traffic speed surveys. CYC agreed to undertake speed surveys at key locations on their road network, which were conducted on 7 April 2022, and the results were provided to National Grid. For locations in the NYCC area, speed surveys were commissioned by National Grid. The results of these speed surveys were used to identify the visibility splay requirements at each access point which have been based on

<sup>2</sup> LV and HGV access. During the construction period, HGV and LV access limited to movements for the construction and removal of the temporary bridge over Hurns Gutter. HGV movements in the order of 6 two-way HGV movements for construction (over a 5 day period) and 6 two-way movements for removal (over a 5 day period). LV movements in the order of 15 two-way movements for construction (over a 5 day period) and 15 two-way movements for removal (over a 5 day period).

Section 3 of DMRB, *CD123 Geometric design of at-grade priority and signal controlled junctions*, August 2020<sup>3</sup> and Table 2.10 of DMRB *CD109 Highway link design*<sup>4</sup>. Visibility splays require coppicing of any vegetation to below 1m and 1m offset to allow for vegetation clearance works within the visibility splays and sufficient working area.

- 3.5.2 Where it is proposed to use an existing field gate access or farm track and providing the required visibility splay lengths are not appropriate (for example, for ecological reasons such as the presence of woodlands), then temporary traffic management measures would be used to ensure safe access. None are currently proposed, but should there be a need following detailed design work, the traffic management measures would be agreed with the relevant highway authority where necessary.
- 3.5.3 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 any visibility splays. The visibility splays achievable at each access point are shown in **Table 3.3**.

**Table 3.3 - Visibility Splays provided on Yorkshire GREEN Project**

Access ID	Visibility Right	Visibility Left
AP2	160m	160m
AP4	160m	160m
AP5	160m	160m
AP6	215m	121m
AP7	123m	215m
AP9	120m	120m
AP10	120m	120m
AP11	160m	160m
AP14	160m	68m
AP16	160m	160m
AP17	160m	160m
AP18	70m	70m
AP19	70m	70m
AP20	160m	160m
AP21	160m	160m

<sup>3</sup> Standards for Highways (2021).CD123 Geometric Design of At Grade Priority and Signal Controlled Junctions (online). (Accessed October 2022).

<sup>4</sup> Standards for Highways (2021).CD109 Highway Link Design. (online). (Accessed October 2022).

<b>Access ID</b>	<b>Visibility Right</b>	<b>Visibility Left</b>
AP22	160m	160m
AP26	215m	215m
AP28	106m	N/A
AP29	215m	215m
AP30	215m	215m
AP31	215m	215m
AP32	215m	215m
AP33	160m	160m
AP34	160m	160m
AP41	120m	120m
AP44	120m	120m
AP45	215m	215m
AP47	215m	215m
AP50	215m	215m
AP52	215m	215m
AP53	215m	215m
AP54	90m	90m
AP55	160m	160m
AP56	160m	160m
AP61	215m	215m
AP62	90m	90m
AP63	215m	215m
AP64	215m	215m
AP65	160m	160m
AP69	215m	215m
AP70	90m	90m
AP71	40m	90m

Access ID	Visibility Right	Visibility Left
AP72	215m	215m
AP74	160m	160m
AP76	160m	160m
AP77	160m	160m
AP78	70m	70m
AP80	70m	70m
AP81	70m	70m
AP82	41m	70m
AP84	70m	70m
AP85	66m	70m
AP86	90m	90m
AP87	90m	90m
AP89	90m	90m
AP90	90m	58m
AP91	215m	215m
AP94	90m	90m
AP95	90m	90m
AP96	90m	90m
AP97	90m	90m
AP98	90m	90m
AP101	70m	70m

### Abnormal Indivisible Loads

3.5.4 During the construction phase, there is a requirement for delivery of abnormal loads to the substations, which includes Super Grid Transformers (SGTs). In addition, there is a need for cable drums to be delivered to the CSEC sites, relevant TCCs, Overton Substation and Monk Fryston Substation. The cable drums would constitute AILs as they cannot be broken down into smaller loads for transport. The routing for AIL deliveries are set out below. **Annex 3F.1** provides a summary of the swept path assessment (SPA) which has informed the routing.



- 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 Tee East and West CSECs – access via A1(M) – A63 – A659; and
  - Cable Drum delivery to the Shipton CSECs – access via A1(M) – A64 – A1237 – B1363 – Corban Lane.
- 3.5.5 The movement of abnormal vehicles is controlled by the Road Vehicles (Authorisation of Special Types) General Order 2003<sup>5</sup> and subject to management and prior agreement with the Police and National Highways
- 3.5.6 The National Highways Electronic Service Delivery for Abnormal Loads (ESDAL) system will be used to notify National Highways, the local highway authorities and the Police of AIL movement details, times, types and route. The ESDAL system will be used to notify the aforementioned authorities prior to the departure of each AIL. Leaflet drops will be undertaken at key sections along the AIL delivery routes to inform local residents.
- 3.5.7 A full road condition survey of any proposed AIL delivery route will be undertaken both before and after delivery. The method of the surveys will be discussed and agreed with the relevant highway authorities prior to being undertaken.

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<sup>5</sup> UK Government (2003). The Road Vehicles (Authorisation of Special Types) General Order 2003, (online). Available at: <https://www.legislation.gov.uk/ukxi/2003/1998/contents/made> (Accessed October 2022).

## 4. HGV Routeing Strategy

### 4.1 Introduction

4.1.1 This section sets out the HGV Routeing Strategy which has been developed to minimise the impact of HGVs during the construction of the Project.

### 4.2 HGV local road routes issues/constraints

4.2.1 A review of the local road network between the SRN and the accesses has been undertaken to identify issues and constraints that have been used to inform the routeing strategy and construction traffic management measures. These are summarised in **Table 4.1**.

**Table 4.1 – Issues and constraints management of HGV local road routes**

No.	Issue/constraint	HGV Routeing Strategy and Management
1	Sensitive, built-up areas (villages, towns)	Avoidance where possible due to impacts on communities and amenity. Settlements avoided include South Milford, Micklefield, Saxton, Bramham, Clifford, Boston Spa, Tadcaster Centre, Healaugh, Tockwith, Long Marston, Rufforth, Askham, Angram, Nether Poppleton, Central York, and Haxby.
2	Congested urban centres	Avoidance where possible due to impacts on traffic congestion and communities. Settlements include the built-up urban centres of Tadcaster, Wetherby, Monk Fryston, York, Boston Spa and Sherburn in Elmet.
3	Narrow rural roads	Avoidance of unsuitable small single-track roads. Short sections of single-track roads required for construction HGV access are as follows: <ul style="list-style-type: none"><li>• 197m of Westfield Lane;</li><li>• 2.1km of Laith Staid Lane;</li><li>• 2.3km of Spen Common Road/Warren Lane;</li><li>• 1.1km of Healaugh Lane;</li><li>• 341m of Red House Lane;</li><li>• 1.4km of Newlands Lane/Common Croft Lane;</li><li>• 2.1km of Overton Lane;</li></ul>

No.	Issue/constraint	HGV Routeing Strategy and Management
		<ul style="list-style-type: none"> <li>• 683m of Stripe Lane; and</li> <li>• 672m of the U1720.</li> </ul>
4	Limited visibility at temporary construction access points.	A limited number of temporary construction access points will not have appropriate visibility splays and will be managed and regulated using appropriate traffic management measures. At these locations, construction traffic movements will be very low
5	Impacts on pedestrians (PRoW), cyclists (National Cycle Network, Sustrans and local routes) and equestrians (local routes).	A Public Rights of Way Management Plan (PRoWMP) has been prepared and is provided as <b>Volume 5, Document 5.3.3G</b> .
6	Temporary construction traffic impacts on the capacity of junctions and links on the construction routes (SRN and local highway network).	The assessment of construction traffic generation from the Project on is set out in <b>Chapter 12: Traffic and Transport (Volume 5, Document 5.2.12)</b> . The environmental measures required to mitigate the impact of construction traffic are also provided.

### 4.3 Overview of HGV Routeing Strategy

- 4.3.1 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 access points are managed and maintained by NYCC, LCC and CYC.
- 4.3.2 Access to each of the temporary construction access points would utilise strategic routes as far as practically possible before routing onto local roads.

### 4.4 Strategic routes

- 4.4.1 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.
- 4.4.2 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; and
- A64/A166/A1079 – Access to York from the west (and Osbaldwick).

4.4.3 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 sections of the SRN;
- 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.

4.4.4 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.

4.4.5 The strategic access routes described are illustrated in **Figure 3F.3**.

## 4.5 Local routes

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

4.5.2 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 Routeing 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).

4.5.3 Based on the parameters outlined above and in **Table 4.1**, and the relevant embedded environmental measures outlined in **Table 12.10** of **Chapter 12: Traffic and Transport (Volume 5, Document 5.2.12)**, the resultant HGV Routeing Strategy comprises 24 local HGV routes which are illustrated in **Figure 3F.4** and summarised in **Table 4.2**.

**Table 4.2 – Local road routes from SRN to construction access points**

Access from SRN	Access Point ID	Route via local road network
A1(M) J42	AP1	A1(M) – A63 East – A162
	AP2, AP3, AP4, AP5	A1(M) – A63 East – A63/A162 roundabout - Rawfield Lane Left in/left out at A63/Rawfield Lane - vehicles route past Rawfield Lane and u-turn at A63/A162 roundabout to turn left into Rawfield Lane
	AP6, AP7	A1(M) – A63 East
	AP8	A1(M) – A63 East – Butts Lane
	AP9, AP10	A1(M) – A63 West – B1222 – Westfield Lane
	AP11, AP12	A1(M) – A63 West – B1222 – Whitecote Lane
	AP13, AP14, AP15, AP16, AP17	A1(M) – A63 West – B1222
	AP18, AP19	A1(M) – A63 West – B1222 – St Johns Lane – Laith Staid Lane
	AP20, AP21	A1(M) - M1 – B1217 – Copley Lane Coldhill Lane (south)
	AP22, AP23, AP24	A1(M) - M1 – B1217 – Copley Lane - Coldhill Lane (north)
AP25, AP26, AP27	A1(M) - M1 – B1217	
A1(M) J44	AP36, AP37, AP38	A1(M)/A64 Junction – Paradise Way – Spen Common Lane – Warren Lane
	AP28, AP29, AP30, AP31, AP32, AP39, AP40, AP41, AP42, AP43, AP44, AP45, AP46, AP47	A1(M) – A64 – A659



<b>Access from SRN</b>	<b>Access Point ID</b>	<b>Route via local road network</b>
	AP33, AP34, AP35	A1(M) – A64 – A659 – Garnet Lane
A1(M) J45	AP48, AP49, AP50, AP51, AP52, AP53	A1(M) – A168 – Walton Road – Wetherby Road – Wighill Lane – Church Lane (south)
	AP54, AP55, AP56, AP57	A1(M) – A168 – Walton Road – Wetherby Road – Wighill Lane – Church Lane (North) – Wighill Lane
A1(M) J46	AP58, AP59	A1(M) – B1224 (York Road – Wetherby Road) - Healaugh Lane
	AP60, AP61	A1(M) – B1224 (York Road – Wetherby Road)
A1(M) J47	AP62, AP63, AP64,	A1(M) – A59 – Marston Lane – Atterwith Lane – Tockwith Road
A64		A64 – A1237 – A59 - Marston Lane – Atterwith Lane – Tockwith Road
A19		A19 North– A1237 – A59 - Marston Lane – Atterwith Lane – Tockwith Road
A1(M) J47	AP65, AP66,	A1(M) – A59 – Marston Lane – Atterwith Lane
A64		A64 – A1237 – A59 - Marston Lane – Atterwith Lane
A19		A19 North– A1237 – A59 - Marston Lane – Atterwith Lane
A1(M) J47	AP67, AP68, AP69, AP70, AP71	A1(M) – A59 – Marston Lane
A64		A64 – A1237 – A59 - Marston Lane
A19		A19 North– A1237 – A59 - Marston Lane
A1(M) J47	AP72	A1(M) – A59
A64		A64 – A1237 – A59
A19		A19 North– A1237 – A59
A1(M) J47	AP73	A1(M) - A59 – Church Lane – Red House Lane
A64		A64 – A1237 – A59 – Church Lane – Red House Lane
A19		

<b>Access from SRN</b>	<b>Access Point ID</b>	<b>Route via local road network</b>
		A19 North – A1237 – A59 – Church Lane – Red House Lane
A1(M) J47	AP74, AP75, AP76, AP77	A1(M) - A59 – Church Lane
A64		A64 – A1237 – A59 – Church Lane
A19		A19 North – A1237 – A59 – Church Lane
A1(M) J47	AP78	A1(M) - A59 – Newlands Lane
A64		A64 – A1237 – A59 – Newlands Lane
A19		A19 North – A1237 – A59 – Newlands Lane
A1(M) J47	AP79, AP80, AP81	A1(M) - A59 – A1237 – A19 – Stripe Lane
A64		A64 – A1237 – A19 – Stripe Lane
A19		A19 North – Stripe Lane
A1(M) J47	AP82, AP83, AP84, AP85, AP86, AP87, AP88, AP89, AP90	A1(M) - A59 – A1237 – A19 – Overton Road
A64		A64 – A1237 – A19 – Overton Road
A19		A19 North – Overton Road
A1(M) J47	AP91, AP92, AP93	A1(M) - A59 – A1237 – A19
A64		A64 – A1237 – A19
A19		A19 North
A1(M) J47	AP94	A1(M) - A59 – A1237 – B1363 – Corban Lane
A64		A64 – A1237 – B1363 – Corban Lane
A19		A19 North - A1237 – B1363 – Corban Lane
A1(M) J47	AP95, AP96, AP97, AP98, AP99	A1(M) - A59 – A1237 – B1363 – Corban Lane - U1720
A64		A64 – A1237 – B1363 – Corban Lane -U1720
A19		

<b>Access from SRN</b>	<b>Access Point ID</b>	<b>Route via local road network</b>
		A19 North - A1237 – B1363 – Corban Lane - U1720
A1(M) J47	AP100, AP101, AP102	A1(M) - A59 – A1237 – B1363 – Corban Lane - Plainville Lane – Bull Lane
A64		A64 – A1237 – B1363 – Corban Lane - Plainville Lane – Bull Lane
A19		A19 North - A1237 – B1363 – Corban Lane - Plainville Lane – Bull Lane
A1(M) J47	AP103, AP104	A1(M) – A59 – A1237 - A1079 – Osbaldwick Road – Murton Way
A64		A64 – A1079 - Osbaldwick Road – Murton Way
A19		A19 – A1237 - A1079 – Osbaldwick Road – Murton Way

# 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 This chapter sets out how the LV Routeing Strategy has been developed.

### LV construction staff traffic

5.1.3 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.

5.1.4 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 or 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 inter-site construction traffic

5.1.5 This element of the LV construction traffic generation would compromise 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.

5.1.6 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, an estimation of the construction traffic generated by the Project has been carried out. The construction traffic generation estimation has been applied to the anticipated 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 (Volume 5, Document**

5.2.12) 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 The LV Routeing 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 3F.5** sets out the locations of the three sections used to inform construction staff distribution; and
- LV inter-site 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 5.2**. This was undertaken using journey planning software and considering any local constraints.

### Construction staff traffic distribution

5.2.4 To estimate the construction staff traffic movements into and out of the TCCs per day, a detailed distribution matrix has been developed. 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 3F.5** 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 Order Limits. The distribution of traffic in the Monk Fyston 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 3F.6** 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	Section 1	Section 2	Section 3
	Monk Fyston Substation TCC	Tadcaster CSECs TCC	Shipton CSECs and Overton Substation TCC
	Access Point 1-27	Access Points 28-61	Access Points 62-104
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%



Entry/exit points from highways network Study Area scope	Section 1	Section 2	Section 3
	Monk Fryston Substation TCC	Tadcaster CSECs TCC	Shipton CSECs and Overton Substation TCC
	Access Point 1-27	Access Points 28-61	Access Points 62-104
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 (at the start and end of the day) and staff vehicles are proposed to be permitted to access TCCs and sites at their own discretion based on the day's work schedule (which could involve 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 inter-site 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 3F.7** and summarised in **Table 5.2**.

**Table 5.2 - LV construction traffic distribution**

<b>Temporary construction compound</b>	<b>Access Point ID</b>	<b>Route</b>
Section 1 - Monk Fryston (APs 1-27)		
	AP1	Rawfield Lane – A63 – A162
	AP3, AP4	Located on Rawfield Lane
	AP6, AP7	Rawfield Lane – A63
	AP8	Rawfield Lane – Butts Lane
Monk Fryston Substation TCC (AP2)	AP9, AP10	Rawfield Lane – A63 – Westfield Lane
	AP11, AP12	Rawfield Lane – A63 – B1222 – Whitecote Lane
Monk Fryston OHL TCC (AP5) Both off Rawfield Lane - left in/left out at A63/ Rawfield Lane	AP13, AP14, AP15, AP16, AP17	Rawfield Lane – A63 – B1222
	AP18, AP19	Rawfield Lane – A63 – B1222 – St John’s Lane, Laith Staid Lane
	AP20, AP21	Rawfield Lane – A63 - A656 – B1217 – Copley Lane – Coldhill Lane (south)
	AP22, AP23, AP24	Rawfield Lane – A63 - A656 – B1217 – Copley Lane – Coldhill Lane (north)
	AP25, AP26, AP27	Rawfield Lane – A63 - A656 – B1217
Tadcaster (Accesses 28 – 61)		
	AP28, AP29, AP31, AP39, AP40, AP41, AP42, AP43, AP44, AP45, AP46, AP47	All Accessed from another location the A659
	AP33, AP34, AP35	A659 – Garnet Lane
Tadcaster CSECs TCC (AP32)	AP36, AP37, AP38	A659 – Unnamed Road North of Garnet Lane – Toulston Lane – Warren Lane
Tadcaster OHL TCC (AP30) Both off A659	AP48, AP49, AP50, AP51, AP52, AP53	A659 – A64 – A1(M) North – A168 – Wetherby Road – Wighill Lane – Church Lane (south)
	AP54, AP55, AP56, AP57	A659 – A64 – A1(M) North – A168 – Wetherby Road – Wighill Lane – Church Lane (north)
	AP58, AP59	A659 – A64 – A1(M) North – B1224 (York Road – Wetherby Road) – Healaugh Lane
	AP60, AP61	A659 – A64 – A1(M) North – B1224 (York Road – Wetherby Road)

Temporary construction compound	Access Point ID	Route
Overton (Access Points 62 – 93)		
Overton Substation TCC (AP89)	AP62, AP63, AP64	Overton Road – A19 – A1237 – A59 – Marston Lane – Atterwith Lane – Tockwith Road
Overton OHL TCC (AP90)	AP65, AP66	Overton Road – A19 – A1237 – A59 – Marston Lane – Atterwith Lane
Both off Overton Road	AP67, AP68, AP69, AP70, AP71	Overton Road – A19 – A1237 – A59 – Marston Lane
	AP72	Overton Road – A19 – A1237 – A59
	AP73	Overton Road – A19 – A1237 – A59 – Church Lane - Red House Lane
	AP74, AP75, AP76, AP77	Overton Road – A19 – A1237 – A59 – Church Lane
	AP78	Overton Road – A19 – A59 - A1237 – Newlands Road
	AP79, AP80, AP81	Overton Road – A19 – Stripe Lane
	AP82, AP83, AP84, AP85, AP86, AP87, AP88	All accessed from another location on Overton Road
	AP91, AP92, AP93	Overton Road – A19
	Shipton (Access Points 94 – 104)	
Shipton CSEC TCC (AP98)	AP94	U1720 - Corban Lane
Shipton OHL TCC (AP98)	AP95, AP96, AP97, AP98, AP99	All accessed from another location on the U1720
Both accessed off U1720	AP100, AP101, AP102	U1720 - Corban Lane – Plainville Road - Bull Lane
	AP103, AP104	U1720 - Corban Lane – B1363 North – A1237 – A64 – A1079 – Osbaldwick Link Road – Murton Way

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 within the Study Area.

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# 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 overhead line crossings of the local and strategic highways network as well as undergrounding of a 11kV cable and proposals for rail crossings. There are no underground cable elements of the Project that need to cross the 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 and other routes with public access. This is covered in a separate PRowMMP (**Volume 5, Document 5.3.3G**) 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 32 highways crossing locations have been identified within the 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 and road closures during the main construction works. At all these locations traffic management by way of a short rolling roadblock will be needed to install the netting in these scaffolding locations. This will be sought by means of traffic regulation order (TRO) under the DCO (as will all other required traffic management where works are directly off, or on the public highway). The only location where an overnight rolling roadblock is not proposed is at Stripe Lane where conductor works may not be required. As such, at this stage, alternative traffic management has been identified.
- 6.2.3 **Table 6.1** below details all 32 crossing locations as shown in **Figure 3F.8** 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 road crossings**

<b>Road Crossing Point</b>	<b>Road Name</b>	<b>Crossing Management</b>	<b>Local Authority</b>
RD1	Rawfield Lane, U1038	Scaffold and netting	NYCC
RD2	Rawfield Lane, U1038	Scaffold and netting	NYCC
RD3	Rawfield Lane, U1038	Scaffold and netting	NYCC
RD4	A63	Scaffold and netting	NYCC
RD5	A63	Scaffold and netting	NYCC
RD6	Westfield Lane, U1288	Scaffold and netting	NYCC
RD7	Whitecote Lane, C230	Scaffold and netting	NYCC
RD8	B1222	Scaffold and netting	NYCC
RD9	U1092	Scaffold and netting	NYCC
RD10	Coldhill Lane, C311	Scaffold and netting	NYCC
RD11	Coldhill Lane, U785	Scaffold and netting	NYCC
RD12	B1217	Scaffold and netting	NYCC
RD13	Warren Lane	Scaffold and netting	LCC
RD14	A64	Scaffold and netting	NYCC
RD15	Leeds Road, A659	Scaffold and netting	NYCC
RD16	Leeds Road, A659	Scaffold and netting	NYCC
RD17	Garnet Lane, C305	Scaffold and netting	NYCC
RD18	Roman Road, A659	Scaffold and netting	NYCC
RD19	A659	Scaffold and netting	NYCC
RD20	Wighill Lane, C288	Scaffold and netting	NYCC
RD21	Main Street, C286	Scaffold and netting	NYCC
RD22	Wetherby Road, B2144	Scaffold and netting	NYCC
RD23	Tockwith Road, C273	Scaffold and netting	NYCC
RD24	Roman Road, A59	Scaffold and netting	NYCC
RD25	Church Lane, U3396	Scaffold and netting	NYCC



Road Crossing Point	Road Name	Crossing Management	Local Authority
RD26	Overton Road, U1724	Scaffold and netting	NYCC
RD27	Stripe Lane, U1724	Stop/Go boards if required	NYCC
RD28	Overton Road, U1724	Scaffold and netting	NYCC
RD29	A19	Scaffold and netting	NYCC
RD30	Corban Lane	Scaffold and netting	CYC
RD31	U1720	Scaffold and netting	NYCC
RD32	Plainville Lane	Scaffold and netting	CYC

### 6.3 Rail network crossing schedule

- 6.3.1 All rail crossings are currently proposed to be managed through a means of crossing protection during conducting works, installation of overhead conductors or the dismantling of overhead conductors which will allow the movement of trains beneath. Co-ordination with Network Rail will be required on the timing or availability of track possessions and any restrictions to enable the required scaffolding to be erected. The most likely timing would be overnight track possessions which will need to be scheduled with Network Rail in advance of them being required.
- 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 3F.9**.
- 6.3.3 **Table 6.2** provides details on the five rail crossings.

**Table 6.2 – Management of rail crossings**

Rail 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

- 6.3.4 The alignment of the Project requires two crossings of the River Ouse between XCP008 and XCP009 and between XC420 and XC421 where conductor works are required to string the conductors on the new overhead line and for the dismantling of the existing line. This will be managed through temporary stopping up of navigation rights, which will likely take place overnight for a short period (potentially an hour) for approximately eight

times over the duration of the Project. This will be agreed in consultation with the Canal and River Trust.

- 6.3.5 All navigable watercourse crossings are proposed to be managed through a means of crossing protection during reconductoring works which should allow for the continued use of the watercourse during these periods.

# 7. 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 to allow for implementation of traffic management works that are required to be scheduled around other ongoing works in the highway.
- 7.1.3 The proposed traffic-related mitigation measures relating to the construction phase of the Project are detailed in the following **Sections 7.2** and **7.3**. These measures cover site-specific issues, 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 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 highway crossings. Construction impacts that may require temporary traffic management include but are not limited to:
  - all construction access points requiring construction works such as bellmouths, and crossing 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 and road widening.
- 7.2.4 All temporary traffic management implementation plans would need to be agreed with NH, CYC, NYC 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<sup>6</sup> (as necessary).
- 7.2.5 Site specific temporary traffic management arrangements will be produced at the detailed design stage for the bellmouths and temporary traffic management arrangements as required. The detailed plans and temporary traffic management implementation dates will be agreed with the relevant highway authority.

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<sup>6</sup> UK Government (1984). Road Traffic Regulation Act 1984 (online). Available at: <https://www.legislation.gov.uk/ukpga/1984/27/contents> (Accessed October 2022).

- 7.2.6 Site specific temporary traffic management arrangements will be implemented with respect to AP93 from the A19 at New Farm Cottages to ensure that traffic required to construct pylon SP005 is routed via Overton Substation.
- 7.2.7 This CTMP provides flexibility for HGV construction traffic to route to pylon XC521 via AP7 and AP8. National Grid will inform the relevant highway authority should the use of AP7 be confirmed. Should AP8 continue to be utilised for HGV construction traffic, National Grid will seek to agree with the relevant highway authority any specific management measures in this location, for example, use of Banksmen if required (as per paragraphs 7.2.2 to 7.2.5 and Section 7.3 of this CTMP).

## 7.3 General construction traffic management/mitigation

### Traffic signage

#### *Access route and point signing*

- 7.3.1 Temporary signage would be erected along construction traffic routes on the local road network to provide directional routeing information for construction vehicles, to ease navigation between the SRN and the proposed accesses.
- 7.3.2 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.
- 7.3.3 Where necessary warning signs at “short cuts” and “rat runs” would be erected to remind construction vehicles drivers to utilise the prescribed construction traffic routes (for example, at Station Lane off of the A19 in Shipton by Beningbrough as identified by the Parish Council).

#### *Access road signage*

- 7.3.4 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 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 **PRoWMP (Volume 5, Document 5.3.3G)**.

#### *Other signage*

- 7.3.5 All signage would be provided in accordance with Traffic Signs Regulations and General Directions 2016 (TSRGD)<sup>7</sup> published by the DfT. Signage to be erected includes:
- instructions for users of NCN65 of the proposed diversion; and
  - traffic warning signs with contact details of the relevant contractors so the public can request information/updates.

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<sup>7</sup> UK Government (2016). Traffic Signs Regulations and General Directions 2016 (online). Available at: <https://www.legislation.gov.uk/ukxi/2016/362/contents/made> (Accessed October 2022).

## HGV and LV construction vehicle records

7.3.6 All HGV and LV construction vehicle movement associated with the Project would be registered 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. If necessary, appropriate action will be taken to address poor driver behaviour by contractors engaged on this project.

## Banksmen or presence of qualified personnel at the access

7.3.7 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 (Volume 5, Document 5.3.3G)**. Qualified personnel would also be provided at other sensitive locations where conflict with the construction vehicles may arise, to be identified by the contractor.

## Exceptional circumstances

7.3.8 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 agreed routes. Exceptional circumstances are defined as one or more of the following:

- 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 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.

## Cleaning of vehicles

7.3.9 Wheel washing/rumble strips will be provided as required, and appropriate road sweeping employed to keep the public highways clear to prevent debris from being transferred off the site onto the road.

## Highway condition surveys

7.3.10 Highway condition surveys of access points would be undertaken before construction, 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.

7.3.11 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 (DMS)**

7.3.12 The contractor will be required to have a 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**

7.3.13 Information packs will be provided to all staff driving vehicles on the Project by the final construction contractors that are used by 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; and
- CTMP contacts (emergency and non-emergency).

7.3.14 Information packs and communications details will be shared with relevant highway authorities ahead of any construction works if requested.



# 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 CTMP objectives are met, and that it is continually monitored and reviewed.
- 8.1.2 An overarching transport coordination officer (TCO) will be appointed by National Grid to implement the CTMP and each principal contractor will be required to appoint a TCO to liaise with the overarching TCO.
- 8.1.3 The overarching TCO will be employed prior to commencement of the works and will have the following transport related responsibilities:
- monitor contractor obligations under the CTMP and liaison with contractors TCOs;
  - liaise with and report to the local highway authorities and National Highways on mitigation and remedial measures as required;
  - resolve issues and problems through the liaison with relevant stakeholders; and
  - liaise with National Grid's Lands Officers and the contractor's Agricultural Liaison Officers to discuss any concerns from landowners, land occupiers and residents regarding construction access outside of the public highway and develop measures to resolve these issues where required.

## 8.2 Monitoring and Compliance Strategy

- 8.2.1 The overarching TCO and 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. The approach to monitoring and compliance is set out in the following sections.

### Compliance

- 8.2.2 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

- 8.2.3 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 CTMP.
- 8.2.4 National Grid will require that the appointed contractor's disciplinary procedures incorporate the Project commitments, including this CTMP, and these items are reflected in the contract between National Grid and the relevant contractor.

## Royal Mail Management and Mitigation

- 8.2.5 National Grid have considered feedback from Royal Mail during the development of this CTMP and have included the following measures in the CTMP in respect to feedback received:
1. Royal Mail is notified by National Grid or its contractors one month in advance on any proposed road closures / diversions / alternative access arrangements, and hours of working related to such measures; and
  2. If road closures / diversions are proposed, National Grid or its contractors liaise with Royal Mail one month in advance to identify and make available alternative highway routes for operational use, where possible.
- 8.2.6 It should be noted that as set out in **Section 7.2** above it is not proposed that any road closures and any associated diversions would be required for this Project, therefore National Grid does not anticipate the measures 1 and 2 being required.

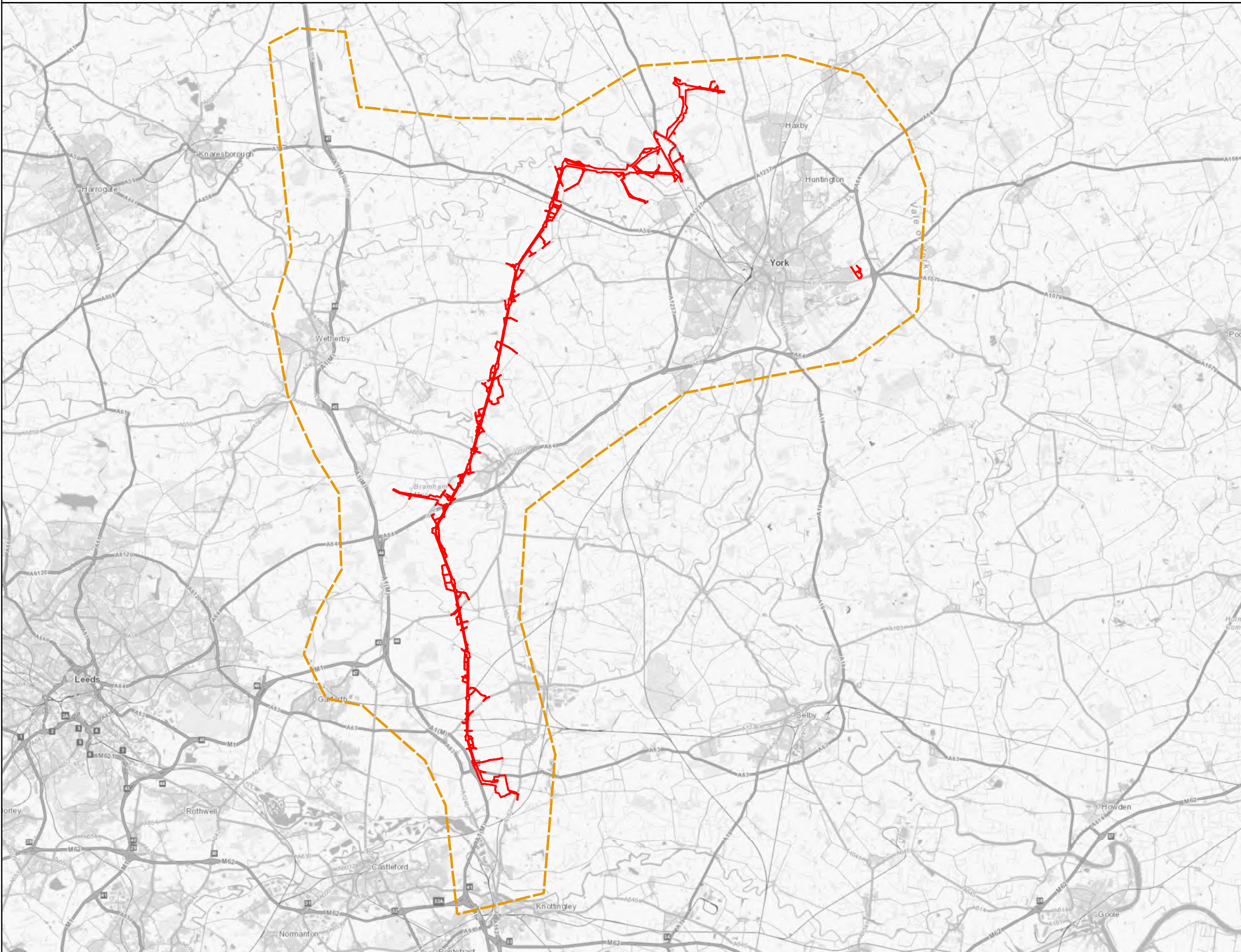




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.1 Construction Traffic Management Plan Study area

**Legend**

- Order Limits
- Study Area

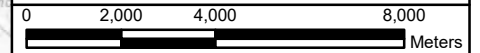


**Notes**

This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 454,052.29 Sheet Y Centroid Coordinate: 442,697.66



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A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC
Issue	Date	Remarks	Drawn	Checked	Approved

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.1  
 CONSTRUCTION TRAFFIC  
 MANAGEMENT PLAN STUDY AREA



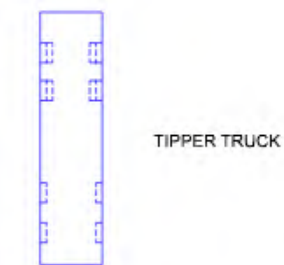
**Figure Number**  
 FIGURE 3F.1

**Drawing Reference**  
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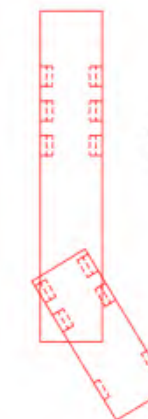
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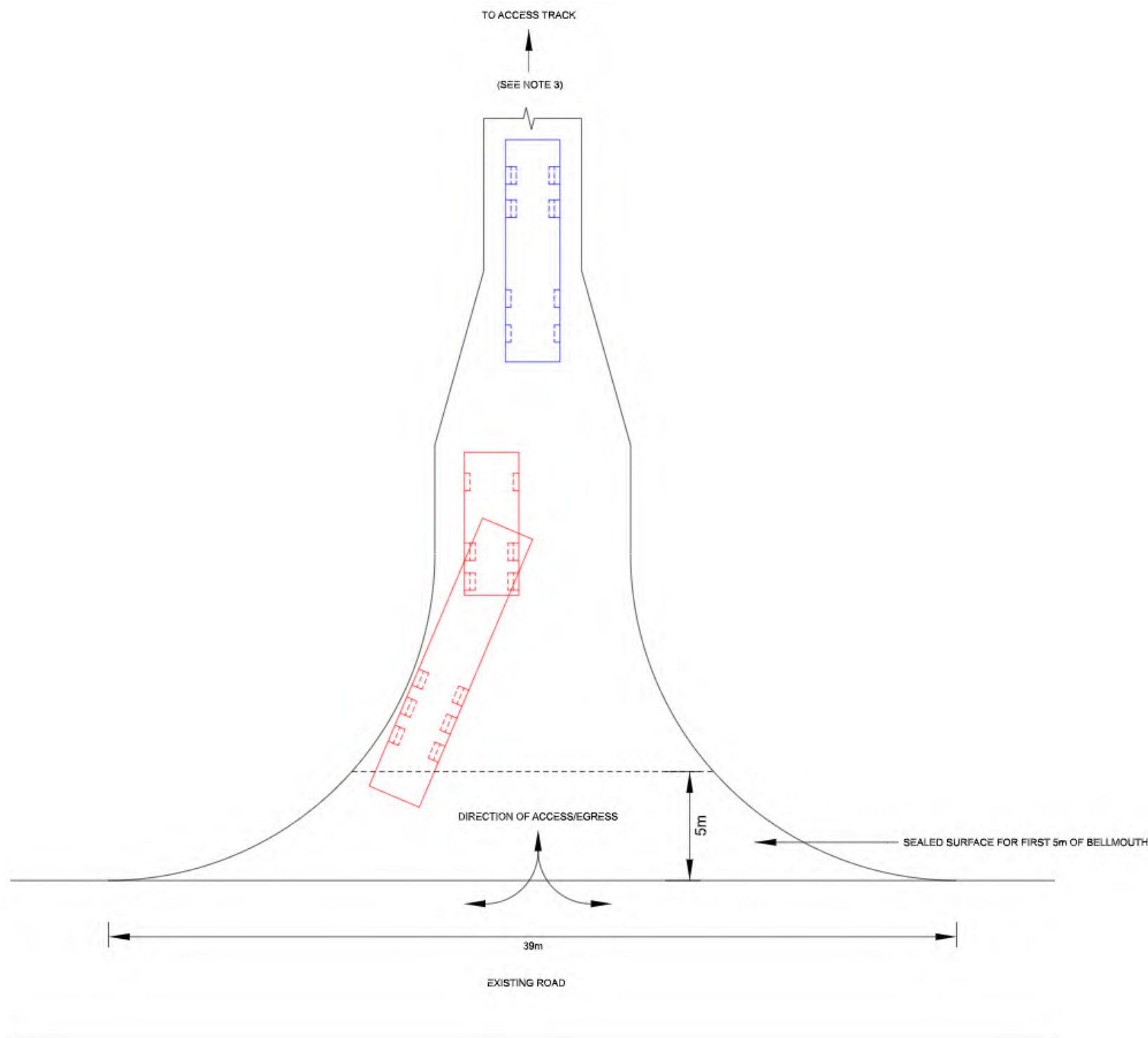
**Legend**



TIPPER TRUCK



ARTICULATED LOW LOADER



**Notes**

1. ALL DIMENSIONS ARE INDICATED IN METRES (m) UNLESS NOTED OTHERWISE
2. THIS DRAWING IS SCALED AT PAPER SIZE A0, THEREFORE ANY PRINTS TAKEN AT SMALLER SIZES WILL AFFECT ACCURACY OF THE MEASUREMENT UNITS AND SHOULD NOT BE SCALED AGAINST.
3. BELLMOUTH DESIGN HAS BEEN BASED ON TD41/95 LAYOUT 6 - RURAL ACCESS, OF THE DESIGN MANUAL FOR ROADS & BRIDGES (DMRB).
4. BELLMOUTH SIZES HAVE BEEN DESIGNED AS SUCH TO ALLOW CONSTRUCTION VEHICLES TO PARK WITHIN THE BELLMOUTH, MINIMISING THE IMPACT ON PUBLIC TRAFFIC.
5. BELLMOUTH AND ACCESS TRACK ARE TYPICAL. SITE SPECIFIC DESIGNS WILL BE REQUIRED.
6. THIS DRAWING SHOWS TYPICAL BELLMOUTH CONSTRUCTION, WHICH WILL BE LOCATED AT THE INTERSECTION OF AN ACCESS TRACK AND PUBLIC HIGHWAY.
7. AREA FOR FENCING AND DRAINAGE DETAILS TO BE ADDED SUBJECT TO SITE SPECIFIC DESIGN TO PREVENT WATER DRAINING ON TO PUBLIC HIGHWAY.
8. FOR ADDITIONAL DETAIL ON THE PLAN SUITES, PLEASE REFER TO DOCUMENT 2.3 PLAN GUIDANCE DOCUMENT, LOCATED IN VOLUME 2 OF THE DCO.

