



PINS Document Number:
EN010140/APP/6.3.5.2

Environmental Statement Appendix 5.2: Outline Construction Traffic Management Plan

February 2025

A Report for
ENSO GREEN HOLDINGS D LIMITED

In respect of
**Helios Renewable Energy Project,
NORTH YORKSHIRE**

Outline Construction Traffic Management Plan

2104-025/CTMP/01/February 2025



Document Management

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Document Review

	Status	Author	Checker	Approver	Date
01	Draft	AC	RR	RR	21 02 24
02	Draft	AC	RR	RR	21 03 24
-	Issue	AC	RR	RR	24 05 24
A	Revision ^a	RR	RR	JD	26 02 25
B	Revision ^b				

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1 Introduction

- 1.1 This Outline Construction Traffic Management Plan ('oCTMP') has been prepared by Transport Planning Associates ('TPA') on behalf of Enso Green Holdings D Limited (the 'Applicant') in relation to an application for a Development Consent Order ('DCO') for the Helios Renewable Energy Project (hereafter referred to as the 'Proposed Development').
- 1.2 The Proposed Development is situated within the jurisdiction of North Yorkshire Council (NYC) who act as the local planning authority and local highway authority.

The Proposed Development

- 1.3 The Proposed Development will comprise the construction, operation, maintenance, and decommissioning of a solar photovoltaic (PV) array electricity generating station and Energy Storage System with a total capacity exceeding 50 megawatts (MW), and export connection to the National Grid.
- 1.4 The Order Limits are shown in the **Location Plan**. This is shown in **Appendix A**.

This Document

- 1.5 This oCTMP provides a framework for the management of construction vehicle movements to and from the Site, to ensure that the effect of the construction phase on the local highway network is minimised. It is an evolving document that will be updated prior to construction to reflect any considerations made during the DCO process, and to add detail that arises from the post-determination procurement and Engineering Principal Contractor (EPC) appointment. A detailed CTMP, substantially in the same form as this oCTMP, will be approved by the Local Planning and Highway Authority prior to construction commencing. This will be secured through a DCO requirement.
- 1.6 This oCTMP has the following objectives:
- Minimise the number of HGVs and other vehicles on the local road network that are associated with the construction of the Proposed Development;
 - Ensure the safe movement of equipment, material and construction workers;
 - Minimise the effects of construction traffic on the local community; and
 - Set out measures to be adhered to by all associated with the construction of the Proposed Development.
- 1.7 This oCTMP is structured as follows:

- Construction methodology;
- Site access;
- Construction vehicle trip generation;
- Construction vehicle routing;
- Abnormal load movements; and
- Mitigation and management measures.

- 1.8 It will be the responsibility of the undertaker to ensure that the appointed contractor complies with all statutory regulations and guidelines in relation to construction and movement activities.
- 1.9 This oCTMP has been prepared following various stages of consultation. It should be read in conjunction with **Chapter 10 Transport and Access of the Environmental Statement (ES) [EN010140/APP/6.1.10]** and the Transport Assessment (TA) **[EN010140/APP/7.6]**.

2 Construction Works

2.1 This section provides an overview of the Proposed Development and the construction programme.

Construction Programme

2.2 The construction programme is anticipated to last approximately 12 months.

Solar Array Works Area

2.3 The Site comprises a number of parcels of land and extends to 475ha of land to the south-west of Camblesforth.

2.4 The main element of the Proposed Development will accommodate the solar arrays. The key equipment within the solar array works are:

- **Solar PV Panels** – to convert sunlight into electrical current;
- **Mounting Structures** – Solar PV Panels will be mounted on a metal assembly of PV Mounting Structures. This includes metal rails to directly support the PV Panels, which themselves are supported by larger metal frames which are fixed on top of metal piles;
- **Inverter Stations** – The Inverter Stations incorporate inverters, transformers and switchgear and are required to manage the electricity generated by the PV Panels;
- **Electric Cabling** – Electrical cabling will be required as part of the Generating Stations to connect PV Panels to the Conversion Units.

BESS Compound

2.5 A BESS will be located within the Proposed Development.

2.6 The BESS is designed to provide peak generation and grid balancing services to the electricity grid by allowing excess electricity generated either from the solar PV panels, or imported from the electricity grid, to be stored in batteries and dispatched when required.

2.7 The substation will consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Site.

Grid Connection

- 2.8 The electricity generated by the Proposed Development will be exported to the National Grid substation at Drax Power Station via a number of electrical cables sited within a defined Cable Route Corridor. These connections will also facilitate the import of electricity to be stored within the energy storage system.
- 2.9 The Grid Connection Route will be approximately 2.1km in length. The construction of the Grid Connection Route includes the following elements:
- Construction of temporary Haul Road, trenchless methods and Laydown Areas;
 - Open Cut Excavation;
 - Construction of Joint Bays; and
 - Cabling/Jointing.

Other Works

Contractors Compound

- 2.10 A Construction compound will be set up within the Proposed Development. This will accommodate storage, parking, offices and welfare facilities.
- 2.11 Appropriate parking will be provided within the construction compound. No parking by contractors, visitors or delivery vehicles will be permitted on the local highway network or the Site access road at any time during the construction phase, and visitors will be advised of the parking arrangements in advance of travelling to the Site. The Site Manager will monitor that parking is taking place in the designated area on a regular basis.

Internal Access Roads

- 2.12 The Proposed Development will include internal access roads throughout the Site allowing for the movement of construction and maintenance vehicles. The internal access road will be completed during the initial stages of construction so that temporary haul routes are not necessary.
- 2.13 Appropriate turning areas will be provided in the vicinity of the internal access road to ensure all vehicles egress the Site in a forward gear.
- 2.14 A wheel washing facility will be provided at the end of each access road, ahead of the egress onto the local highway network.

Other Works

2.15 Other works include the following:

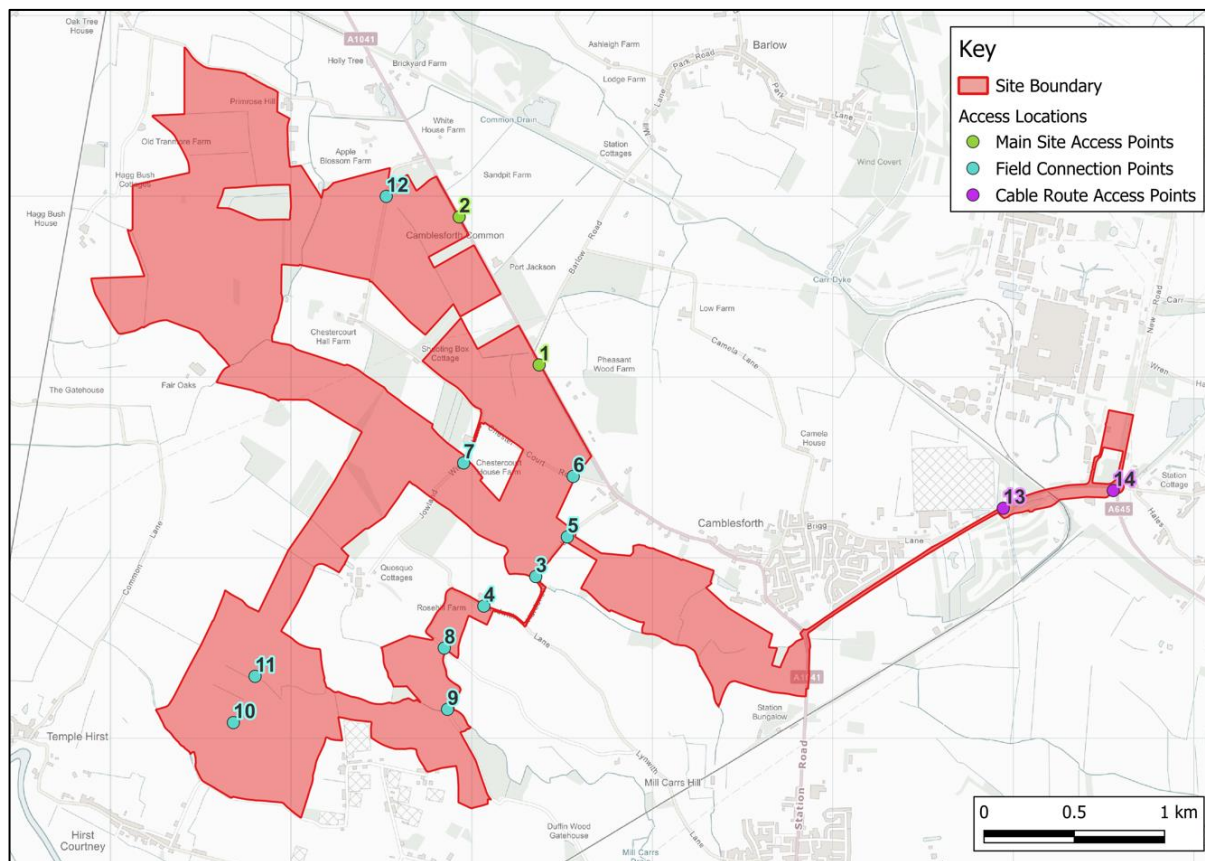
- Erection of security fencing and lighting;
- Installation of landscaping and habitat management;
- Installation of Site access points and internal access tracks;
- Installation of surface water drainage features; and
- Construction of construction/ decommissioning compounds.