A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC
Issue	Date	Remarks	Drawn	Checked	Approved

Title  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.2  
 PROPOSED CONSTRUCTION  
 BELLMOUTH DESIGN



Figure Number	FIGURE 3F.2			
Drawing Reference	806503-WOOD-0257			
Scale	Sheet Size	Sheet	Issue	
1:160,000	A3	SHEET 1 OF 1	A	

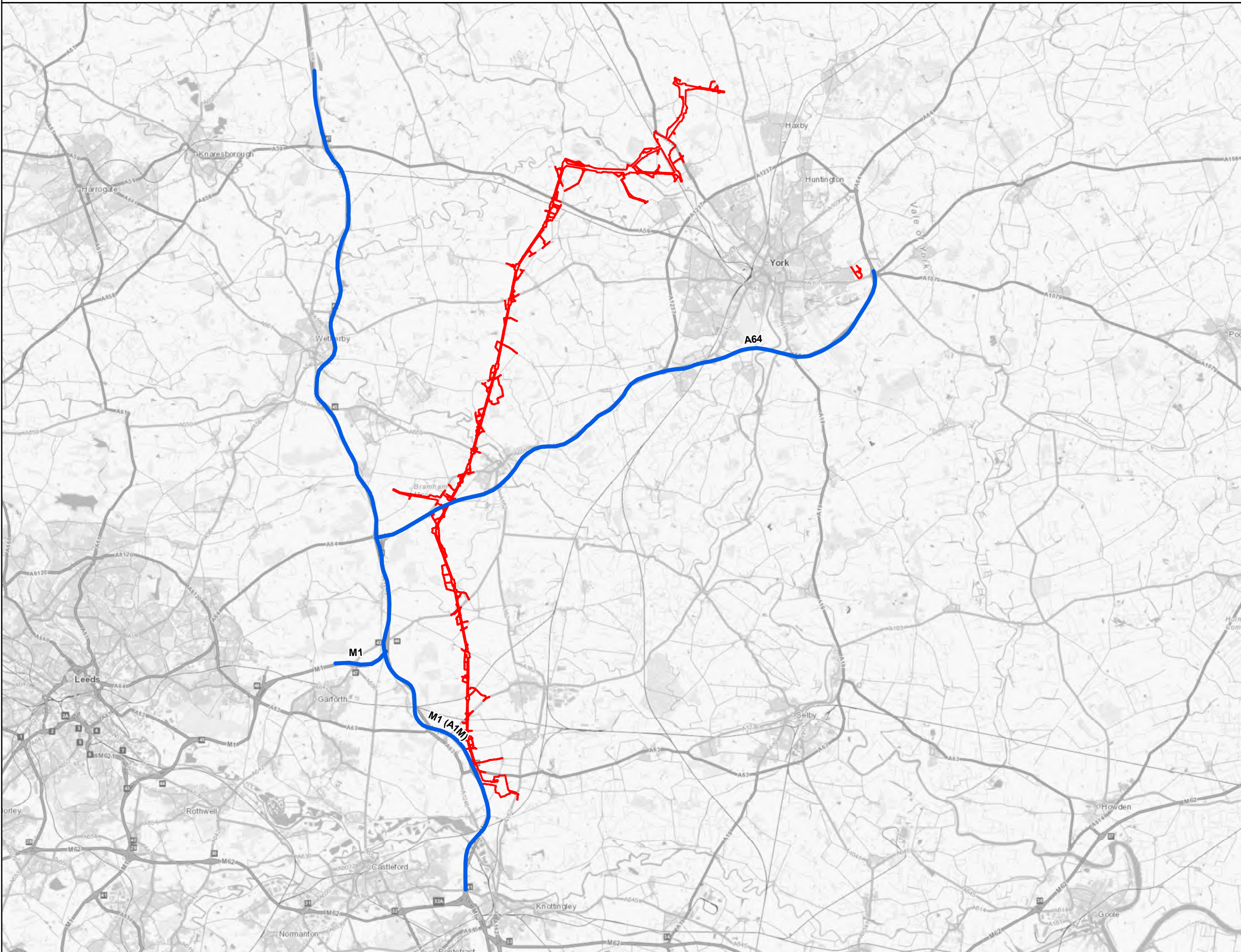




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.3 Strategic Access Routes

**Legend**

- Order Limits
- Strategic Road Network

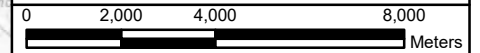


**Notes**

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Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 454,052.29 Sheet Y Centroid Coordinate: 442,697.66



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A	1 NOV 22	FOR DCO SUBMISSION	SUTET	DIMMR	CHADC
Issue	Date	Remarks	Drawn	Checked	Approved

**Title**

5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.3  
 STRATEGIC ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.3

**Drawing Reference**  
 806503-WOOD-0258

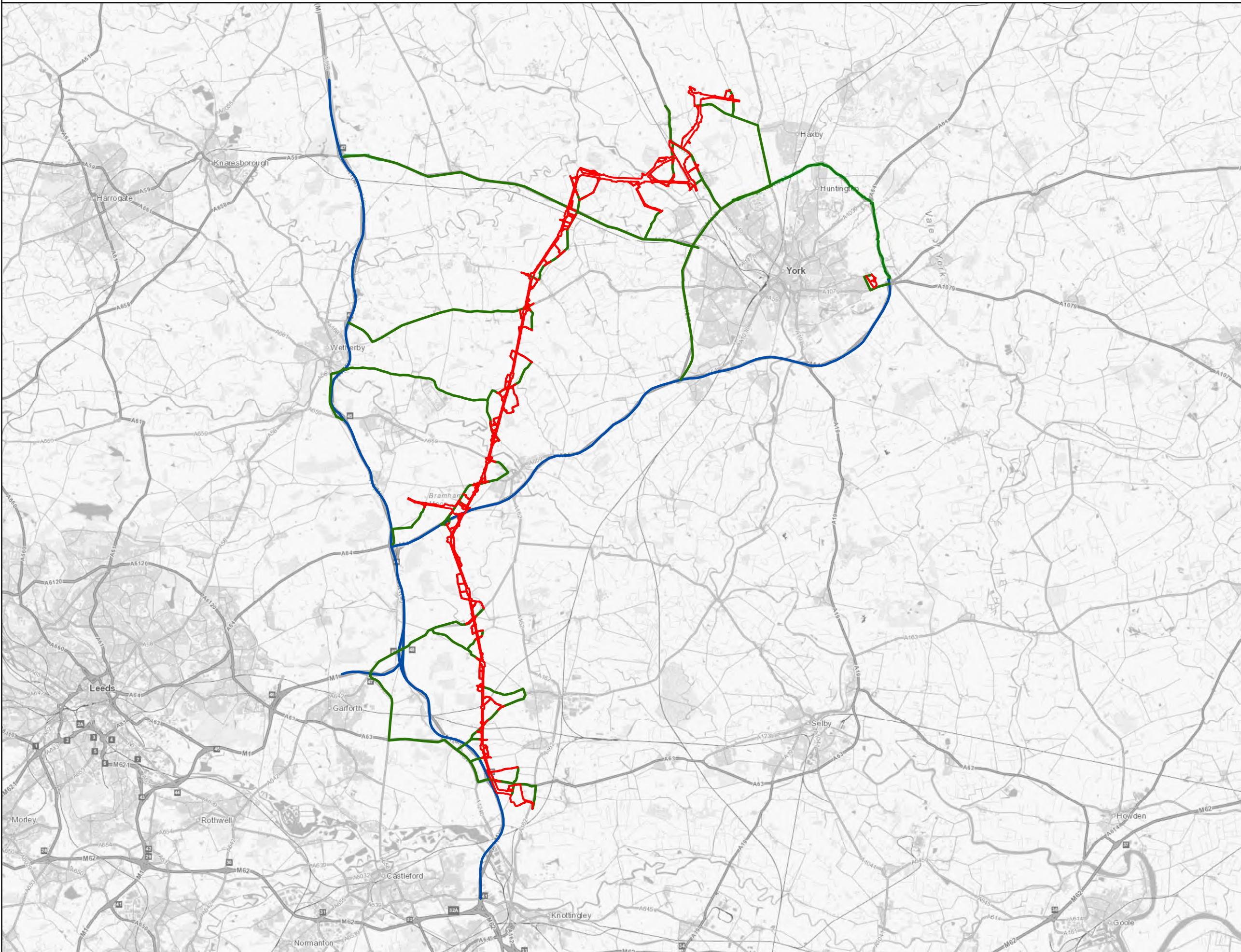
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National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes: Overview

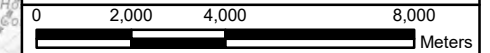
- ▭ Order Limits
- ▬ Local HGV Access
- ▬ Strategic Road Network



**Notes**  
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Issue	Date	Remarks	Drawn	Checked	Approved

**Title**  
 5.4.3, ES CHAPTER 3  
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 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.4

**Drawing Reference**  
 806503-WOOD-0259

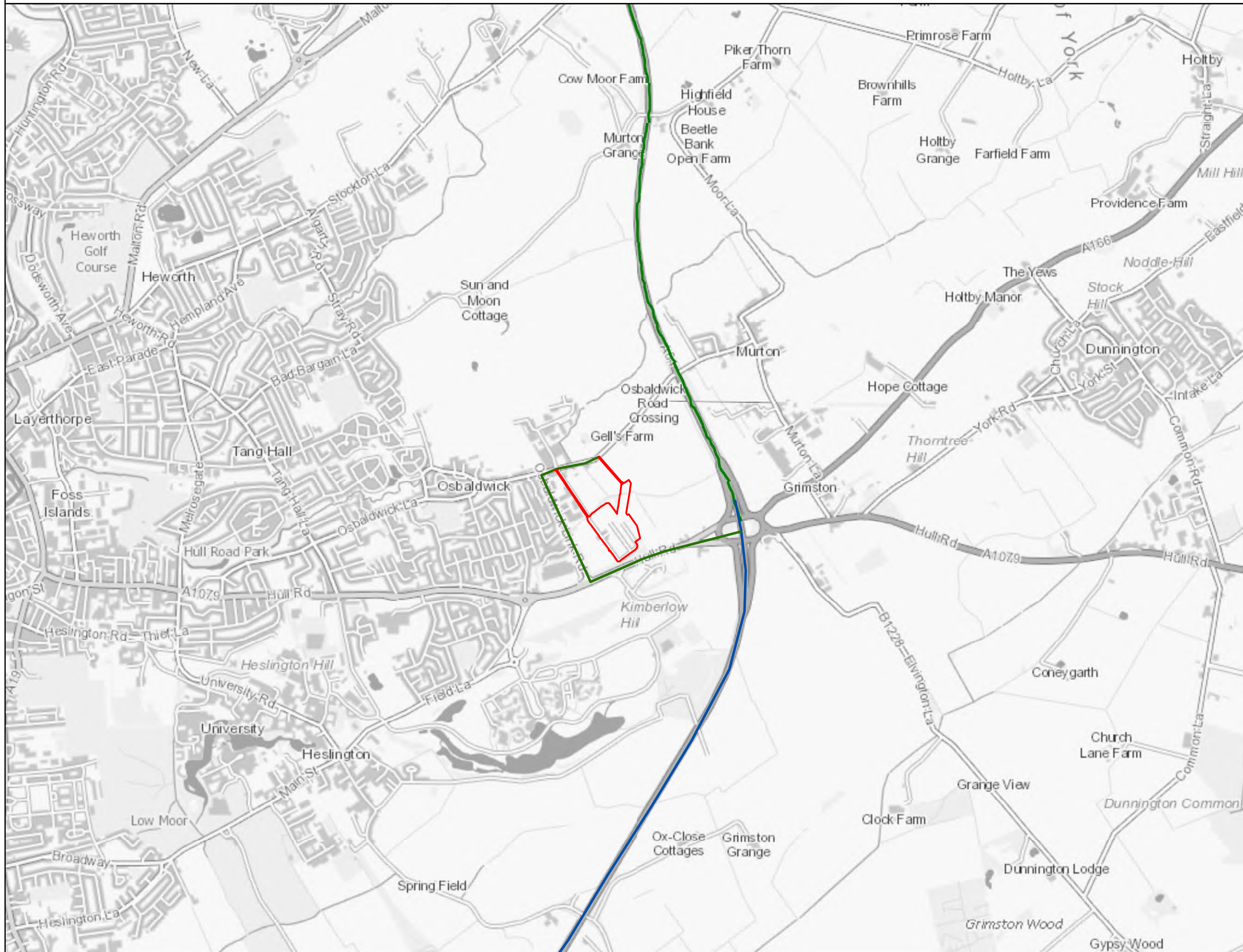
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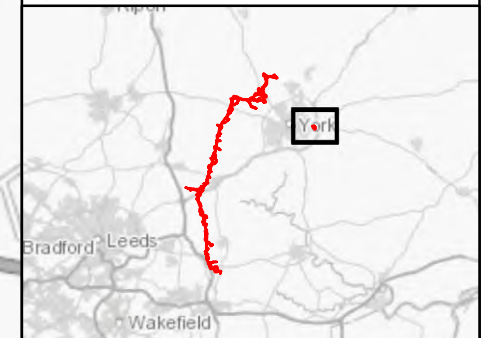


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

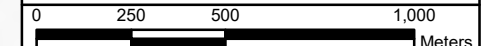
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Issue	Date	Remarks	Drawn	Checked	Approved
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**Title**  
 5.4.3, ES CHAPTER 3  
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 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

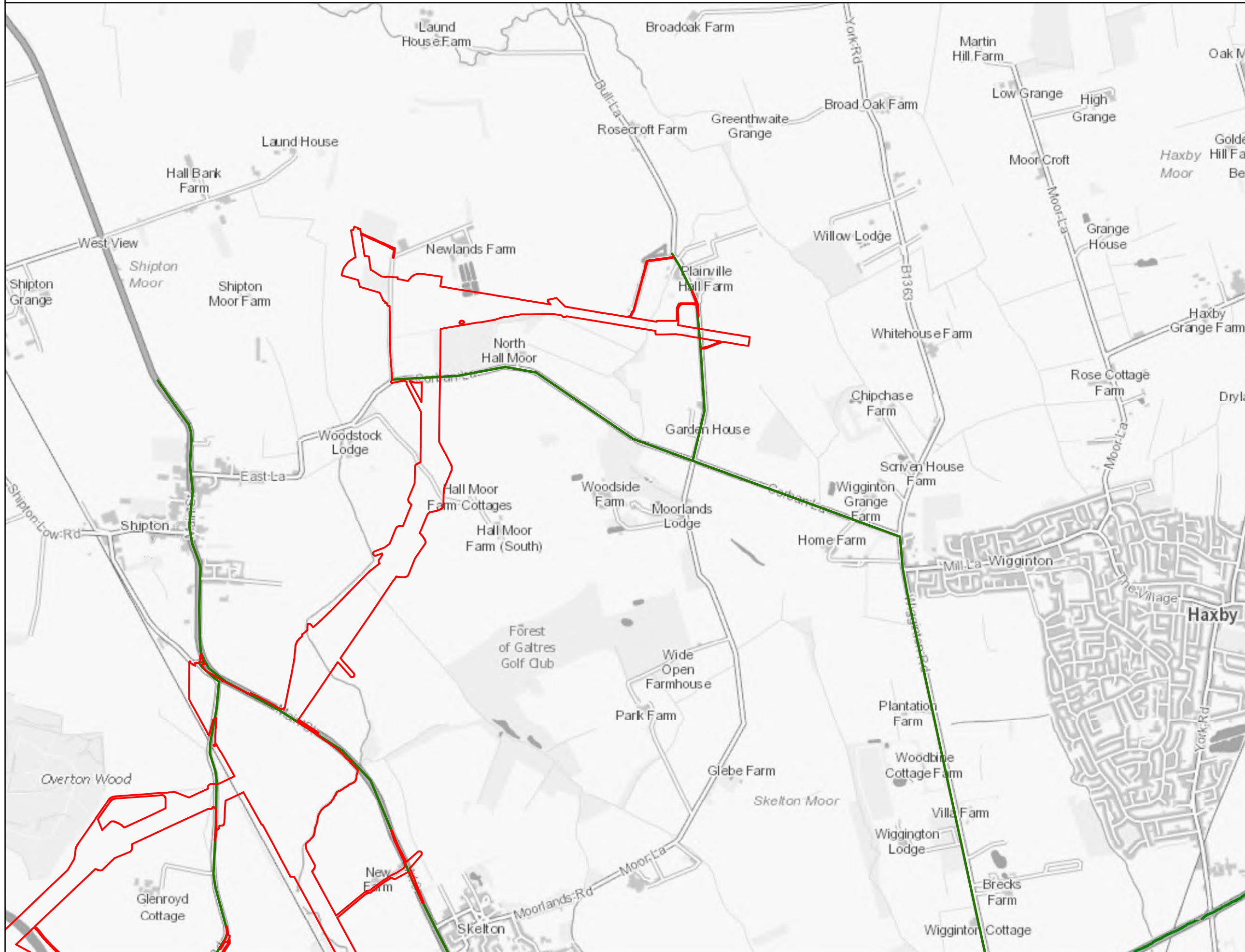
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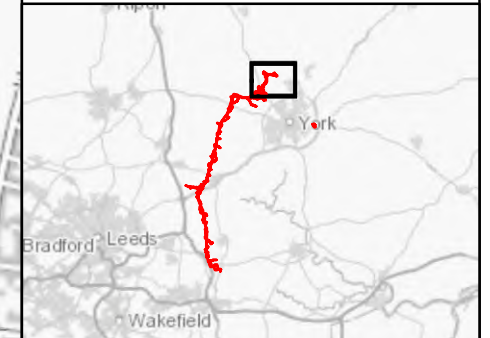


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

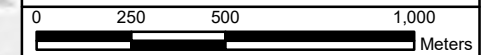
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- Strategic Road Network



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Issue	Date	Remarks	Drawn	Checked	Approved
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 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

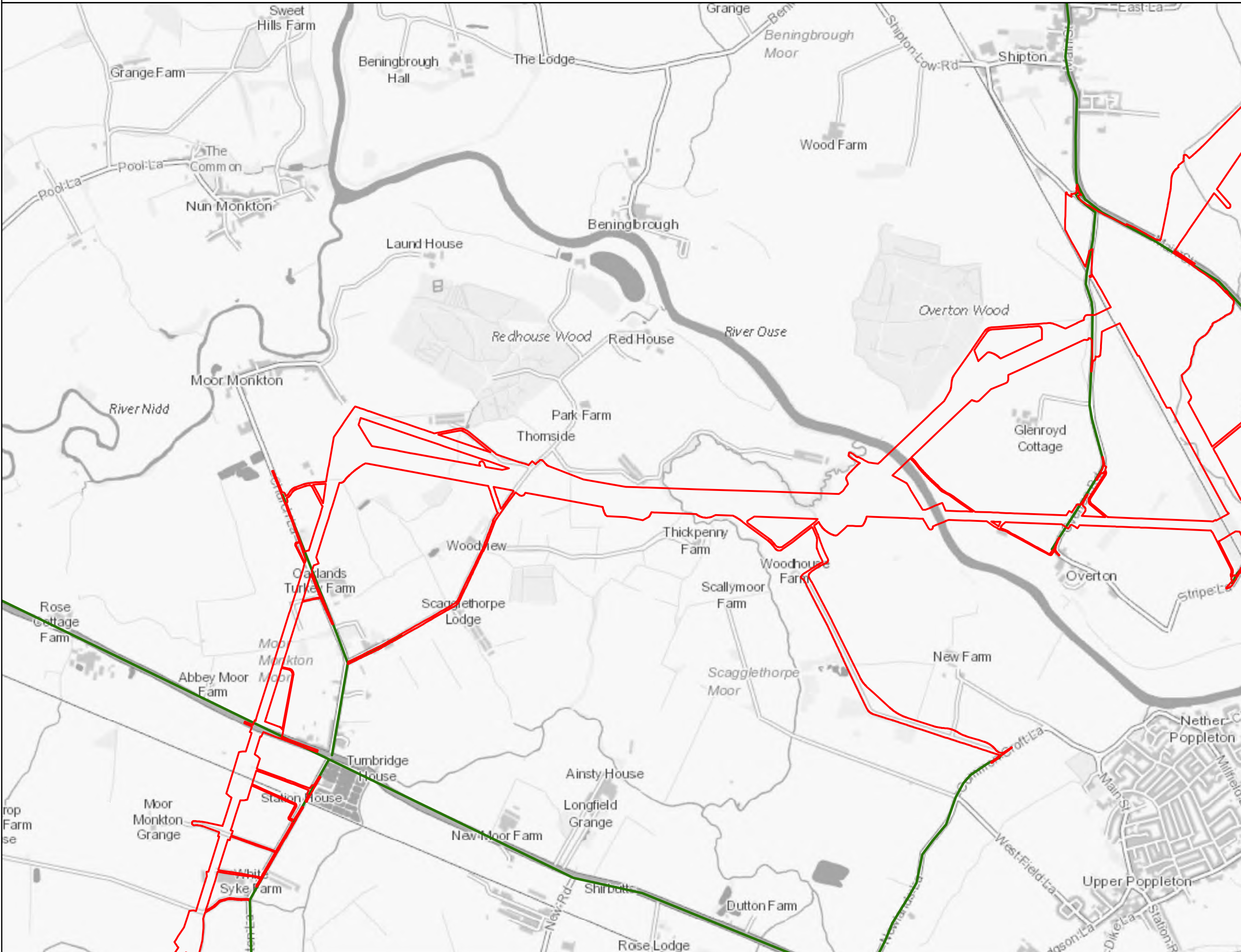
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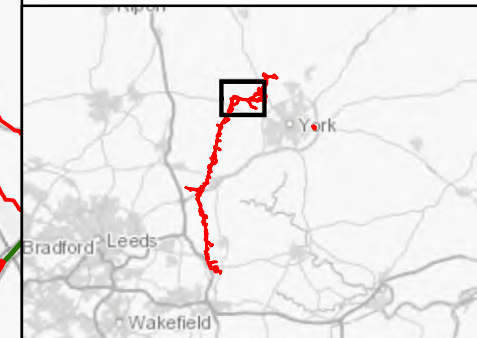


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

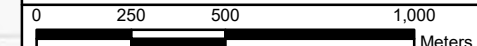
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Issue	Date	Remarks	Drawn	Checked	Approved
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**Title**  
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 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

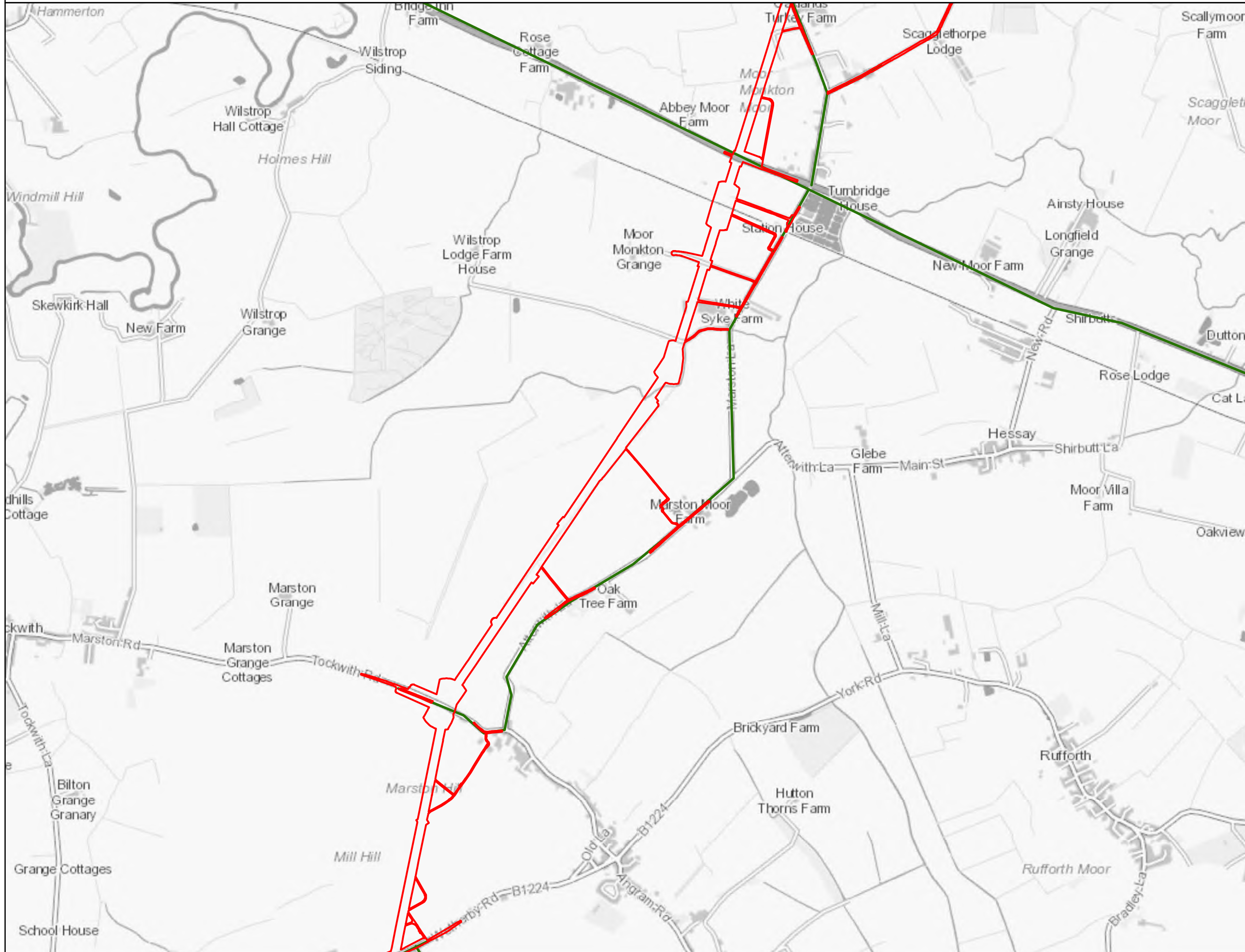
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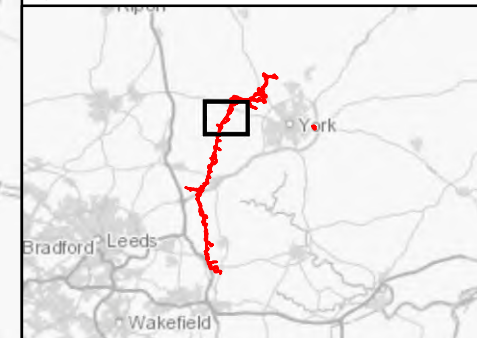


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

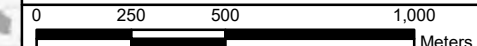
- ▭ Order Limits
- Local HGV Access
- Strategic Road Network



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Issue	Date	Remarks	Drawn	Checked	Approved

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.4

**Drawing Reference**  
 806503-WOOD-0259

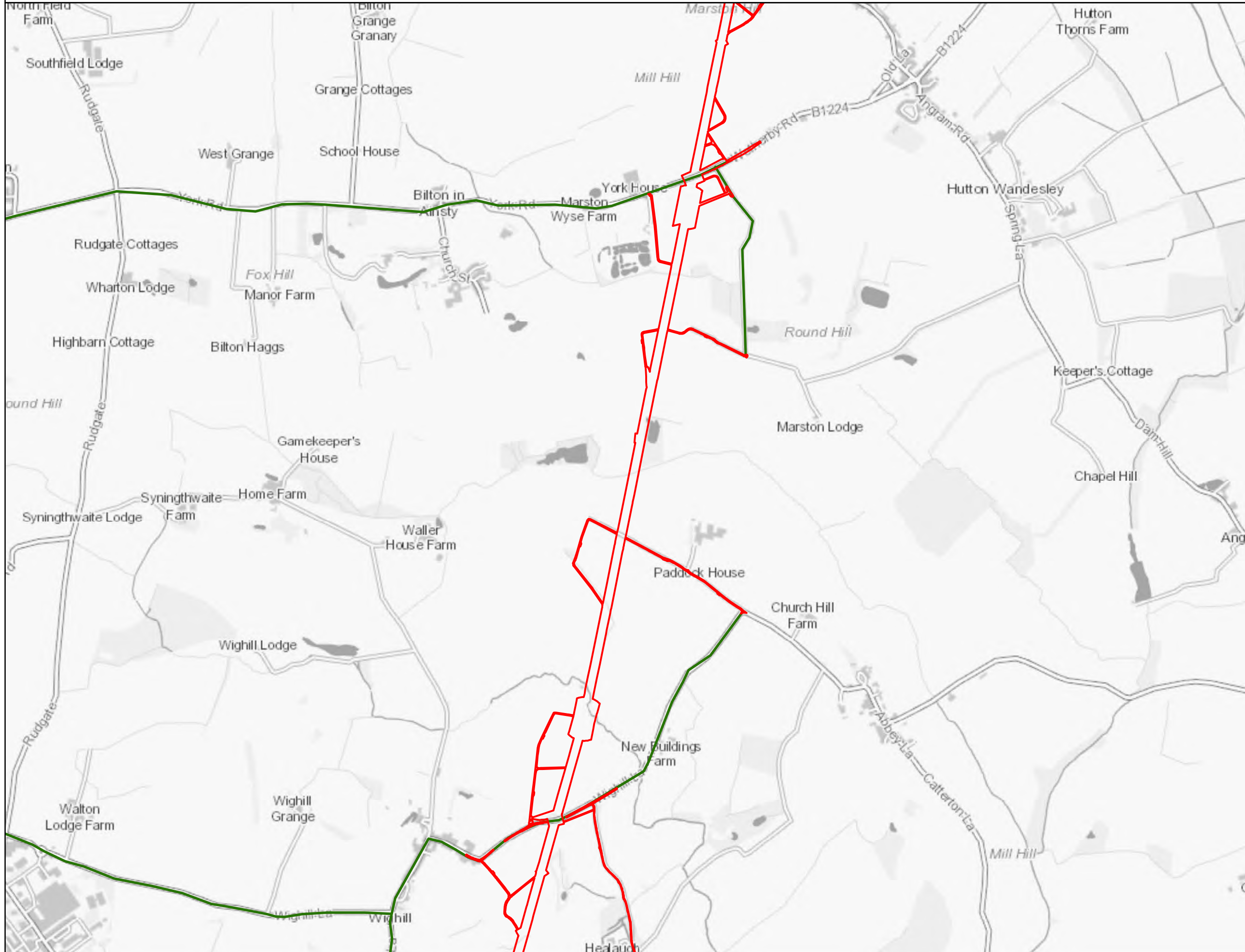
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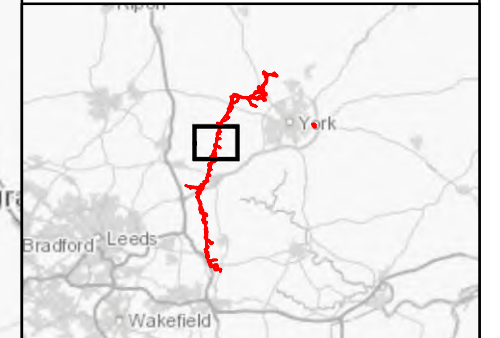


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

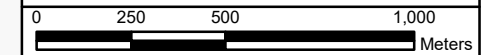
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- Local HGV Access
- Strategic Road Network



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
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 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES



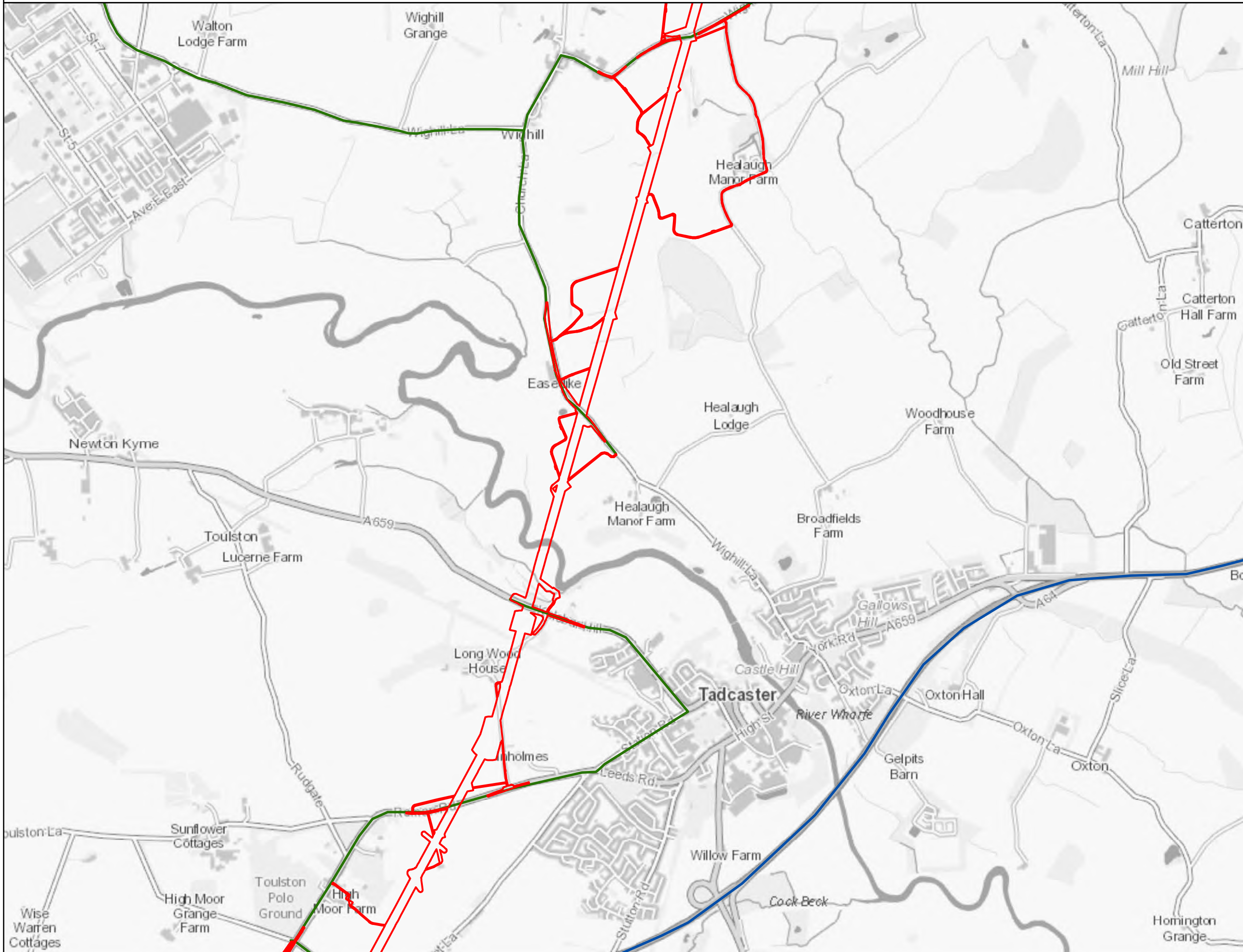
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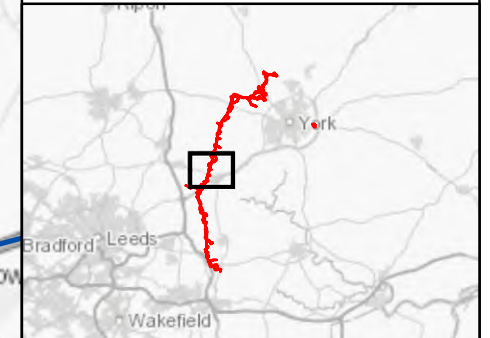


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
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 Figure 3F.4 Local HGV Access Routes

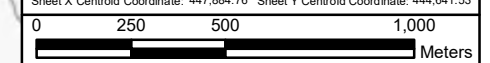
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**Title**  
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 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

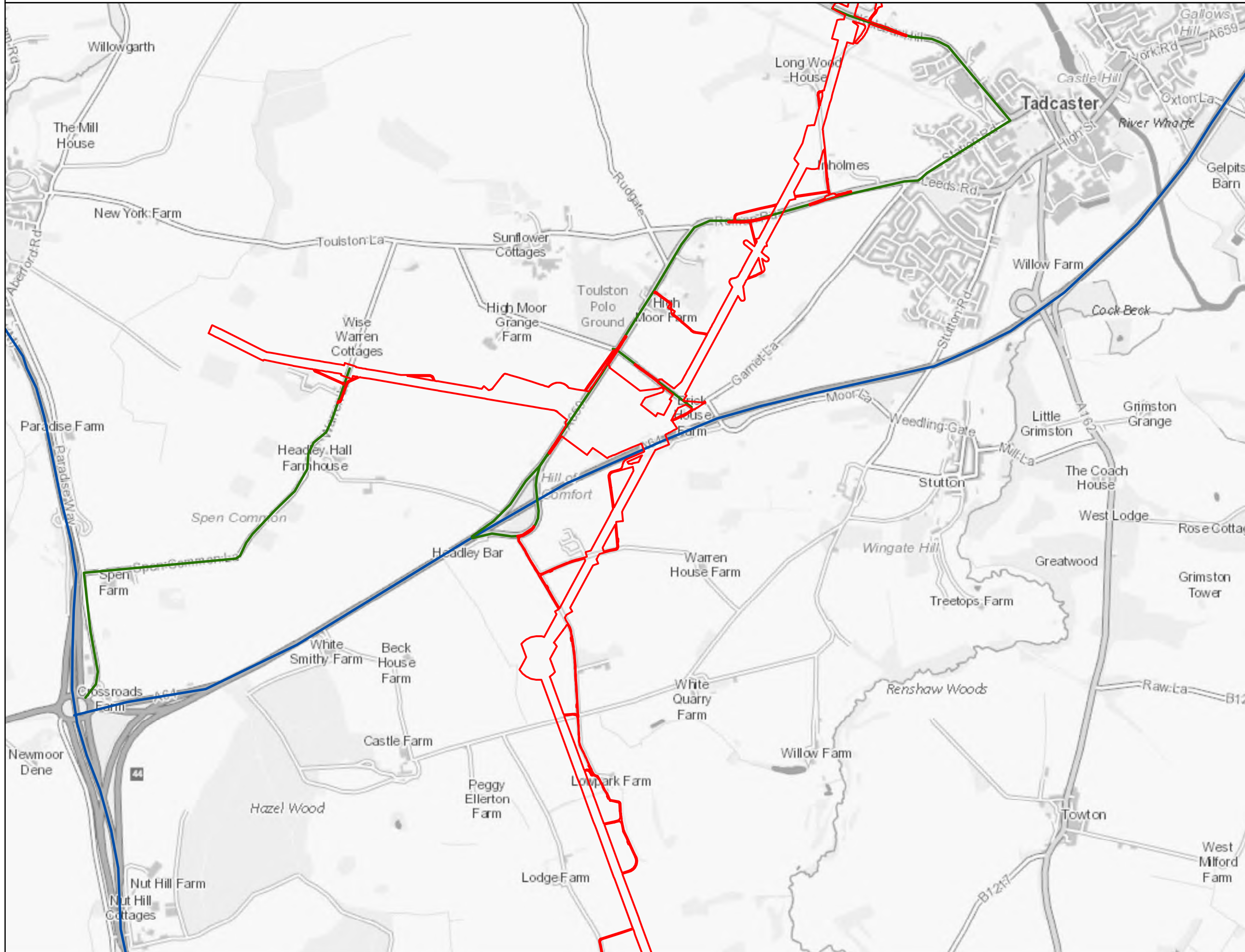
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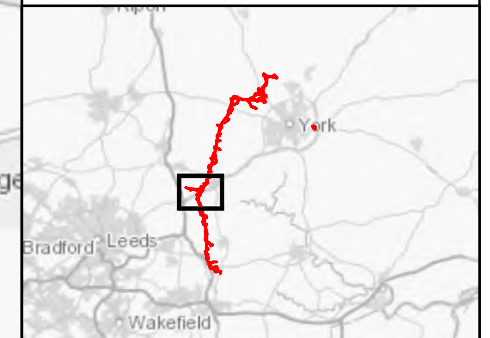


National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

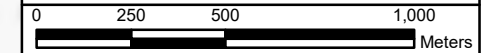
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 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

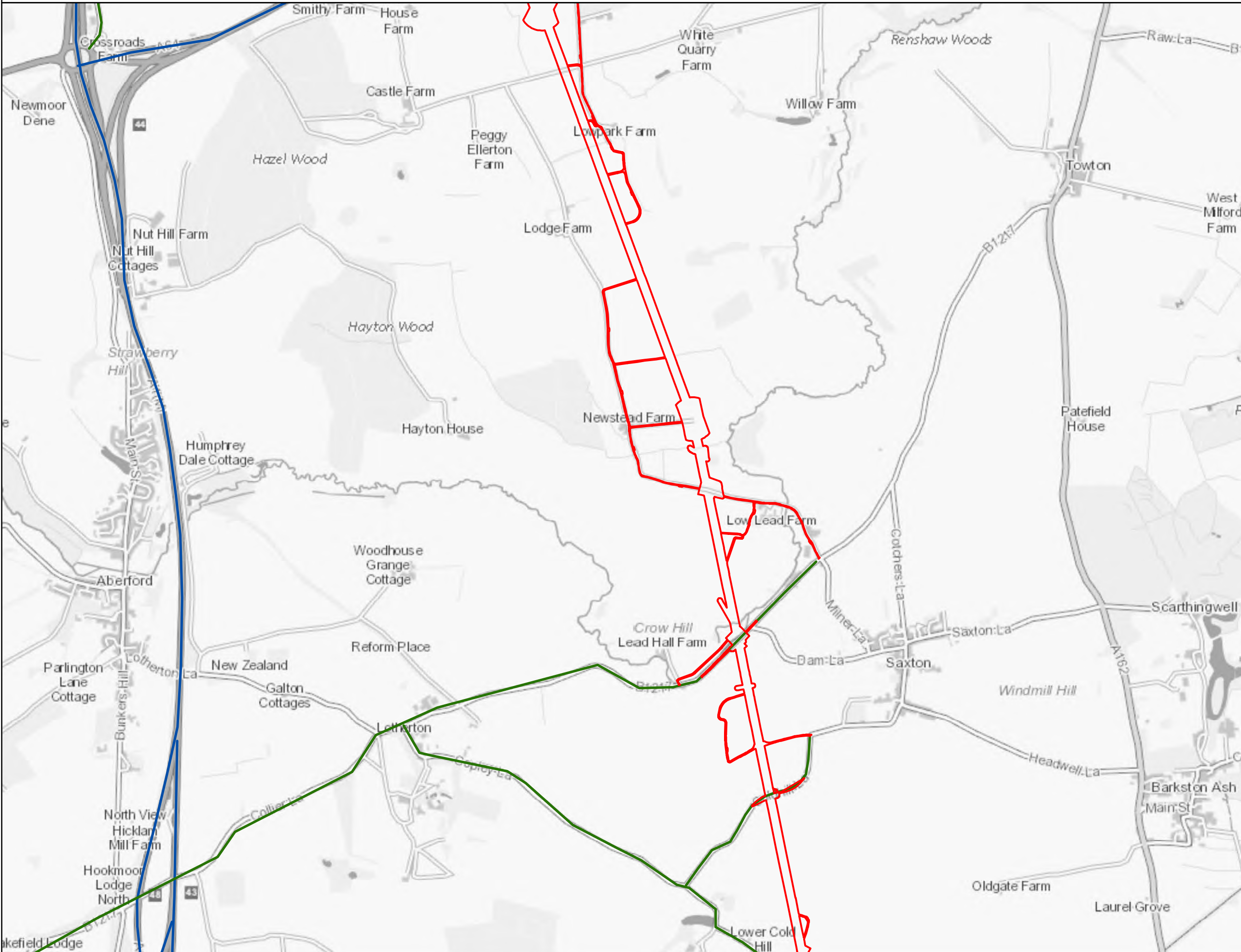
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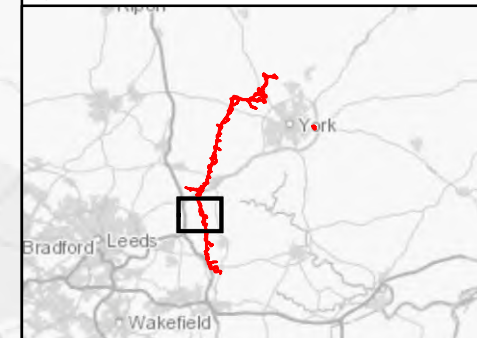


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

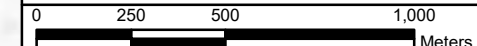
- ▭ Order Limits
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 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.4

**Drawing Reference**  
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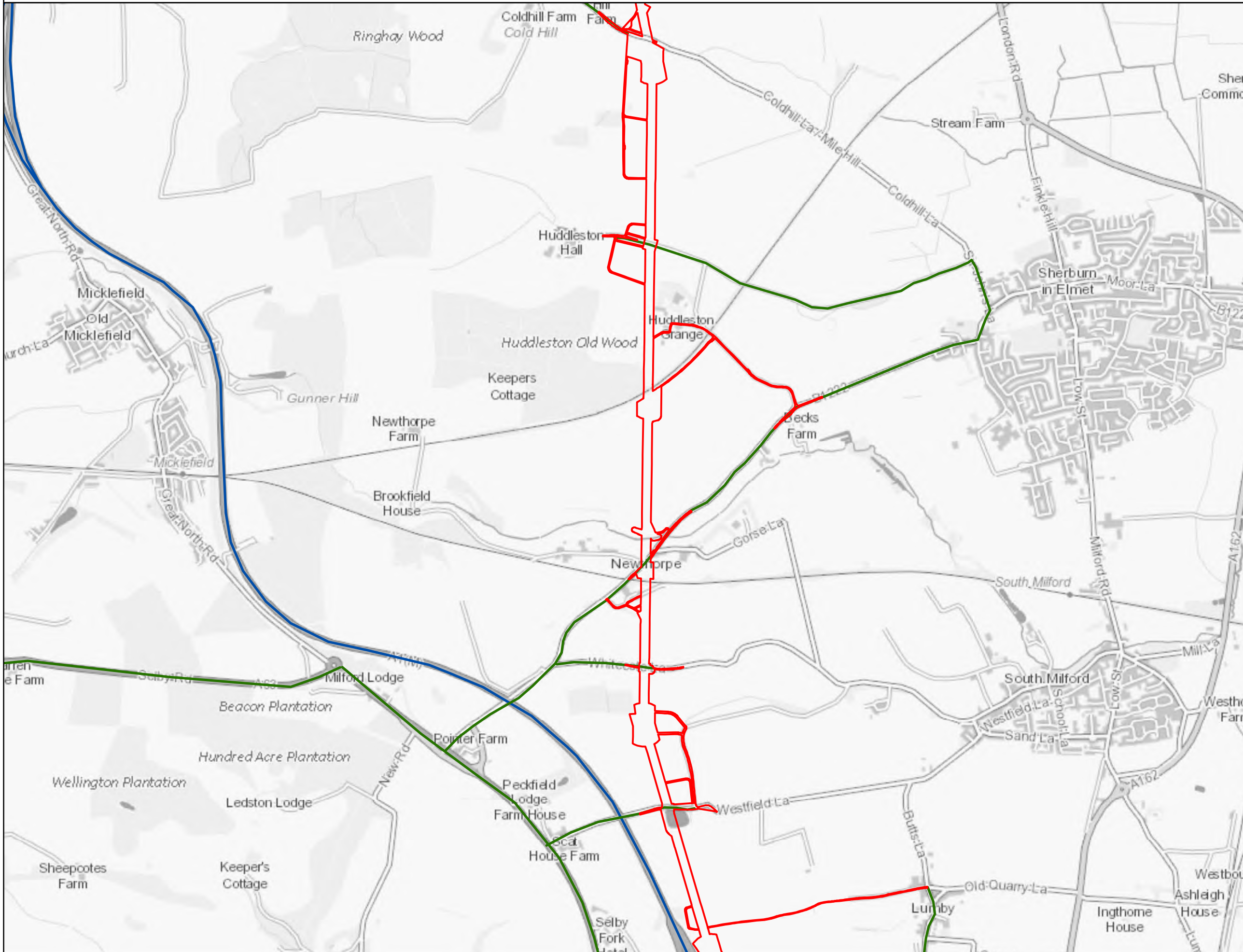
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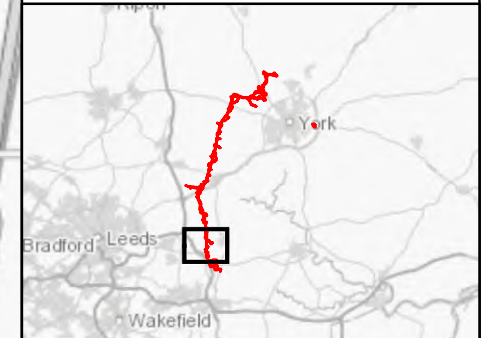


National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

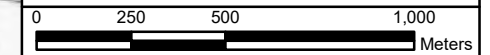
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 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

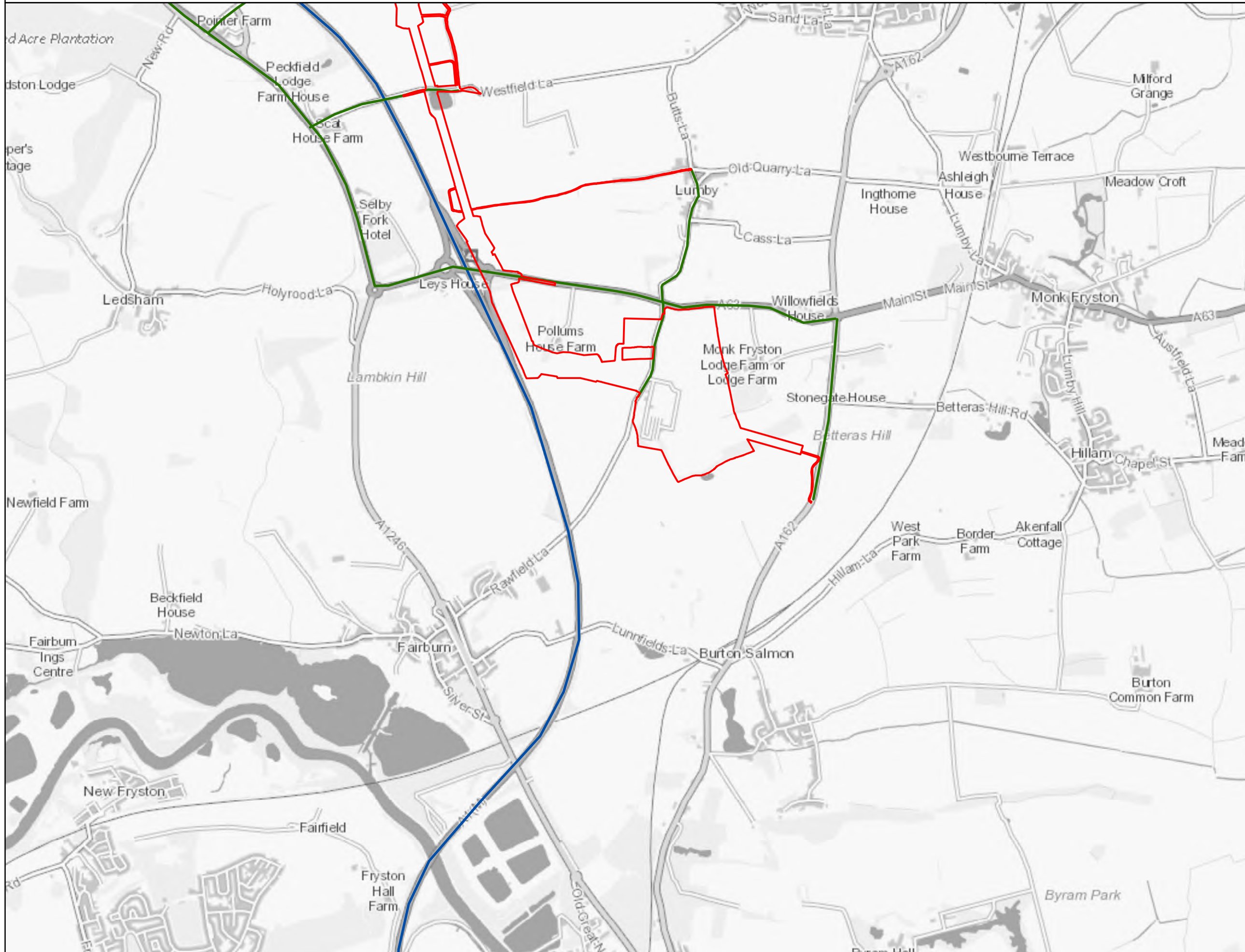
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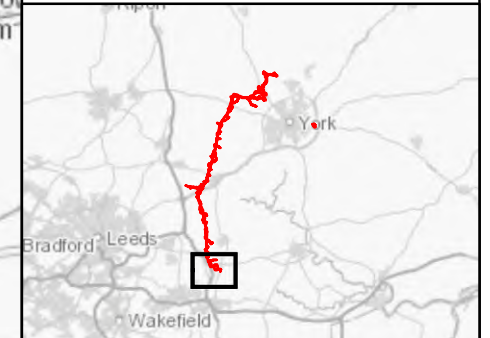


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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.4 Local HGV Access Routes

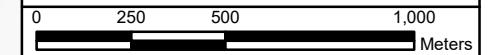
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 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.4  
 LOCAL HGV ACCESS ROUTES

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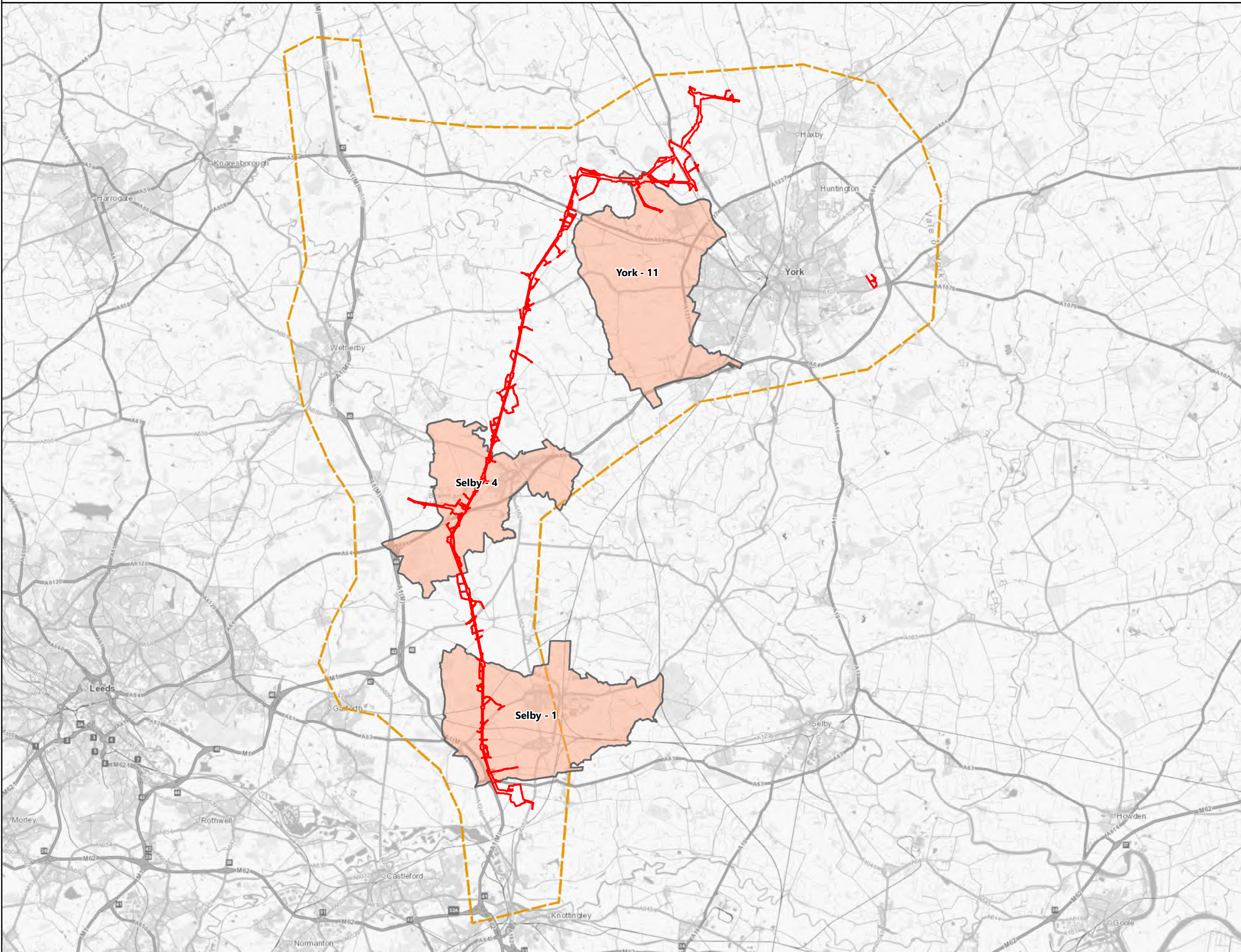




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.5 Census Areas Used to Define LV Distribution

**Legend**

- Order Limits
- Study Area
- Census Areas

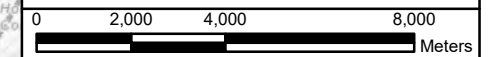


**Notes**

This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 453,394.96 Sheet Y Centroid Coordinate: 443,094.07



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A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC
Issue	Date	Remarks	Drawn	Checked	Approved

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.5  
 CENSUS AREAS USED TO  
 DEFINE LV DISTRIBUTION



**Figure Number**  
 FIGURE 3F.5

**Drawing Reference**  
 806503-WOOD-0260

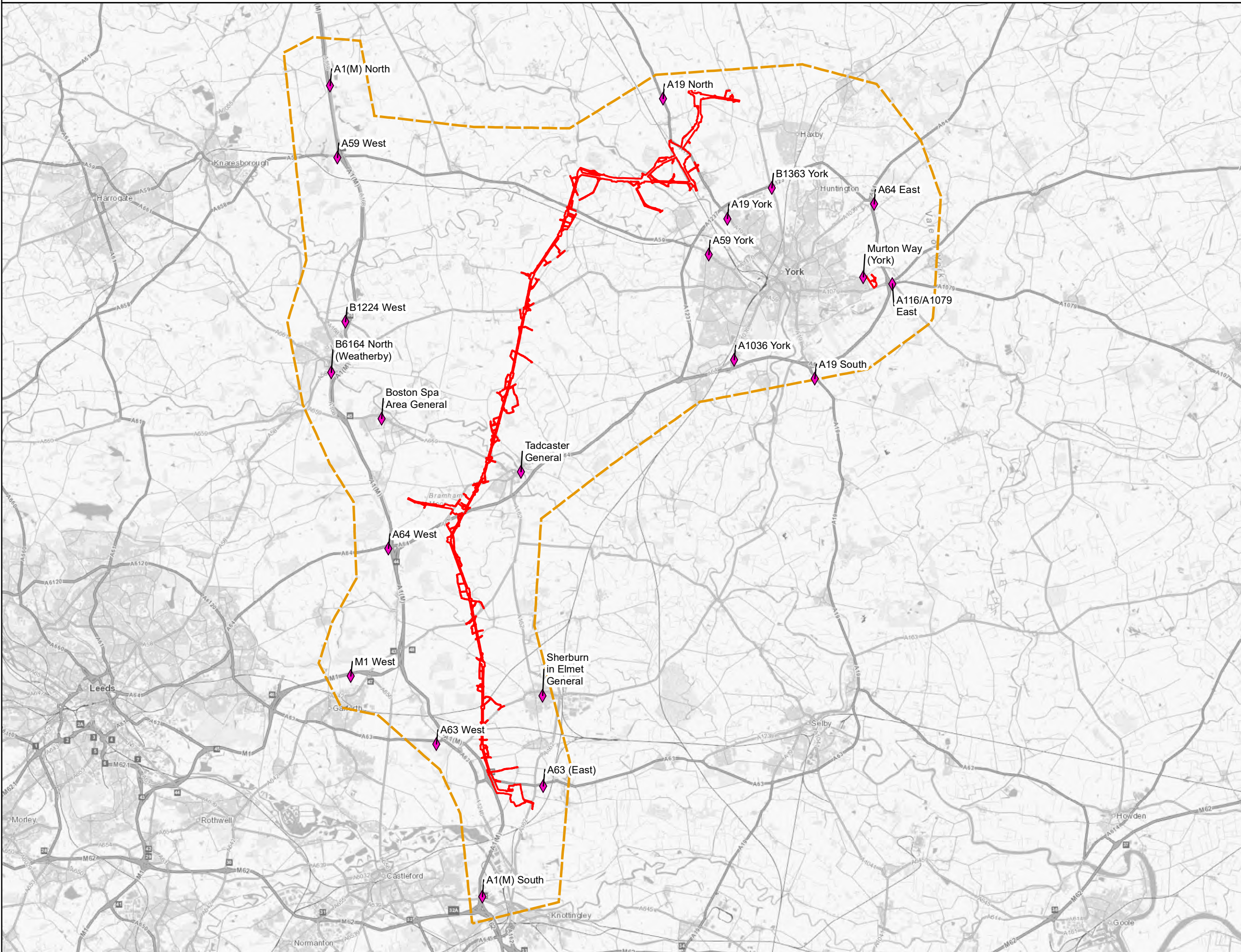
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National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points: Overview

- Legend**
- Order Limits
  - Study Area
  - ◆ LV Distribution Network entry/exit points



**Notes**  
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 Sheet X Centroid Coordinate: 453,394.96 Sheet Y Centroid Coordinate: 443,094.07  
 0 2,000 4,000 8,000  
 Meters

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Issue	Date	Remarks	Drawn	Checked	Approved
A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
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 FIGURE 3F.6  
 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS



**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261

Scale	Sheet Size	Sheet	Issue
1:160,000	A3	SHEET 1 OF 11	A

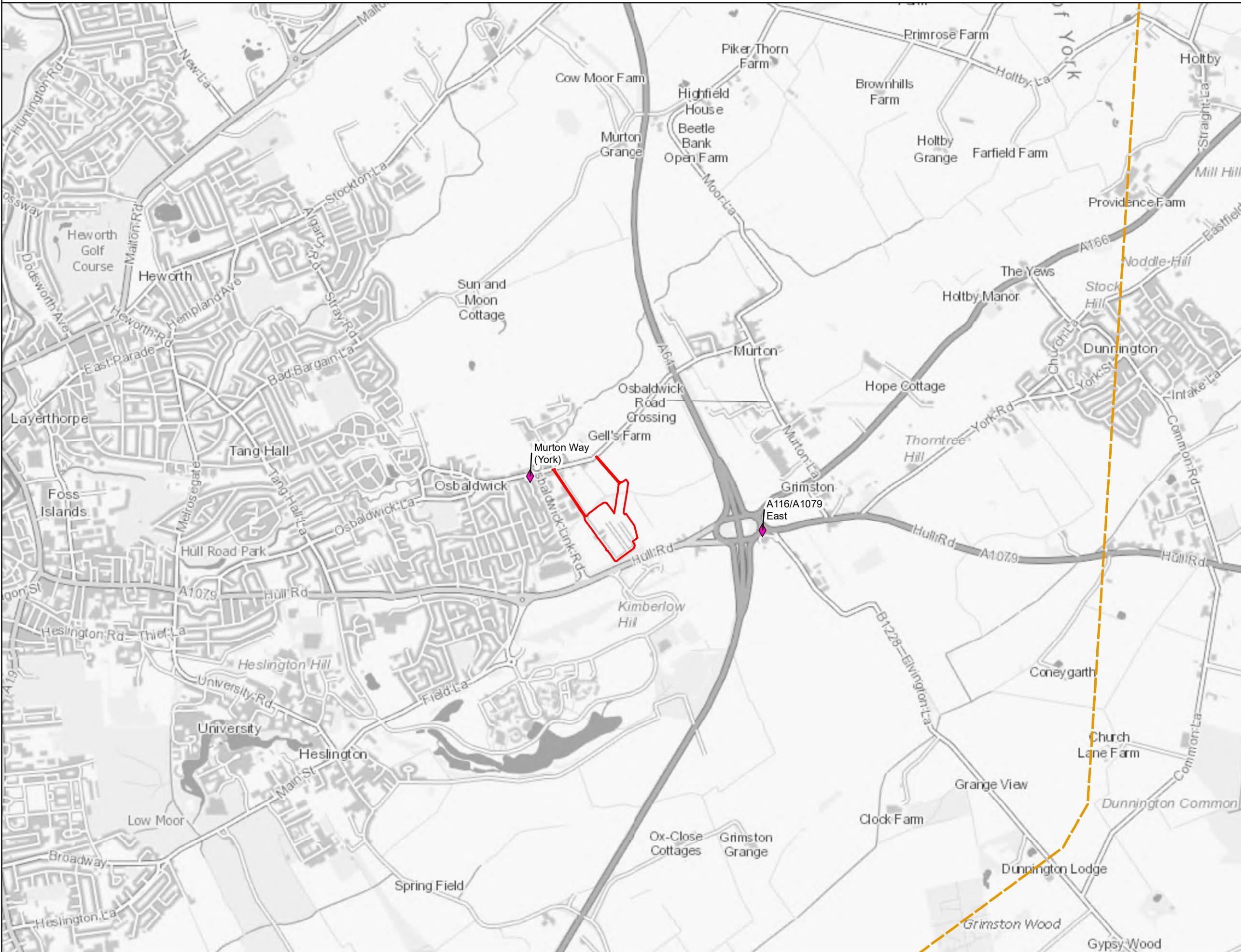




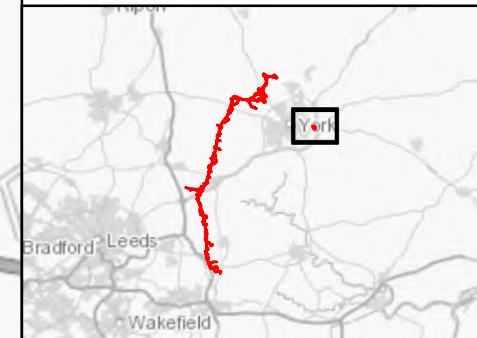
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

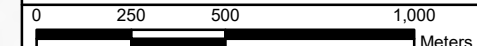
- Order Limits
- Study Area
- LV Distribution Network entry/exit points



**Notes**  
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 Sheet X Centroid Coordinate: 464,313.68 Sheet Y Centroid Coordinate: 451,918.16



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Issue	Date	Remarks	Drawn	Checked	Approved
A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.6  
 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS

**nationalgrid**

Figure Number: FIGURE 3F.6  
 Drawing Reference: 806503-WOOD-0261  
 Scale: 1:20,000 | Sheet Size: A3 | Sheet: SHEET 2 OF 11 | Issue: A

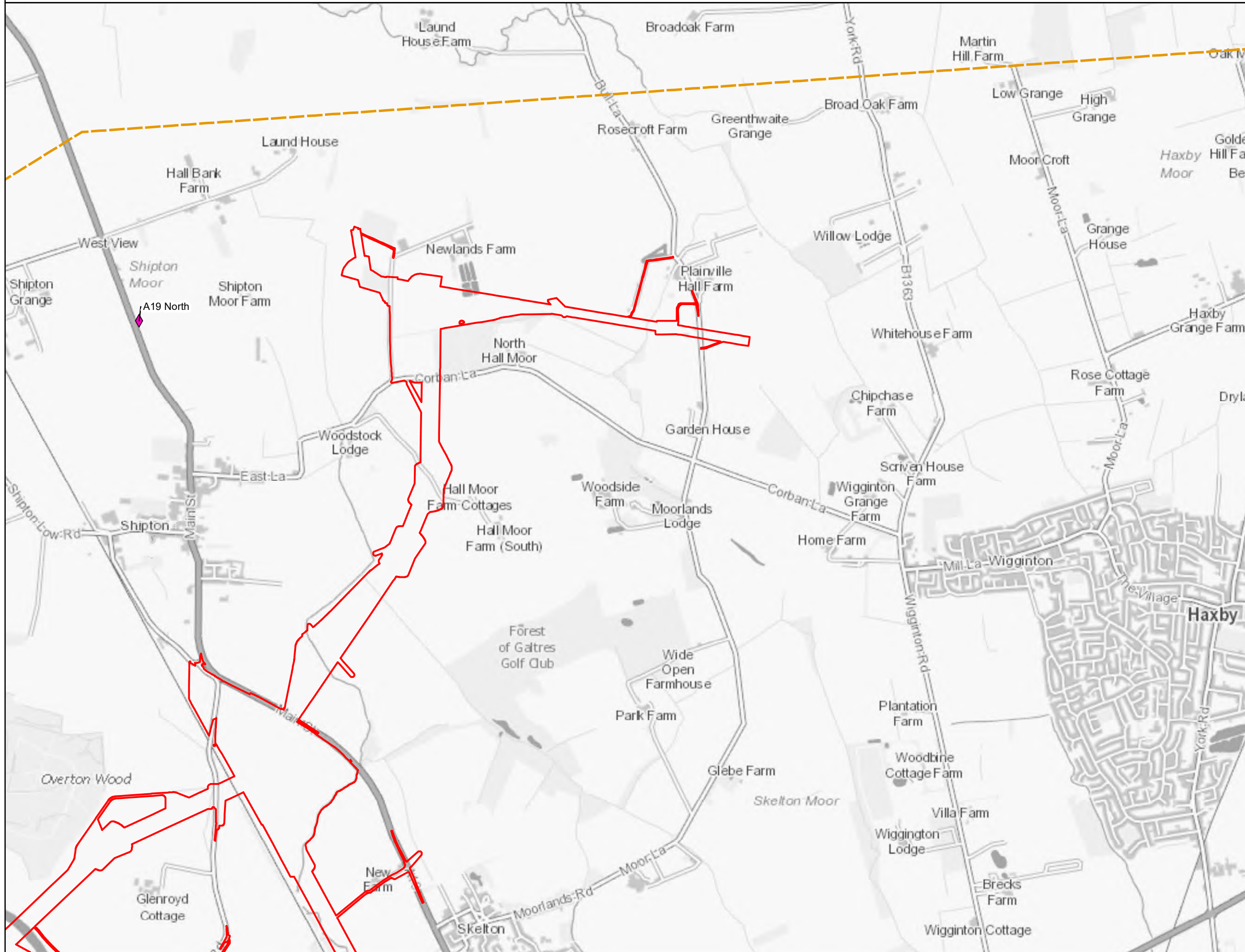




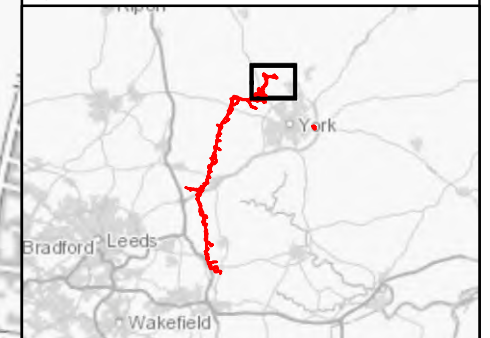
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

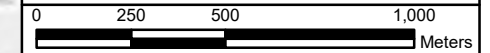
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



**Notes**  
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 Sheet X Centroid Coordinate: 457.691.99 Sheet Y Centroid Coordinate: 456.895.64



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
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 FIGURE 3F.6  
 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS



**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261

Scale	Sheet Size	Sheet	Issue
1:20,000	A3	SHEET 3 OF 11	A

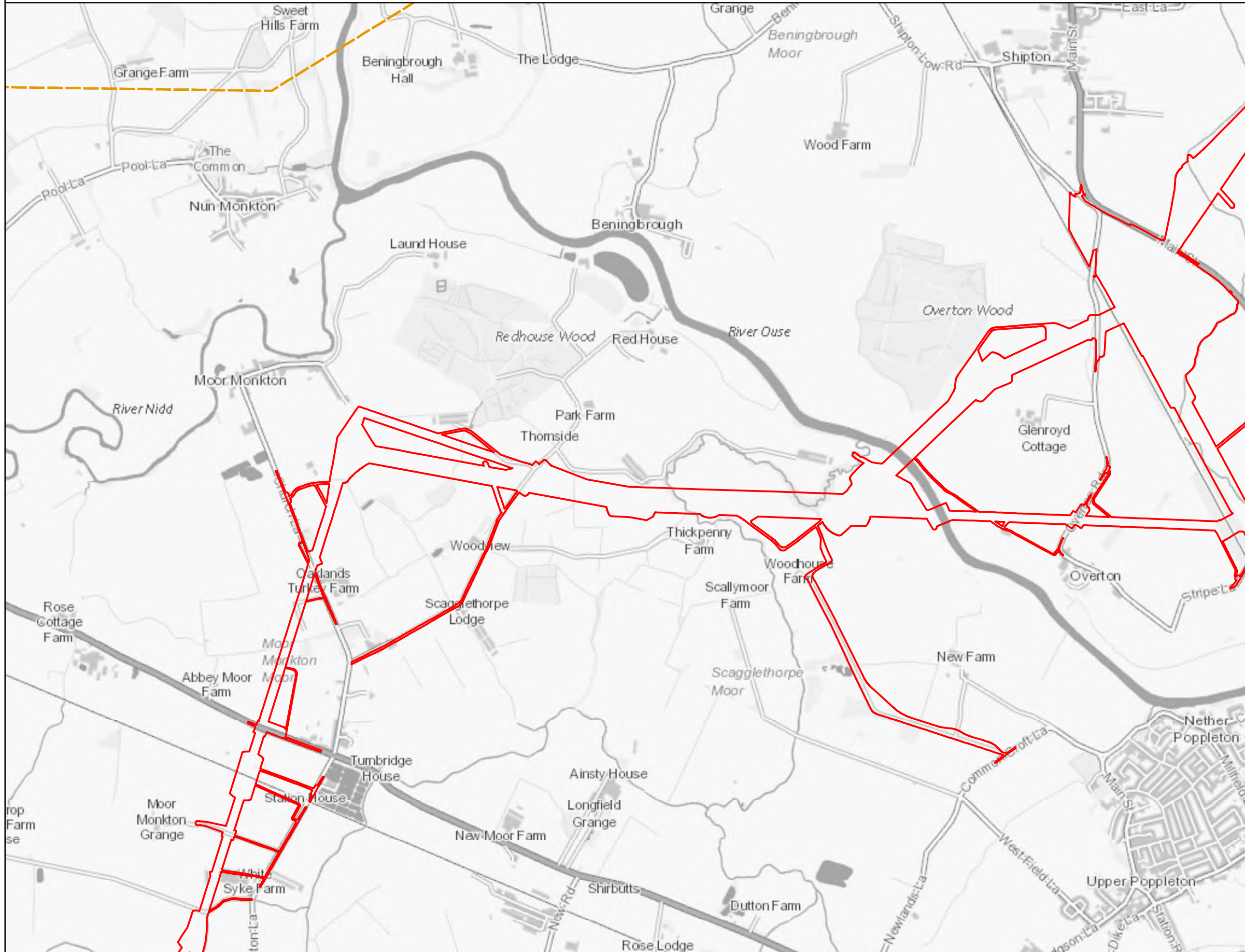




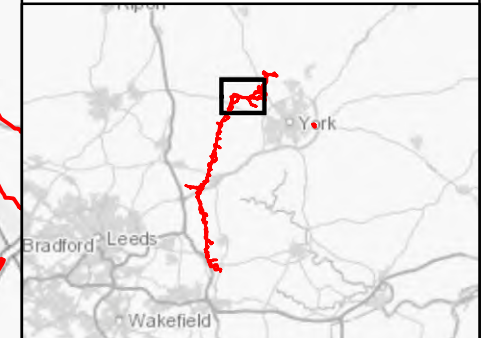
National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



**Notes**  
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 Sheet X Centroid Coordinate: 452,869.02 Sheet Y Centroid Coordinate: 456,326.03  
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
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 FIGURE 3F.6  
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 ENTRY/EXIT POINTS






<b>Figure Number</b>	FIGURE 3F.6		
<b>Drawing Reference</b>	806503-WOOD-0261		
<b>Scale</b>	<b>Sheet Size</b>	<b>Sheet</b>	<b>Issue</b>
1:20,000	A3	SHEET 4 OF 11	A

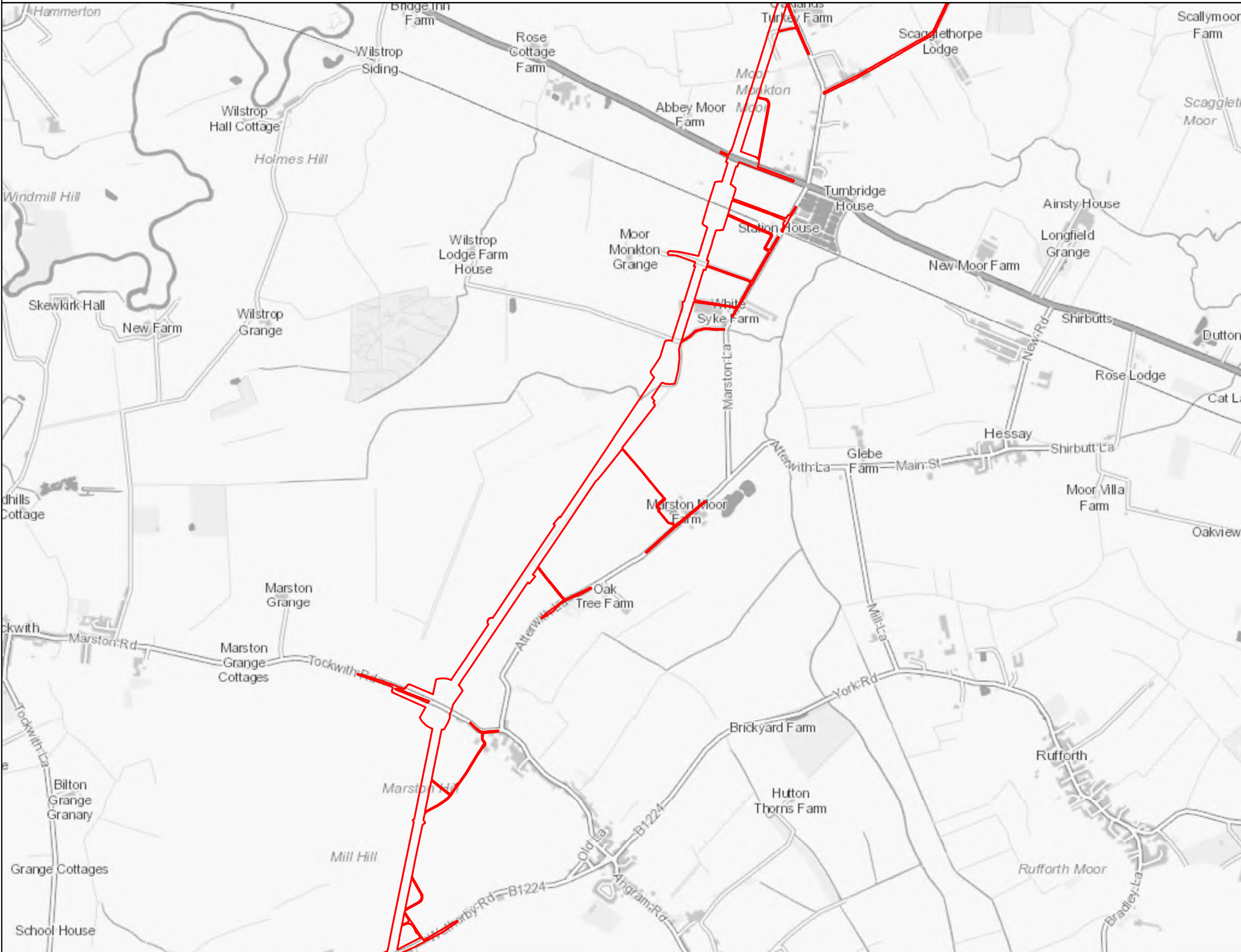




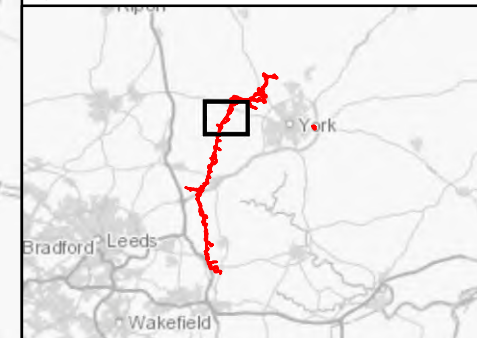
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

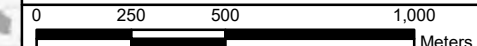
-  Order Limits
-  Study Area
-  LV Distribution Network entry/exit points



**Notes**  
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**Title**  
 5.4.3, ES CHAPTER 3  
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 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS



**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261

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1:20,000	A3	SHEET 5 OF 11	A

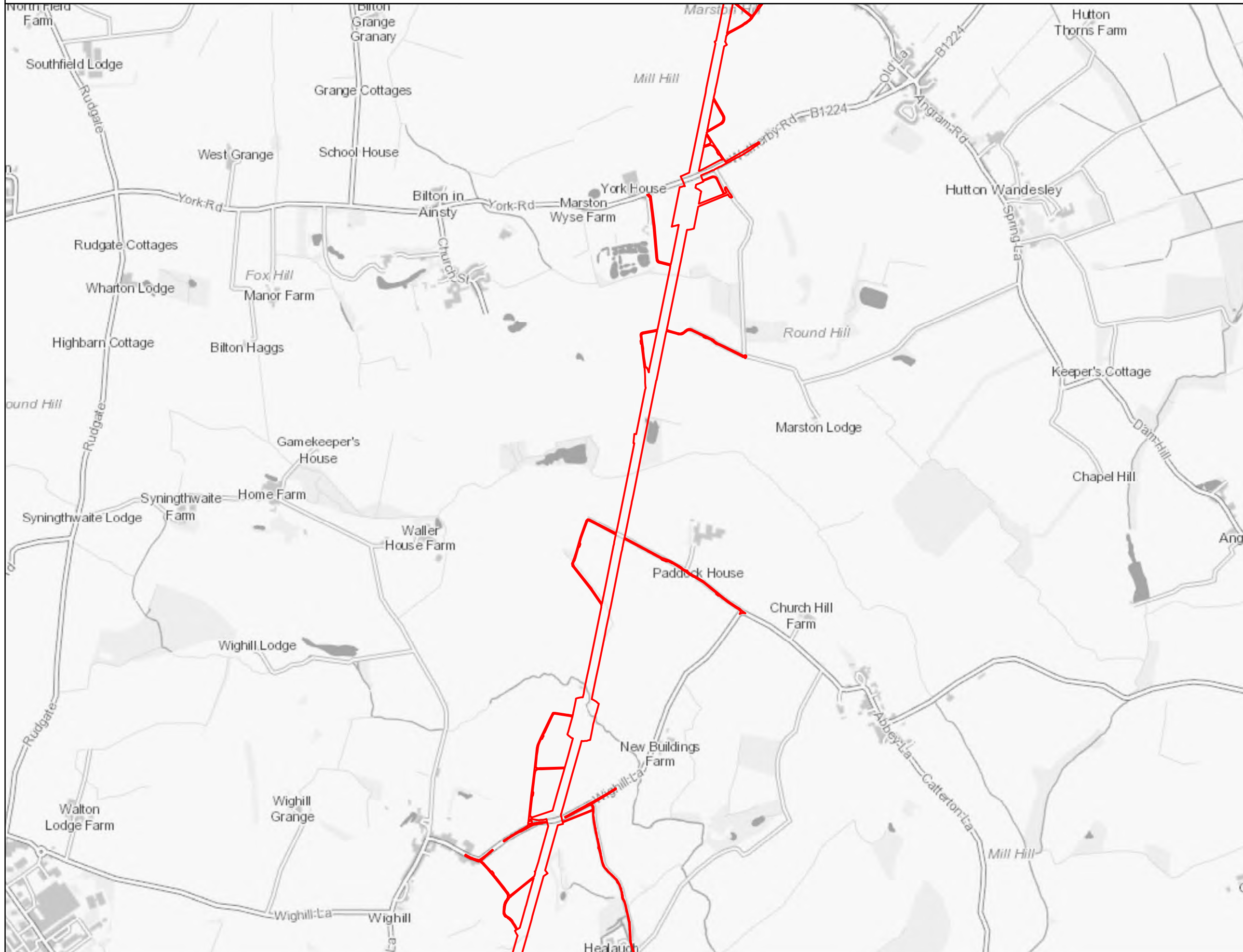




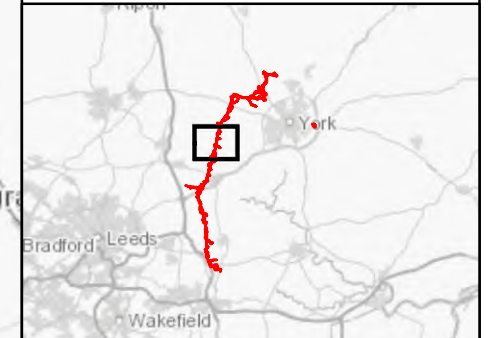
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 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

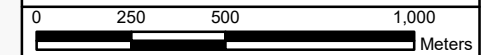
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



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A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
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 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.6  
 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS

<b>nationalgrid</b>			
Figure Number		FIGURE 3F.6	
Drawing Reference		806503-WOOD-0261	
Scale	Sheet Size	Sheet	Issue
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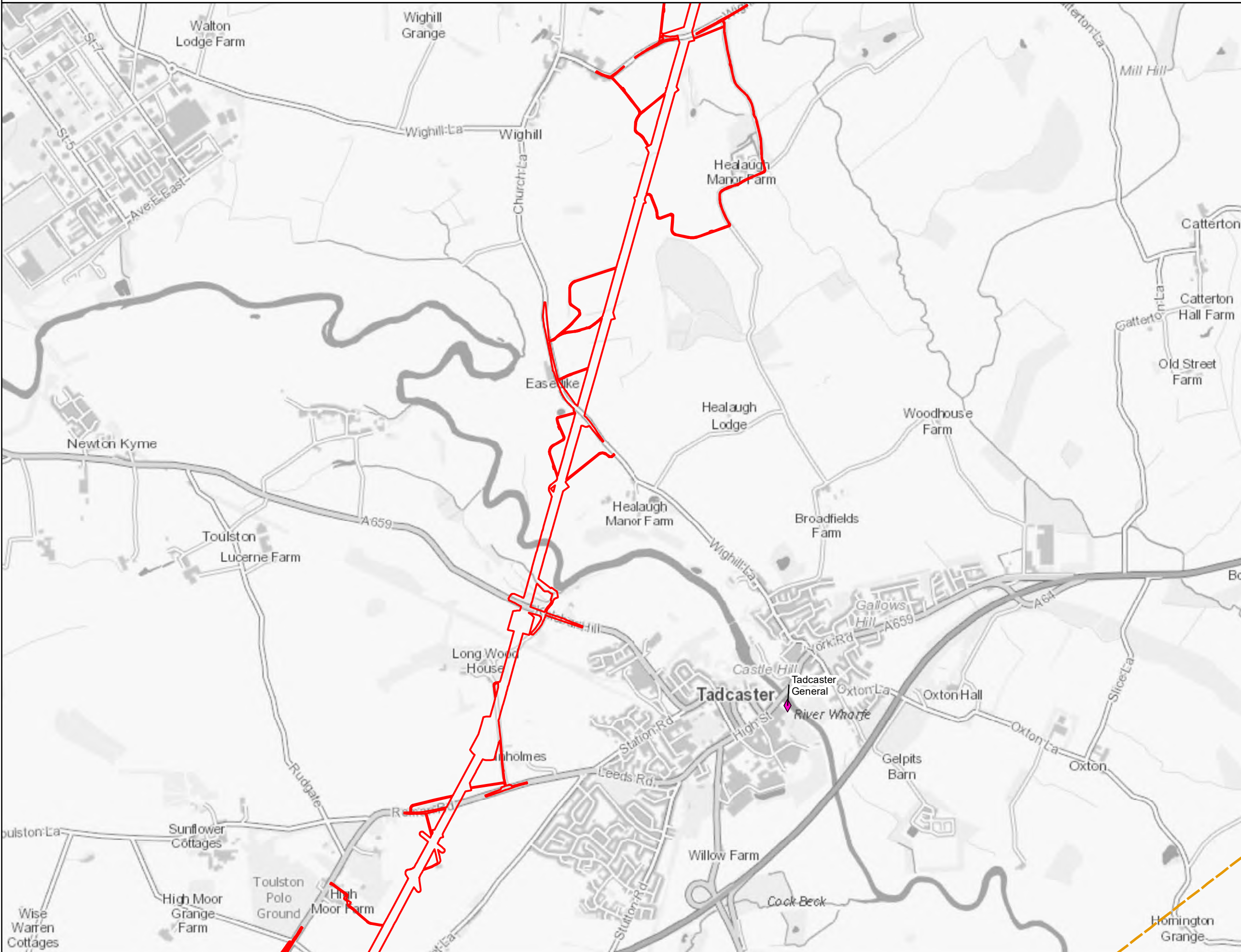




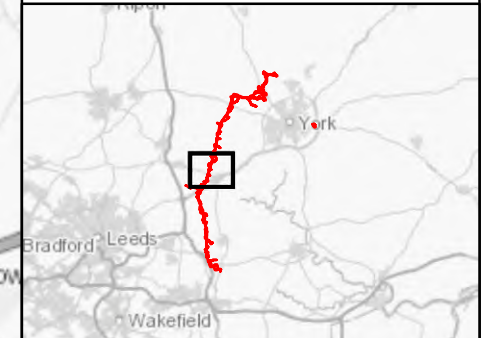
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 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

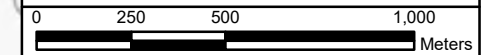
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



**Notes**  
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
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 FIGURE 3F.6  
 LV DISTRIBUTION NETWORK  
 ENTRY/EXIT POINTS



**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261

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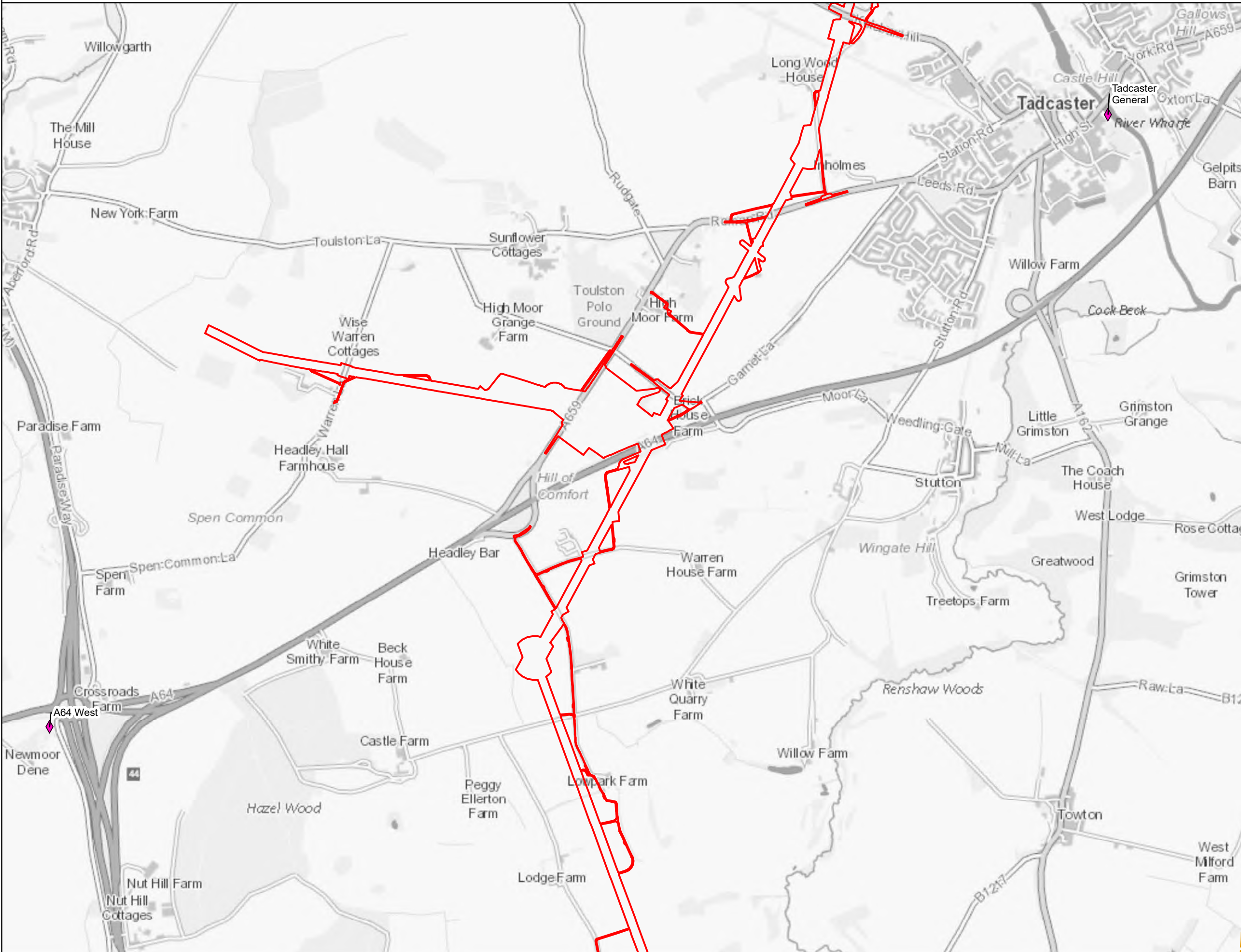