3 Construction Site Access Arrangements

3.1 This section summarises the accesses that will be used during the construction phase of the Proposed Development.

3.2 The access locations are shown in **Figure 3.1**.

Figure 3.1 Access and Field Connection Locations – Solar Farm



3.3 Prior to carrying out any works to the public highway the detailed design of such works will be submitted to the highway authority for approval.

Main Site Accesses

3.4 There will be main two access points for the solar farm, as follows:

- Access 1: A1041 Bawtry Road (onto Jowland Winn Lane) shown in **Drawing SK01**; and
- Access 2: A1041 Bawtry Road shown in **Drawing SK02**.

3.5 Both drawings are shown in **Appendix B**. [The constructed accesses on the A1041 \(Access 1 and Access 2\) will accord with standard details provided by NYC or set out in the Design Manual for Roads and Bridges \(DMRB\).](#)

3.6 Drawings SK01 and SK02 show the achievable visibility splays, and the swept path analysis of a 16.5m articulated vehicle, which will be the maximum sized vehicle that will be used to delivery equipment to the Site on a day-to-day basis. There will be a small number of abnormal load movements for the transportation of transformers to the Site, via Access 1. An over-runable area will be provided to the south of the junction to ensure this vehicle can access the Site. A specialist haulage company will be appointed to coordinate the movement of these loads in conjunction with the highway authority and police.

[Hardenshaw Lane Connection](#)

3.7 [Hardenshaw Lane will be used to connect the northern parcels of land to the southern parcels of land \(Access 3 and Access 4 on Figure 3.1.\). This is shown in **Drawing SK03 in Appendix C**, which includes swept path analysis of a 16.5m articulated vehicle. Drawing SK03 also shows area where widening of the public highway will be required.](#)

3.8 [The construction of Access 3 and Access 4 will accord with NYC's standard details as set out in Drawing E30-A 'Rural Quarry and Major Industrial Concrete Access'.](#)

Field Connections

~~3.6~~ There will be a number of locations where the internal access track will cross over the public highway. Field connection drawings are shown in [Drawings SK05 – SK12 in Appendix C \(Accesses 5-12 in Figure 3.1\).](#)

~~3.7~~ ~~Hardenshaw Lane will be used to connect the northern parcels of land to the southern parcels of land (Access 3 and Access 4 on Figure 3.1.). This is shown in **Drawing SK03**, which includes swept path analysis of a 16.5m articulated vehicle. Drawing SK03 also shows area where widening of the public highway will be required.~~

3.9 ~~In addition, **Drawings SK05 – SK12** show the remaining field connections (Accesses 5-12 in Figure 3.1).~~ These are all crossings of the public highway/unclassified roads that run through the Site. [Final locations will be agreed with NYC as part of the Final CTMP.](#)

3.10 Banksmen will be deployed field connections/crossings whenever they are being used by construction vehicles, to ensure the safety of all road users.

~~3.8~~3.11 Roads surrounding the field connections/crossings will be monitored to ensure that any debris on the highway caused by vehicles crossing between land parcels is cleared.

Cable Route Accesses

~~3.9~~3.12 Where the cable installation goes across the Drax Power Station railway line, works will be undertaken to the south of the A645. Therefore, there will be two cable route accesses (Access 13 and 14 in Figure 3.1).

~~3.10~~3.13 Access 13 is shown in **Drawing SK13**, contained in **Appendix D**. This will utilise an existing access to the Drax Sports and Social Club from the A645.

~~3.11~~3.14 Access 14 is shown in **Drawing SK14**, contained in **Appendix D**. This will utilise an existing access to the Drax Sports and Social Club from the A645/New Road Roundabout.

Detailed Design

3.15 Prior to carrying out any works in relation to Access 1, 2, 3 and 4, the detailed design of such works must be submitted to the highway authority for approval (either as part of the Final CTMP or separately) and include:

- A programme for the works, method statement and any traffic management proposals;
- Detailed technical drawings;
- Any health and safety documentation required under the CDM Regulations;
- Stage 1/2 Safety Audit; and
- Details of the contractor.

3.16 The Applicant agrees to pay NYC for the technical approval process at the time the approval is sought, in line with NYC's costs for accesses of the nature proposed. Exact costs will be agreed with NYC through the Final CTMP and will reflect the standard NYC costs for the above types of works at the time approval is sought.

3.17 The Final CTMP will confirm the process and which departments at NYC the detailed design drawings will be issued to.

3.18 The contractor will notify NYC of their programme of works at least three months prior to works commencing on Site. This is to allow for NYC to programme works and to avoid any conflicts.

Traffic Management/Regulation Measures

3.19 Details of the form and proposed locations of any signs or signals to be placed on a public highway will be submitted to the highway authority in advance of being placed (either as part of the Final CTMP or separately).

Management of Accesses

~~3.12~~3.20 All construction vehicles will access and egress the Site in a forward gear.

~~3.13~~3.21 A booking system will be set up to manage arrivals and departures at each access. The intention of this procedure is to avoid instances of HGVs arriving and departing the Site at the same time.

~~3.14~~3.22 Banksman will be deployed at each access whenever construction vehicles are accessing or egressing each Site. This will ensure the safe movement of construction vehicles in and out of the accesses.

~~3.15~~3.23 Temporary signage will be erected in the vicinity of the accesses during the construction phase. Diagram 7301 'WORKS TRAFFIC' in the Traffic Signs Regulations and General Directions (TSRGD)¹ will be used to indicate the access and will read 'WORKS TRAFFIC LARGE VEHICLE TURNING'. These signs will be white text and red background 1050 x 750 mm mounted in 'A' frames. The temporary signs will be in place for the duration of the construction phase.

¹ The Traffic Signs Regulations and General Directions (2016). Available at <https://tsrgd.co.uk/pdf/tsrgd/tsrgd2016.pdf> [Accessed March 2024]

4 Construction Vehicle Trip Generation

- 4.1 The section sets out the trip generation associated with the construction, operation, and decommissioning phase of the Proposed Development.

HGV Movements

- 4.2 A summary of the construction activity that requires HGV movements is as follows:
- Delivery of solar modules and mounting structures;
 - Delivery of Inverters and Transformers;
 - Delivery of Substation equipment;
 - Delivery of material for the access track construction;
 - Other deliveries for items such as waste, fencing, sand and gravel, and for non-grid connection elements such as landscaping;
 - Deliveries of equipment associated with the grid connection, including construction of temporary haul route, excavation, and cabling.
- 4.3 The vast majority of deliveries by HGV will be by 16.5m articulated vehicles or 8-10m rigid vehicles. However, there will be a small number of abnormal load deliveries associated with the substation transformers. Abnormal load movements are discussed separately in **Section 6**.
- 4.4 **Table 4.1** sets out a summary of the HGV movements that will be associated with the construction phase of the Proposed Development.
- 4.5 It is expected that there will be a relatively flat profile of deliveries throughout the construction period. Therefore, an average number of deliveries per day has been calculated based on the length of the construction period. A 50% uplift on these numbers has been applied to provide a forecast of the peak number of daily deliveries.

Table 4.1 Solar Farm Anticipated Construction Deliveries (HGVs)

Construction Activity	Vehicle Size (Max)	Solar Farm	Grid Connection	Total
Construction Period (Working Days)		260	260	260
Modules and Mounting Structures	16.5m Articulated	1,350	-	1,350
Power Stations	16.5m Articulated	25	-	25
Access Track	10m Tipper	450	-	450
General (Fencing, Landscaping, etc.)	10m Rigid	1,100	-	1,100
Energy Storage System	16.5m Articulated	450	-	450
Substation	27.5m AIL Vehicle	3	-	3
Grid Connection	10m Tipper	-	1,200	1,200
Total		3,378	1,200	4,578
Average per Day		13	5	18
Total Movements (Arrivals + Departures)		6,756	2,400	9,156
Average Movements per Day		26	10	36
Average Arrivals per Day (Peak Period – Plus 50%)		19	7	26
Average Movements per Day (Peak Period – Plus 50%)		38	14	52

Cars/LGV Movements

- 4.6 On an average day, there is expected to be 150 workers involved with the construction of the solar array element of Proposed Development. On a peak day, this could increase to 200 workers.
- 4.7 In addition, there will be around 10 construction workers associated with the installation of the grid connection cable.
- 4.8 Therefore, on a peak day, there could be 210 construction workers on Site.
- 4.9 A Construction Worker Travel Plan has been prepared. This is shown in **Appendix E**. The Travel Plan includes a measure for the provision of shuttle buses to transport construction workers to and from the Site. This is particularly important for the workers, all of which will be non-local, who will stay in local accommodation and be transported to the Site. It can also be utilised by other workers as appropriate. It is expected that a mixture of coaches and minibuses will be used. On average, it is expected that a shuttle bus will be able to accommodate 20 workers. In addition, workers who drive will be encouraged to car share where possible.
- 4.10 With this in mind, it is assumed that 50% of workers will arrive by shuttle bus. The remainder will arrive by car with an assumed 1.5 construction workers per car.
- 4.11 Based on 210 construction workers, the forecast number of cars/LGVs are set out in **Table 4.2**.

Table 4.2 Construction Worker Movements: Peak Day

Construction Activity	Non-Grid Connection Elements	Grid Connection Element	Total
Construction Workers (Busy Day)	200	10	210
Shuttle Bus	5	-	5
Car	67	7	74
Total (Arrivals)	72	7	79
Total Movements (Arrivals + Departures)	143	14	158

- 4.12 Table 4.2 shows that there could be up to 79 cars/LGCs/shuttle buses associated with construction worker arrivals on a busy day. These are likely to arrive in the morning, with the same amount of the departures in the afternoon/evening.