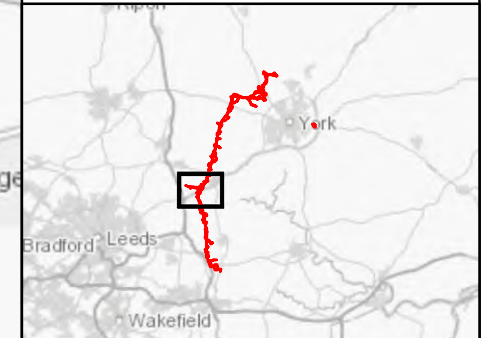
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

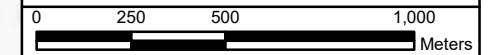
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
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**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
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Scale	Sheet Size	Sheet	Issue
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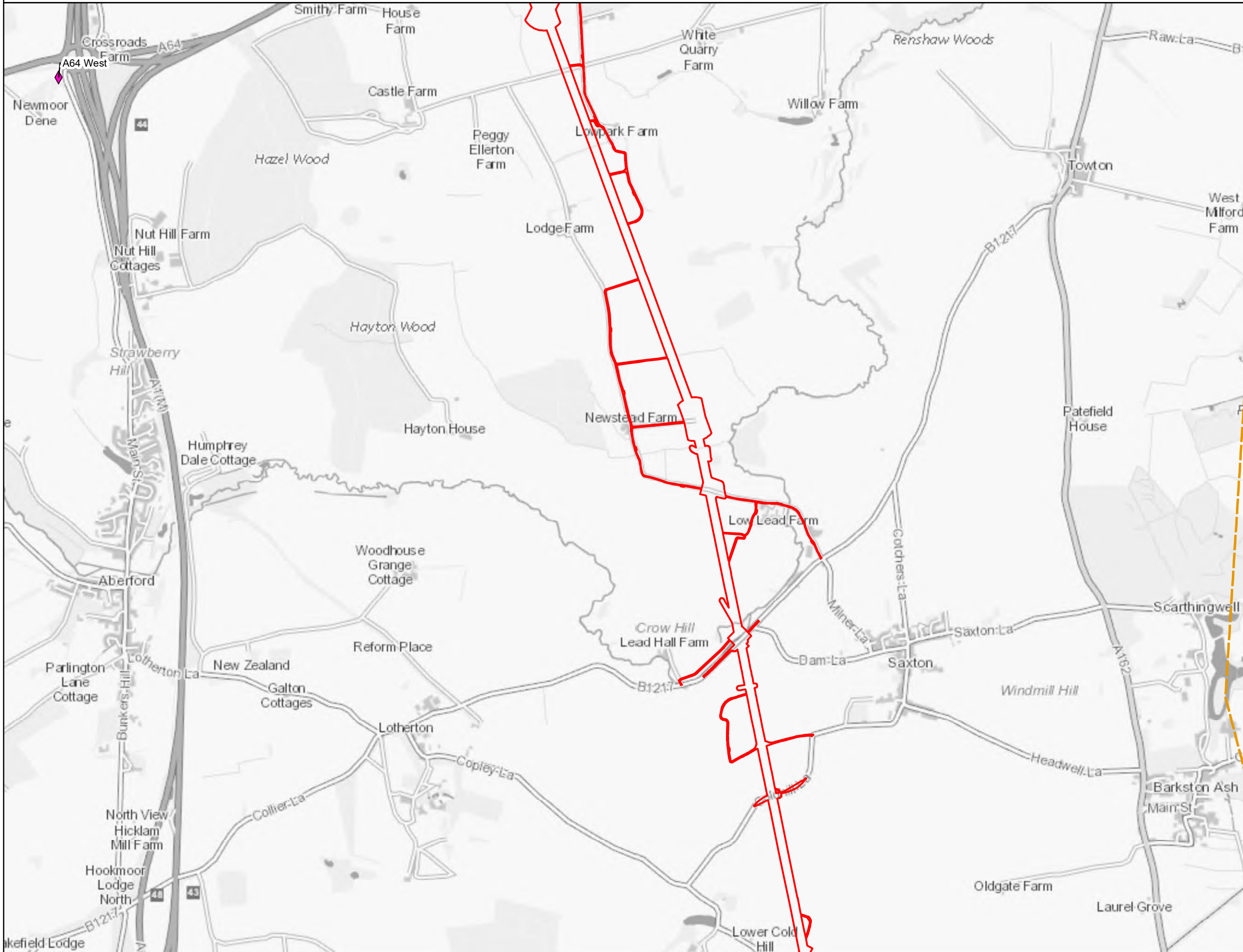




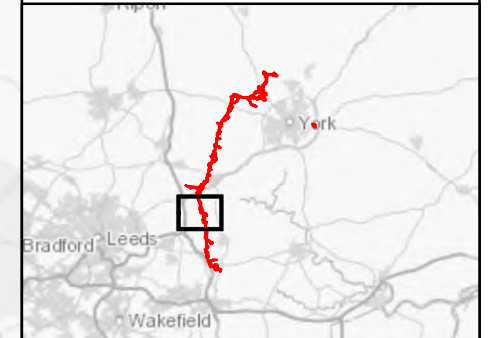
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

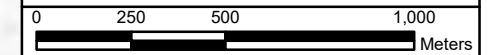
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
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**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261

Scale	Sheet Size	Sheet	Issue
1:20,000	A3	SHEET 9 OF 11	A

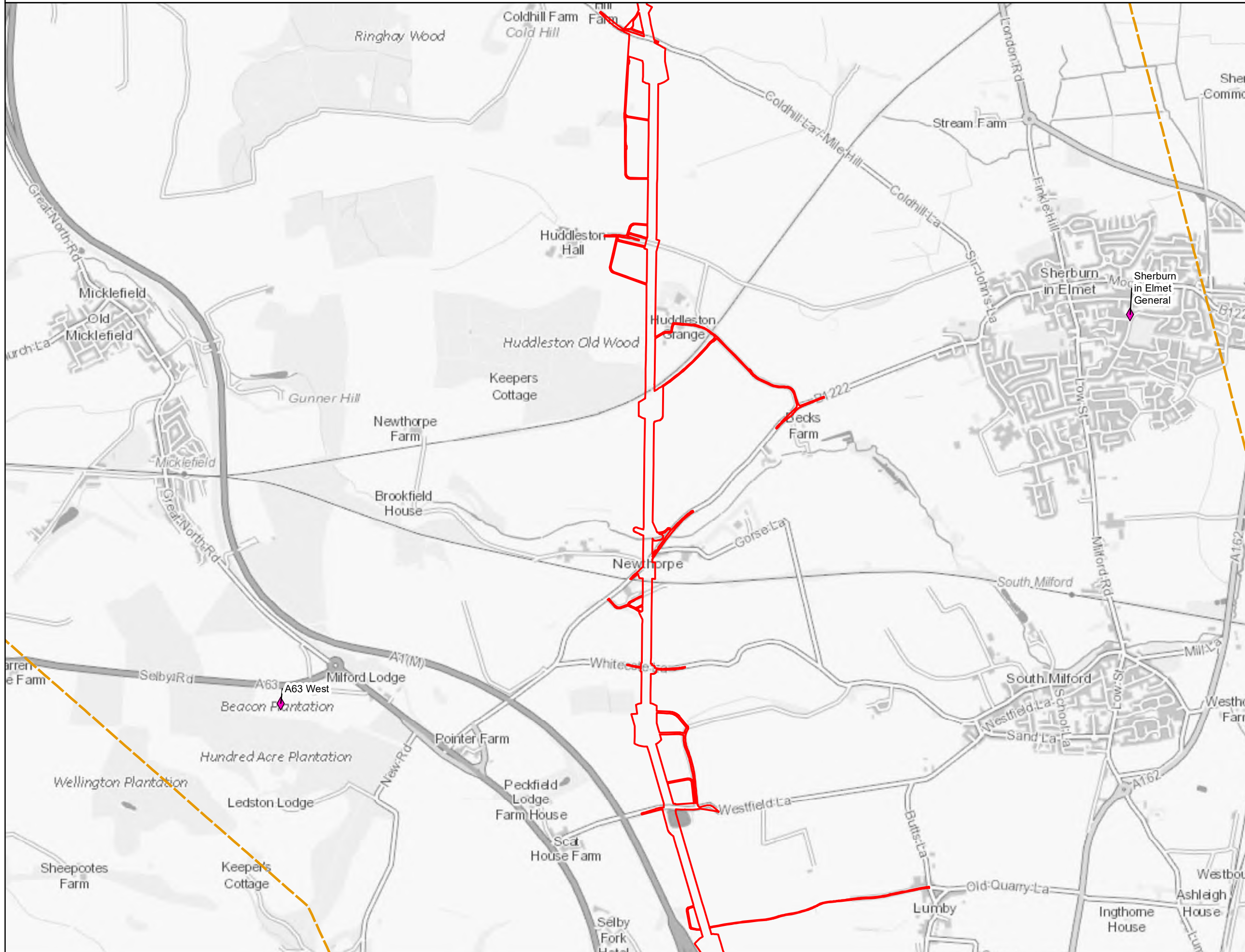




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.6 LV Distribution Network Entry/Exit Points

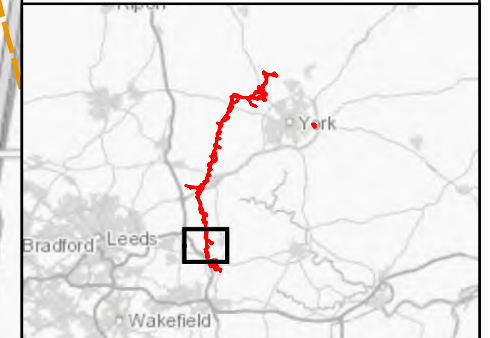
**Legend**

- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points

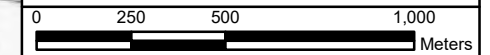


**Notes**

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 FIGURE 3F.6  
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 ENTRY/EXIT POINTS



<b>Figure Number</b>	FIGURE 3F.6		
<b>Drawing Reference</b>	806503-WOOD-0261		
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1:20,000	A3	SHEET 10 OF 11	A

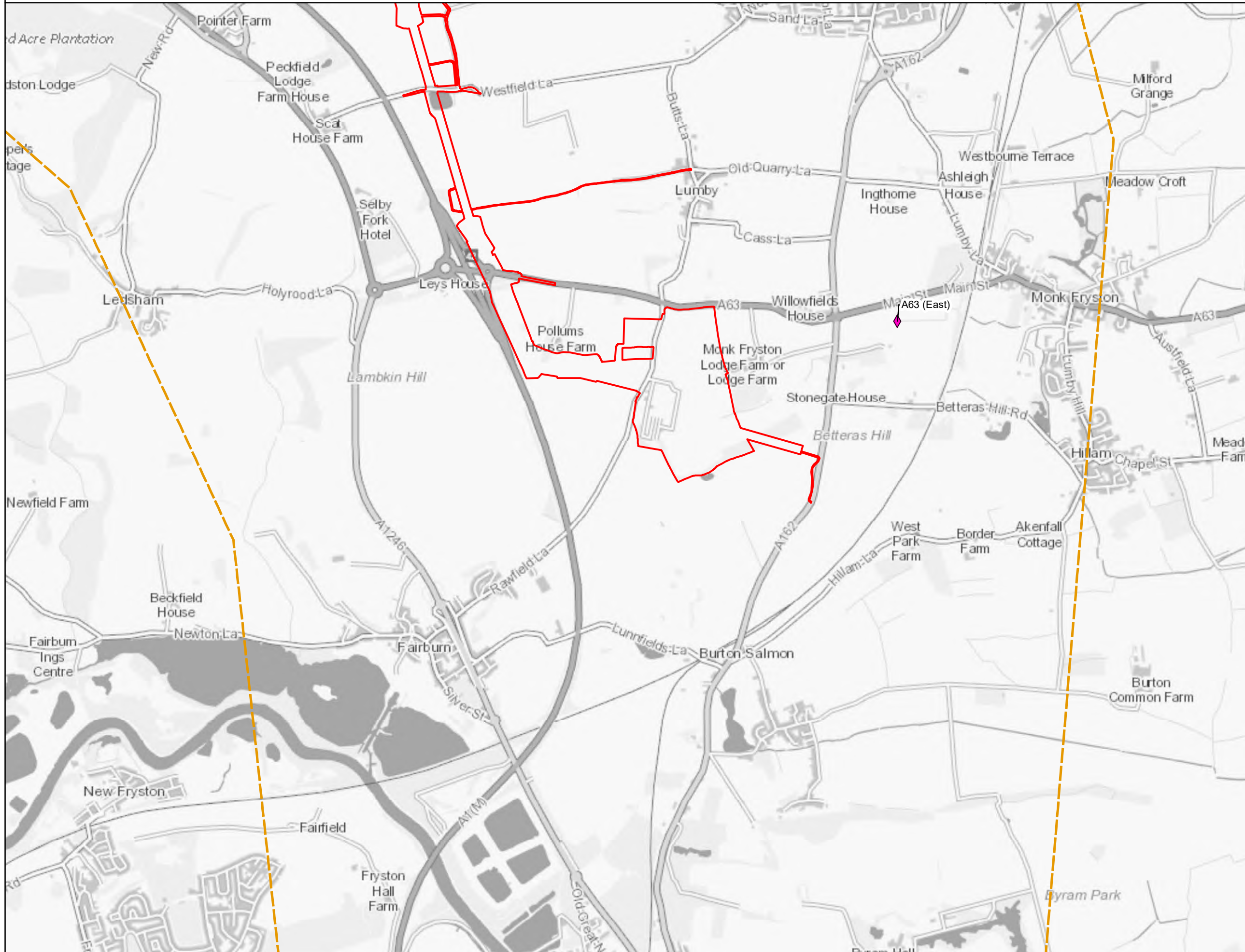




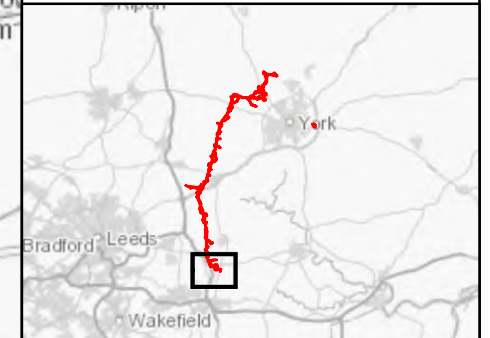
National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Figure 3F.6 LV Distribution Network Entry/Exit Points

**Legend**

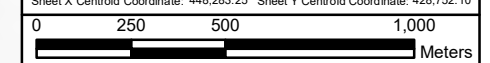
- Order Limits
- Study Area
- ◆ LV Distribution Network entry/exit points



**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



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 Sheet X Centroid Coordinate: 448,283.25 Sheet Y Centroid Coordinate: 428,752.10



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**Figure Number**  
 FIGURE 3F.6

**Drawing Reference**  
 806503-WOOD-0261








Scale	Sheet Size	Sheet	Issue
1:20,000	A3	SHEET 11 OF 11	A

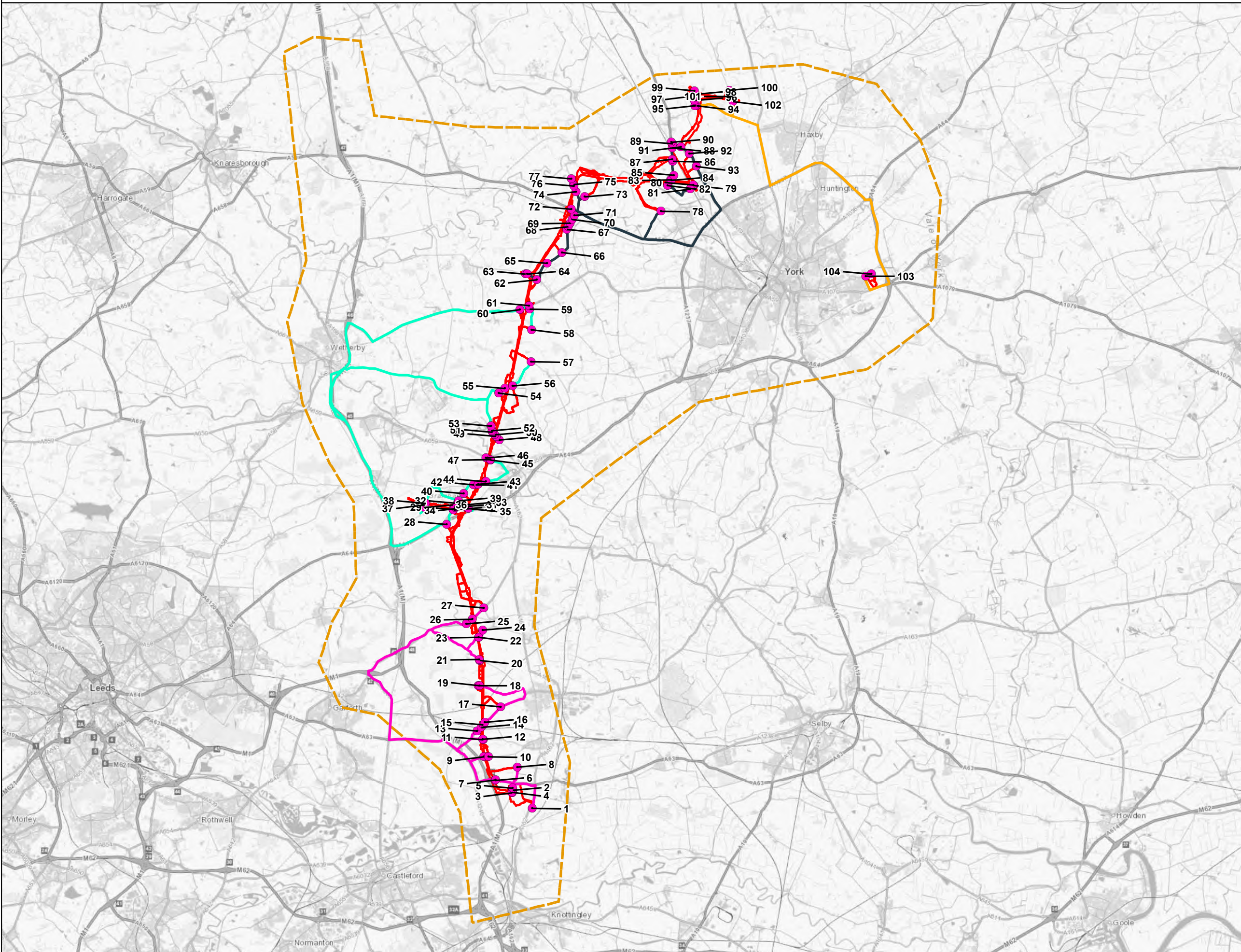




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes: Overview

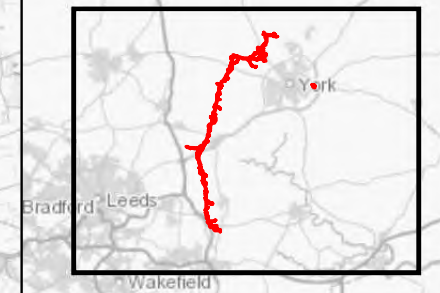
**Legend**

-  Order Limits
-  Study Area
-  Proposed Accesses
-  Monk Fyston Substation TCC
-  Overton Substation TCC
-  Shipton TCC
-  Tadcaster TCC

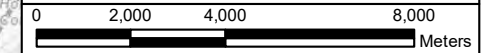


**Notes**

This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 453,394.96 Sheet Y Centroid Coordinate: 443,094.07



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Issue	Date	Remarks	Drawn	Checked	Approved
B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.7(B)

**Drawing Reference**  
 806503-WOOD-0262 B

Scale	Sheet Size	Sheet	Issue
1:160,000	A3	SHEET 1 OF 11	B

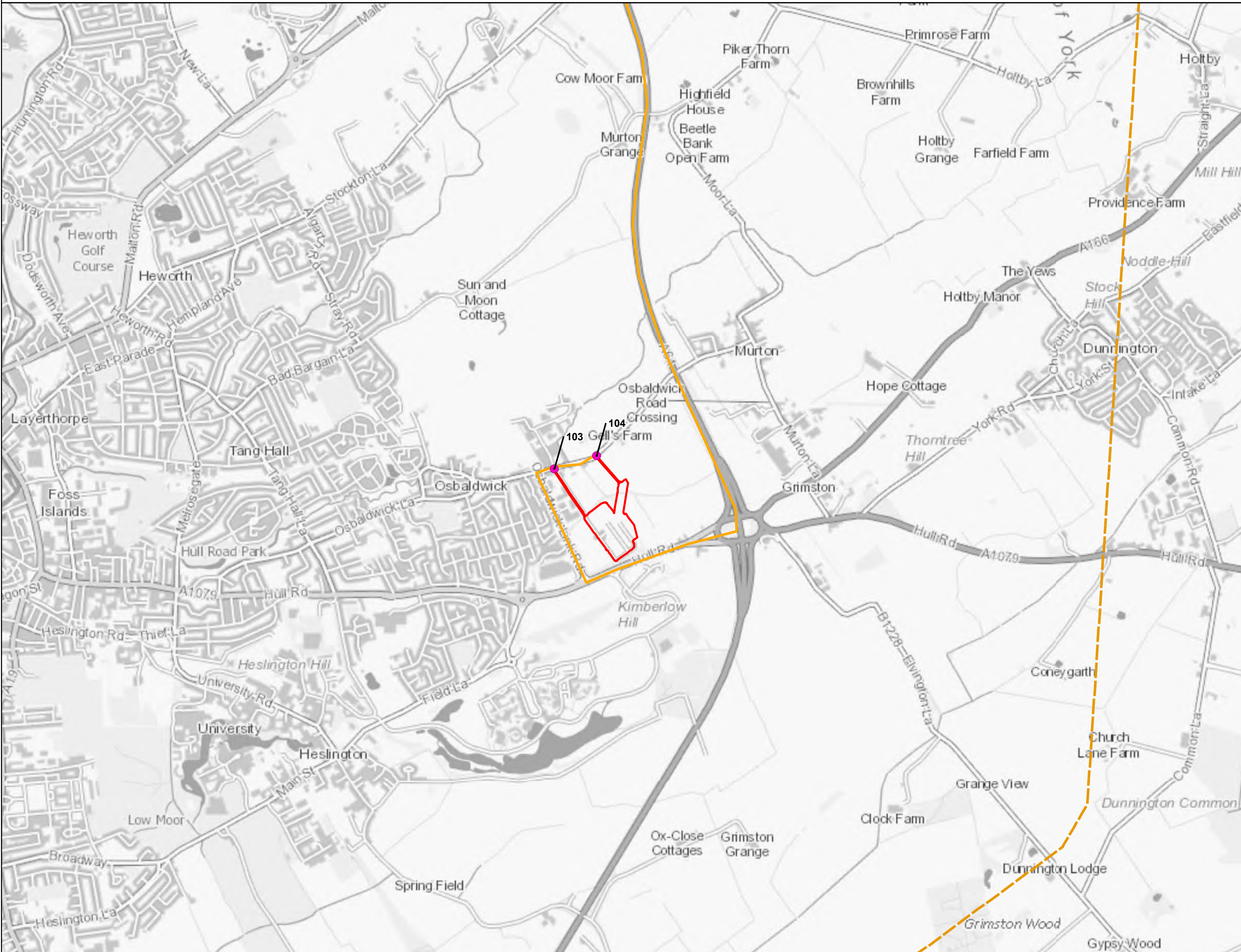




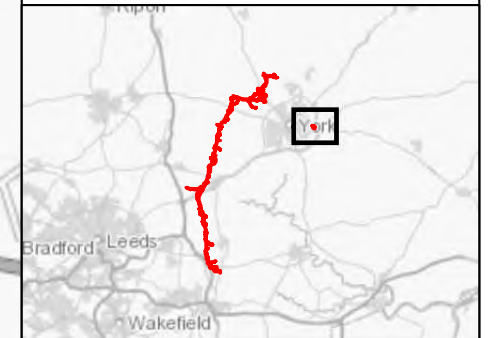
National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

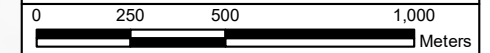
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- Study Area
- Proposed Accesses
- Monk Fryston Substation TCC
- Overton Substation TCC
- Shipton TCC
- Tadcaster TCC



**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



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 Sheet X Centroid Coordinate: 484,313.88 Sheet Y Centroid Coordinate: 451,918.16



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Issue	Date	Remarks	Drawn	Checked	Approved
B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES

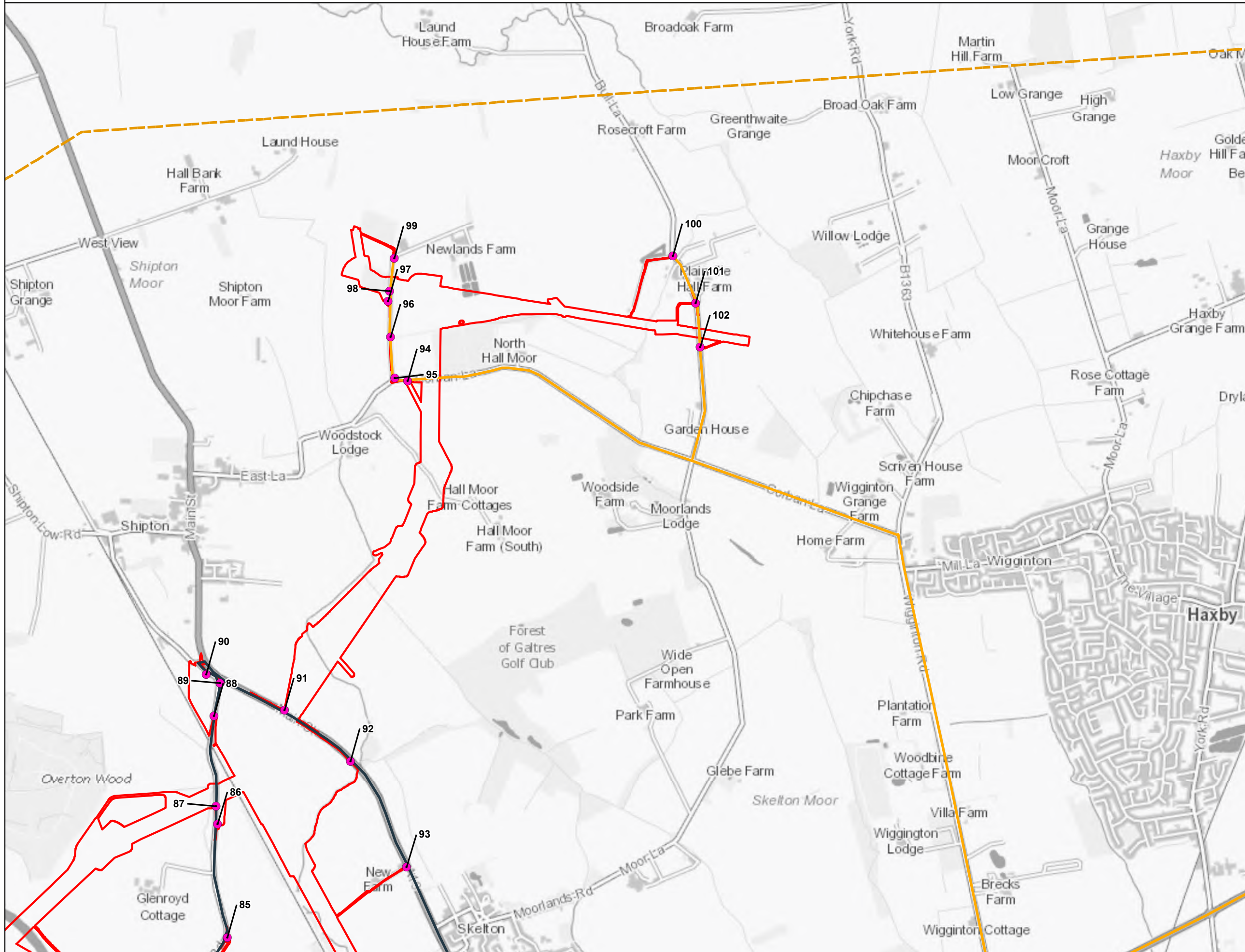
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<b>Figure Number</b>		FIGURE 3F.7(B)	
<b>Drawing Reference</b>			
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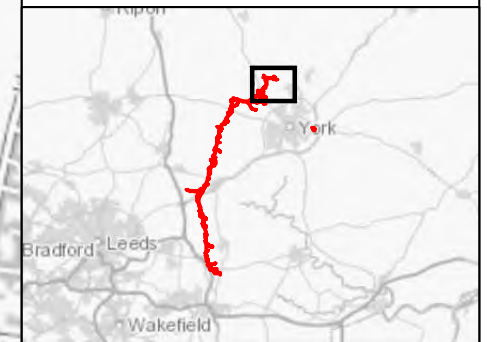


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

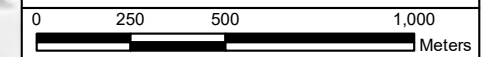
- Legend**
- Order Limits
  - Study Area
  - Proposed Accesses
  - Monk Fyston Substation TCC
  - Overton Substation TCC
  - Shipton TCC
  - Tadcaster TCC



**Notes**  
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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.7(B)

**Drawing Reference**  
 806503-WOOD-0262 B

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1:20,000	A3	SHEET 3 OF 11	B

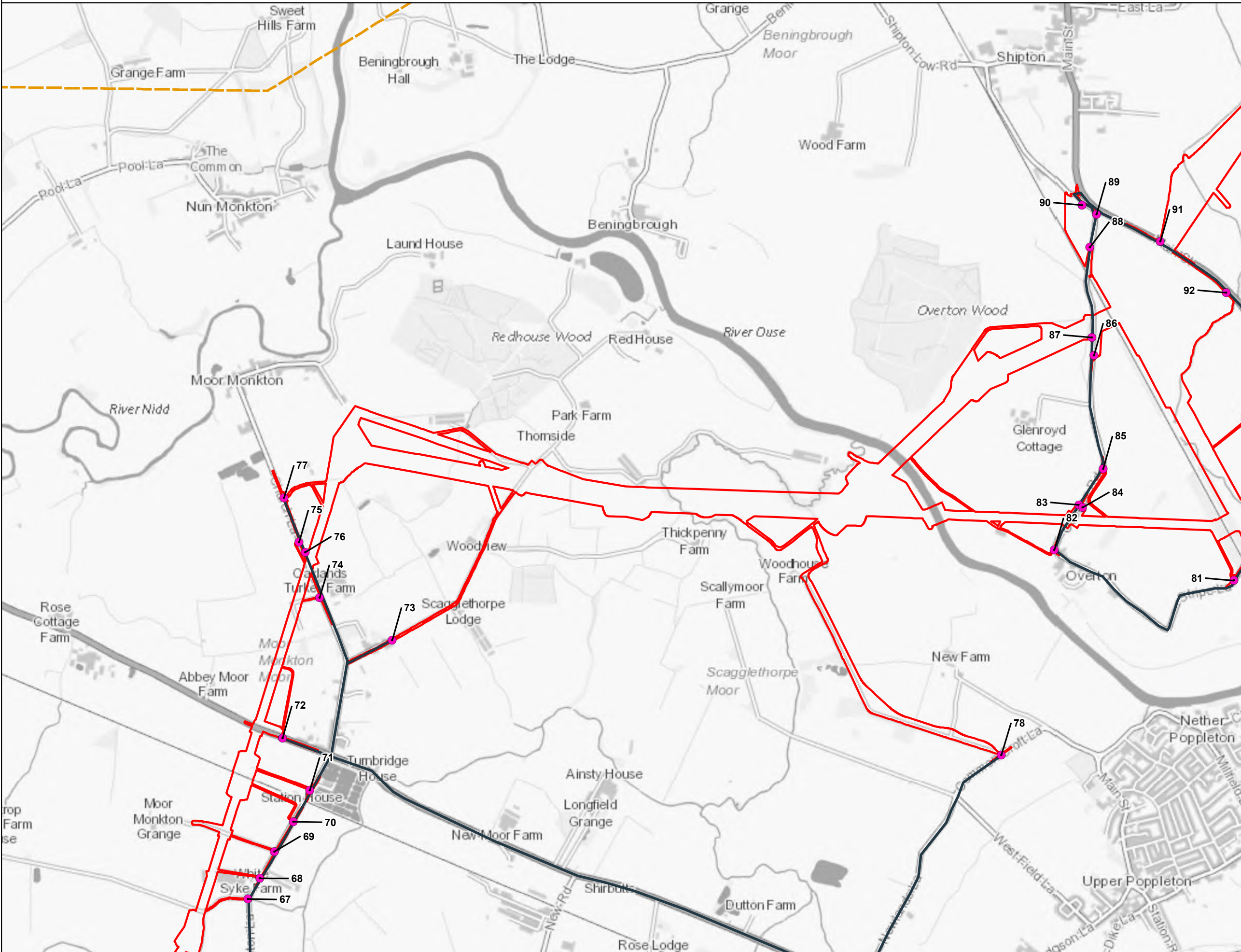




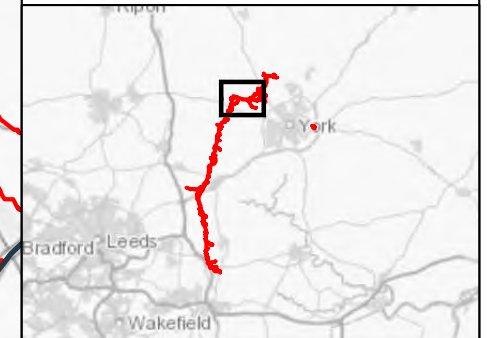
National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

- Order Limits
- Study Area
- Proposed Accesses
- Monk Fyston Substation TCC
- Overton Substation TCC
- Shipton TCC
- Tadcaster TCC



**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 452,869.02 Sheet Y Centroid Coordinate: 456,326.03  
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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES

<b>nationalgrid</b>			
Figure Number		FIGURE 3F.7(B)	
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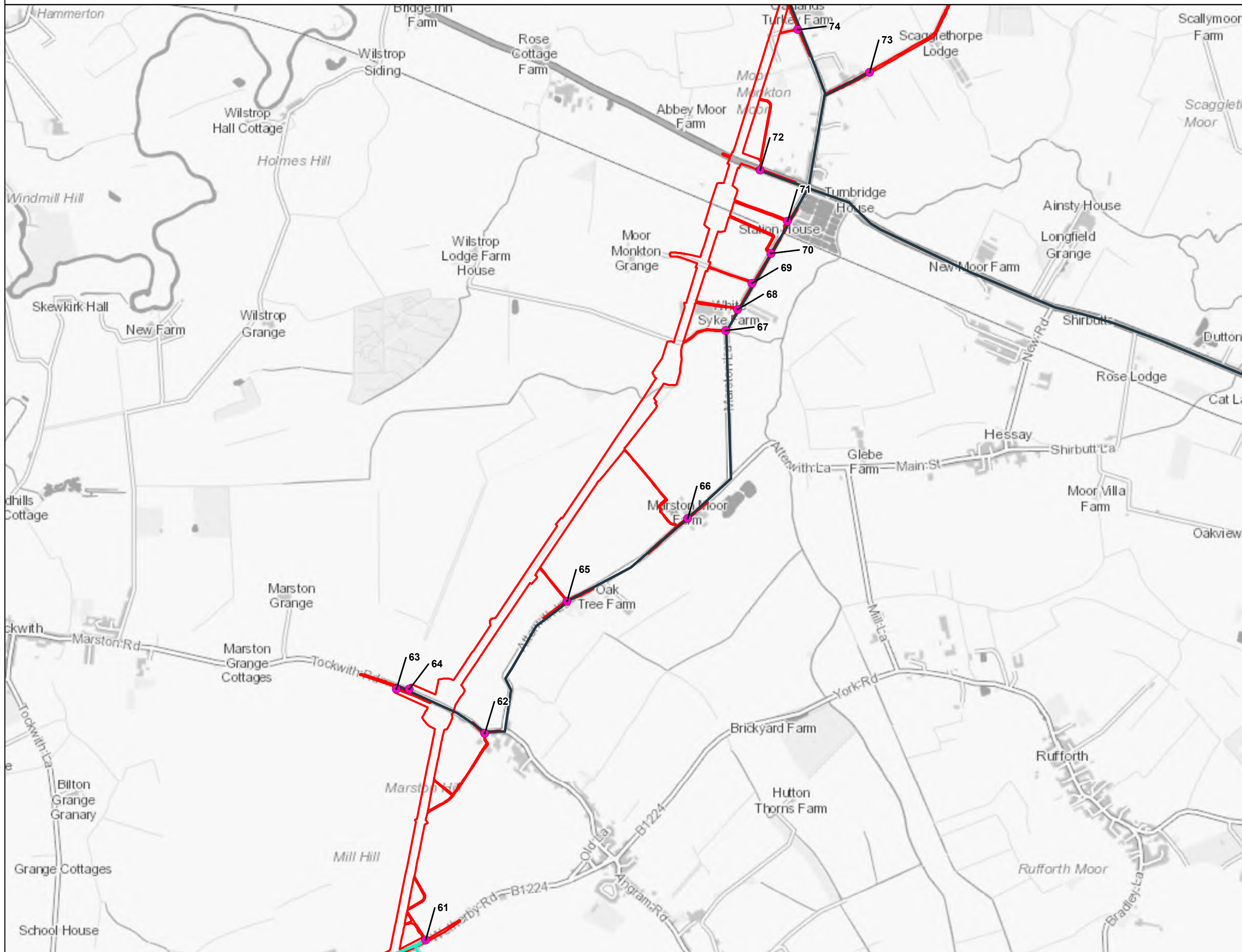




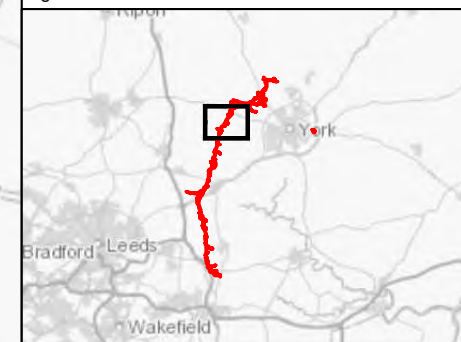
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 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

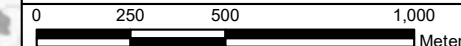
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- Study Area
- Proposed Accesses
- Monk Fryston Substation TCC
- Overton Substation TCC
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- Tadcaster TCC



**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 450,259.87 Sheet Y Centroid Coordinate: 453,202.96



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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
Issue	Date	Remarks	Drawn	Checked	Approved

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.7(B)

**Drawing Reference**  
 806503-WOOD-0262 B

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1:20,000	A3	SHEET 5 OF 11	B

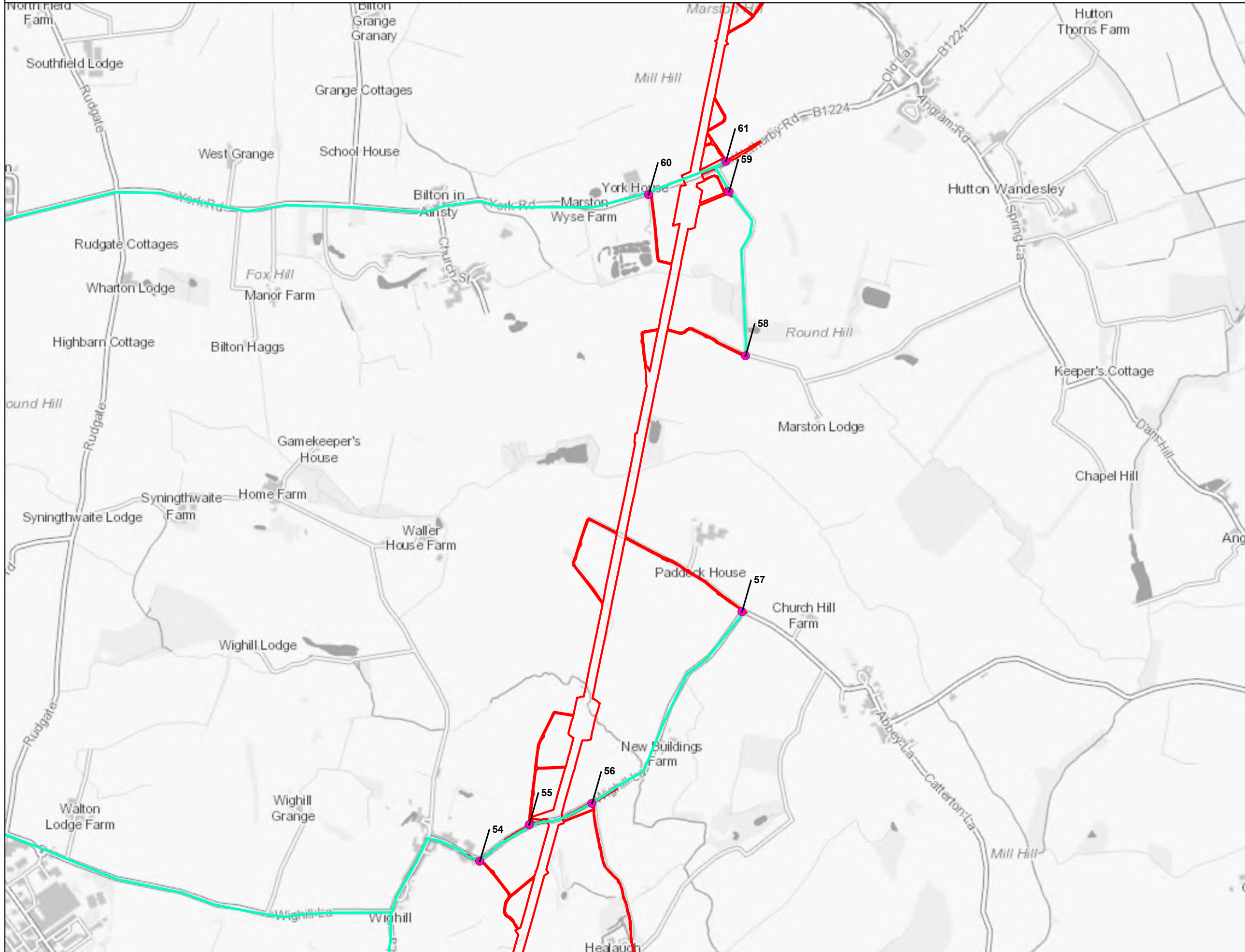




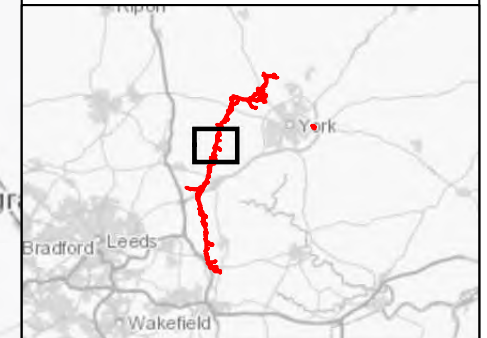
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