Timings of Construction Vehicle Movements

- 4.13 Deliveries by HGV will be coordinated through a booking system to avoid travel during the network peak hours, where possible. Therefore, deliveries will be scheduled for between 09:30 and 16:30 where possible.
- 4.14 Construction worker shifts will be schedule so that workers are not traveling during the network peak hours of 08:00-09:00 and 17:00-18:00.
- 4.15 Therefore, there should be limited or no construction vehicle movement between 08:00-09:00 and 17:00-18:00.

Summary

- 4.16 This section has summarised the likely trip generation of the Proposed Development during the construction and operational phase.
- 4.17 On a peak day during the construction phase, the following movements could be generated:
- HGV – 26 (52 total movements)
 - Car/LGV/Shuttle Bus associated with construction workers – 79 (158 total movements)

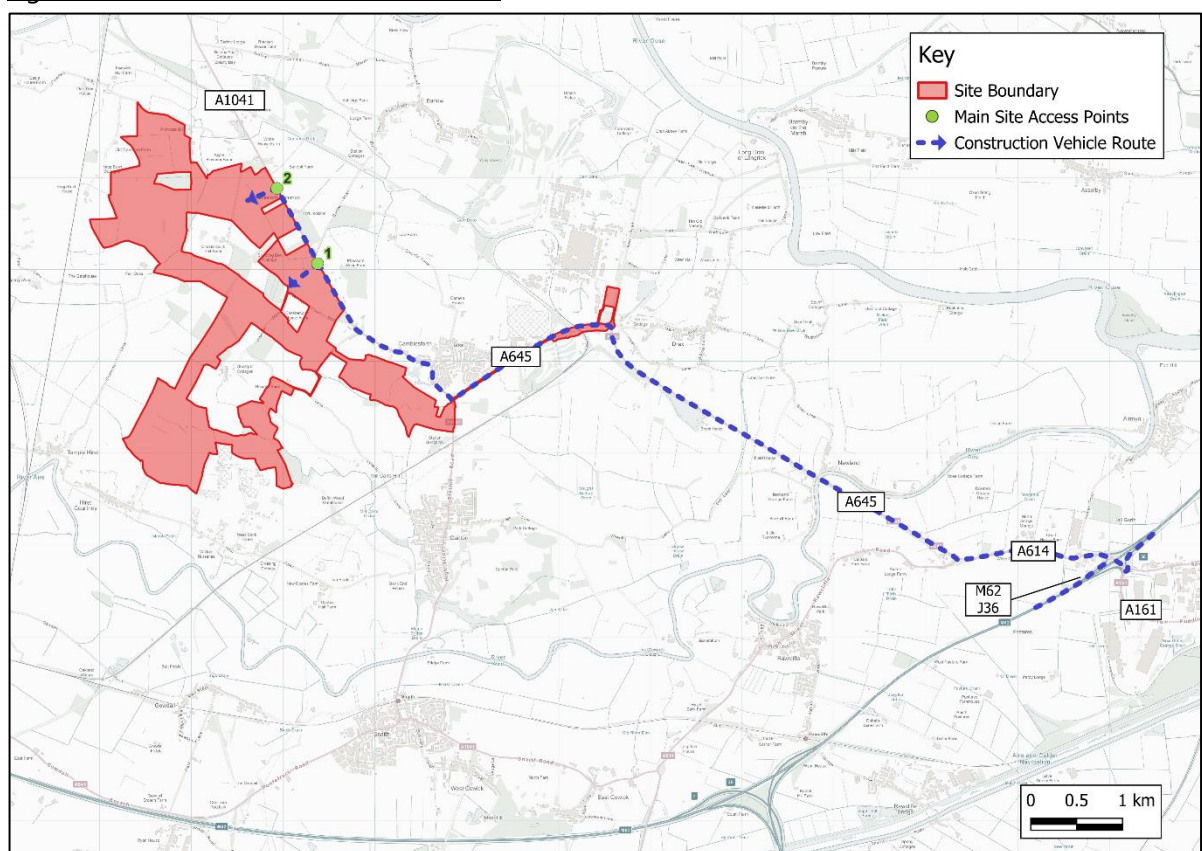
5 Construction Vehicle Routing

- 5.1 This section provides details of the construction vehicle routes the Site. Drivers will be made aware of the route in advance of driving to the Site. The selected routes are considered the most appropriate to each access.

Solar Farm

- 5.2 The construction vehicle route for the solar farm is shown in **Figure 5.1**.

Figure 5.1 Construction Vehicle Route



- 5.3 The route will be as follows:

- Access 1: M62 Junction 36 → A614 → A645 → A1041 Bawtry Road → Access 1 and 2

- 5.4 The route provides the most direct route to the Site from the Strategic Road Network (M62). The route to the Site access points follows A-Roads with well-established HGV use. There are no weight, height or width restrictions along the route.

Route Signage

- 5.5 Temporary road signing will be implemented along the designated routes to inform background traffic of the ongoing construction works and to direct construction traffic to and from the Site. The signs will be located at key points along the route, including junctions.
- 5.6 All signage will be compliant with Chapter 8 of the Traffic Signs Manual where applicable. The following points will be considered when locating signage:
- The position of the sign in relation to the highway;
 - Possible distraction to drivers; and
 - The proximity to junctions and roundabouts.
- 5.7 The signage strategy will be agreed with the local highway authority through the final CTMP.

Management of Deliveries

- 5.8 Due to the relatively low number of daily vehicles associated with the construction phase there is not anticipated to be any significant delay to background traffic.
- 5.9 All deliveries will be scheduled in advance using a booking system. Drivers will be instructed to stop in an appropriate layby or service station and make contact if they are likely to miss their allotted slot to allow the schedule to be adapted in as much as possible. The intention of this procedure is to avoid instances of HGVs arriving and departing the Site at the same time.

Procedure for Arrival to Site

- Drivers to be notified of scheduled arrival time ahead of delivery to the Site and which access/route to use;
 - When the delivery vehicle is due the banksmen will be mobilised and will go to position at the relevant Site access;
 - All operatives will communicate with each other, as necessary; and
 - Banksmen will assist HGVs to manoeuvre from the public highway into the Site accesses.
- 5.10 The following procedure will be initiated when HGVs are leaving the Site:

Procedure for Leaving the Site

- Before drivers depart, the Site Manager will be notified. They will then mobilise the banksmen at the relevant Site access;

- Drivers will be advised when the banksmen are in place; and
- Banksmen will guide the drivers exiting the Site on to the public highway.

5.11 Mitigation measures will be provided throughout the construction phase and are discussed in more detail in **Chapter 7**.

6 Abnormal Loads

- 6.1 There will be a number of abnormal load movements associated with the construction of the Proposed Development.
- 6.2 The Department for Transport (DfT) define a movement to be abnormal if the load and vehicle meets any of the following criteria:
- a weight of more than 44,000kg;
 - an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle;
 - a width of more than 2.9 metres;
 - a rigid length of more than 18.65 metres.
- 6.3 Abnormal Loads will be required for the delivery of transformers to the substation. They will all access the Site via Access 1. An over-runnable area will be provided to the south of the junction to ensure this vehicle can access the Site.
- 6.4 It is anticipated there will be approximately three abnormal load trips associated with the Proposed Development. Equipment will be most likely delivered on a 5-axle bed with a 5-axle draw bar trailer (approximately 36m in length). However, a 16-axle girder frame (approximately 70m in length) may be required if the transformer height is greater than 4.86m.
- 6.5 The abnormal loads will follow the same routes to the Site as other HGVs and as described in Section 5.

Management Measures

- 6.6 Traffic management will be in place for all abnormal load movements destined for the Site. The exact nature of traffic management will be agreed with North Yorkshire Council and Yorkshire Police prior to the movement taking place. Traffic management measures may include rolling road closures and vehicle escorts.

7 Construction Traffic Mitigation and Management Measures

- 7.1 The contractor will introduce measures to minimise the impact resulting from construction activities. It will be the responsibility of the Project Manager and Site Manager to oversee the implementation of the mitigation and management measures.
- 7.2 The measures are set out below.

Public Rights of Way

- (i) PRowWs that cross the Site will generally remain open during the construction phase of the Proposed Development. There may be the requirement for some very temporary diversions of PRowWs where they cross the cable corridor. This will only be required when the cable is being installed and will not likely last more than a day. If a temporary diversion of a PRowW is required for this short period, it will be appropriately managed in consultation with the local highway authority.
- (ii) During the construction phase, there could be instances whereby a small number of construction vehicles have to cross the PRowWs on-site. Where this occurs, the following measures will be implemented:
 - A widened access track to ensure vehicles can pass PRowW users safely;
 - The provision of banksmen at either end of the PRowW, to hold vehicles if a PRowW user is present and advise PRowW users of the potential for construction vehicles to be present;
 - Speeds to be limited to 10mph;
 - Drivers will stop and give-way to any PRowW user that they encounter;
 - Appropriate signage will be installed along the PRowW to make PRowW users aware of the construction activity. This will include information on construction times and contact details for a public liaison officer;
 - The PRowW will be kept clear of construction vehicles and apparatus outside of permitted construction hours so far as is practicable to do so; and
 - Any damage to the surface of the footpath will be repaired as soon as practicable. The surface will be returned to its original condition following completion of construction.