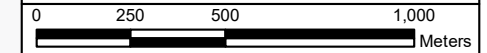
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- Study Area
- Proposed Accesses
- Monk Fyston Substation TCC
- Overton Substation TCC
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**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 448,619.27 Sheet Y Centroid Coordinate: 448,933.45



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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
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 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES

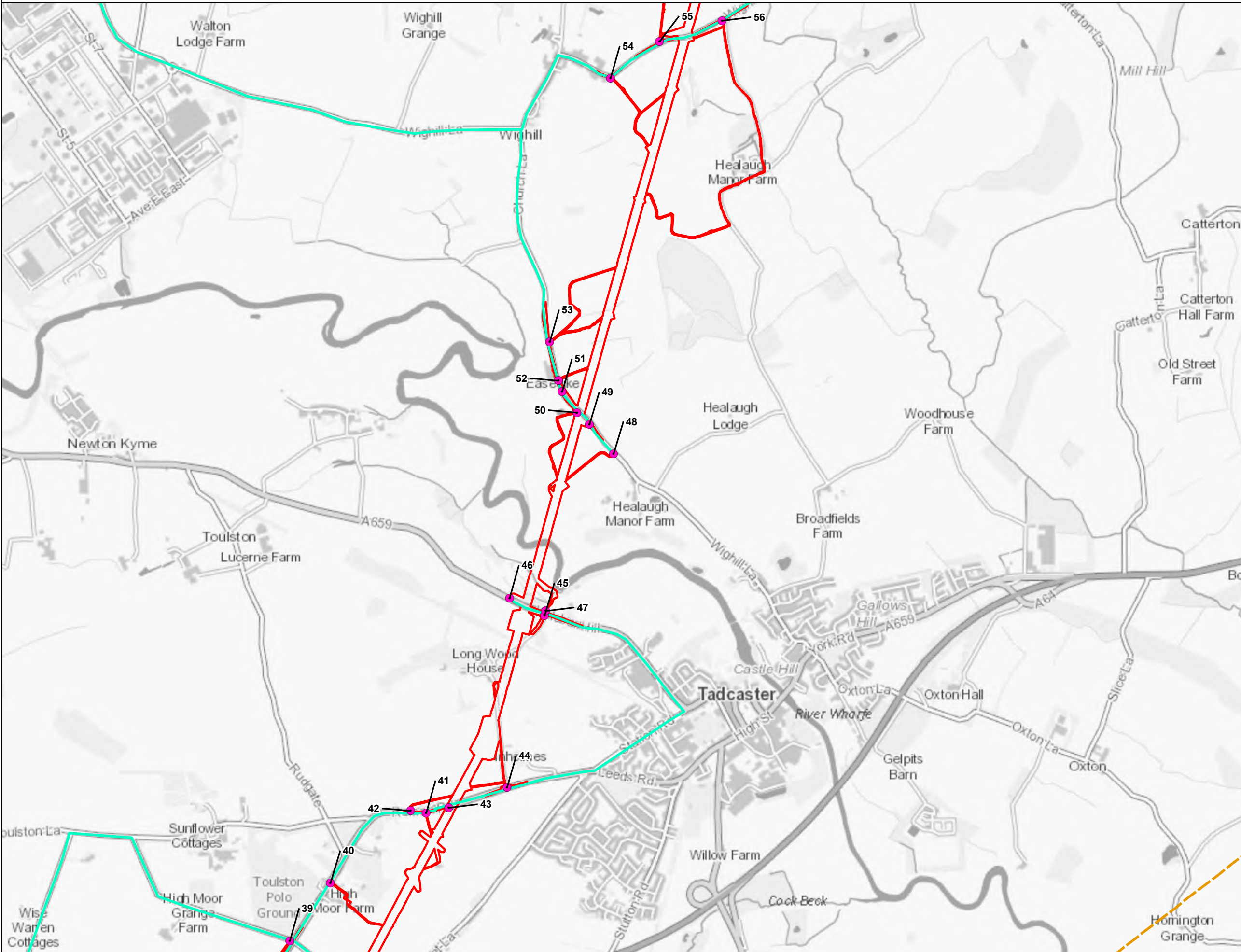
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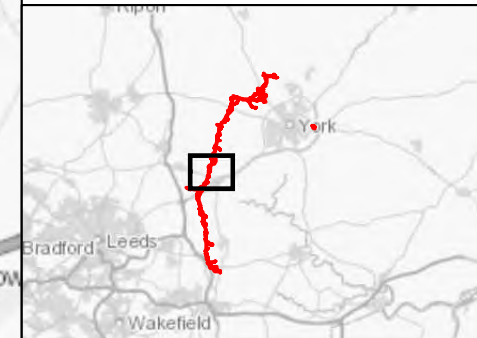


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

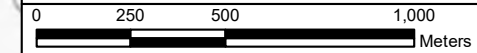
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  - Proposed Accesses
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**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES

<b>nationalgrid</b>			
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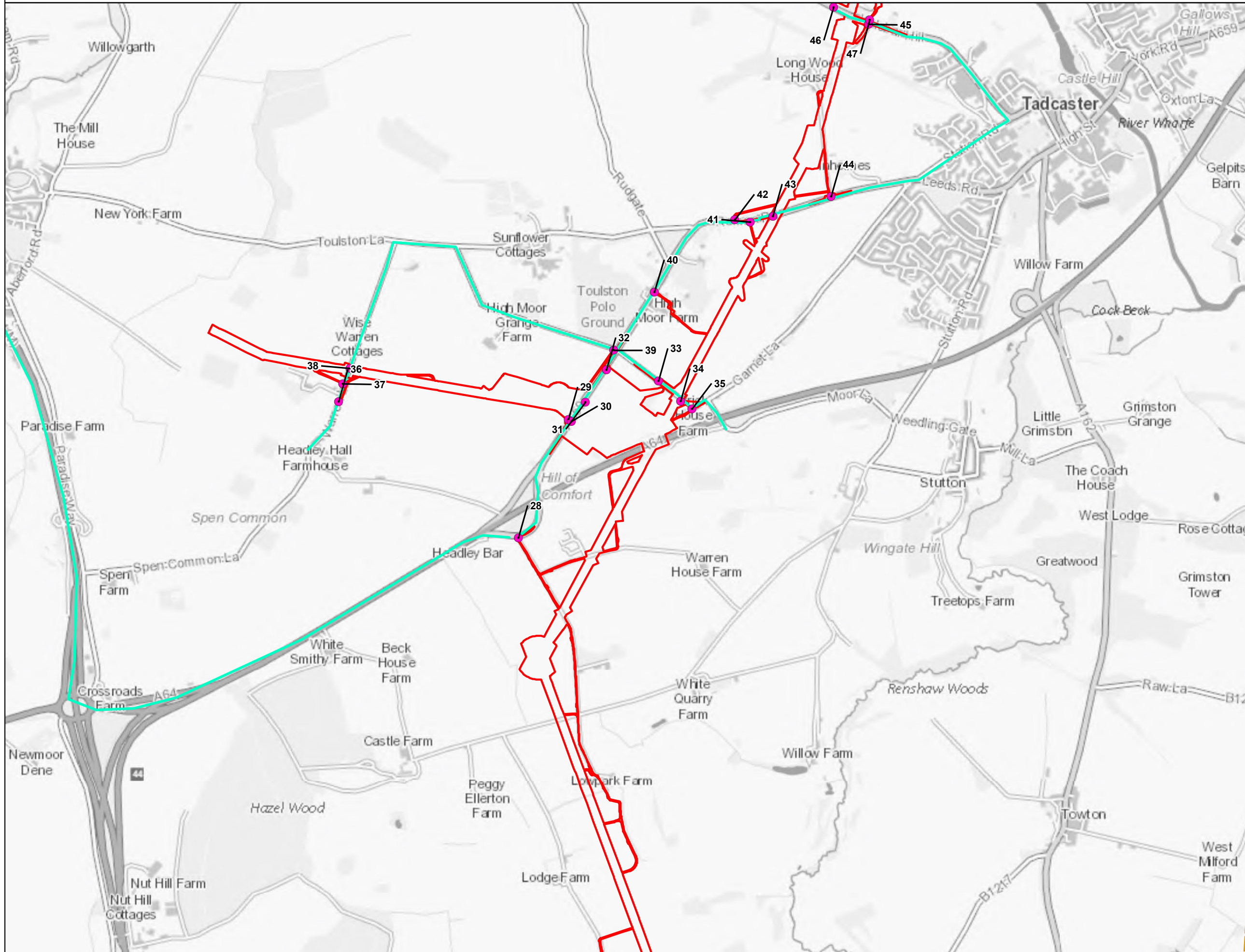




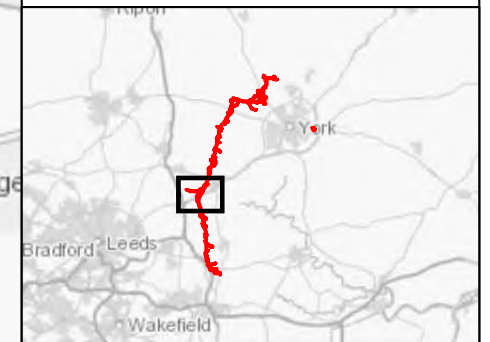
National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

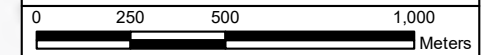
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- Monk Fyston Substation TCC
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**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 446,128.73 Sheet Y Centroid Coordinate: 441,402.51



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Issue	Date	Remarks	Drawn	Checked	Approved
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A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.7(B)

**Drawing Reference**  
 806503-WOOD-0262 B

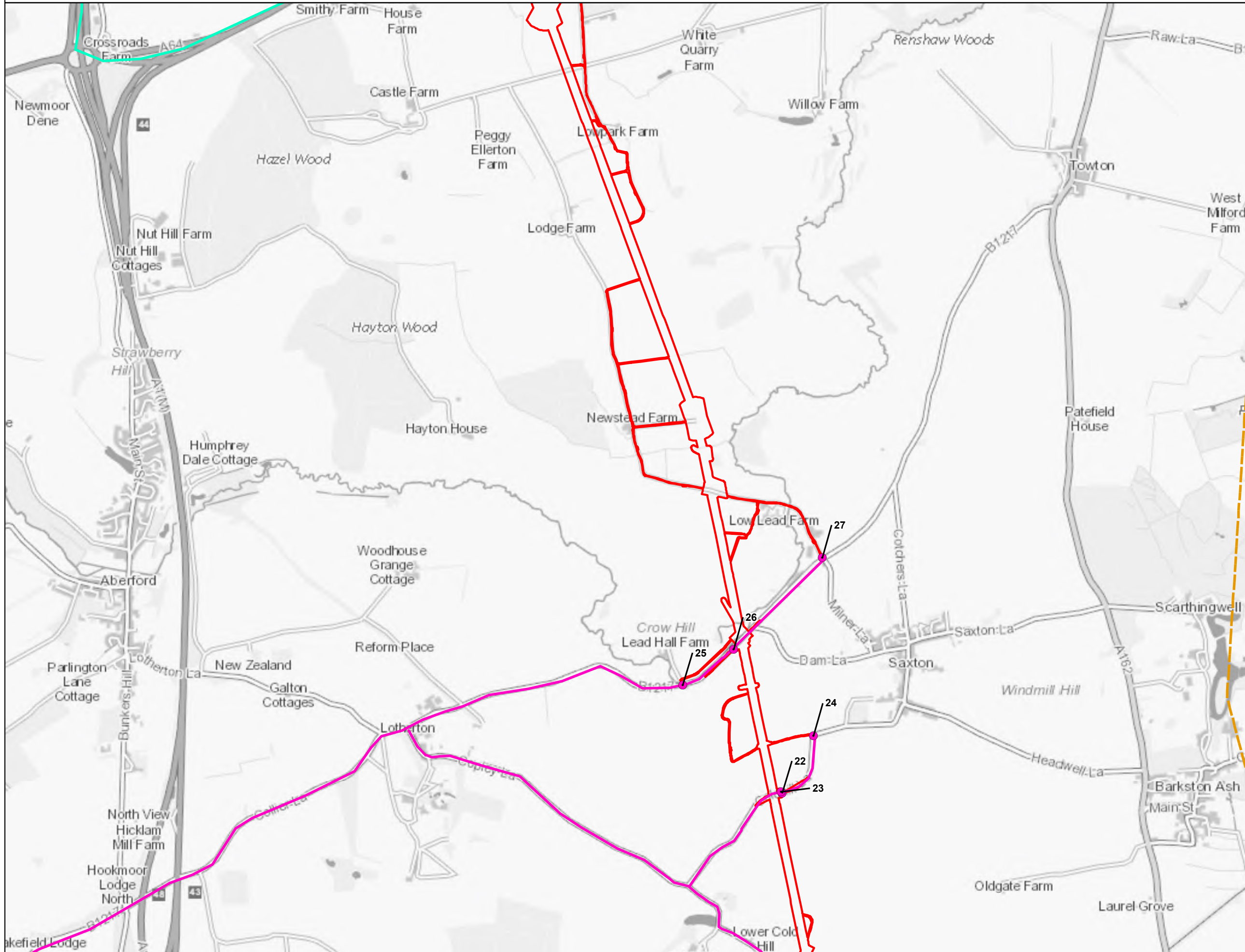
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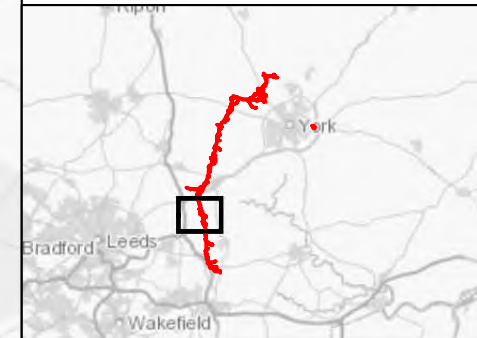


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

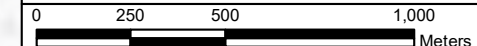
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- Order Limits
  - Study Area
  - Proposed Accesses
  - Monk Fyston Substation TCC
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**Notes**  
 This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 446,089.19 Sheet Y Centroid Coordinate: 437,844.58



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B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
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 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
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Figure Number	FIGURE 3F.7(B)		
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Scale	Sheet Size	Sheet	Issue
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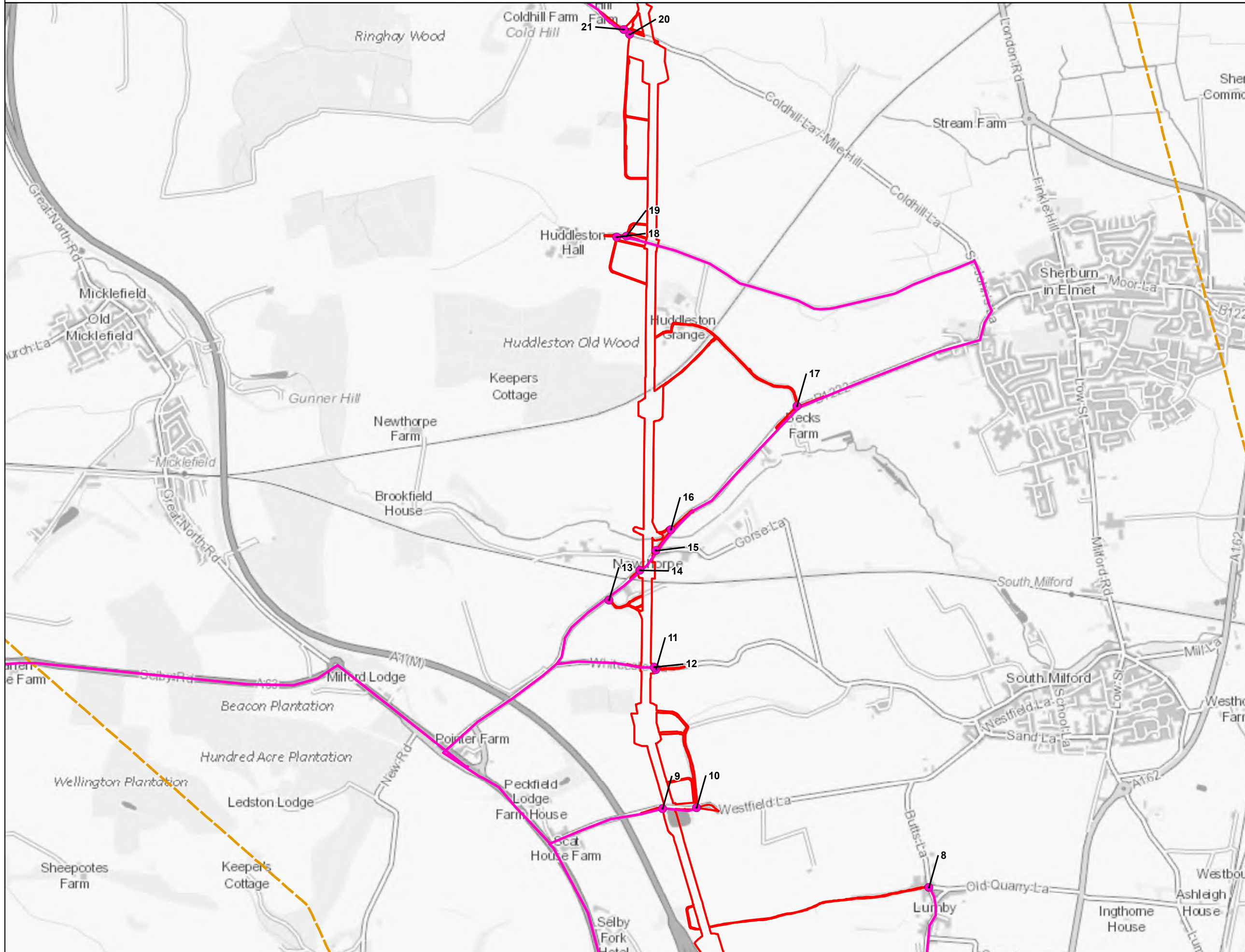




National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.7(B) TCC Temporary Construction Access Routes

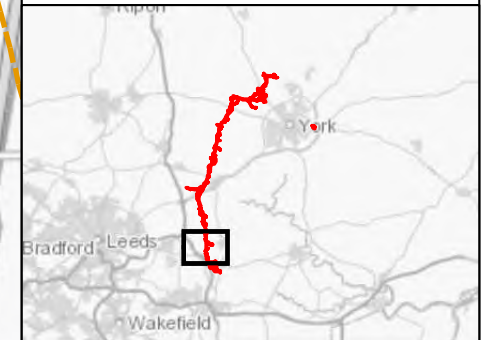
**Legend**

-  Order Limits
-  Study Area
-  Proposed Accesses
-  Monk Fyston Substation TCC
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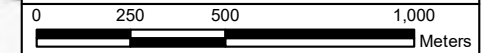


**Notes**

This drawing is scaled at paper size A3, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against.



Coordinate System: British National Grid  
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A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES



**Figure Number**  
 FIGURE 3F.7(B)

**Drawing Reference**  
 806503-WOOD-0262 B

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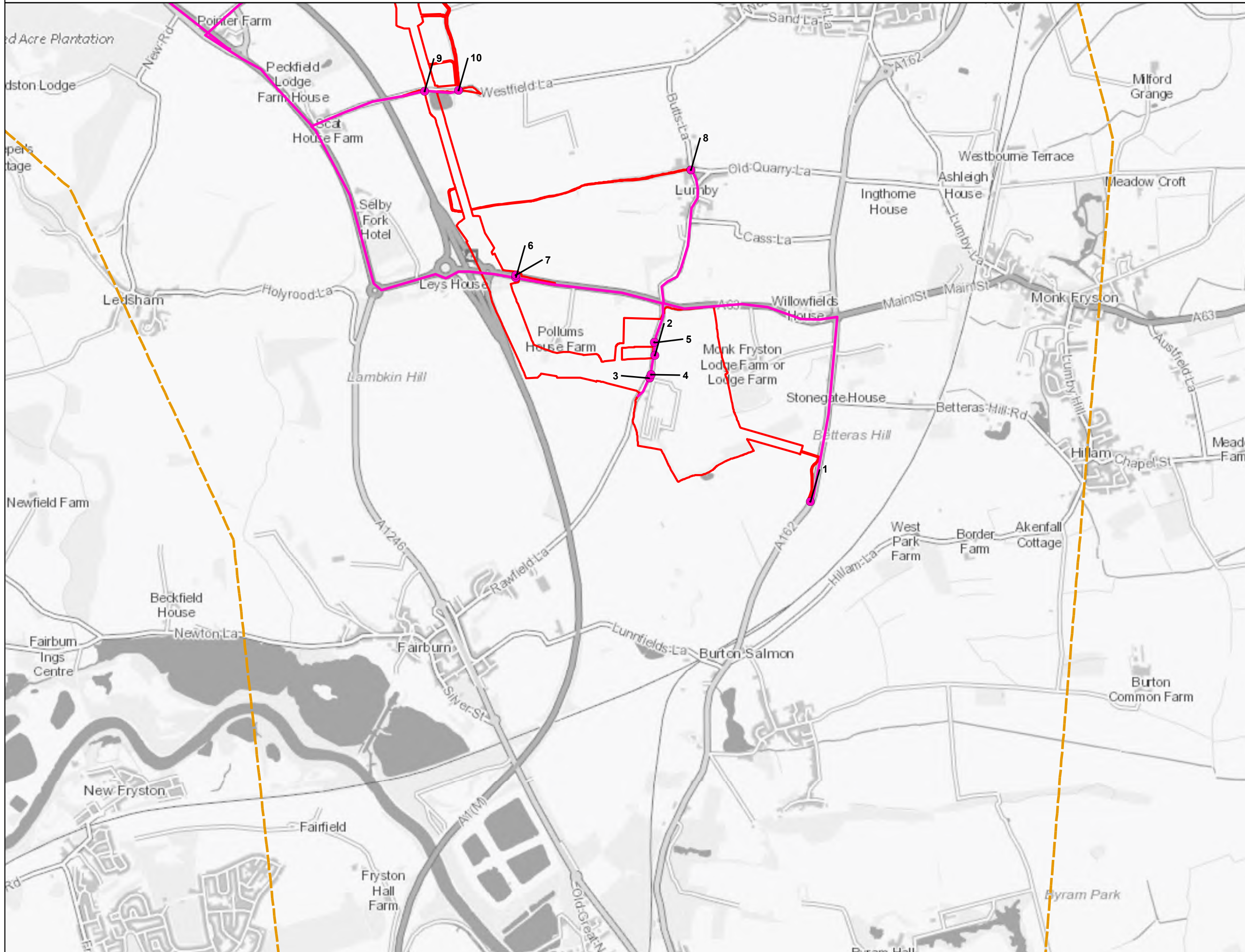




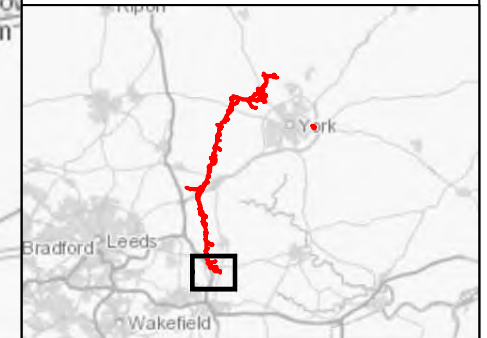
National Grid (Yorkshire Green Energy Enablement Project) Order  
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 Figure 3F.7(B) TCC Temporary Construction Access Routes

**Legend**

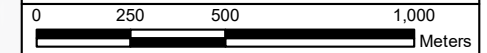
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Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 448,283.25 Sheet Y Centroid Coordinate: 428,752.10



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Issue	Date	Remarks	Drawn	Checked	Approved
B	28/07/23	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC
A	1 NOV 22	FOR DCO SUBMISSION	BERNB	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.7(B)  
 TCC TEMPORARY CONSTRUCTION  
 ACCESS ROUTES

<b>nationalgrid</b>			
<b>Figure Number</b>		FIGURE 3F.7(B)	
<b>Drawing Reference</b>			
806503-WOOD-0262 B			
<b>Scale</b>	<b>Sheet Size</b>	<b>Sheet</b>	<b>Issue</b>
1:20,000	A3	SHEET 11 OF 11	B

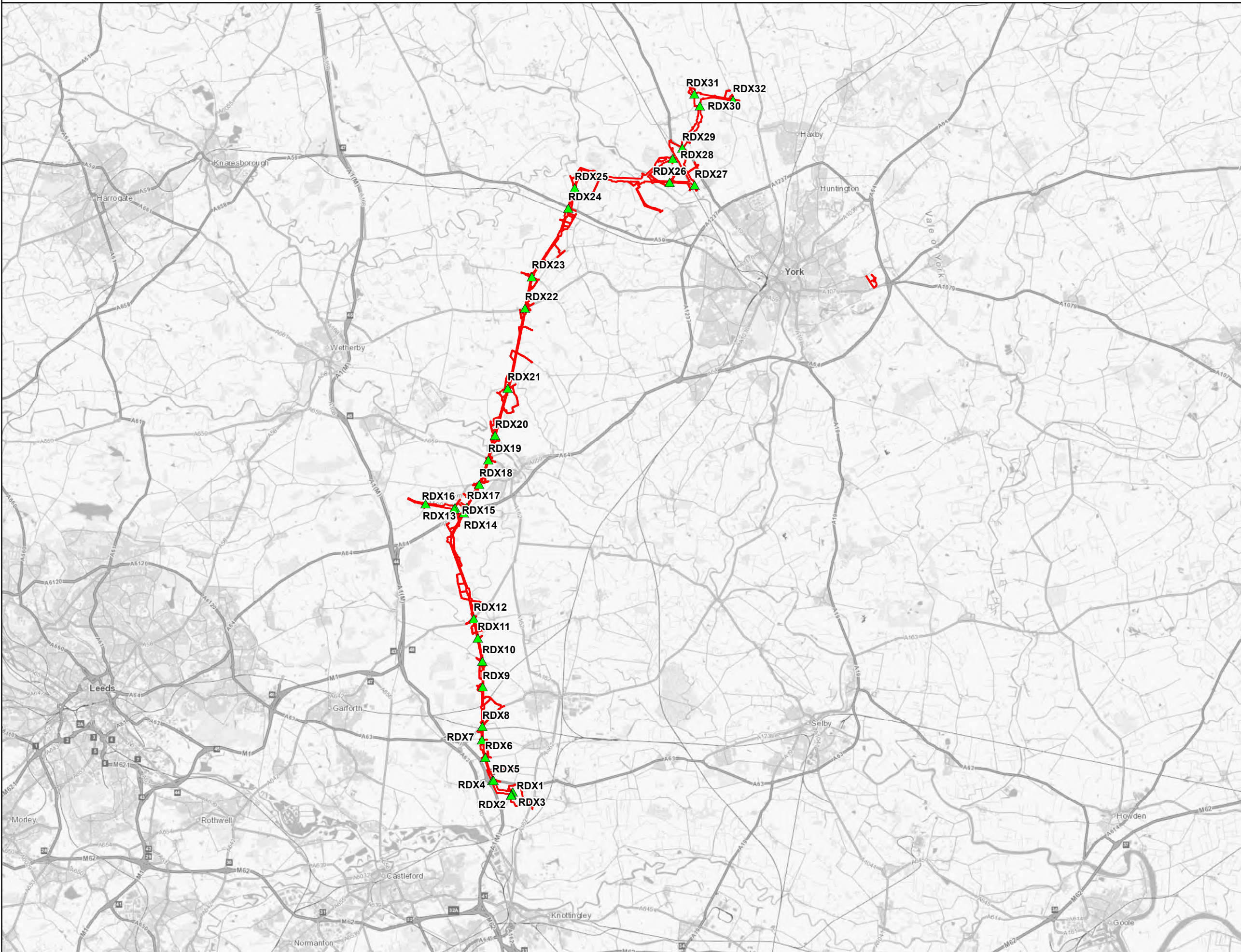




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations: Overview

**Legend**

- Order Limits
- ▲ Road Crossings

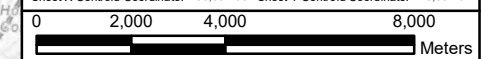


**Notes**

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Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 453,394.96 Sheet Y Centroid Coordinate: 443,094.07



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Issue	Date	Remarks	Drawn	Checked	Approved
A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**

5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS



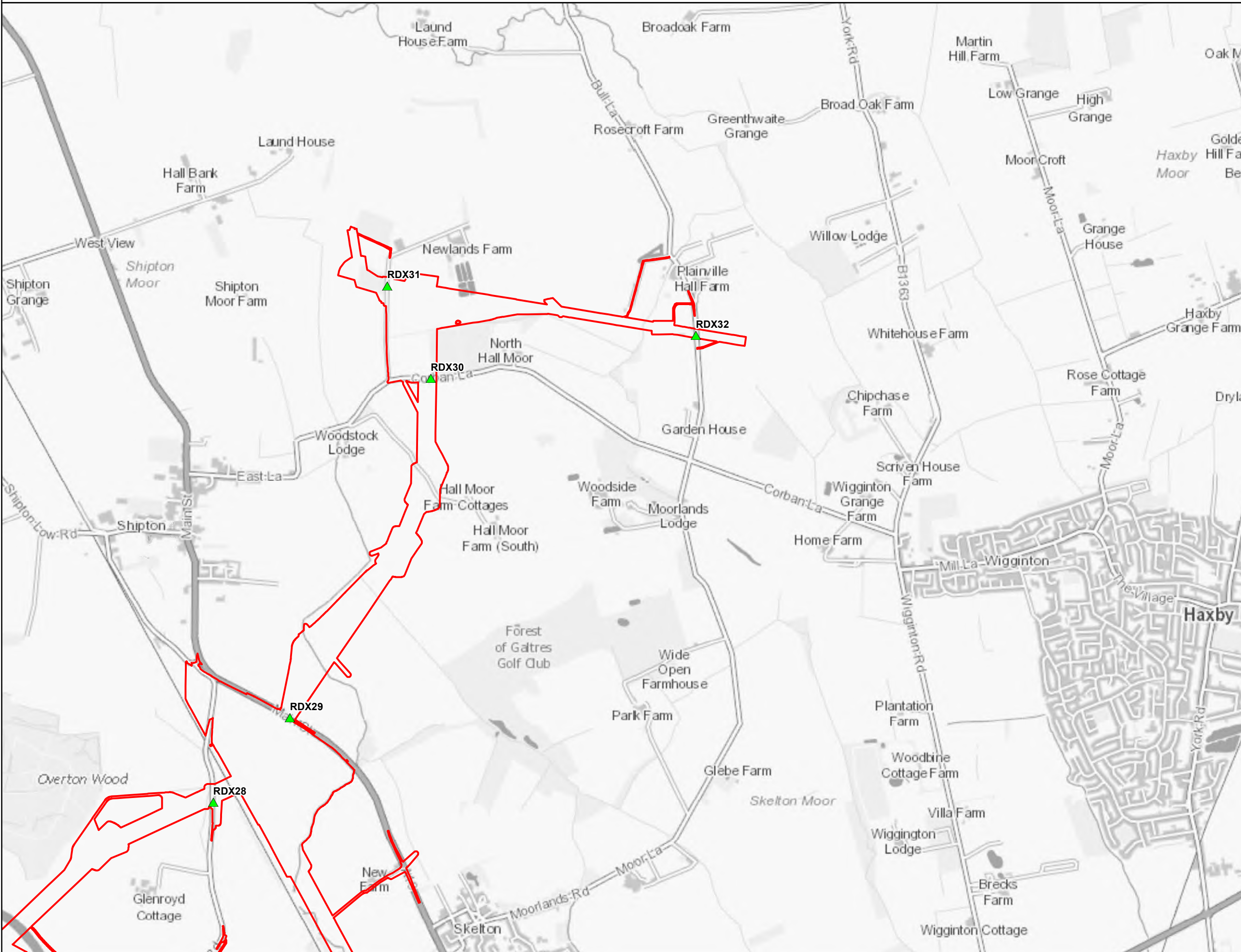
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1:160,000	A3	SHEET 1 OF 10	A



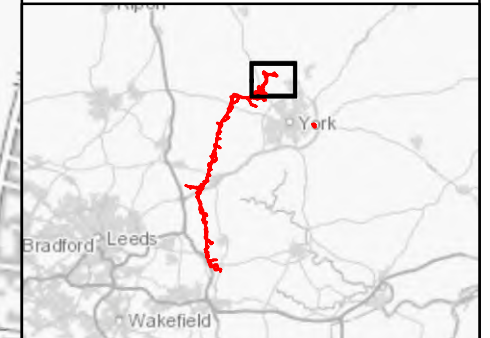


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

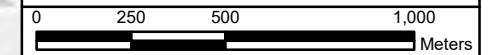
- Legend**
- Order Limits
  - ▲ Road Crossings



**Notes**  
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Issue	Date	Remarks	Drawn	Checked	Approved
A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

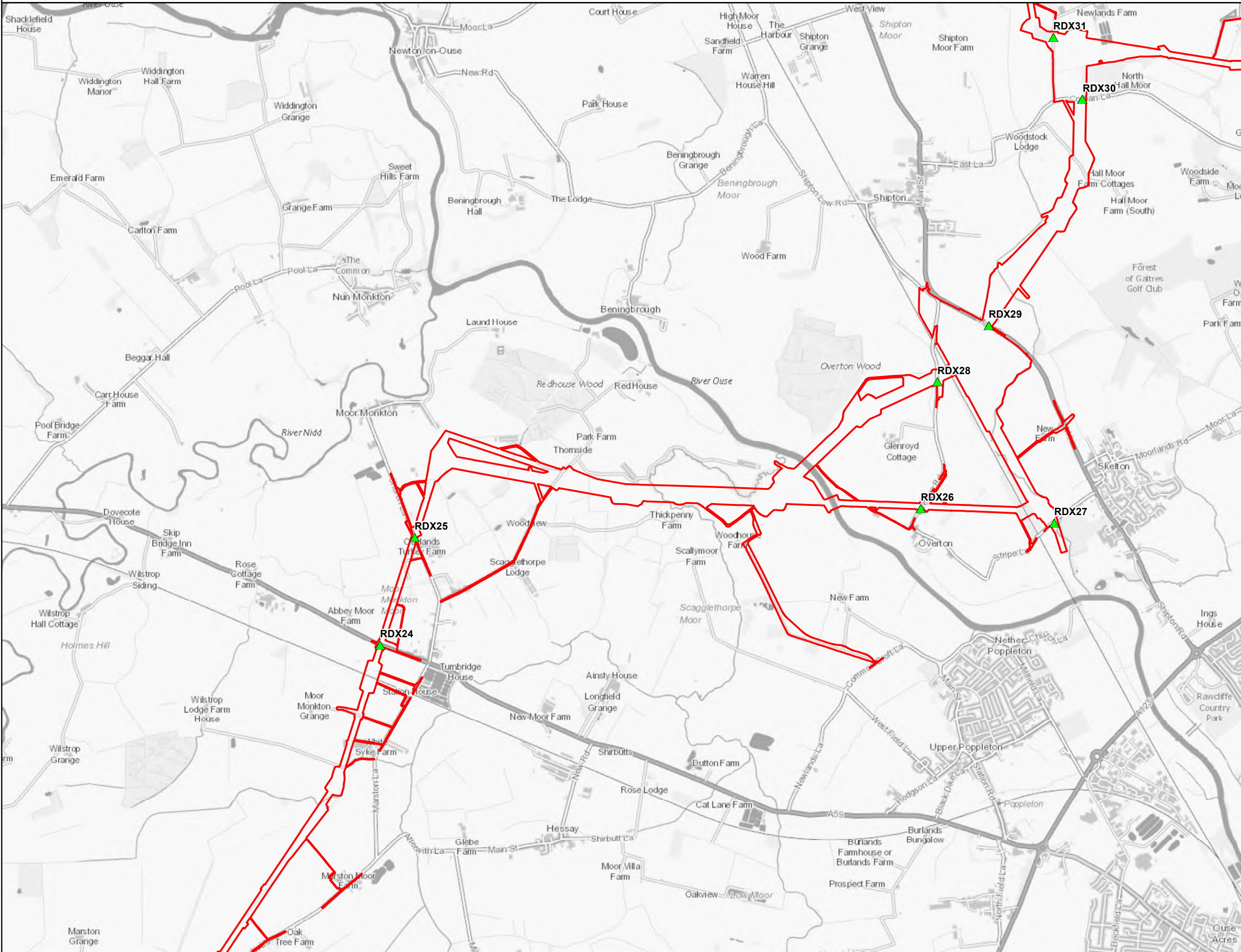
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Scale	Sheet Size	Sheet	Issue
1:20,000	A3	SHEET 2 OF 10	A



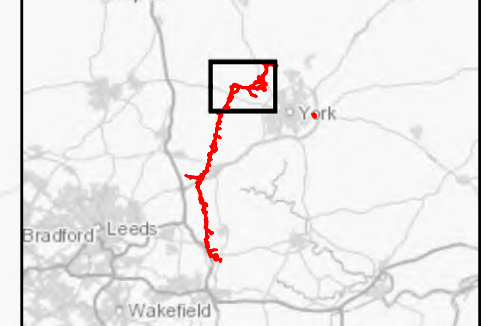


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

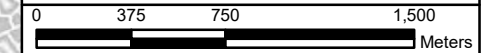
- Legend**
- Order Limits
  - ▲ Road Crossings



**Notes**  
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A	1 NOV 22	FOR DCO SUBMISSION	PANNG	DIMMR	CHADC

**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

<b>nationalgrid</b>			
<b>Figure Number</b>		FIGURE 3F.8	
<b>Drawing Reference</b>			
806503-WOOD-0263			
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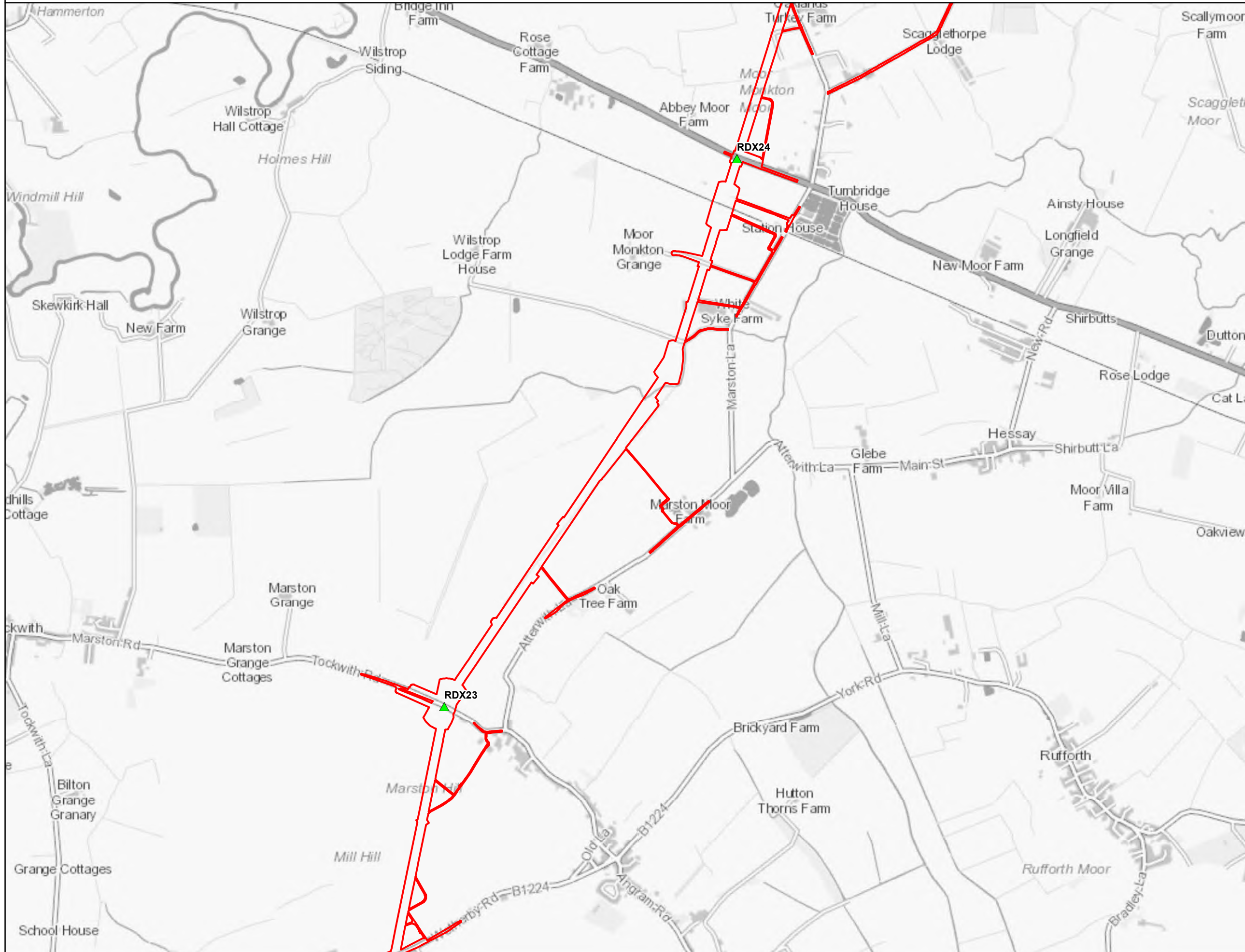




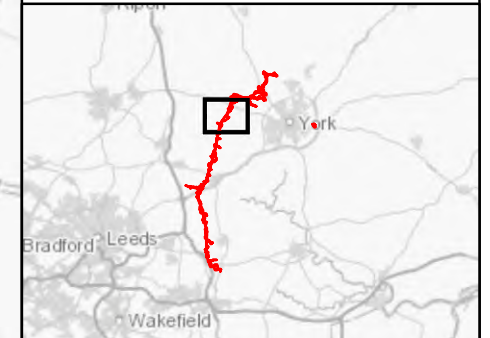
National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

**Legend**

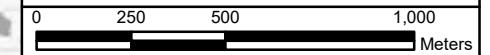
- Order Limits
- ▲ Road Crossings



**Notes**  
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS



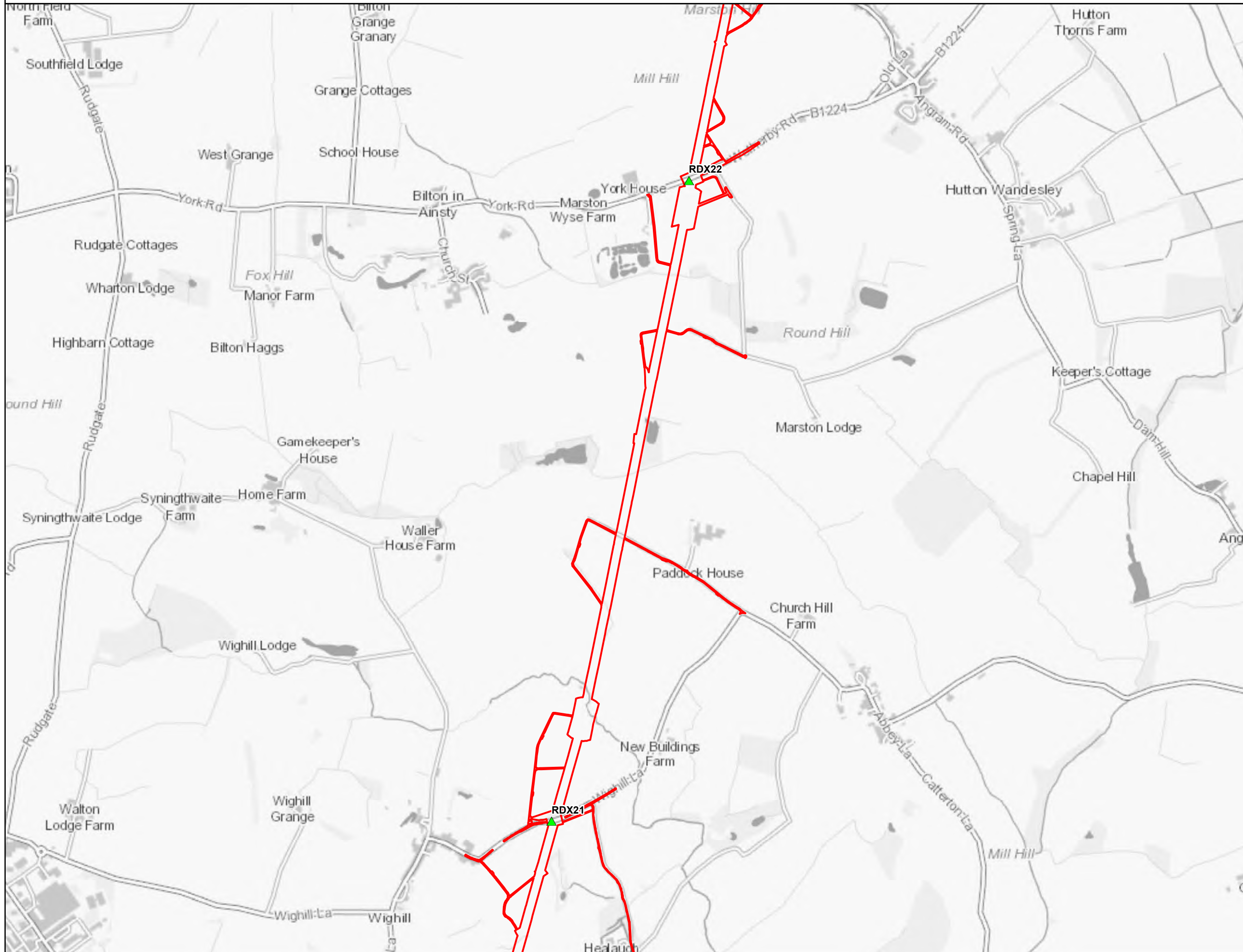
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1:20,000	A3	SHEET 4 OF 10	A



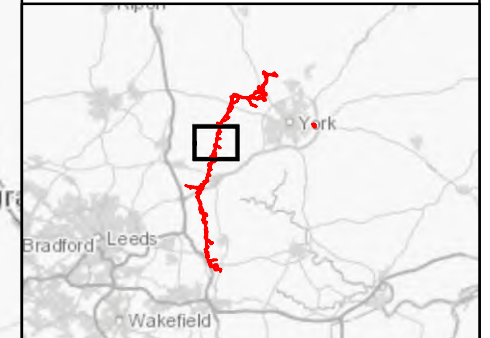


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

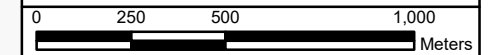
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- Order Limits
  - ▲ Road Crossings



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

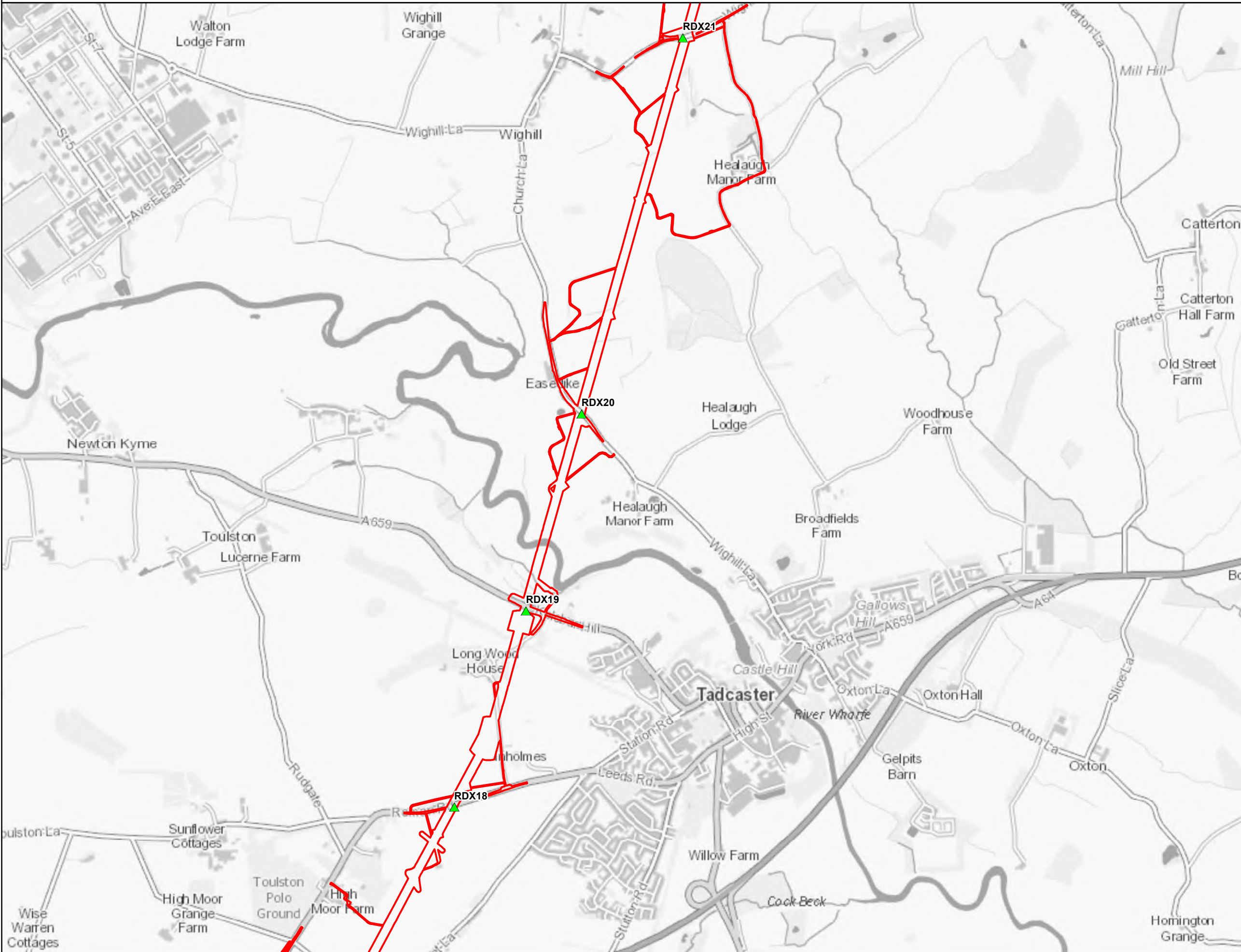
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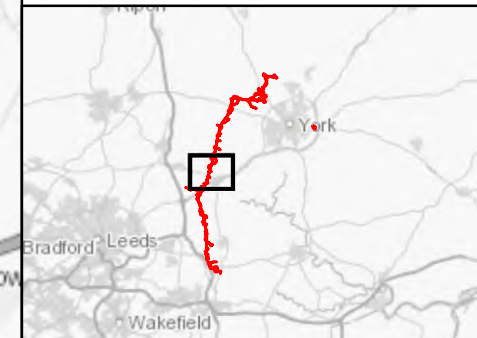


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

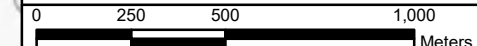
- Legend**
- Order Limits
  - ▲ Road Crossings



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Issue	Date	Remarks	Drawn	Checked	Approved
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

<b>nationalgrid</b>			
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Drawing Reference	806503-WOOD-0263		
Scale	Sheet Size	Sheet	Issue
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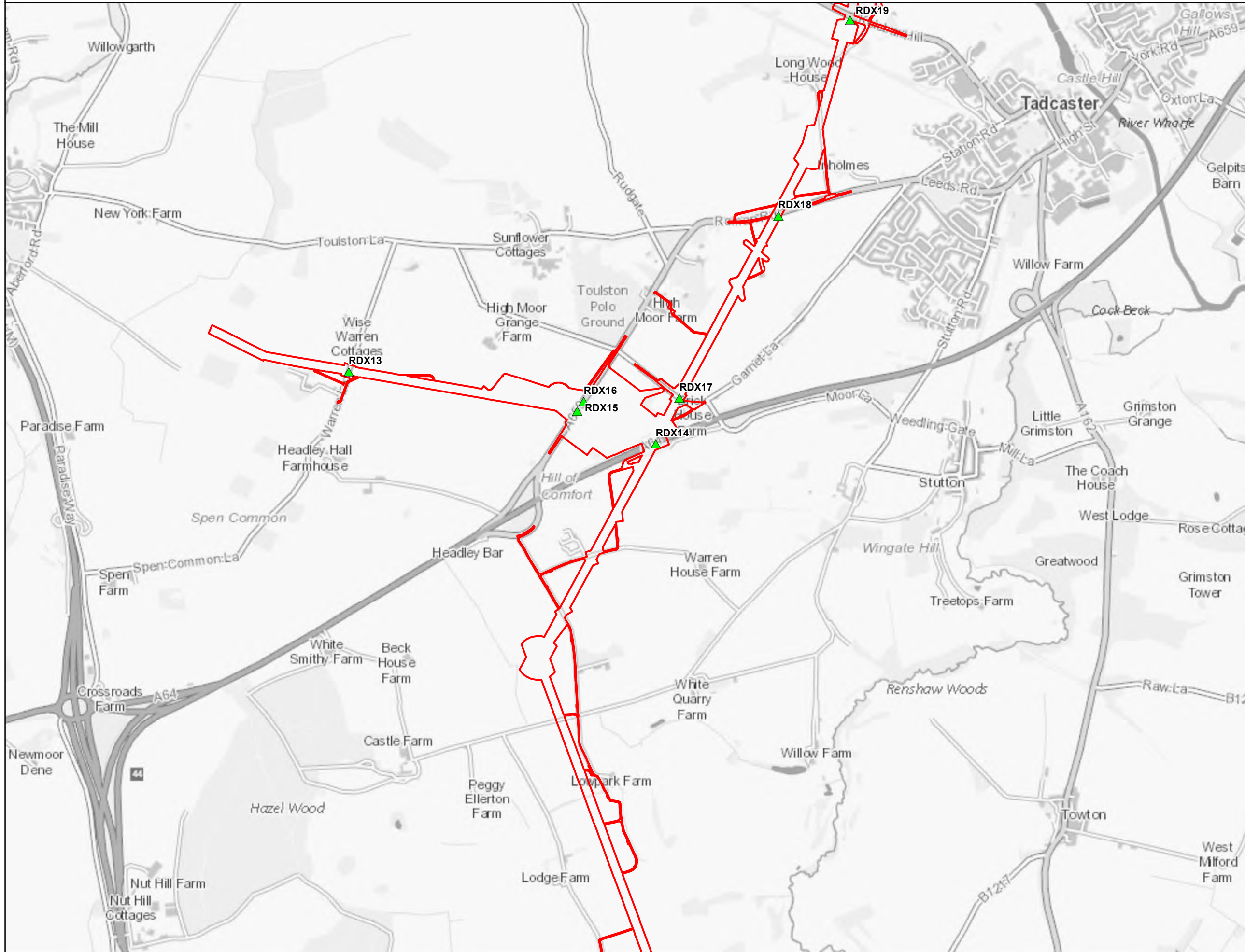




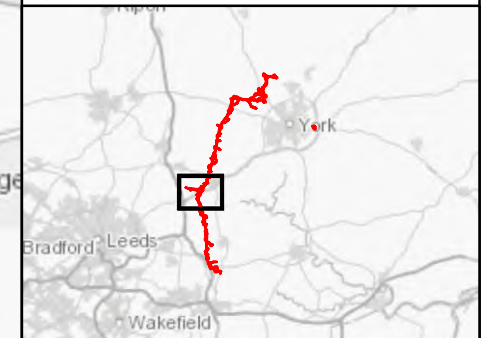
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

**Legend**

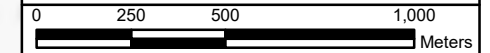
- Order Limits
- ▲ Road Crossings



**Notes**  
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

<b>nationalgrid</b>			
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Drawing Reference			
806503-WOOD-0263			
Scale	Sheet Size	Sheet	Issue
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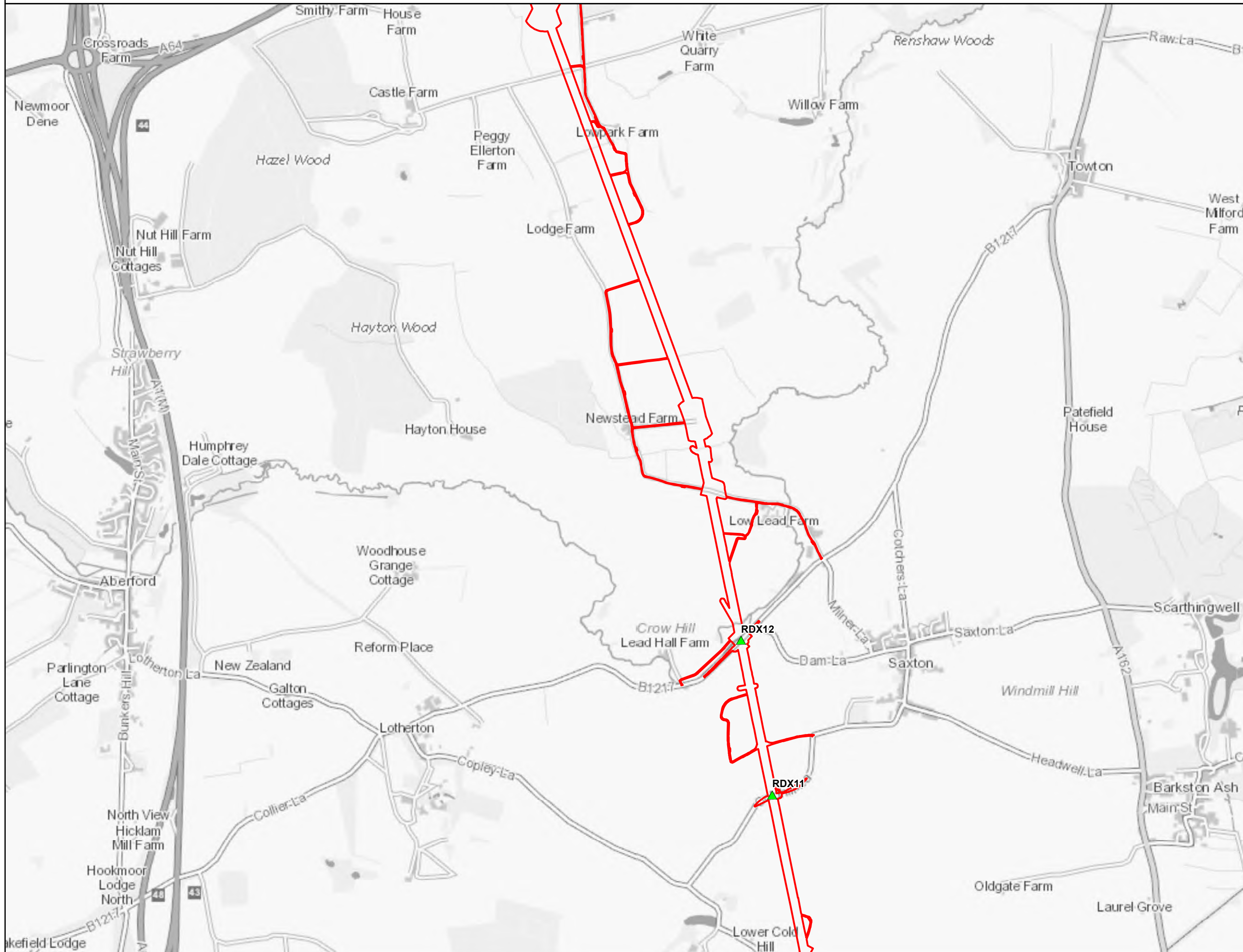




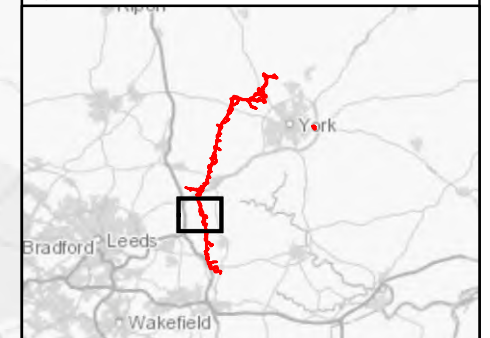
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 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

**Legend**

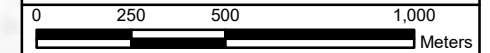
- Order Limits
- ▲ Road Crossings



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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS



**Figure Number**  
 FIGURE 3F.8

**Drawing Reference**  
 806503-WOOD-0263

Scale	Sheet Size	Sheet	Issue
1:20,000	A3	SHEET 8 OF 10	A

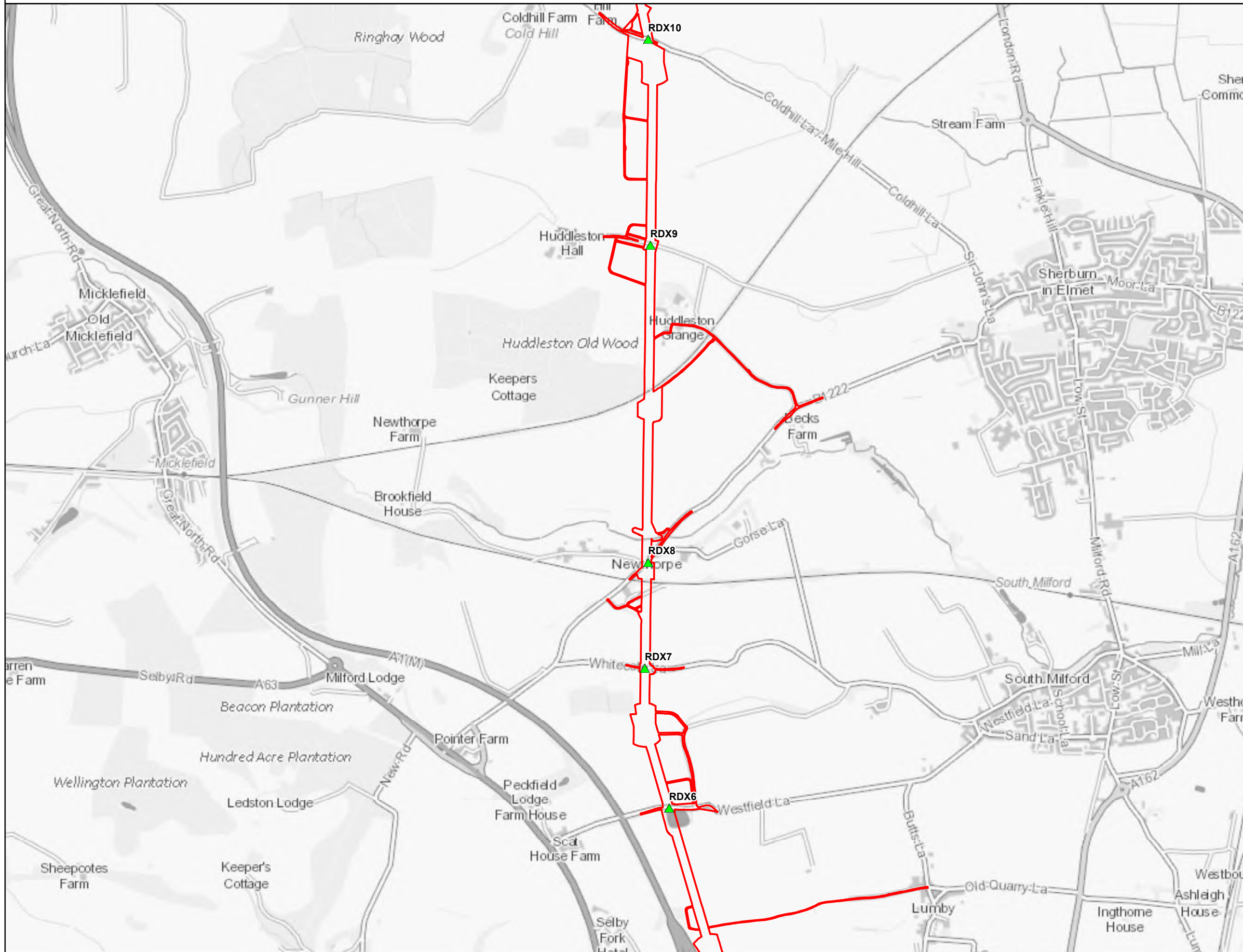




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

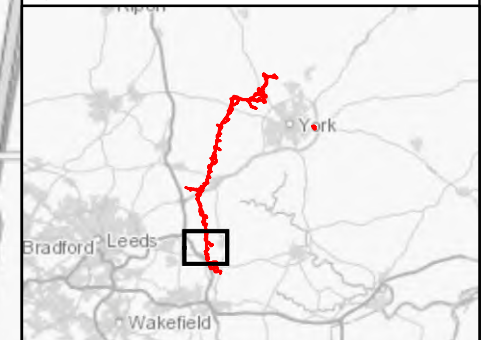
**Legend**

- Order Limits
- ▲ Road Crossings

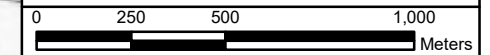


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**Title**

5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS



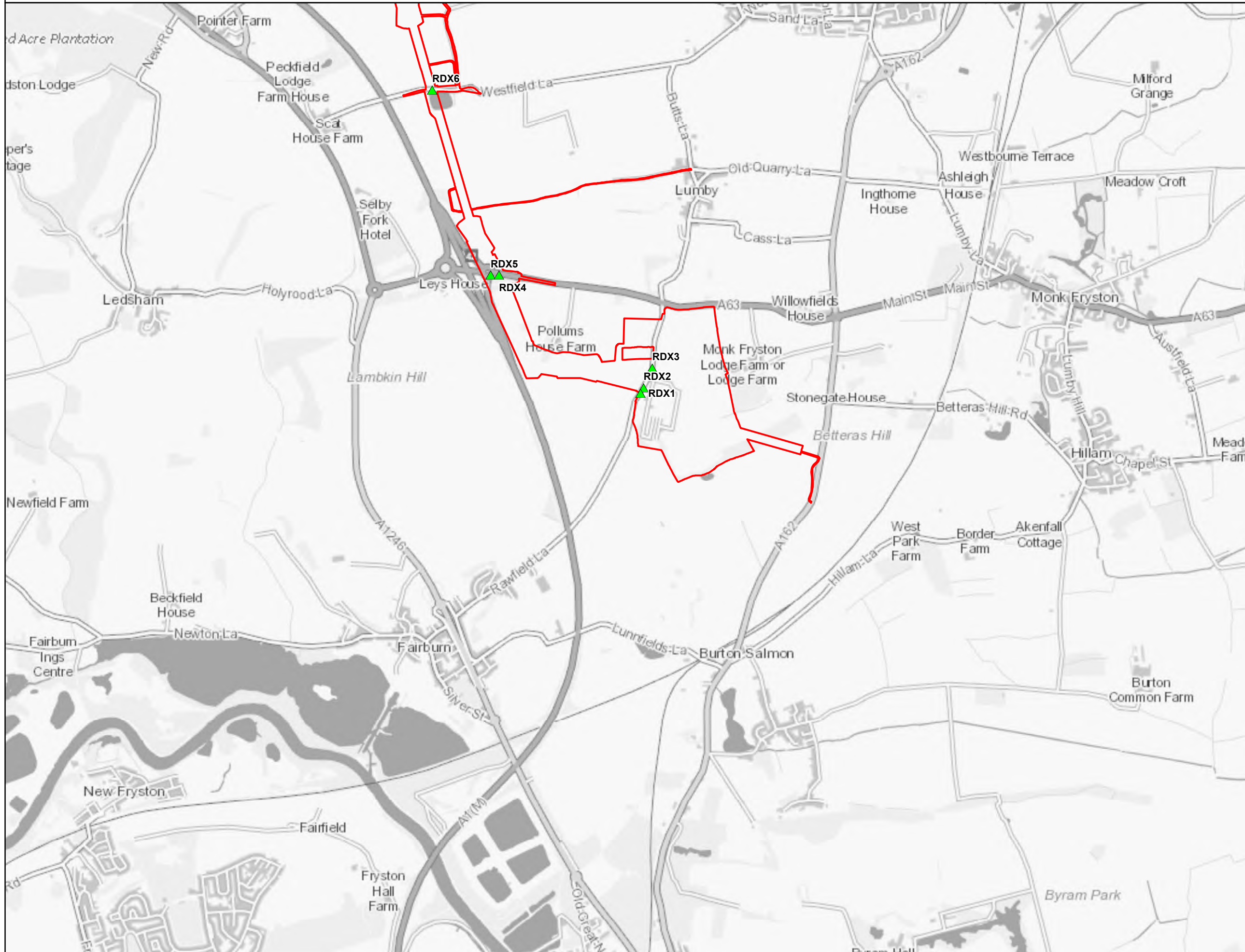
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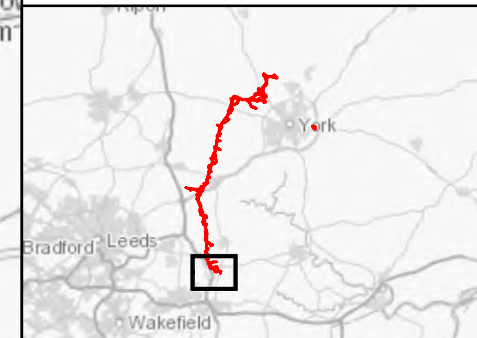


National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.8 Highway Crossing Locations

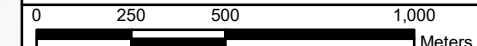
- Legend**
- Order Limits
  - ▲ Road Crossings



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Coordinate System: British National Grid  
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**Title**  
 5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.8  
 HIGHWAY CROSSING LOCATIONS

<b>nationalgrid</b>			
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Scale	Sheet Size	Sheet	Issue
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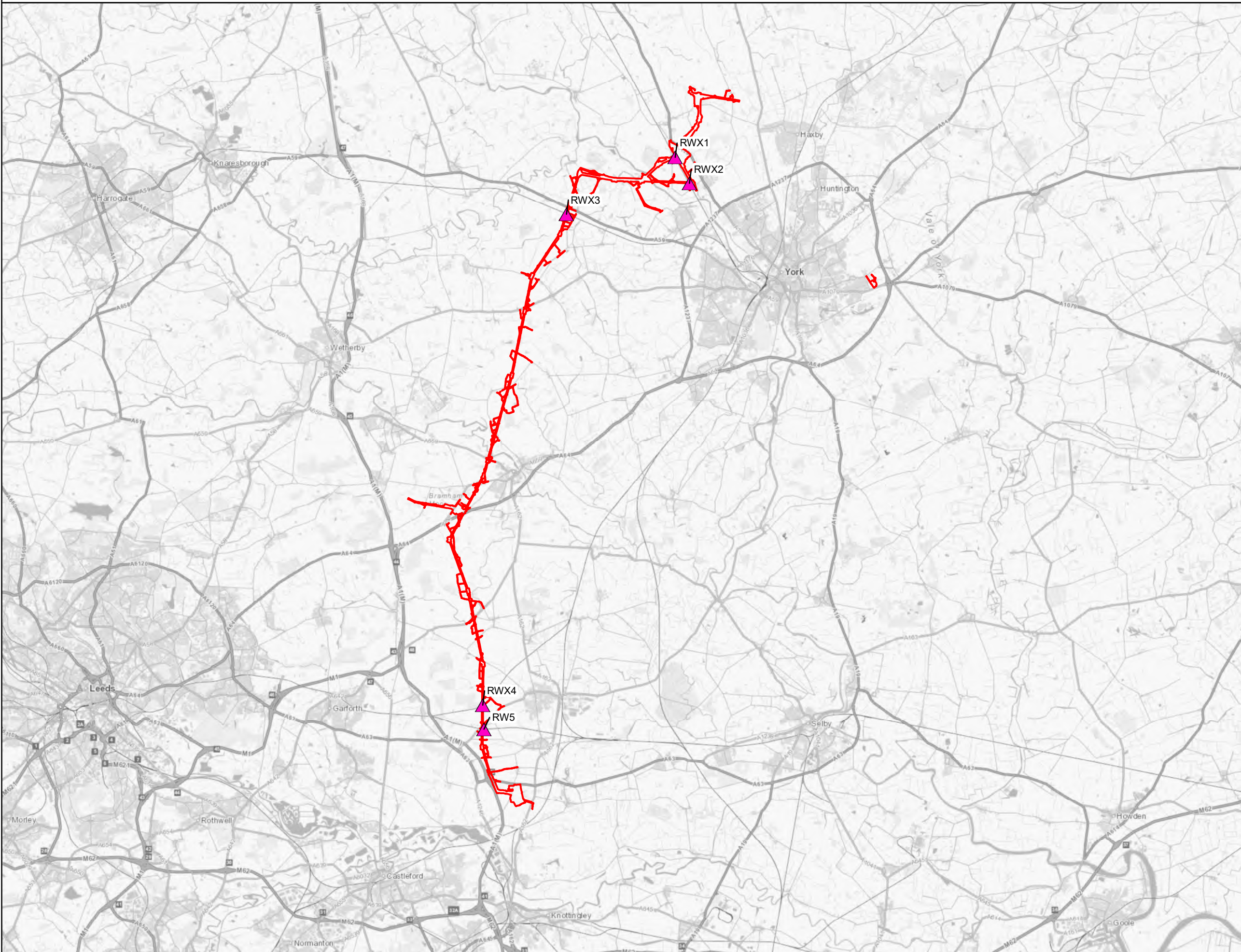




National Grid (Yorkshire Green Energy Enablement Project) Order  
 5.4.3, ES Chapter 3, Description of the Project  
 Appendix 3F Construction Traffic Management Plan  
 Figure 3F.9 Rail Crossing Locations: Overview

**Legend**

- Order Limits
- ▲ Rail Crossings

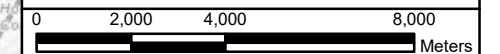


**Notes**

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Coordinate System: British National Grid  
 Sheet X Centroid Coordinate: 453,394.96 Sheet Y Centroid Coordinate: 443,094.07



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Issue	Date	Remarks	Drawn	Checked	Approved

**Title**

5.4.3, ES CHAPTER 3  
 DESCRIPTION OF THE  
 PROJECT FIGURES  
 APPENDIX 3F CONSTRUCTION  
 TRAFFIC MANAGEMENT PLAN  
 FIGURE 3F.9  
 RAIL CROSSING LOCATIONS



<b>Figure Number</b>	FIGURE 3F.9		
<b>Drawing Reference</b>	806503-WOOD-0307		
<b>Scale</b>	<b>Sheet Size</b>	<b>Sheet</b>	<b>Issue</b>
1:160,000	A3	SHEET 1 OF 5	A



# Annex 3F.1

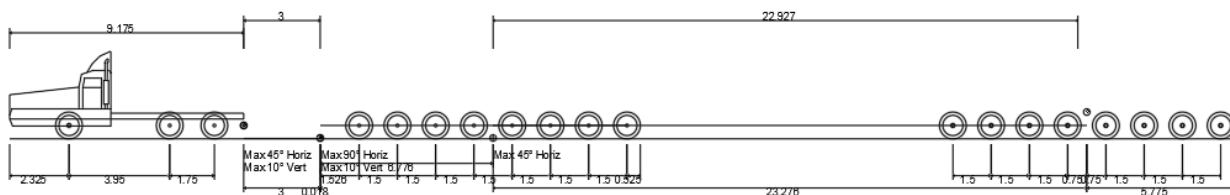
## AIL Assessment

- F.1.1. Assessment of the routes for the AIL deliveries was undertaken based on swept path assessment (SPA) using AutoTRACK in order to understand route constraints (pinch points) and the need for temporary mitigation.
- F.1.2. It should be noted that the delivery of cable drums to the Shipton CSECs will route through junctions that are proposed to be improved as part of A1237 York Outer Ring Road Dualling scheme. At this stage the AIL assessments have been undertaken on the existing junction layouts. It is noted that these junctions are proposed to be improved with wider entrances and exits to the existing layout. Updated SPA will be provided once the scheme has been completed, in consultation with CYC.

### SGT AILs

- F.1.3. SPAs have been undertaken of the delivery of the 250t SGTs to the two substation sites within the Project – Monk Fryston and Overton. The scope of this assessment included any pinch points on the proposed abnormal load delivery route from the anticipated port of delivery, assumed to be Goole Port for the purposes of the assessment, to each substation site. The pinch points identified for assessment and the potential impact of the abnormal load vehicle are summarised at the end of this appendix.
- F.1.4. **Figure 3FA.1** shows out the specification of the SGT AIL vehicle.

**Figure 3FA.1 – SGT AIL Vehicle**



GirderFrameTrailer_16axle_FOR_INFORMATION_ONLY	
Overall Length	48.002m
Overall Width	4.500m
Overall Body Height	3.428m
Min Body Ground Clearance	0.017m
Max Track Width	3.000m
Lock to lock time	6.00s
Wall to Wall Turning Radius	26.500m

- F.1.5. A review of the route between Goole Port and the substation sites identified the following pinch points. Vehicle tracking has been undertaken for each of these locations.
  - Pinch Point locations on delivery routes to both Monk Fryston and Overton:
    - A161 Normandy Way roundabout (**Figure 3FA.2**);
    - A161/Tom Pudding Way roundabout (**Figure 3FA.3**); and
    - A161/M62 junction (**Figure 3FA.4**).



- Pinch Point locations on delivery route to Monk Fryston Substation:
  - The A1M/A63 junctions (**Figure 3FA.5**); and
  - A63/Rawfield Lane junction (**Figure 3FA.6**).
- Pinch Point locations on delivery route to Overton Substation:
  - A64/A1237 roundabout (**Figure 3FA.7**);
  - A1237/Askham Lane roundabout (**Figure 3FA.8**);
  - A1237/B1224 roundabout (**Figure 3FA.9**);
  - A1237/A59 roundabout (**Figure 3FA.10**);
  - A1237/Great North Way junction (**Figure 3FA.11**);
  - A1237/A19 junction (**Figure 3FA.12**); and
  - A19/Overton Road and new section of widened Overton Road (**Figure 3FA.13**).

F.1.6. The results of this assessment set out that only three locations of those assessed would require mitigation works. For the other nine locations no AIL mitigation would be required. The two locations and anticipated mitigation required is set out in the following sections.

#### *A1237/B1224 roundabout*

F.1.7. **Figure 3FA.7** shows the SPA of the AIL vehicle carrying the SGT routeing northbound through the roundabout. The assessment indicates a minor overhang and overrun of the central island on the A1237 southbound approach and on the highway verge to the west of the carriageway at the same location. It is anticipated that this would be accommodated by providing temporary metal plating of the verge where required and the temporary removal of one bollard on the central island.

#### *A1237/A59 Roundabout*

F.1.8. **Figure SFA.10** shows the SPA of the AIL vehicle carrying the SGT running northbound through the roundabout. The assessment indicates a minor overrun and overhang of the central island on the A1237 southbound. Although there is a need to overrun the central island there is no signage or highways infrastructure to remove.

#### *A19/Overton Road and New Section of widened Overton Road*

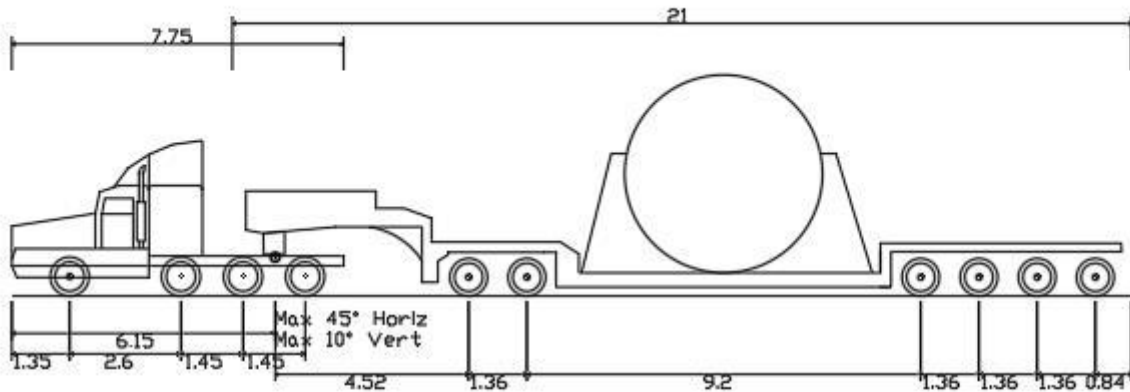
F.1.9. **Figure 3FA.13** shows the SPA of the AIL vehicle carrying the SGT running northbound on the A19 and undertaking a U turn into the widened section of Overton Road. The assessment indicates the following impacts:

- Overrun on the east side of the A19 – Proposed to be mitigated through temporary plating of the verge during SGT delivery;
- Overrun of Overton Road north of the carriageway at the junction with A19 – Proposed to be mitigated with the hardening of the verge widening/hardening of the existing grass verge. This will also require the temporary relocation of one give way sign; and
- Overrun of the verge on the south side of Overton Road – Proposed to be mitigated through temporary plating of the verge during SGT delivery.

F.1.10. The proposed mitigation is identified in the AIL Assessment of Proposed Site Accesses below.

**Cable Drum AIL**

F.1.11. The proposed cable drum AIL vehicle specification is provided as **Figure 3FA.14**.



Broshius SL2 replica - based on VT Low Boy	
Overall Length	26.150m
Overall Width	2.850m
Overall Body Height	5.159m
Min Body Ground Clearance	0.209m
Max Track Width	2.591m
Lock to lock time	6.00s
Max Steering Angle (Virtual)	30.00°

F.1.12. The cable drum vehicle is required to access both substations and CSEC locations. SPA has not been undertaken at the two substation locations as the impacts of the cable drum AIL vehicle will be significantly less than the SGT as the vehicle and load are smaller, therefore the SGT SPA is the worst-case vehicle tracking.

F.1.13. Route assessment for the Tadcaster CSEC is not required as the cable drum AIL vehicles will route directly off the SRN via a slip road and route along the A659 directly to the site entrance.

F.1.14. SPA of the cable drum AIL route to the Shipton CSEC has been undertaken at the following junctions as this route has not previously assessed for the SGT AIL. A detailed SPA has been undertaken for all three pinch points.

- A1237/Clifton Moor Gate (**Figure 3FA.15**);
- A1237/Wiggington Road/B1363 (**Figure 3FA.16**); and
- B1363/Corban Lane (**Figure 3FA.17**).

F.1.15. The results of this assessment conclude that there is no requirement for widening at any of these junctions.



## **AIL Assessment of Proposed Site Accesses**

F.1.16. The design of the access points at Overton and Monk Fryston substations and at the Shipton and Tadcaster CSECs has been based on vehicle tracking. A summary of these is provided below.

### **Monk Fryston Substation**

F.1.17. Indicative bellmouth work and improvement drawings for the existing bellmouth access at Monk Fryston substation are provided in **Annex 3F.1.A**. This shows widening on the western junction radius to 30m to accommodate the SGT AIL. The drawings also show the visibility splay requirements of 2.4m setback by 120m sightline.

### **Overton Substation**

F.1.18. Indicative bellmouth work and improvement drawings for the bellmouth access at Overton substation are provided in **Annex 3F.1.B**. This shows the permanent substation access road and the required junction works and visibility splay requirements of 2.4m by 70m sightline.

F.1.19. **Annex 3F.1.B** also shows the proposed improvement works at the A19/Overton Road junction which entails surfacing of the overrun area which will comprise grass-crete or similar. The drawings also show the visibility splay requirements of 2.4m setback by 120m sightline.

### **Shipton CSEC**

F.1.20. Indicative bellmouth work and improvement drawings for the bellmouth access points at the Shipton CSEC are provided in **Annex 3F.1.C**. This shows the permanent east access road off the U1720 and the required junction works and visibility splay requirements of 2.4m by 70m sightline. **Annex 3F.1.C** also shows proposed improvement works at the Corban Lane/U1720 junction which comprises widening on the eastern side of the junction to 22m radius to accommodate the sweep of the vehicle. The drawings also show the visibility splay requirements of 2.4m setback by 160m sightline at this junction.

### **Tadcaster CSEC**

F.1.21. Indicative bellmouth work and improvement drawings for the access points at the Tadcaster CSEC are provided in **Annex 3F.1.D**. This shows the permanent access road off the A659 and the required junction works and visibility splay requirements of 2.4m by 215m sightline and access off Garnet Lane from the existing access to Red Brick Farm which doesn't require any improvement.