Specific Highway Measures

- (iii) Where existing accesses are utilised, these will be widened and formalised as appropriate. Visibility splays will be kept clear throughout the construction period;

- (iv) On narrower sections on the highway, such a Hardenshaw Lane, temporary pass-by bays will be created [for the construction period only. These will be reinstated for the operational phase](#).

Traffic Management

- (v) Traffic management for abnormal load movements will be agreed with the local highway authority and police prior to the abnormal load movements taking place.

Signage

- (vi) Signs to direct construction vehicles associated with the development will be installed along the construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to Site to ensure that vehicles follow the identified route. The signage strategy will be agreed with the local highway authorities prior through the Final CTMP;
- (vii) All signage on the designated route will be inspected daily by the Site Manager, to ensure they are kept in a well-maintained condition and located in safe and appropriate locations;

Vehicle Movement

- (viii) Construction deliveries by HGV will be coordinated to arrive/depart between 09:30-16:30 to avoid the network peak hours of 08:00-09:00 and 17:00-18:00.
- (ix) Banksman will be provided at the Site accesses to indicate to construction traffic when it is safe for them to enter and exit the Site. [They will also be located on Hardenshaw Lane, where pass-by bays will be created \(see measure 'iv'\)](#);
- (x) A Construction Worker Travel Plan will be implemented, to encourage construction workers to travel to the Site via sustainable travel, where possible. Measures include the provision of a shuttle bus and a car sharing Proposed Development. Shifts will be organised to avoid construction worker movement between 08:00-09:00 and 17:00-18:00;
- (xi) The management associated with Abnormal Load movements will be agreed with the local highway authority and the police prior to the delivery;

Booking System

- (xii) A booking system will be set up to manage arrivals and departures to the Site. A log will be kept as part of the booking system. The intention of this procedure is to avoid instances of HGVs passing each other in opposite directions on the local roads surrounding the Site.

Parking

- (xiii) Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;

Wheel Wash Facility

- (xiv) A wheel washing facility will be provided at each access. This will be located at the end of each access road, ahead of the egress onto the local highway network;
- (xv) A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway;
- (xvi) If required, a road sweeper will be provided for the area surrounding access to alleviate any residual debris generated during the construction phase, as required;

Noise Reduction and Air Quality

- (xvii) When on Site and when not in use, vehicle engines will be switched off;
- (xviii) Vehicles carrying material off-Site will be sheeted to prevent the spread of dust;
- (xix) In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust;

Site Security

- (xx) The Site will be secured at all times via a perimeter fence or temporary fencing. CCTV will be operational within the construction compound;

Road Condition Survey

- (xxi) A pre-construction road condition survey will be carried out on the local highway network via video two weeks before the construction phase commences. The extent of the survey will be agreed with the local highway authority prior to commencement. Once construction is complete, a post-construction condition survey will be undertaken to identify any additional defects that can reasonably be attributable to construction activities at the Site. Any identified highways defects resulting from construction activities associated with the Site will be corrected to the satisfaction of the local highway authority.

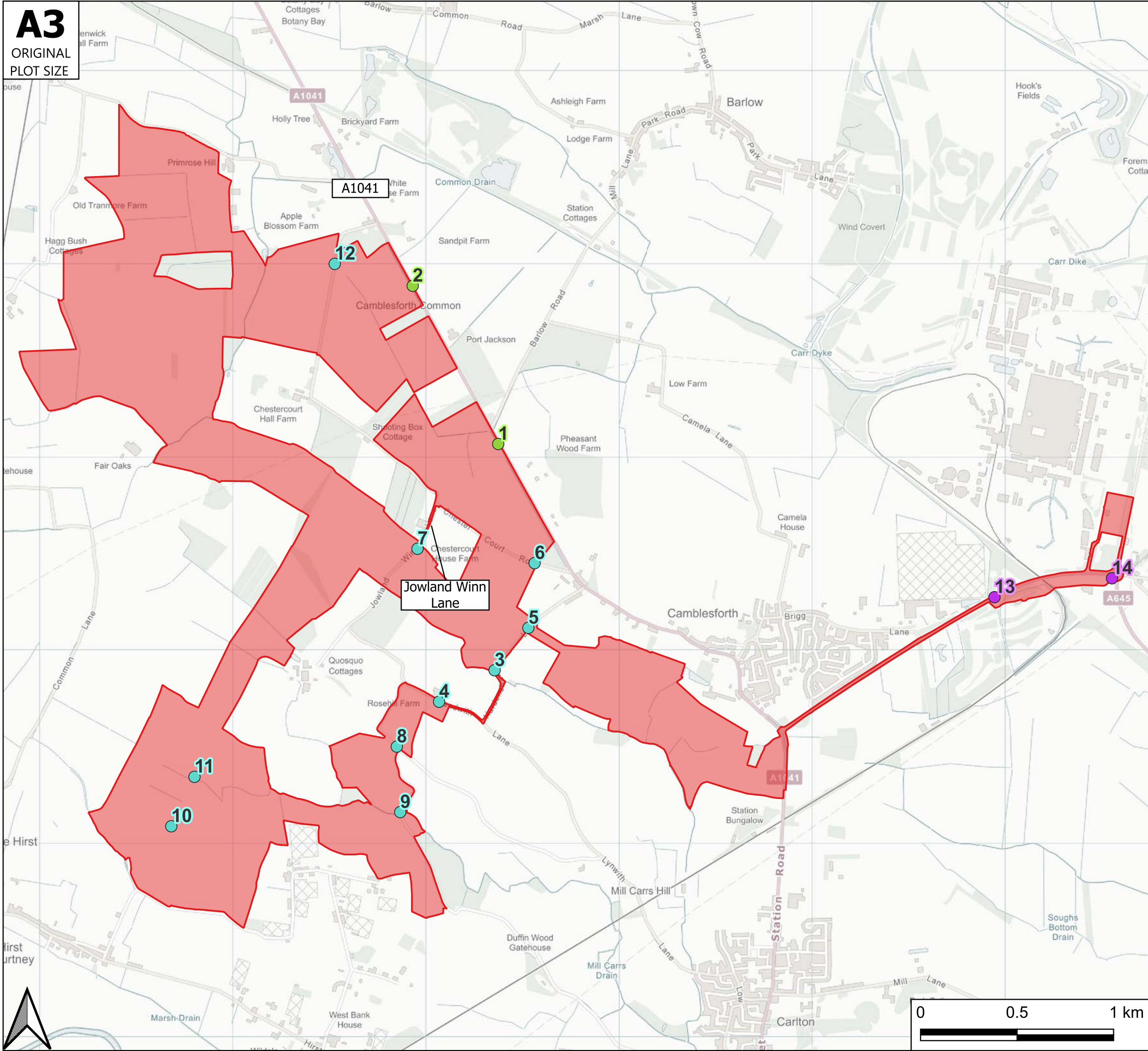
Community Engagement

- (xxii) The details of the Construction Site Manager will be provided to the local highway authority in advance of any work being carried out.
- (xxiii) The Construction Site Manager's details will also be provided on a Site-board at the Site accesses. If anyone in the local community has any issues during the construction phase, the Site Manager will be available to discuss.

Monitoring

- (xxiv) Any unforeseen issues that arise in relation to construction vehicle movement will be logged by the Site Manager. If necessary, the issues will be discussed with the local highway authority so that they can be resolved as appropriate.

FIGURES



A3
ORIGINAL
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Key

Site Boundary

Access Locations

Cable Route Access Points

Field Connection Points

Main Site Access Points

Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol

Cambridge

London

Welwyn Garden City

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Transport Planning Associates

40 Berkeley Square

Clifton

Bristol

BS8 1HP

0117 925 9400

www.tpa.uk.com

CLIENT:

Enso Green Holdings D Limited

PROJECT:

Helios Renewable Energy Project

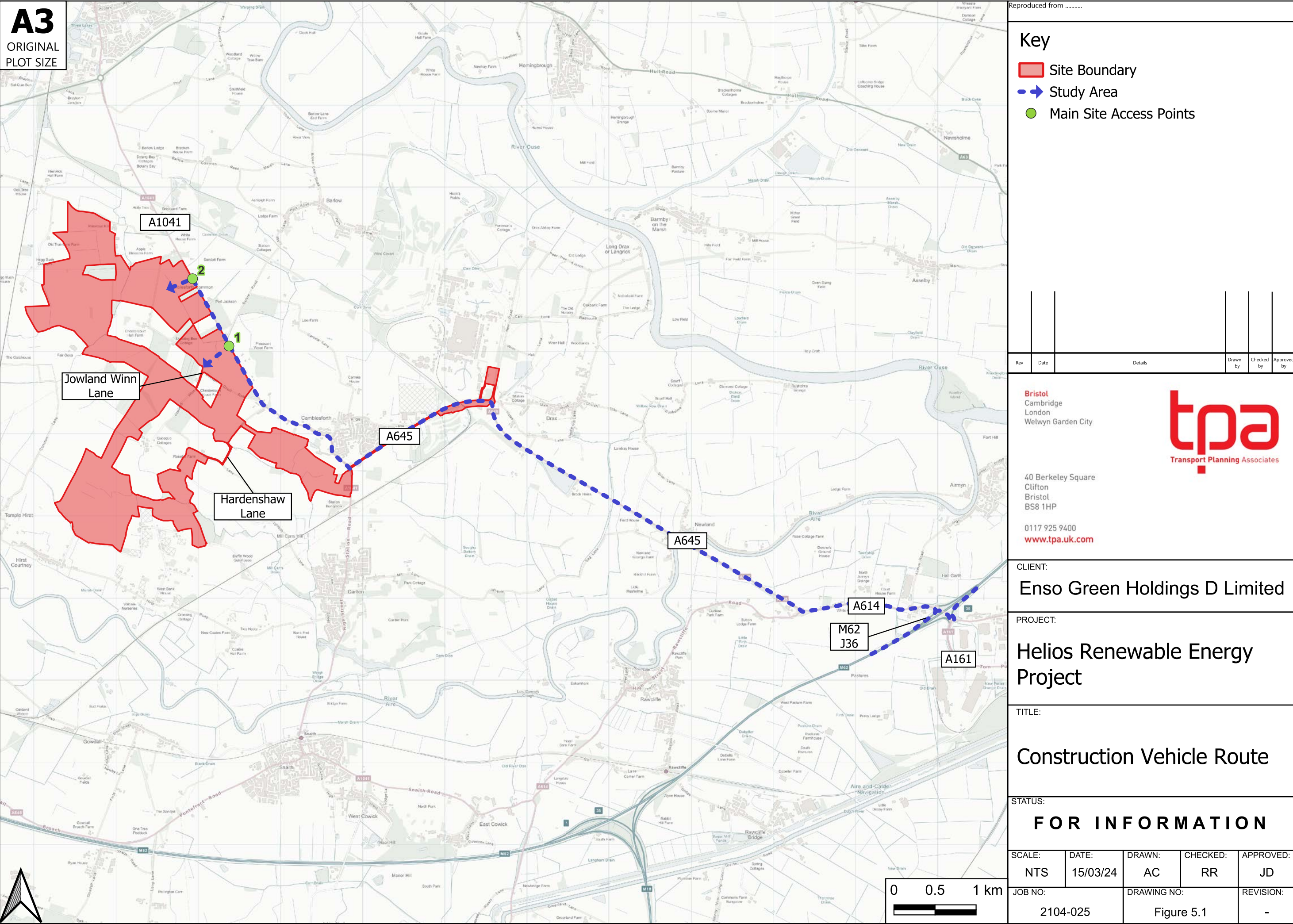
TITLE:

Access Locations

STATUS:

FOR INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
NTS	15/03/24	AC	RR	JD
JOB NO:	DRAWING NO:		REVISION:	
2104-025	Figure 3.1		-	



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Key

Site Boundary

Study Area

Main Site Access Points

Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City

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40 Berkeley Square
Clifton
Bristol
BS8 1HP

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PROJECT:

Helios Renewable Energy Project

TITLE:

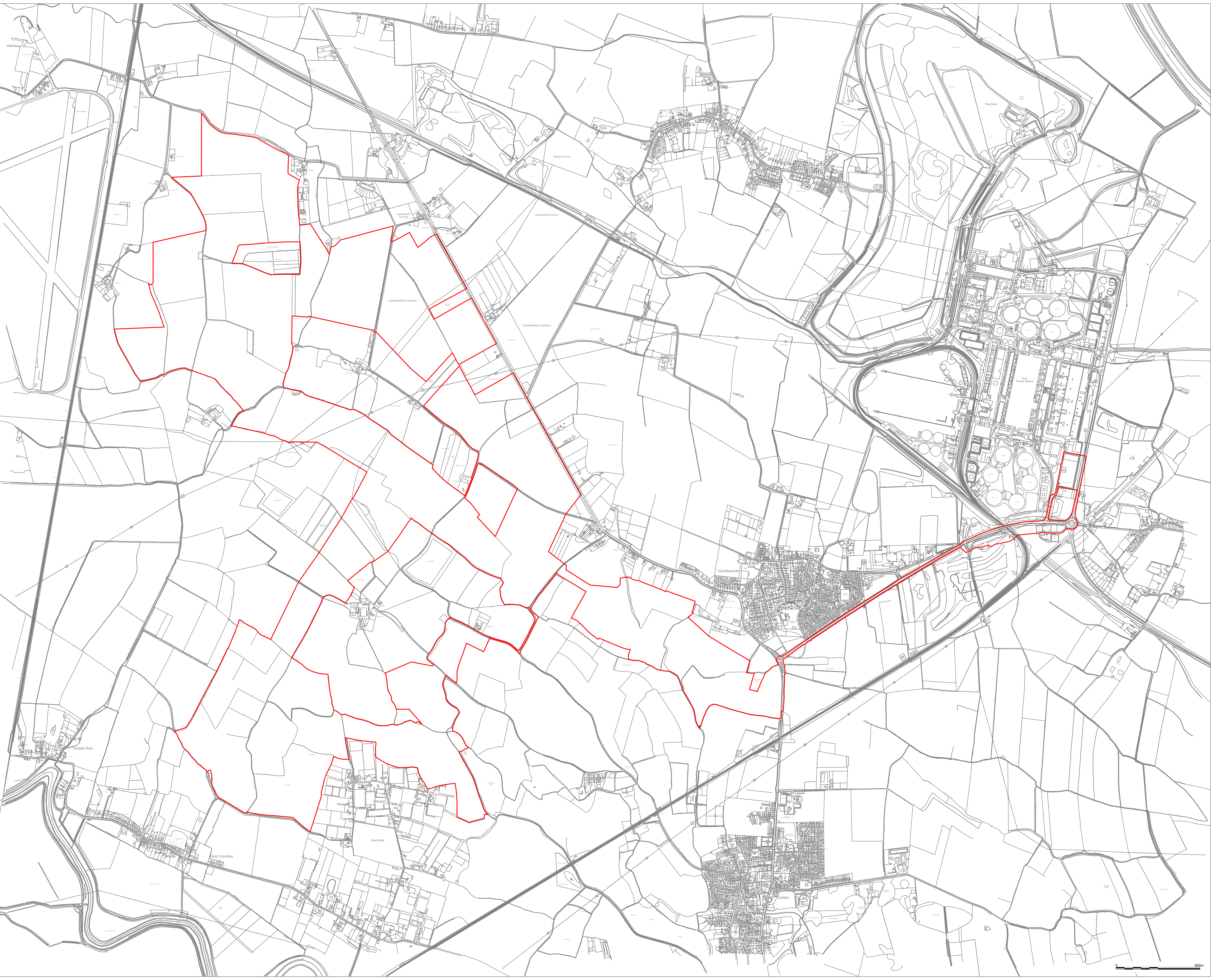
Construction Vehicle Route

STATUS:

FOR INFORMATION

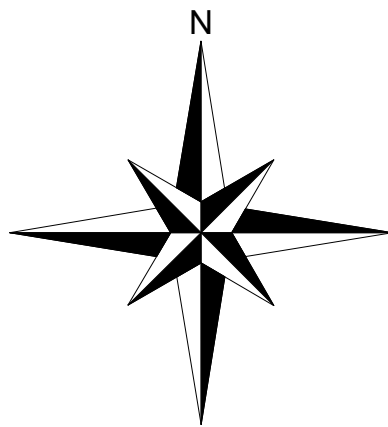
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NTS	15/03/24	AC	RR	JD
JOB NO:	DRAWING NO:		REVISION:	
2104-025	Figure 5.1		-	

APPENDIX A



KEY

Site Boundary



Revisions:
First Issue- 03/05/2022 JS
01 - (12/07/2022 JS) Revised boundary
02 - (21/02/2023 JS) Revised boundary
03 - (20/04/2023 JS) Revised boundary
04 - (28/04/2023 JS) Revised boundary
05 - (12/06/2023 JS) Revised boundary
06 - (20/07/2023 JS) Revised boundary
07 - (03/08/2023 AD) removal of sheets 2 & 3
08 - (11/10/2023 JS) Revised boundary
09 - (30/01/2024 JS) Revised boundary
10 - (07/02/2024 JS) Revised boundary
11 - (15/02/2024 AH) Revised boundary

ALL DIMENSIONS TO BE CHECKED ON SITE WORK
TO FIGURED DIMENSIONS ONLY REPORT
DISCREPANCIES TO THE GFP AT ONCE BEFORE
PROCEEDING COPYRIGHT ACT APPLIES.

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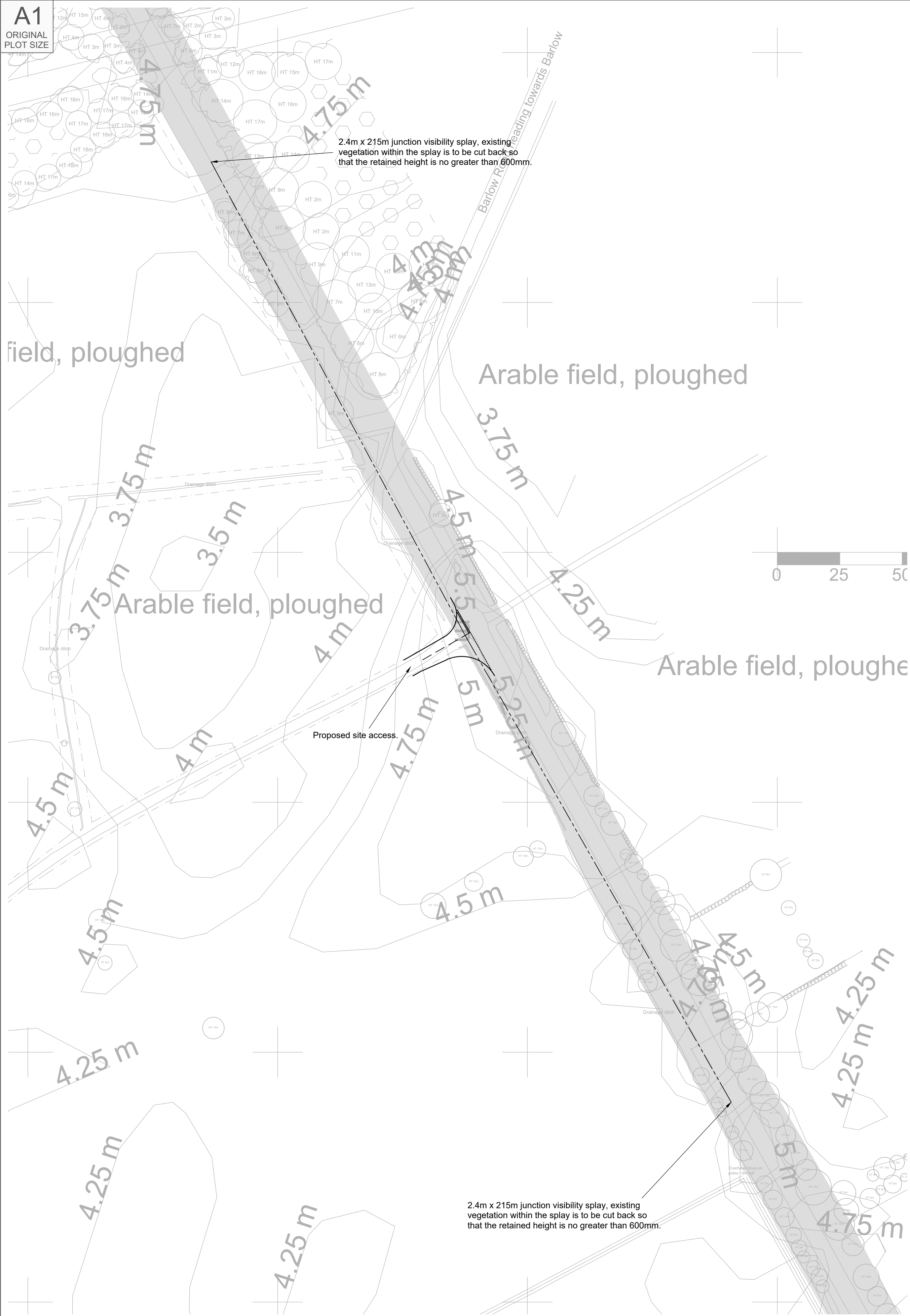
Tel: 01452 784885 Email: enquiries@ensoenergy.co.uk

Project Title:
Helios Renewable Energy Project

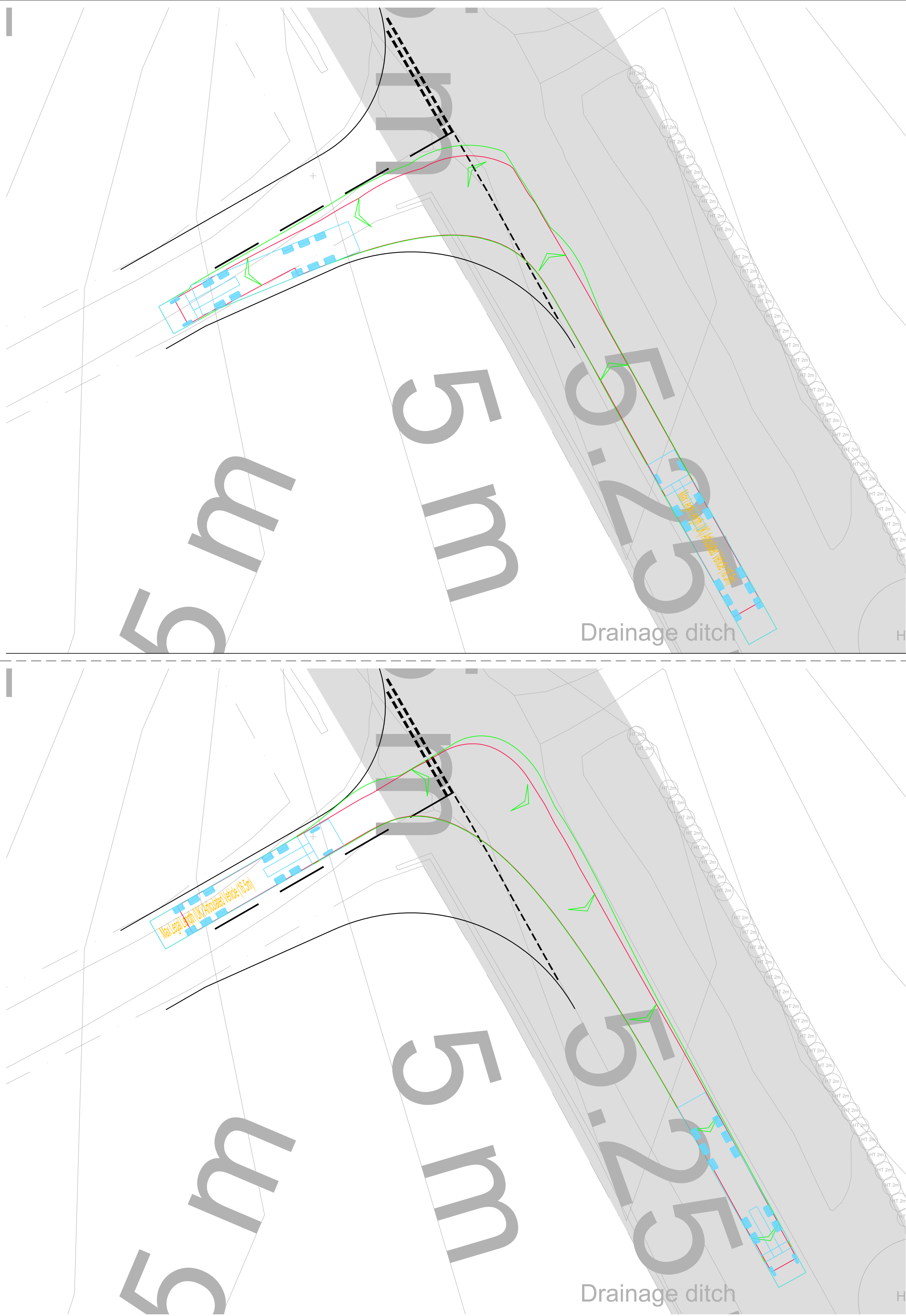
Drawing Title:
**Figure 1.1
Order Limits Location Plan**

DRWG No: DX-01-P01	Rev: 11	Sht no: 1/1
Drawn by : AH	Checked by: NK	
Scale: 1:10,000 @ A1	Date: 15/02/2024	

APPENDIX B



Site Access Arrangement and Visibility Splays



Swept Pats Of A 16.5m Articulated HGV

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NOTES:

1. The extent of adopted highway shown has been taken from an unscaled adopted highway record plan dated 24th March 2022 received from North Yorkshire County Council and is indicative only.

Location Plan
Not To Scale

KEY

Approximate extent of adopted highway maintainable at public expense by North Yorkshire County Council.

Max Legal Length (UK) Articulated Vehicle (16.5m)

Max Legal Length (UK) Articulated Vehicle (16.5m)	16.500m
Overall Length	2.550m
Overall Width	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

B	23.05.24	Location plan added.	PSW	RR	JD
A	20.02.24	Drawing re-numbered from SK03.	PSW	RR	JD

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TITLE:
Site Access 1 From A1041 - Southern Access

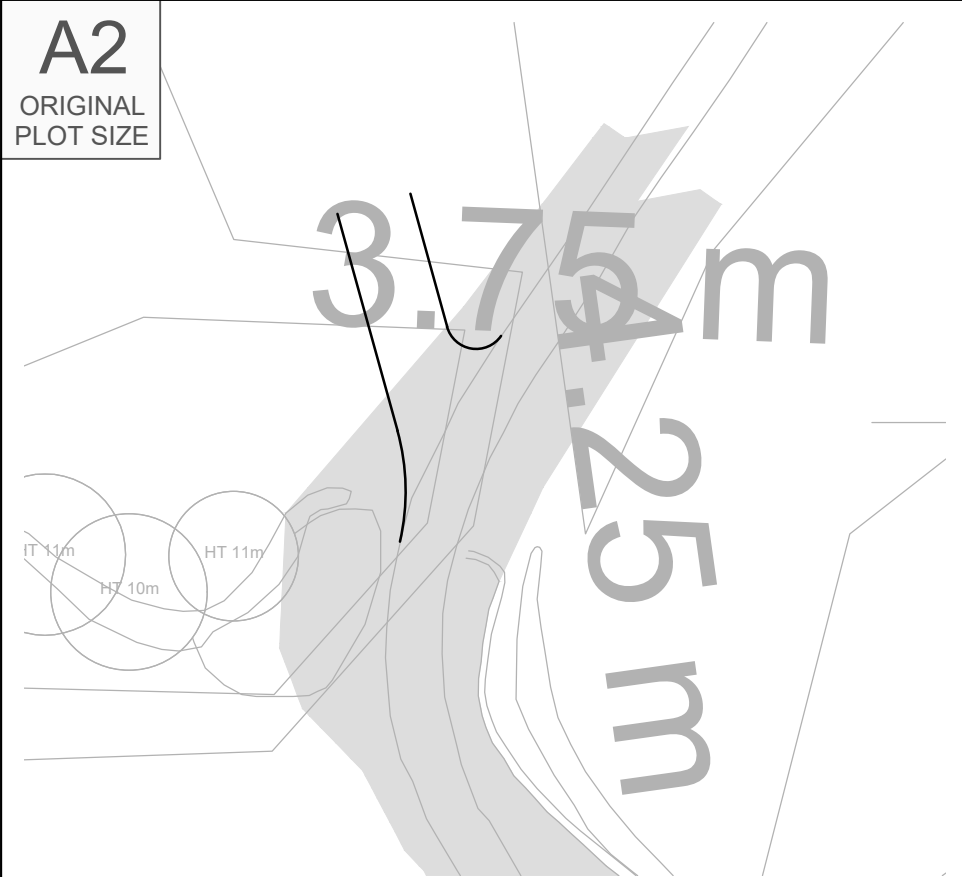
STATUS:
INFORMATION

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
As Shown	05.04.23	PSW	RR	JD
JOB NO:	DRAWING NO:		REVISION:	
2104-025	SK01		B	