# **Annex 3F.1.A**

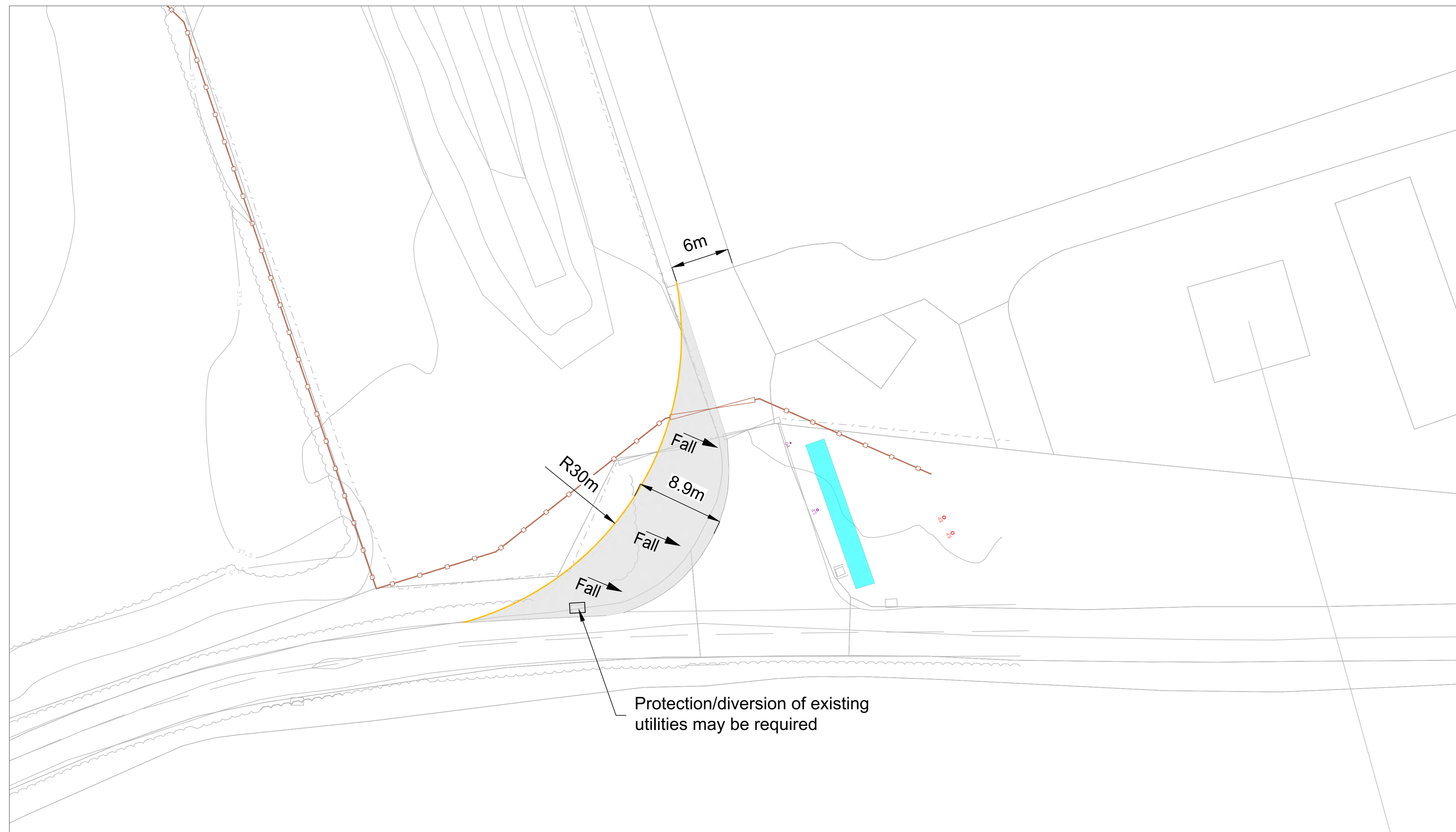
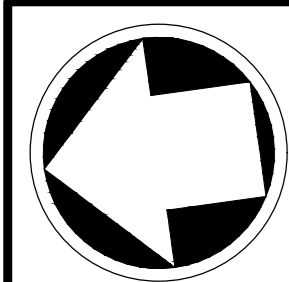
## **Monk Fryston Substation Access Point**



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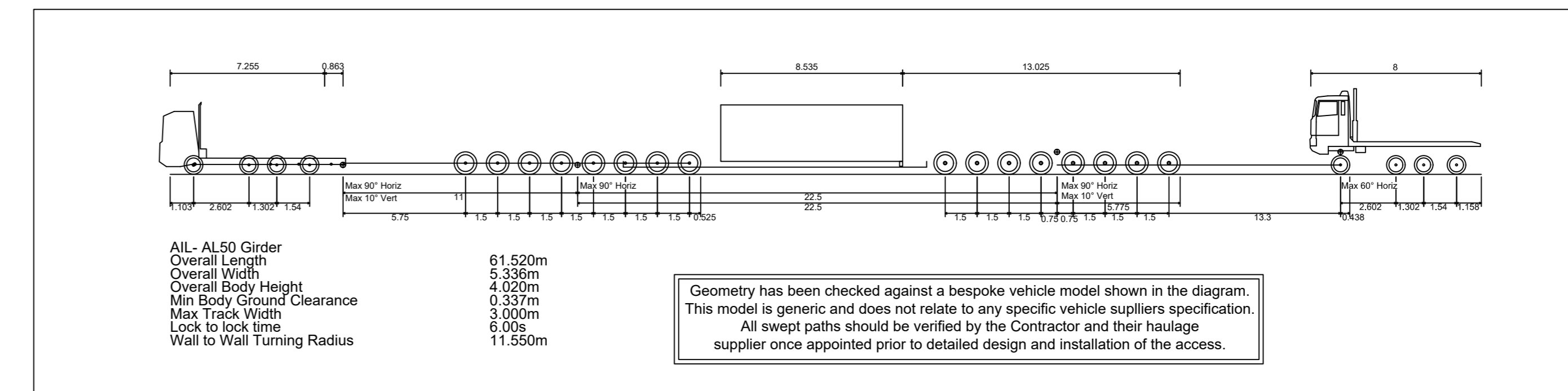






Access to the substation improvements

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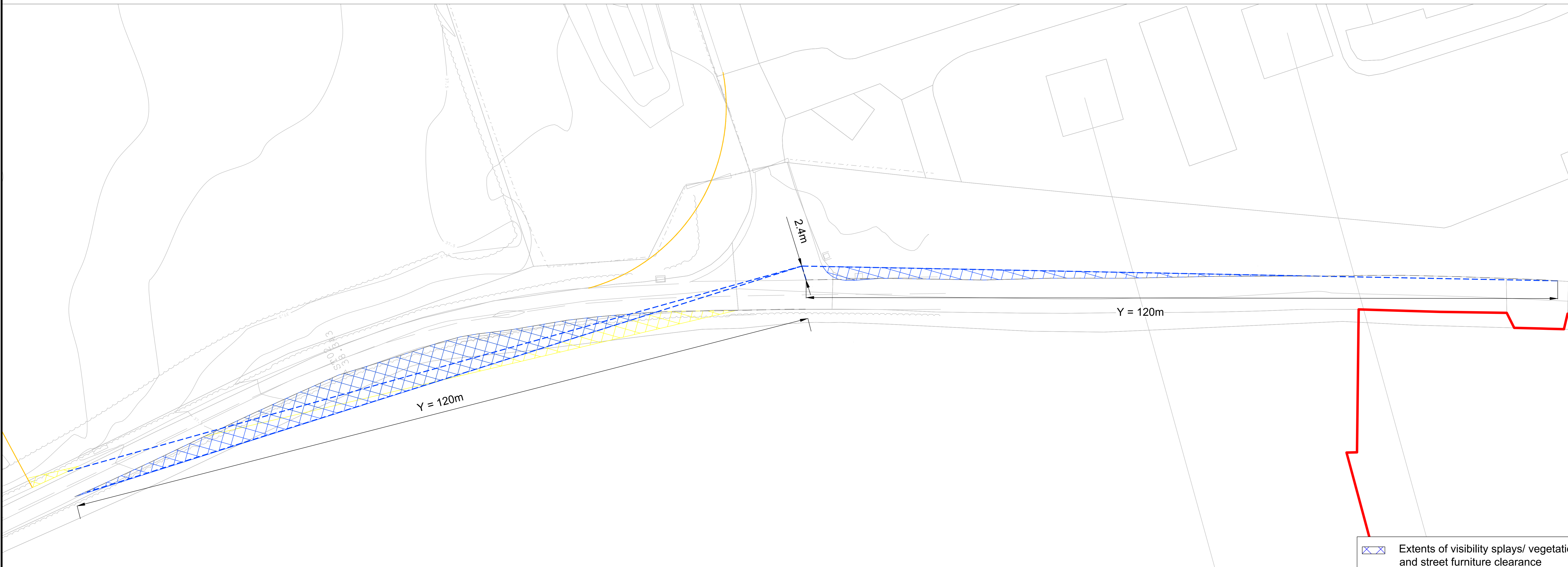


Swept Path Analysis - Vehicle Details  
N.T.S

- Notes
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 44832, 429100 (easting, northing).
  - Posted speed limit is 50mph (NSL), due to the road alignment and the proposed construction activities it is suggested that a reduced speed limit should be applied as mitigation during construction. A speed limit of 40mph is suggested and a 70kph value has been used as the design speed.

- Key to symbols
- Red Line Boundary
  - Indicates proposed new temporary carriageway construction for all construction traffic
  - Indicative drainage
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Visibility splay zone from temporary beltmouth to the north
  - Visibility splay (line of sight)
  - Proposed fence line
  - Proposed security gate
  - Existing electricity pole
  - Existing lamp post
  - Proposed kerb

- Reference drawings
- PDD-33754-LAY-075 - Permanent Drainage Layout
  - PDD-33754-REP-085 - Drainage Strategy
  - PDD-33754-LAY-062 - Overall Site Layout
  - DES21014\_1 - Topographic/GPR Drawing
  - PDD-33754-LAY-079 - Site Hazard Plan
  - PDD-33754-LAY-065 - Overall Civil Enabling Works Layout



Visibility Splays  
SCALE @ A0: 1:250

Extents of visibility splays/ vegetation and street furniture clearance

Rev	Date	Drawn	Description	CHK'd	App'd
03	03/08/2022	PS	ATTENUATION POND WORKS INCLUDED	CK	PM
02	13/05/2022	PS	UPDATED FOR DESIGN FREEZE	JW	PM
01	10/03/2022	PS	FIRST ISSUE	JW	PM

Client

Master Scheme No: 33754  
Sub-Scheme No: TBC  
Site: MONK FRYSTON 400KV

Scheme Name: YORKSHIRE GREEN

Document Title: CIVIL ENABLING WORKS. ACCESS TO THE SUBSTATION IMPROVEMENTS SHEET 2 OF 2

Created by: P. Skrzewski  
Checked by: C. Kennedy  
Date: 03/08/2022  
Approved by: P. McLoughlin  
Date: 03/08/2022

Management Eng: S. Fowler  
Document Type: DRAWING  
Scale: 1:250  
Form: A0  
Sheet: 2  
Rev: 03

National Grid Document Number: 100102545-MMD-02-XX-DR-C-0238

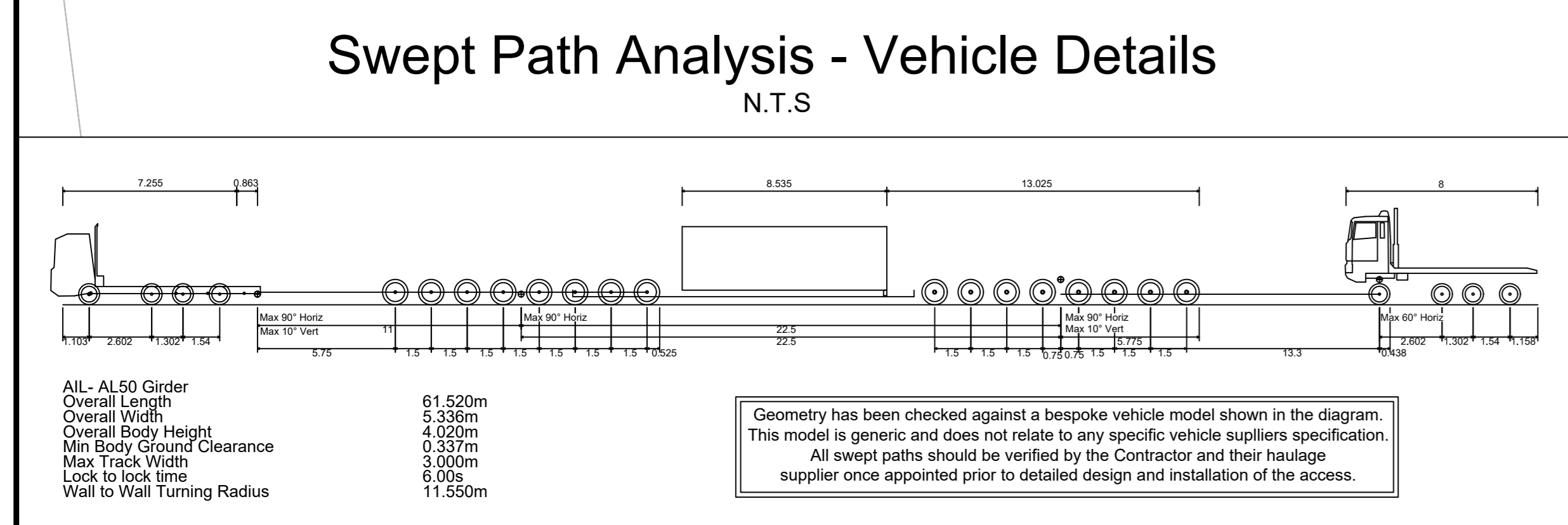
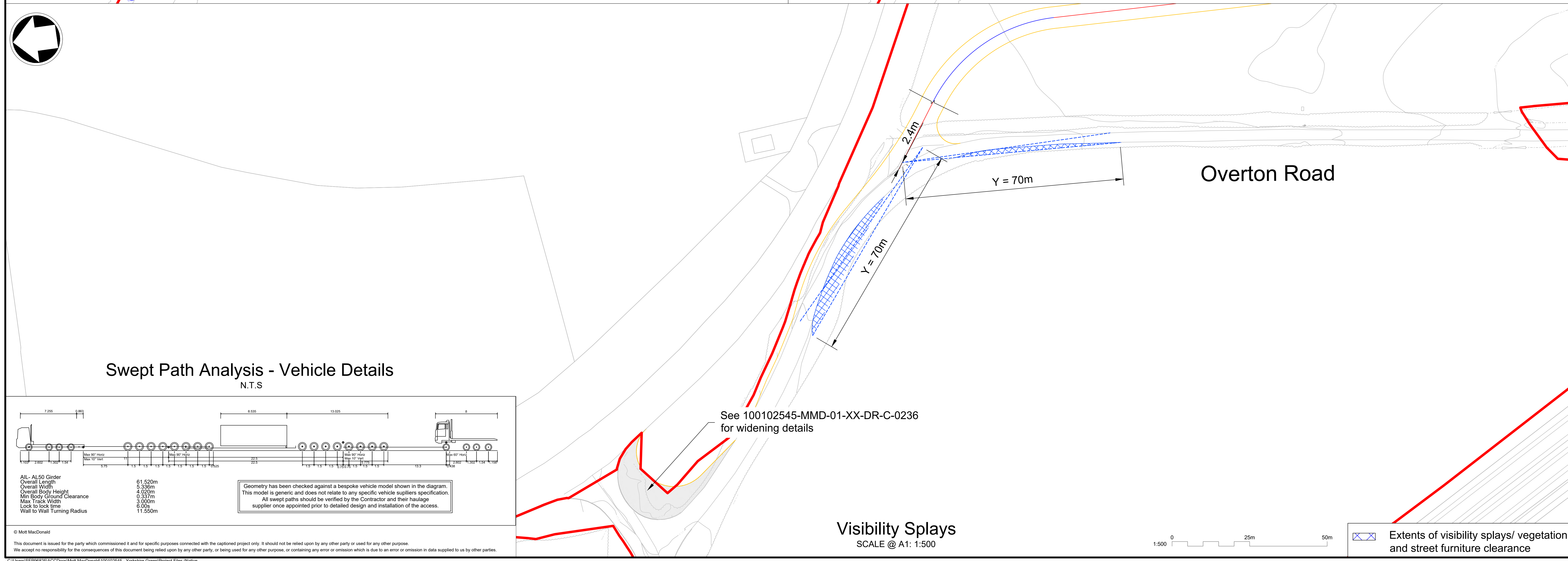
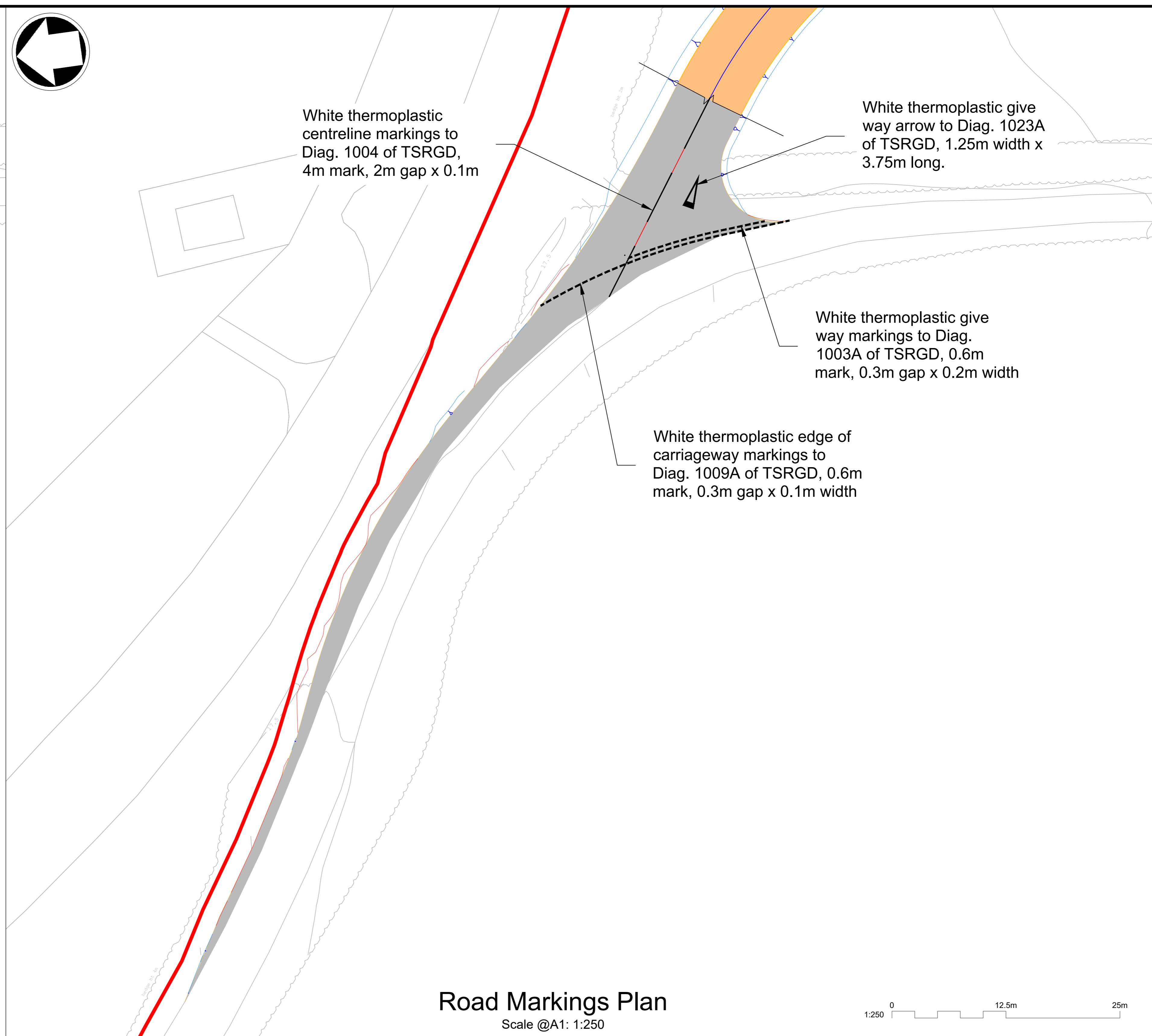
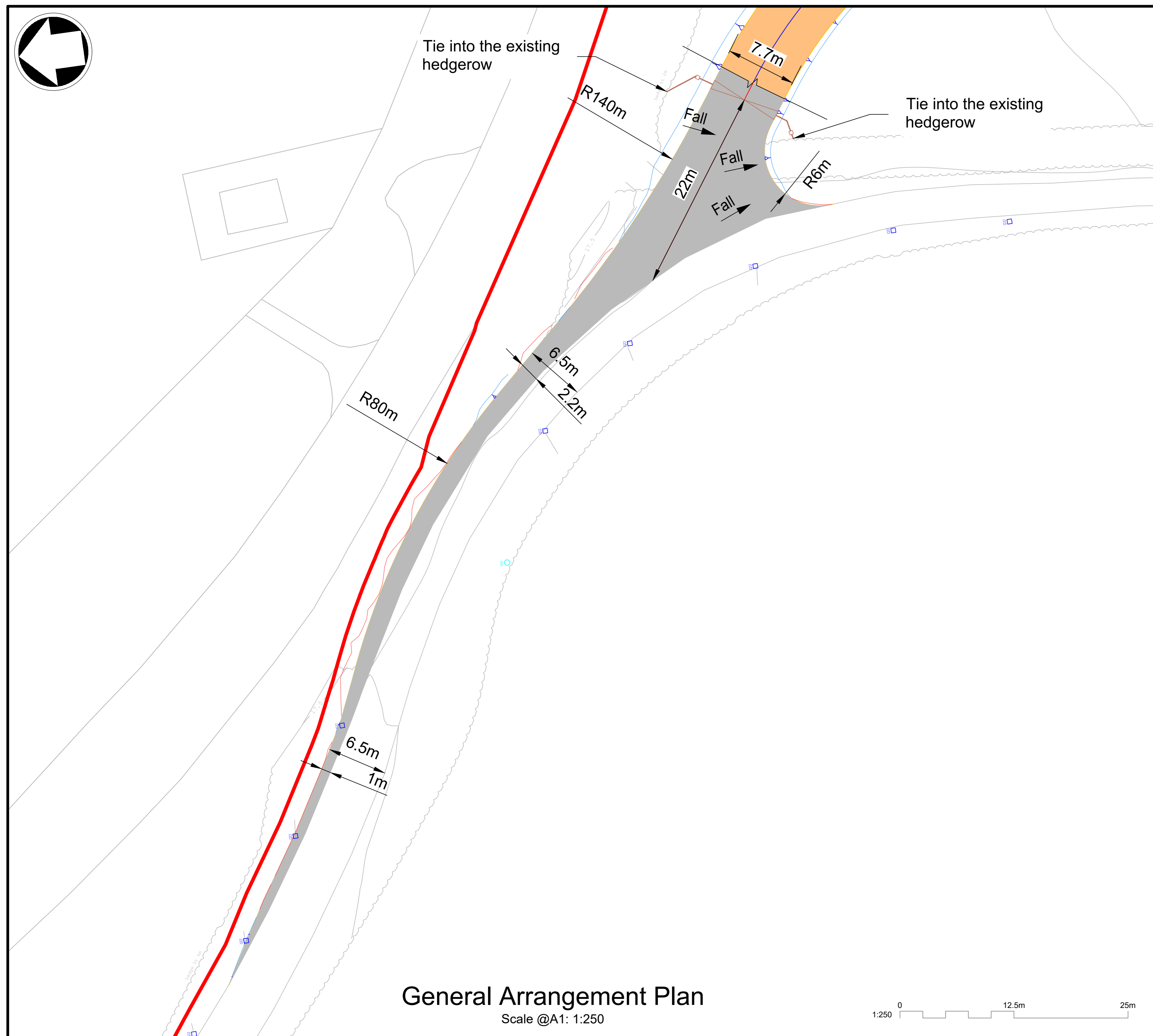
FEED Document Number: PDD-33754-LAY-238

# **Annex 3F.1.B**

## **Overton Substation Access Point**



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- Notes**
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  - Posted speed limit is 60mph (NSL), due to existing road geometry and visibility the design speed has been taken as 30mph (50kph).
  - Position of gullies to be reviewed

- Key to symbols**
- Red Line Boundary
  - Proposed Permanent Substation Access Road
  - Proposed full depth carriageway construction with asphalt surfacing
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Visibility splay (line of sight)
  - Proposed fence line
  - Proposed security gate
  - Earthworks - out
  - Earthworks - fill
  - Existing gullies to be retained
  - Existing manhole

- Reference drawings**
- PDD-33754-LAY-032 - Permanent Drainage Layout
  - PDD-33754-REP-042 - Drainage Strategy
  - PDD-33754-LAY-019 - Overall Electrical Layout
  - PDD-33754-LAY-027 - Overall Civil Enabling Works Layout
  - PDD-33754-LAY-241 - Site Hazard Plan
  - DES21013\_1 - Topographic/GPR Drawing

Rev	Date	Drawn	Description	Chk'd	App'd
03	03/08/2022	PS	ROOT PROTECTION AREA INCLUDED	CK	PM
02	13/05/2022	PS	UPDATED FOR DESIGN FREEZE	JW	PM
01	18/02/2022	PS	FIRST ISSUE	JW	PM

**nationalgrid**

Master Scheme No: 33754 | Sub-Scheme No: TBC | Site: OVERTON 275KV

Scheme Name: YORKSHIRE GREEN

Document Title: CIVIL ENABLING WORKS BELLMOUTH GENERAL ARRANGEMENT SHEET 1 OF 2

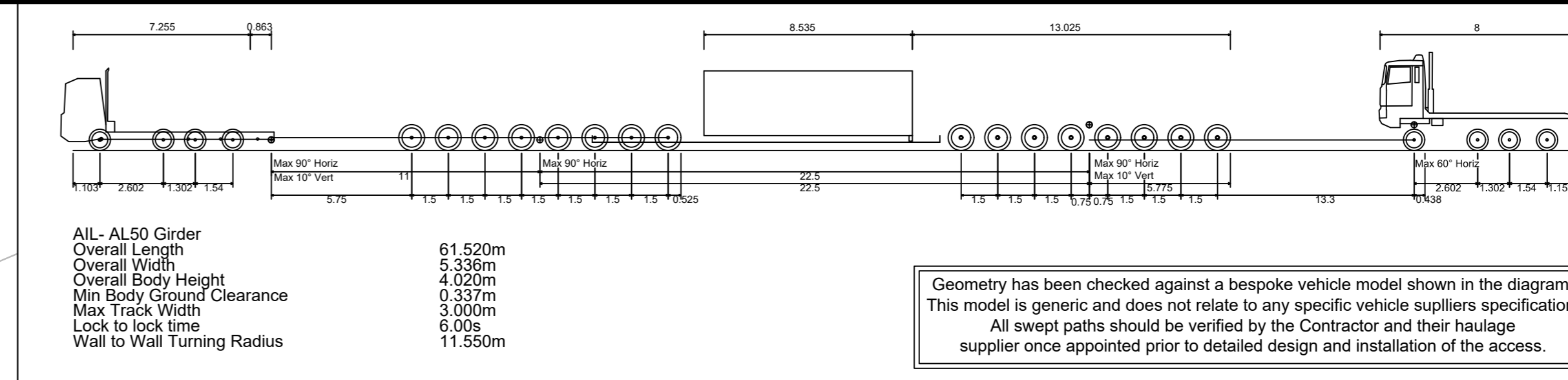
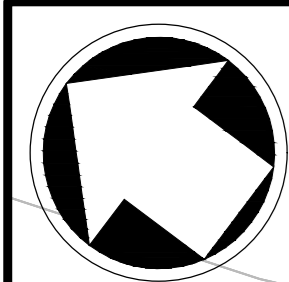
Created by: P. Skrzewska | Date: 03/08/2022 | Checked by: C. Kennedy | Date: 03/08/2022 | Approved by: P. McLoughlin | Date: 03/08/2022

Management Eng: S. Fowler | Document Type: DRAWING | Scale: AS | Format: A0 | Sheet(s): 2 | Rev: 03

National Grid Document Number: 100102545-MMD-01-XX-DR-C-0235

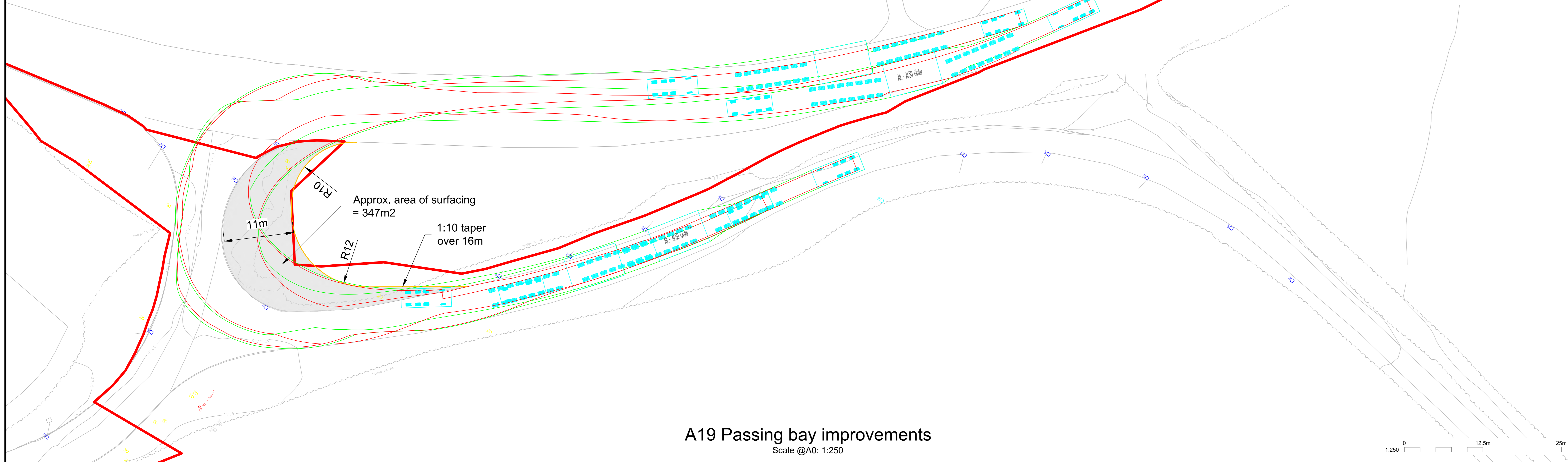
FEED Document Number: PDD-33754-LAY-0235





- Notes**
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  - Posted speed limit is 60mph (NSL), due to existing road geometry and visibility the design speed has been taken as 60 mph (100kph).
  - The visibility on the approach to the existing junction is considered acceptable with only the offside v distance being below the desired minimum value (188m). Given the nature and use of the road it is considered unlikely that vehicle will approach the junction on the offside from the south.

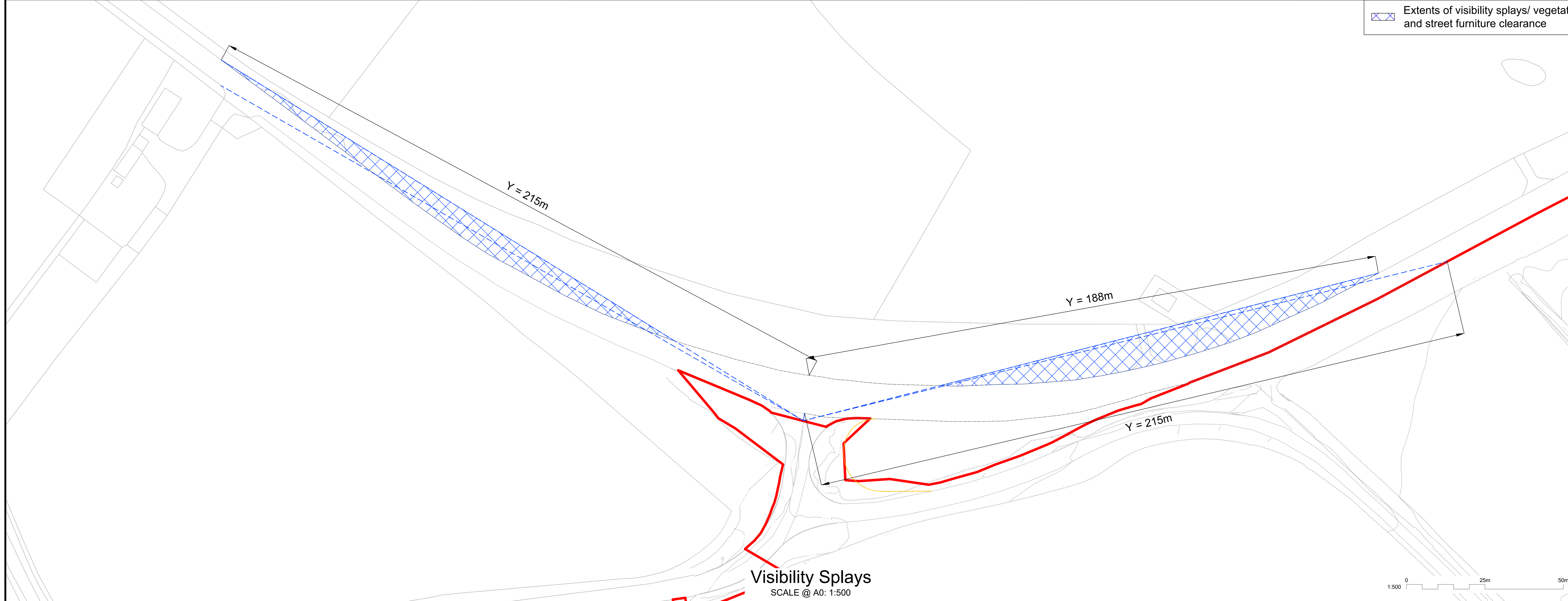
**Swept Path Analysis - Vehicle Details**  
N.T.S



- Key to symbols**
- Red Line Boundary
  - Proposed vehicle overrun area (anticipated to comprise grass-crete or similar surfacing)
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Visibility Splay (line of sight)
  - Earthworks - out
  - Earthworks - fill
  - Existing gully
  - Existing manhole
  - Existing road sign
  - Existing electricity pole
  - Proposed Kerb

Extents of visibility splays/ vegetation and street furniture clearance

- Reference drawings**
- PDD-33754-LAY-032 - Permanent Drainage Layout
  - PDD-33754-REP-042 - Drainage Strategy
  - PDD-33754-LAY-019 - Overall Electrical Layout
  - PDD-33754-LAY-027 - Overall Civil Enabling Works Layout
  - PDD-33754-LAY-241 - Site Hazard Plan
  - DES21013\_1 - Topographic/GPR Drawing



Rev	Date	Drawn	Description	Chk'd	App'd
03	03/08/2022	PS	ROOT PROTECTION AREA INCLUDED	CK	PM
02	13/05/2022	PS	UPDATED FOR DESIGN FREEZE	JW	PM
01	11/03/2022	PS	FIRST ISSUE	JW	PM

Client

**nationalgrid**

Master Scheme No:	Sub-Scheme No:	Site:
33754	TBC	OVERTON 275 kV

Scheme Name: **YORKSHIRE GREEN**

Document Title:  
**BELMOUTH GENERAL ARRANGEMENT  
A19 PASSING BAY IMPROVEMENTS  
SHEET 2 OF 2**

Created by:	Date:	Checked by:	Date:	Approved by:	Date:
P.Skrzewska	03/08/2022	C.Kennedy	03/08/2022	P.McLoughlin	03/08/2022
Development Eng:	Document Type:	Scale:	Format:	Sheet(s):	Rev:
S.Fowler	DRAWING	AS	A0	2	03

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**PDD-33754-LAY-0236**



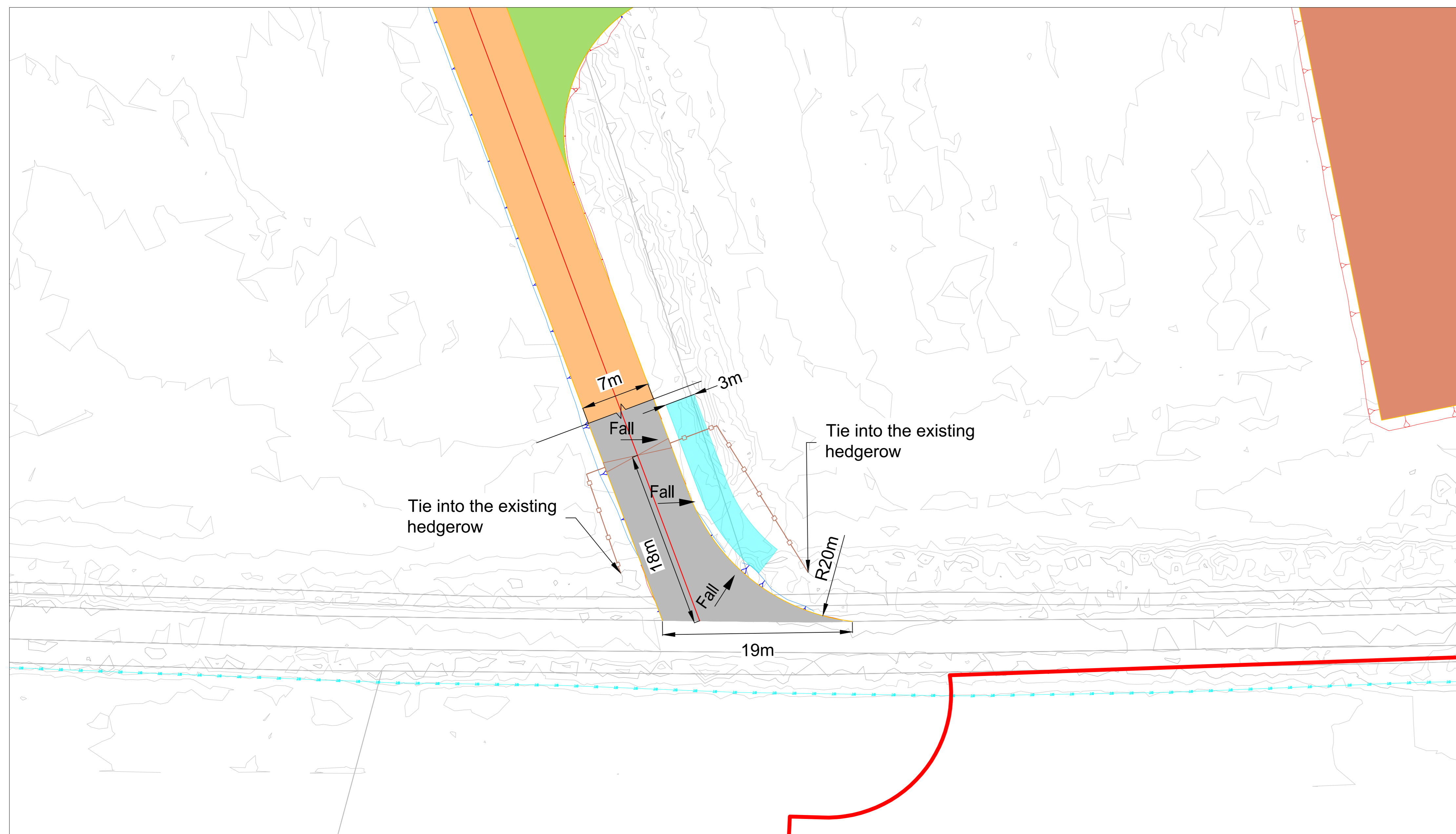
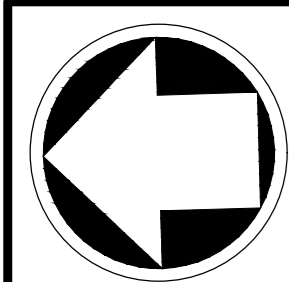
# **Annex 3F.1.C**

## **Shipton CSEC Access Point**

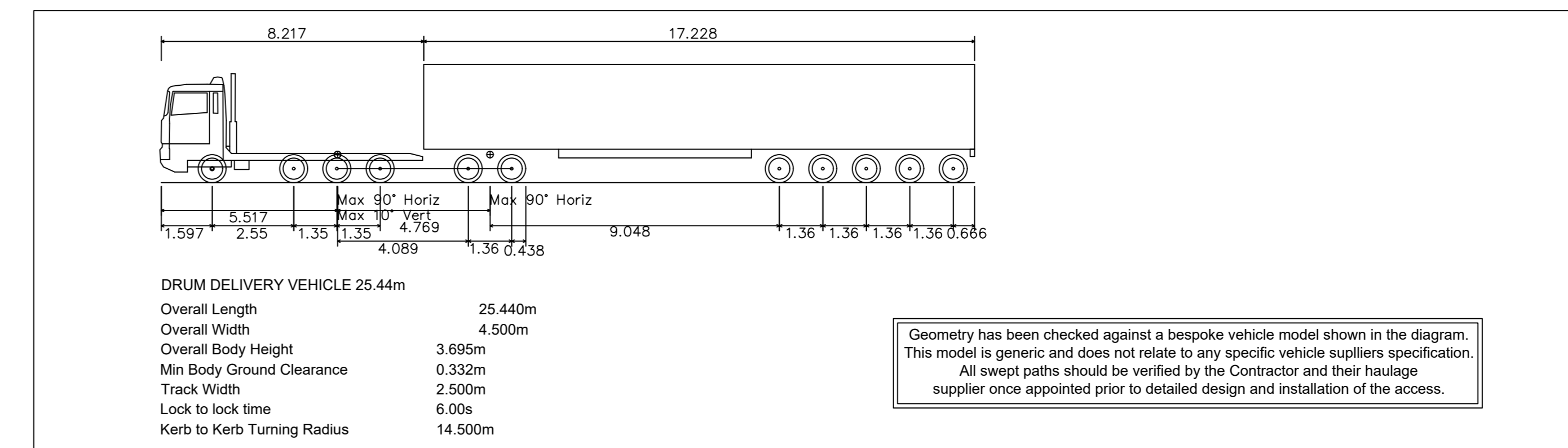


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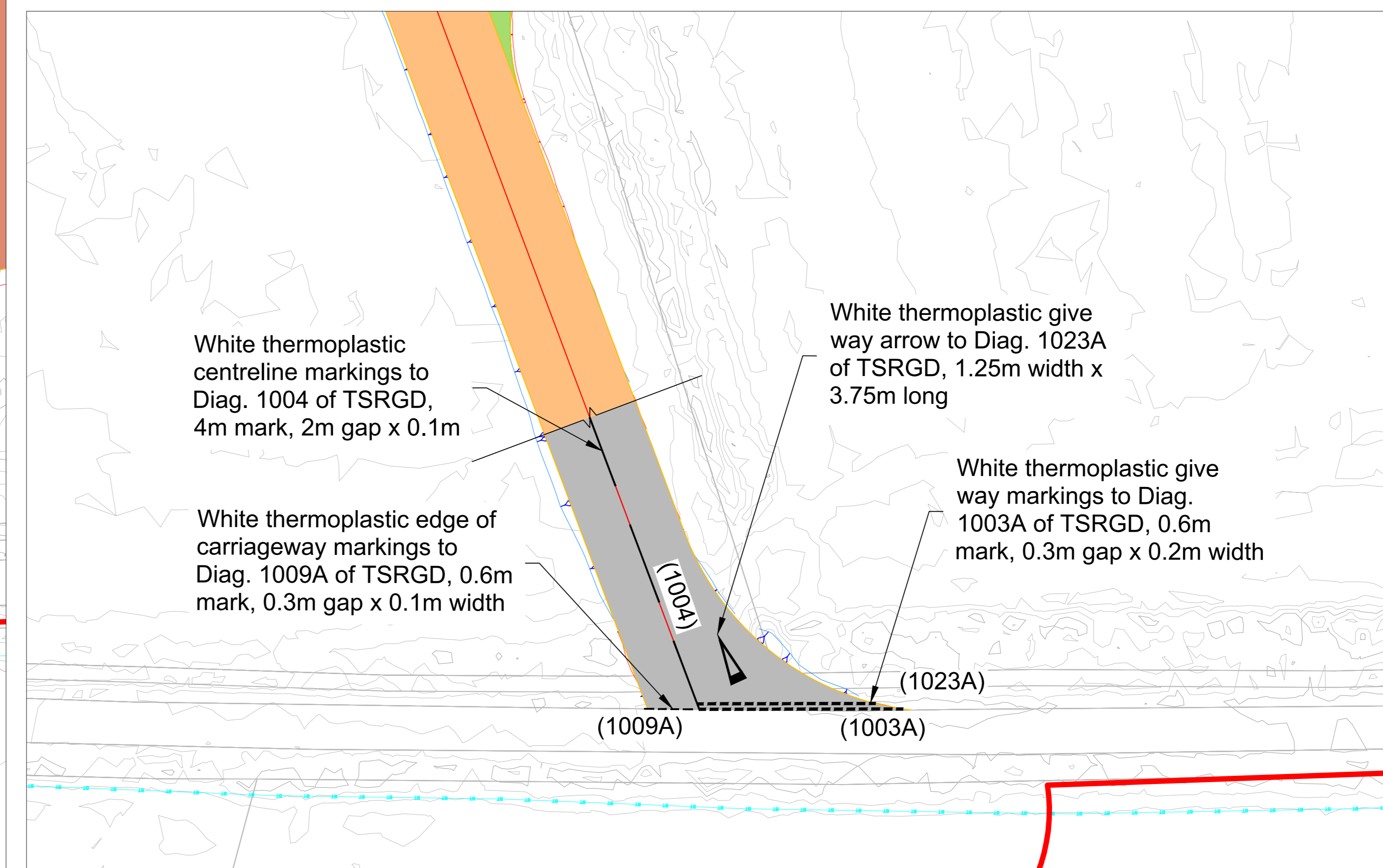




**General Arrangement Plan**  
Scale @A0: 1:250



**Swept Path Analysis - Vehicle Details**  
N.T.S



**Road Markings Plan**  
Scale @A0: 1:250

- Notes**
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  - Posted speed limit is 50mph (NSL), due to existing road geometry and visibility the design speed has been taken as 50mph (50kph).
  - Construction traffic management / control shall be required between the bellmouth access and Corban Lane and improvements made to passing places to facilitate vehicle movements without causing congestion at the Corban Lane junction or along the access lane to Newlands Farm.