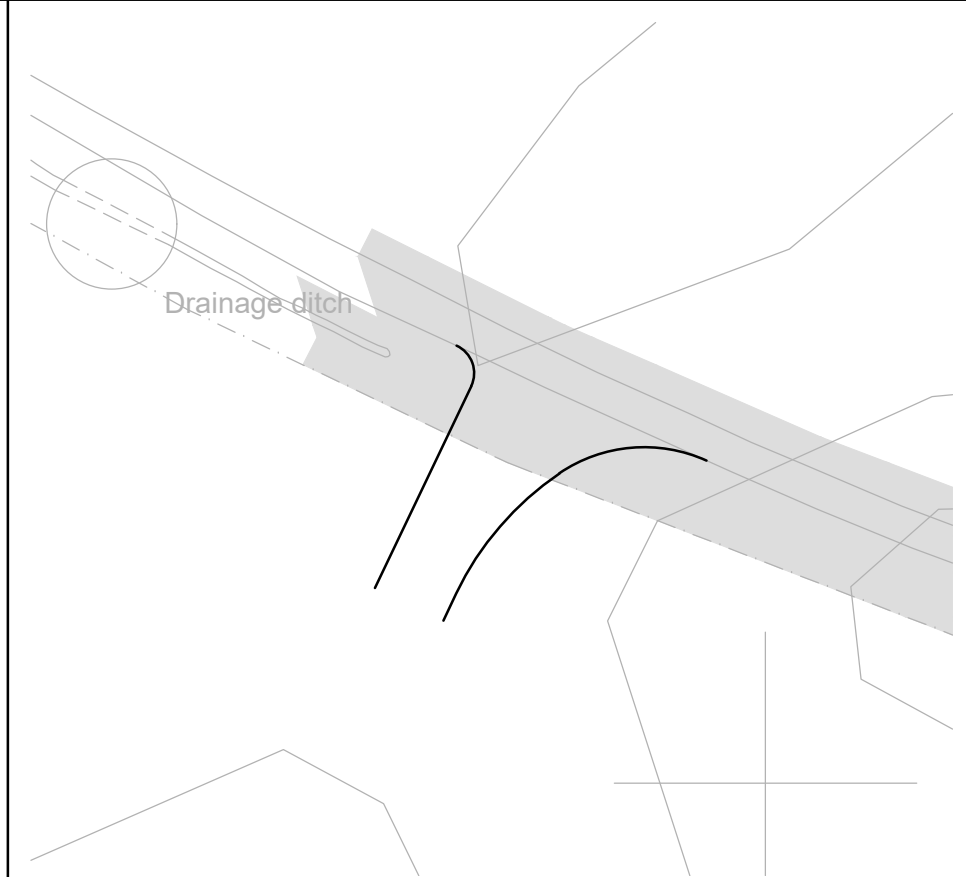
RESERVED COPYRIGHT

APPENDIX C

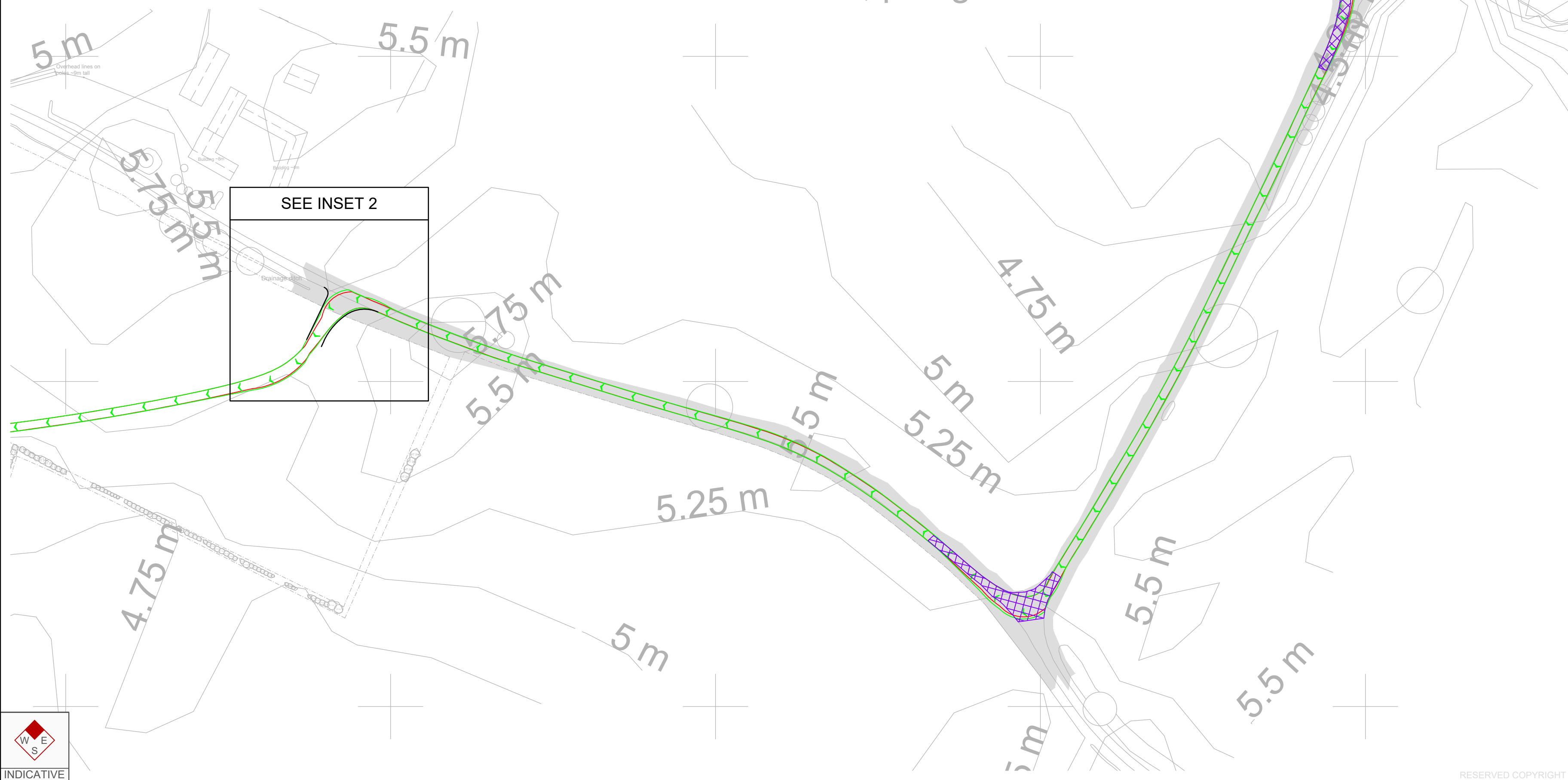
A2
ORIGINAL
PLOT SIZE



INSET 1 - Access 3 Sandwith Lane
Scale 1:500

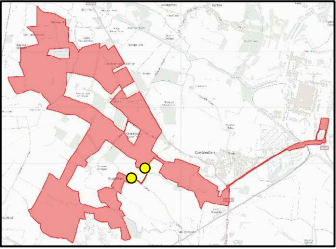


INSET 2 - Access 4 Hardenshaw Lane
Scale 1:500



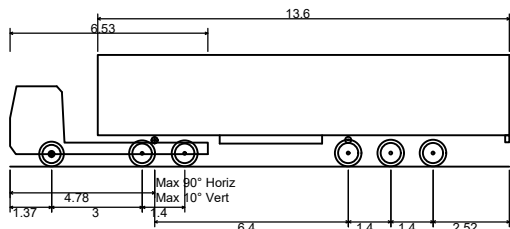
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NOTES:
1. The extent of adopted highway shown has been taken from an unscaled Ordnance Survey based adopted highway record plan dated 24th March 2022 received from North Yorkshire County Council and is indicative only.



Location Plan
Not To Scale

KEY
Approximate extent of adopted highway maintainable at public expense by North Yorkshire County Council (see note 1).
Localised widening of existing road to accommodate swept path of an articulated HGV.