- Key to symbols**
- Red Line Boundary
  - Indicates proposed new carriageway construction for all construction traffic
  - Permanent Access Road
  - Temporary Access Road
  - Temporary Construction Compound
  - Indicative drainage
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Visibility splay (line of sight)
  - Proposed fence line
  - Proposed security gate
- Utilities (based on C2 records)**
- BT Overhead Line
  - BT Underground Cable
  - LV Underground Cable
  - National Grid Overhead Line

- Reference drawings**
- PDD-33754-LAY-170 - Overall Electrical Layout
  - PDD-33754-LAY-139 - Overall Civil Layout
  - PDD-33754-LAY-244 - Corban Lane Improvements
  - PDD-33754-LAY-242 - Site Hazard Plan

Rev	Date	Drawn	Description	CHK'D	App'd
03	03/08/2022	PS	CR 303 CHANGES INCORPORATED	CK	PM
02	13/05/2022	PS	UPDATED FOR DESIGN FREEZE	JW	PM
01	18/02/2022	PS	FIRST ISSUE	JW	PM

Client

**nationalgrid**

Master Scheme No:	33754	Sub-Scheme No:	TBC	Site:	TEE-OFF SHIPTON
Scheme Name:	YORKSHIRE GREEN				

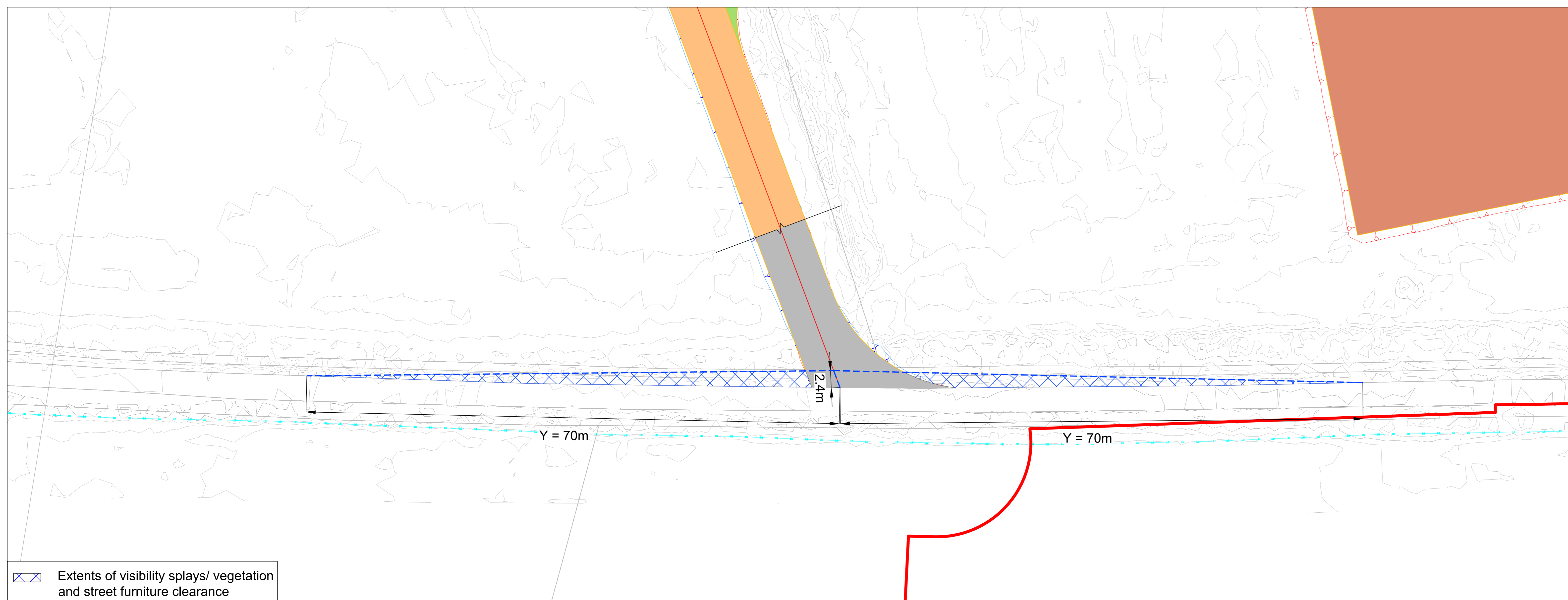
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**BELLMOUTH ACCESS EAST PERMANENT ACCESS SHEET 2 OF 2**

Created by:	P. Skrzewski	Checked by:	C. Kennedy	Date:	03/08/2022	Approved by:	P. McLoughlin	Date:	03/08/2022
Development Eng:	S. Fowler	Document Type:	DRAWING	Scale:	1:250	Form:	A0	Sheet(s):	2
Rev:		Date:		Drawn:		CHK'D:		App'd:	

National Grid Document Number:  
100102545-MMD-10-XX-DR-C-0240

FEED Document Number:  
PDD-33754-LAY-240

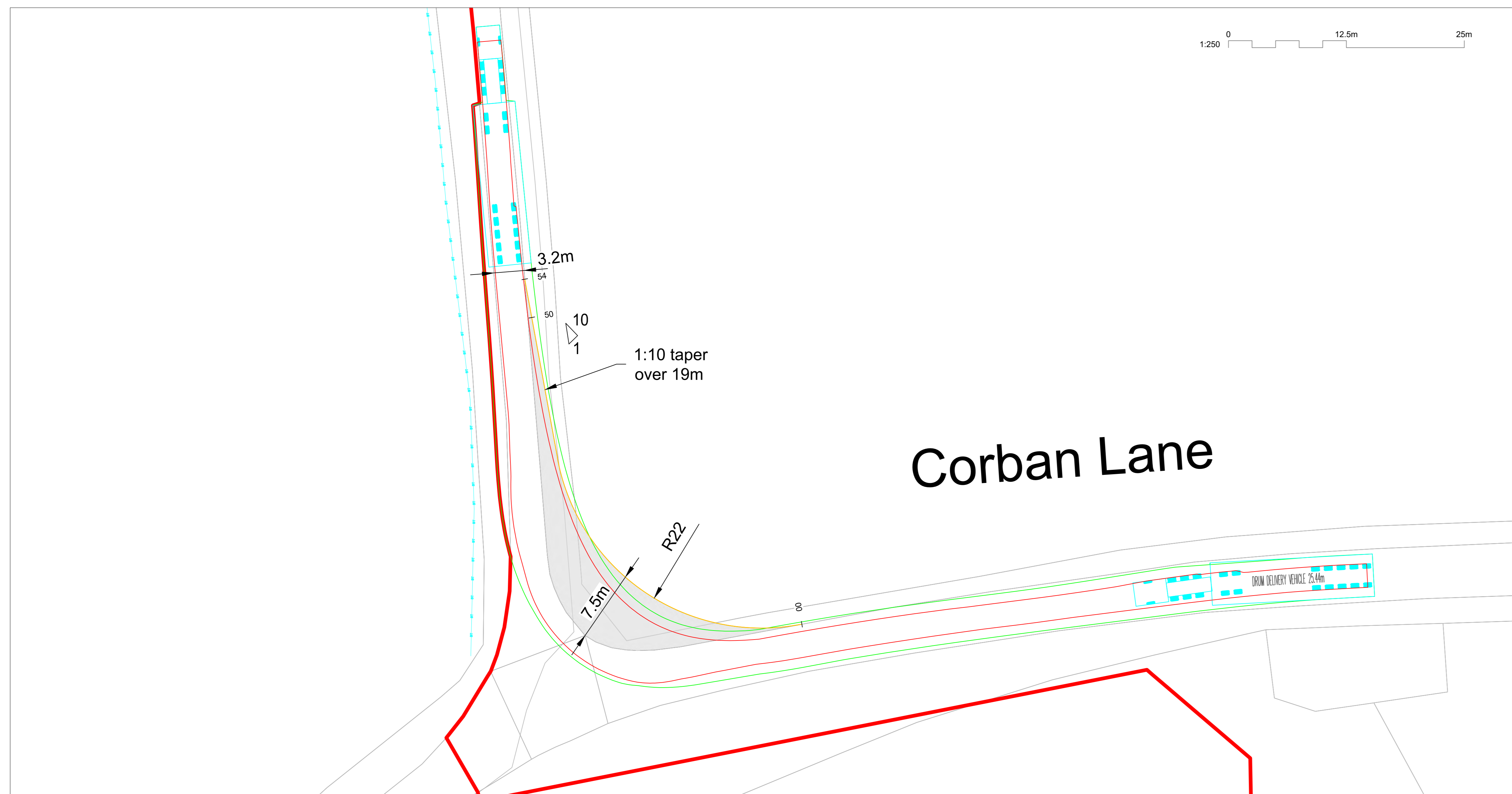
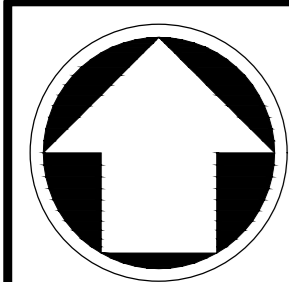


Extents of visibility splays/ vegetation and street furniture clearance

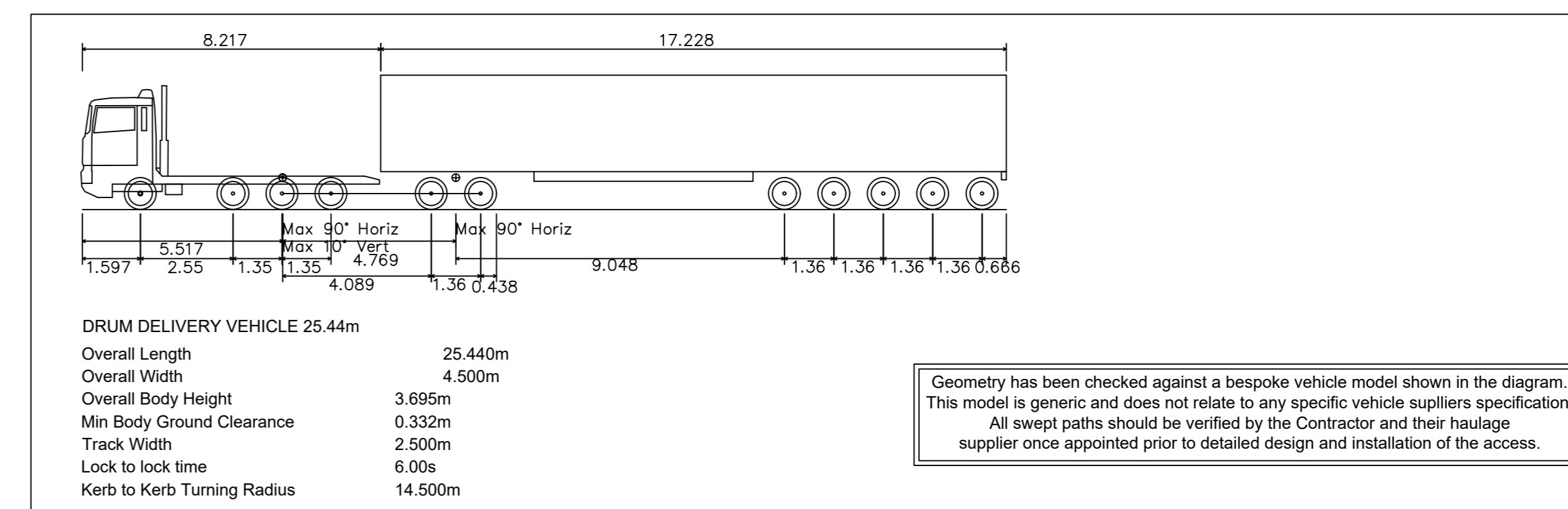
**Visibility Splays**  
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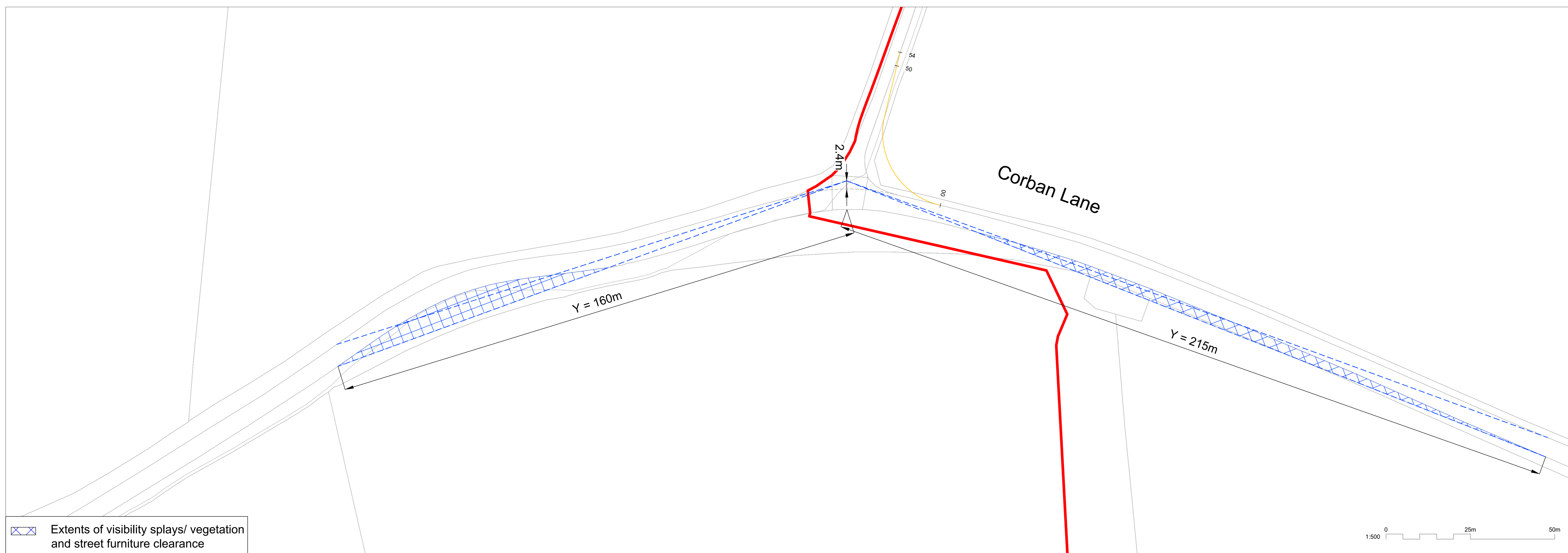




**Corban Lane widening**  
Scale @A0: 1:250



**Swept Path Analysis - Vehicle Details**  
N.T.S



**Visibility Splays**  
SCALE @ A0: 1:500

- Notes
1. This drawing is for development purposes only and should not be used for construction.
  2. All dimensions are in meters unless otherwise stated.
  3. Do not scale any items or information from this drawing.
  4. Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  5. The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  6. Posted speed limit is 60mph (NLS), due to existing road geometry and visibility the design speed of the road is taken as 60mph (100kph). A Stopping Sight Distance (SSD) of 215m is required at this speed without mitigation (y=215m), due to the significant vegetation removal required for the eastbound approach it is proposed to implement mitigation to allow for a reduction to one step below desirable minimum with a SSD of 160m (y=160m). Mitigation will need to be agreed with the Local Highways Authority and may include warning signage or a reduction in the posted speed limit to 50mph.

- Key to symbols
- Red Line Boundary
  - Indicates proposed new carriageway construction for all construction traffic
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Visibility splay (line of sight)

- Utilities (based on C2 records)
- BT Overhead Line
  - BT Underground Cable
  - LV Underground Cable
  - National Grid Overhead Line

- Reference drawings
1. PDD-33754-LAY-170 - Overall Electrical Layout
  2. PDD-33754-LAY-139 - Overall Civil Layout
  3. PDD-33754-LAY-240 - Bellmouth Access General Arrangement
  4. PDD-33754-LAY-242 - Site Hazard Plan

Rev	Date	Drawn	Description	Chk'd	App'd
03	03/08/2022	PS	CR 303 CHANGES INCORPORATED	CK	PM
02	13/05/2022	PS	UPDATED FOR DESIGN FREEZE	JW	PM
01	23/02/2022	PS	FIRST ISSUE	JW	PM



Master Scheme No: 33754 Sub-Scheme No: TBC Site: TEE-OFF SHIPTON

Scheme Name: YORKSHIRE GREEN

Document Title: BELLMOUTH ACCESS CORBAN LANE IMPROVEMENTS SHEET 2 OF 2

Created by: P. Skirzewski	Date: 03/08/2022	Checked by: C. Kennedy	Date: 03/08/2022	Approved by: P. McLoughlin	Date: 03/08/2022
Development Eng: S. Fowler	Document Type: DRAWING	Scale: AS	Format: A0	Sheet(s): 2	Rev: 03

National Grid Document Number: 100102545-MMD-10-XX-DR-C-0244

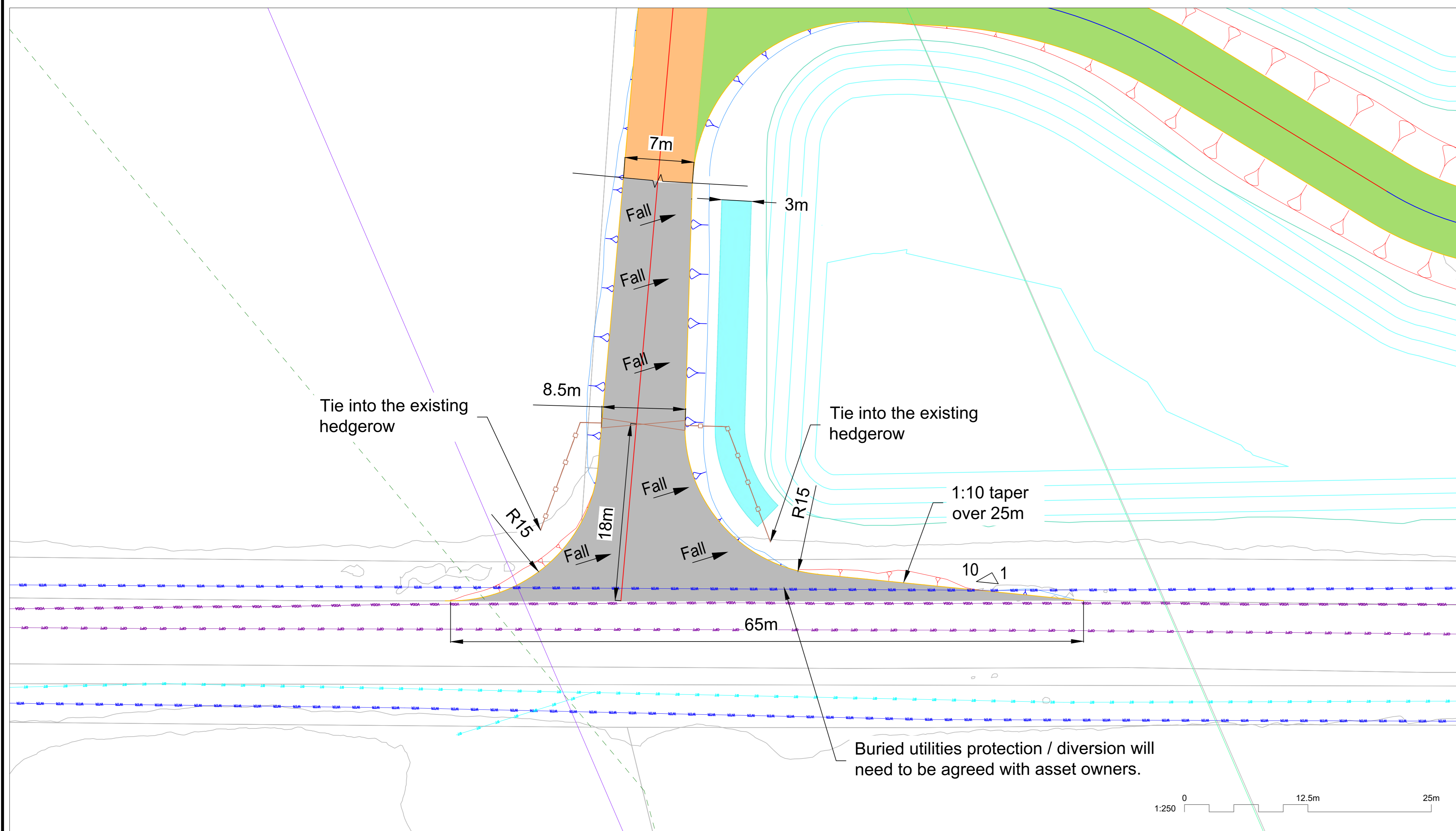
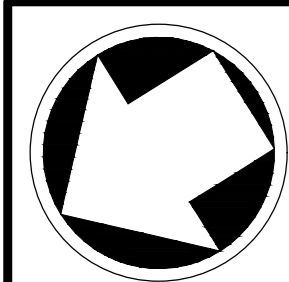
FEED Document Number: PDD-33754-LAY-244

# **Annex 3F.A.4**

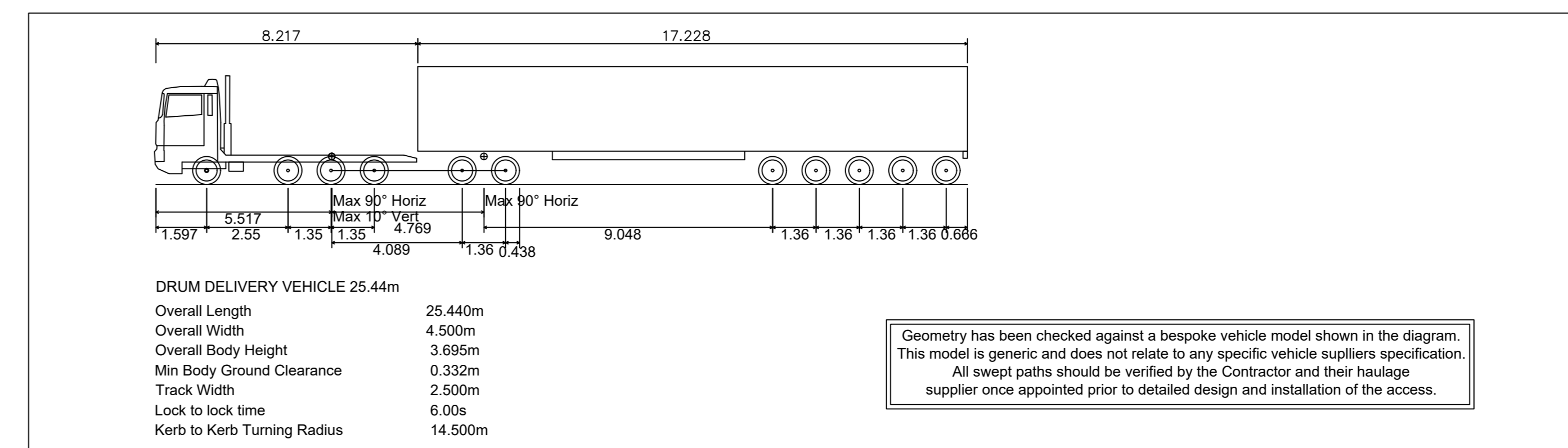
## **Tadcaster CSEC Access Point**



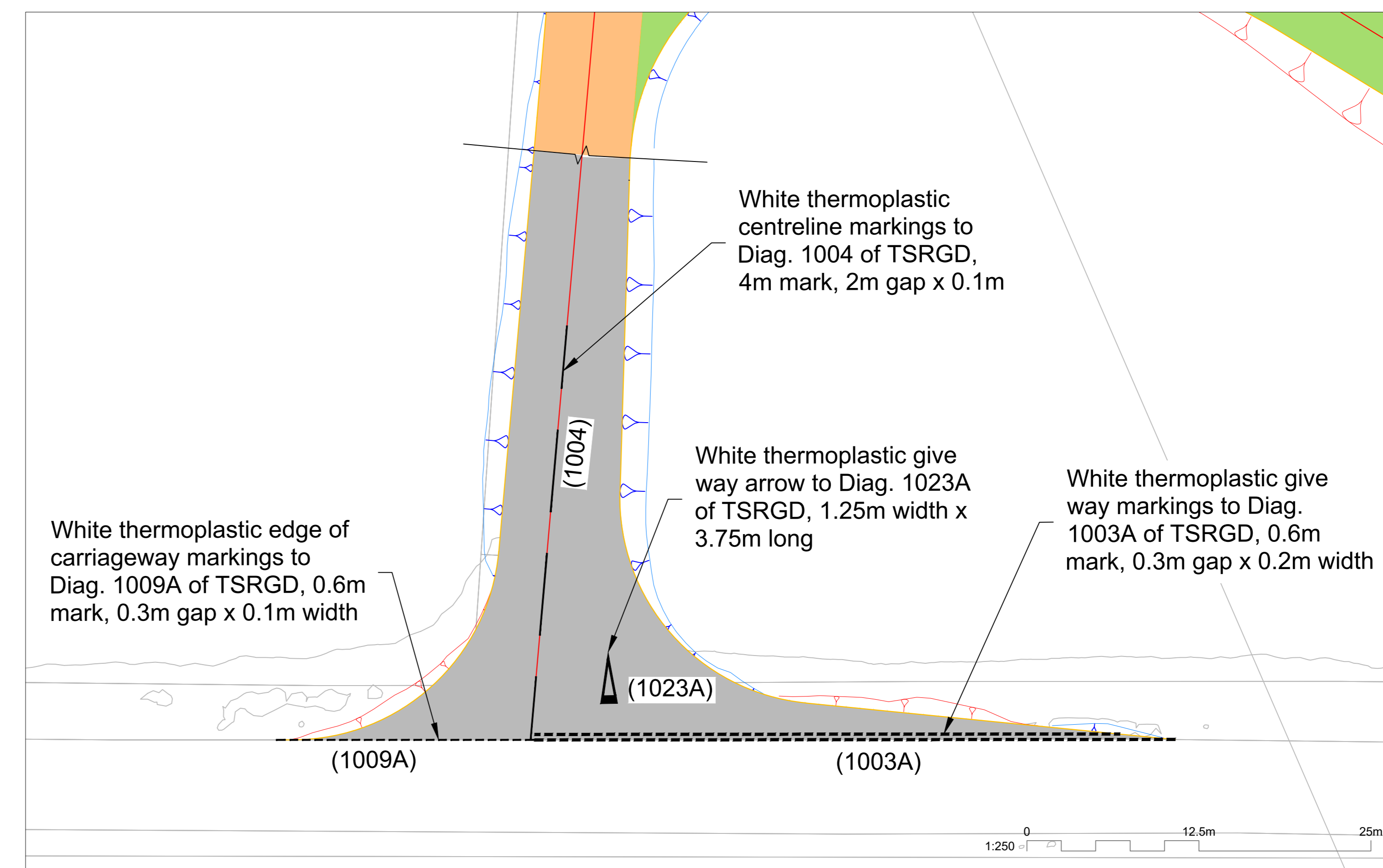
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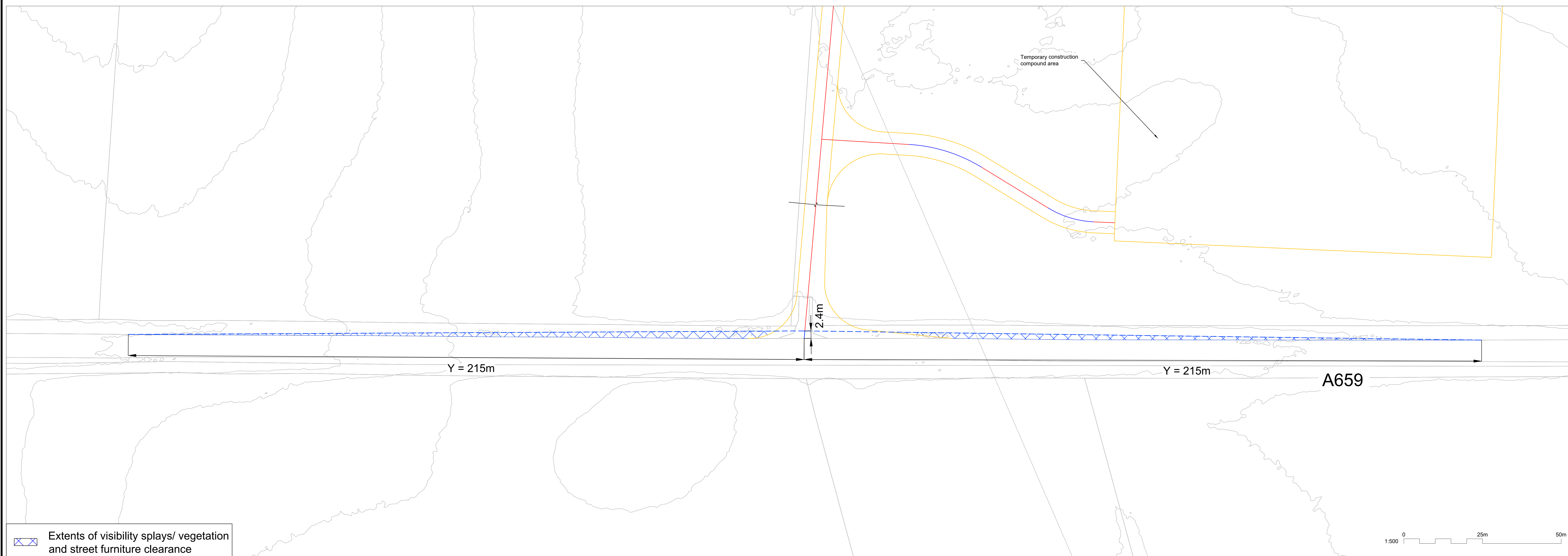
**General Arrangement Plan**  
Scale @A0: 1:250



**Swept Path Analysis - Vehicle Details**  
N.T.S



**Road Markings Plan**  
Scale @A0: 1:250



**Visibility Splays**  
SCALE @A0: 1:500

- Notes
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  - Posted speed limit is 60mph (NSL), due to existing road geometry and visibility the design speed has been taken as 60mph (100kph).

- Key to symbols
- Red Line Boundary
  - Indicates proposed new carriageway construction for all construction traffic
  - Indicative drainage
  - Permanent access road
  - Temporary access road
  - Visibility splay zone (area of verge to be cleared and maintained for visibility)
  - Temporary earth bund 1V:3H
  - Existing 33KV Overhead Cable
  - Existing OHL
  - Proposed OHL (refer to LSTC design)
  - Visibility splay (line of sight)
  - Proposed fence line
  - Proposed security gate

- Utilities (based on C2 records)
- 11KV Overhead Line
  - 11KV Underground Cable
  - 33KV Underground Cable
  - BT Underground Line
  - Gas Pipeline
  - Gas Pipeline (High Pressure)
  - Gas Pipeline (Medium Pressure)
  - Gas Pipeline (Low Pressure)
  - LV Overhead Line
  - LV Underground Cable
  - National Grid Overhead Line
  - Vodafone Cable
  - Water Pipeline
  - Fibre Optic Cable

- Reference drawings
- PDD-33754-LAY-160 - Overall Electrical Layout
  - PDD-33754-LAY-243 - Site Hazard Plan
  - PDD-33754-LAY-131 - Overall Civil Layout
  - PDD-33754-LAY-245 - Bellmouth Access General Arrangement Sheet 2 of 2

Rev	Date	Drawn	Description	CHK'D	App'd
03	03/08/2022	PS	CSECS EXTENSIONS INCLUDED	CK	PM
02	13/05/2022	PS	UPDATED DESIGN FREEZE	JW	PM
01	18/02/2022	PS	FIRST ISSUE	JW	PM

Client

Master Scheme No: 33754  
Sub-Scheme No: TBC  
Site: TEE-OFF TADCASTER

Scheme Name: YORKSHIRE GREEN

Document Title: BELLMOUTH ACCESS GENERAL ARRANGEMENT SHEET 1 OF 2

Created by: P. Skrzewski  
Checked by: C. Kennedy  
Date: 03/08/2022  
Approved by: P. McLoughlin  
Date: 03/08/2022

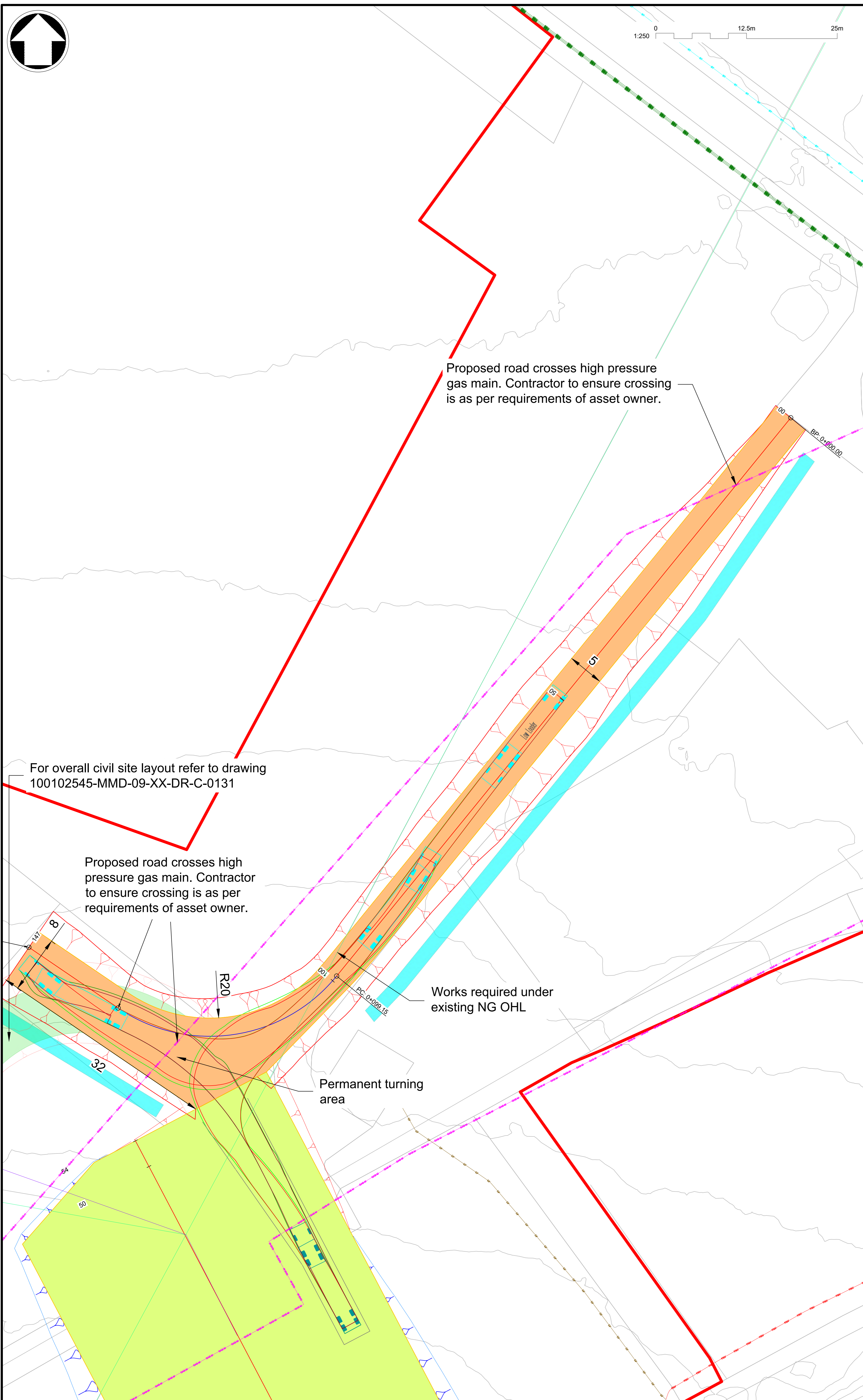
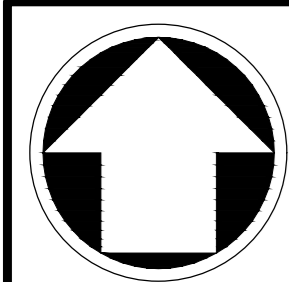
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Format: A0  
Sheet(s): 2  
Rev: 03

National Grid Document Number: 100102545-MMD-09-XX-DR-C-0239

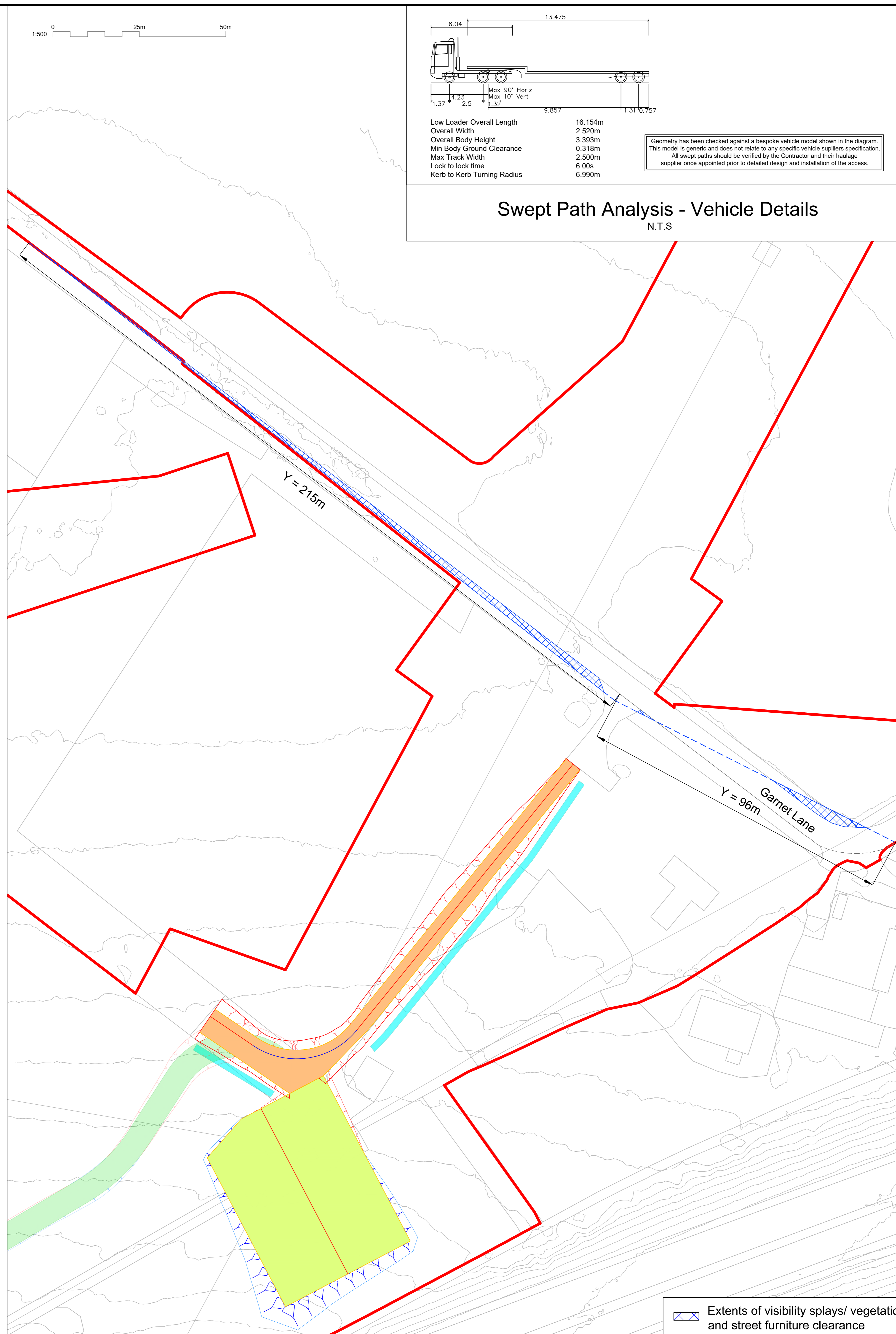
FEED Document Number: PDD-33754-LAY-239

Extents of visibility splays/ vegetation and street furniture clearance

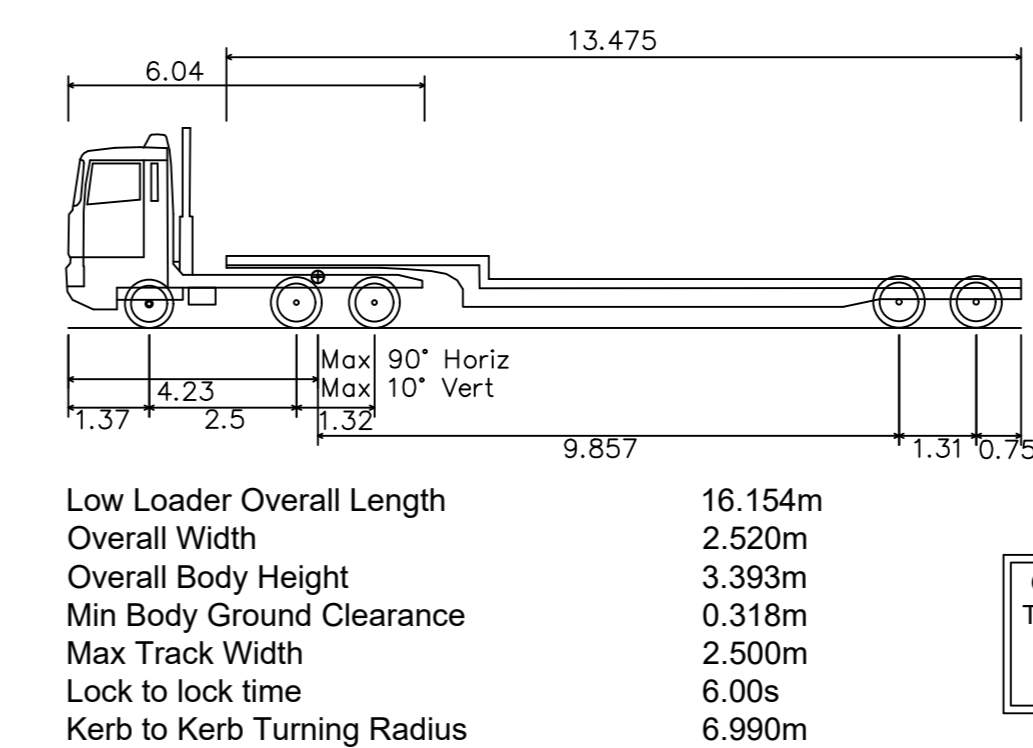




**East Permanent Access**  
Scale @A0: 1:250



**Visibility Splays**  
SCALE @ A0: 1:500



Geometry has been checked against a bespoke vehicle model shown in the diagram. This model is generic and does not relate to any specific vehicle suppliers specification. All swept paths should be verified by the Contractor and their haulage supplier once appointed prior to detailed design and installation of the access.

- Notes**
- This drawing is for development purposes only and should not be used for construction.
  - All dimensions are in meters unless otherwise stated.
  - Do not scale any items or information from this drawing.
  - Drainage features are shown indicatively to indicate the approximate area required, the arrangement and shape of these may vary.
  - The site is located at OS Grid Reference 455675, 457427 (easting, northing).
  - Posted speed limit is 60mph (NSL), due to existing road geometry and visibility the design speed has been taken as 60mph (100kph).
  - It is anticipated that vehicles approaching the junction from the east will be going slower due to the road geometry however speed data will be needed to confirm the appropriate design speed in this location.
  - Visibility at the existing access is limited to the east with only a 96m visibility splay available. This visibility would allow for a design speed of 38mph (62kph). Assessment against speed survey data in this location will be needed to confirm whether further mitigation including warning signage are required.
  - The access off Garnet Lane is proposed as a permanent access for the Tadcaster East Stealing End Compound. The proposal is to use the existing access with no alteration. Use of the access by National Grid will be infrequent.

**Key to symbols**

- Red Line Boundary
- Existing access to be upgraded during Detailed Design to suit new road requirements
- Indicative drainage
- East CSEC
- Temporary Access Road
- Visibility splay zone (area of verge to be cleared and maintained for visibility)
- Existing OHL
- Proposed OHL (refer to LSTC design)
- Visibility splay (line of sight)
- Proposed fence line
- Proposed security gate
- Earthworks - cut
- Earthworks - fill

**Utilities (based on C2 records)**

- 11kV Overhead Line
- 11kV Underground Cable
- 33kV Underground Cable
- BT Overhead Line
- BT Underground Cable
- Gas Pipeline (High Pressure)
- Gas Pipeline (Medium Pressure)
- Gas Pipeline (Low Pressure)
- LV Overhead Line
- LV Underground Cable
- National Grid Overhead Line
- Vodafone Cable
- Water Pipeline

- Reference drawings**
- PDD-33754-LAY-168 - Overall Electrical Layout
  - PDD-33754-LAY-243 - Site Hazard Plan
  - PDD-33754-LAY-131 - Overall Civil Layout
  - PDD-33754-LAY-239 - Bellmouth Access General Arrangement Sheet 1 of 2

Rev	Date	Drawn	Description	CHK'd	App'd
02	03/08/2022	PS	CSECS EXTENSIONS INCLUDED	CK	PM
01	13/07/2022	PS	FIRST ISSUE	JW	PM

Client: **nationalgrid**

Master Scheme No: 33754 | Sub-Scheme No: TBC | Site: TEE-OFF TADCASTER

Scheme Name: **YORKSHIRE GREEN**

Document Title: **BELLMOUTH ACCESS EAST PERMANENT ACCESS SHEET 2 OF 2**

Created by: P. Skrzewski | Date: 03/08/2022 | Checked by: C. Kennedy | Date: 03/08/2022 | Approved by: P. McLoughlin | Date: 03/08/2022

Development Eng: S. Fowler | Document Type: DRAWING | Issue: AS | Form: AD | Sheet: 2 | Rev: 02

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