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 6.530m

B	23.05.24	Inset 1 is now access 3. Inset 2 is now access 4 and location plan added.	PSW	RR	JD
A	20.02.24	Site access from A1041 (southern access) now shown on SK01 route between land parcels shown on this drawing.	PSW	RR	JD
Rev	Date	Details	Drawn by	Checked by	Approved by

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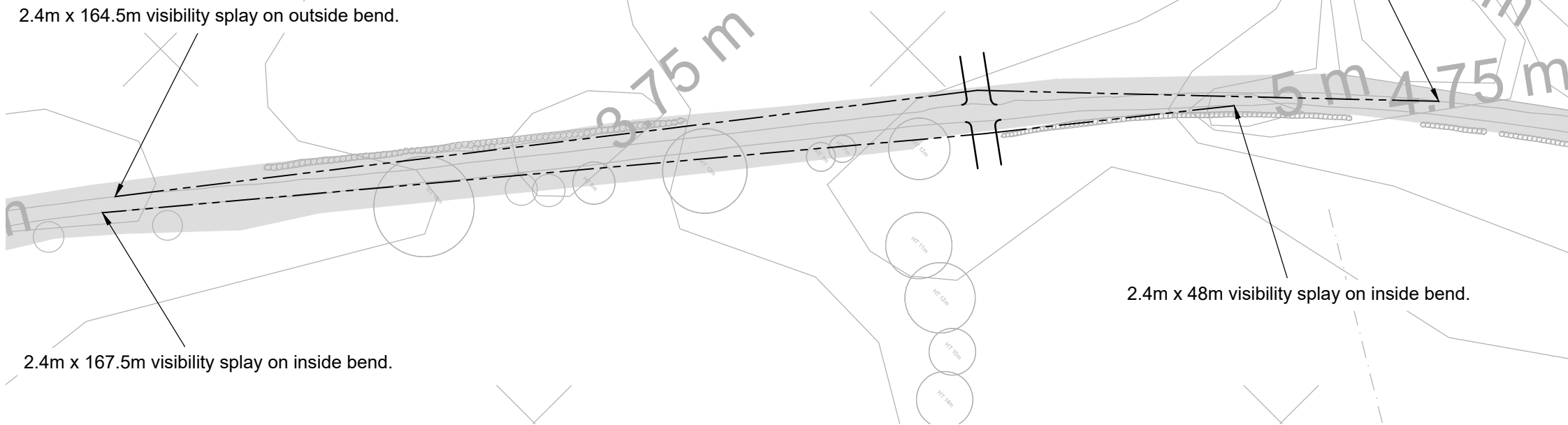
TITLE:
Site Accesses 3 and 4 -
Vehicle Access Between
Land Parcels

STATUS:
INFORMATION

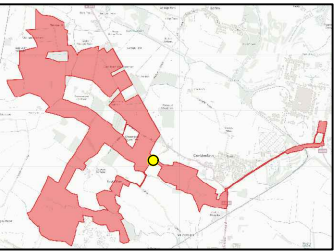
SCALE: 1:1,000	DATE: 05.04.23	DRAWN: PSW	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025	DRAWING NO: SK03	REVISION: B		

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ORIGINAL
PLOT SIZE



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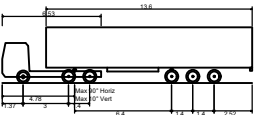
Location Plan

Not To Scale

KEY



Approximate highway boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

-	-	-	-	-	-
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Proposed Site Crossing and Visibility Splay

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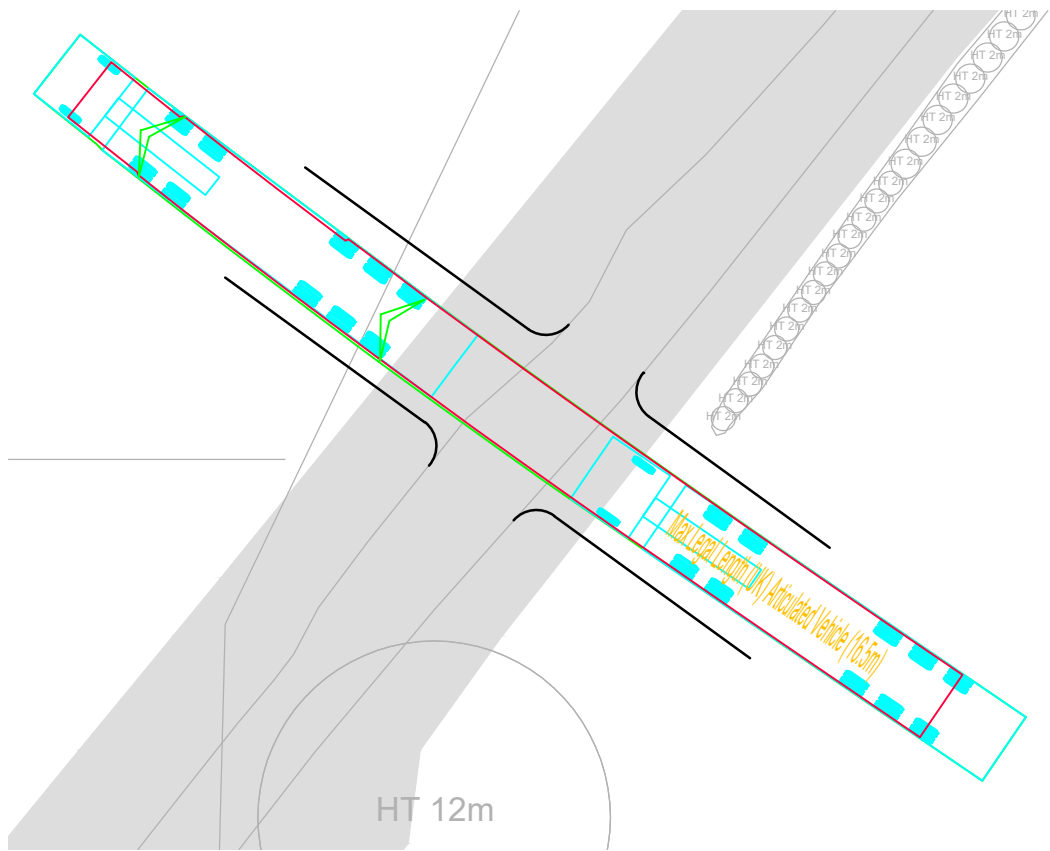
HELIOS RENEWABLE ENERGY PROJECT

TITLE:

Crossing 5 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV

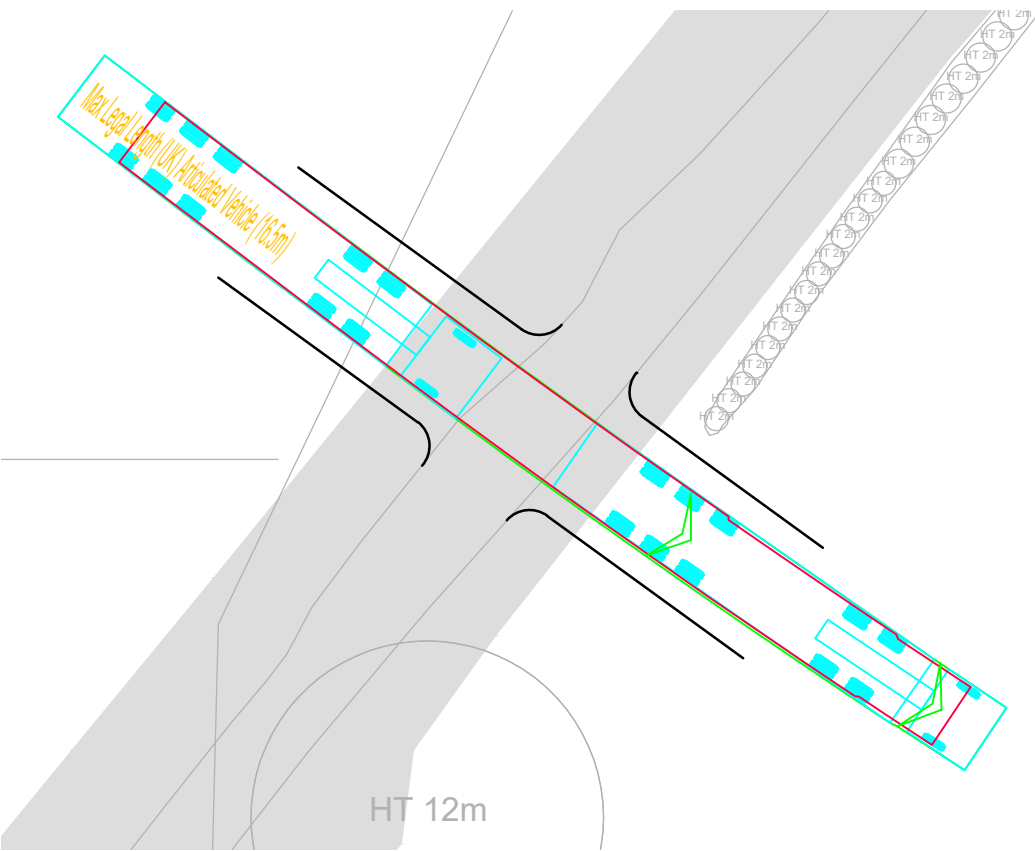
STATUS:

INDICATIVE



16.5m Articulated HGV Northbound

Scale 1:250

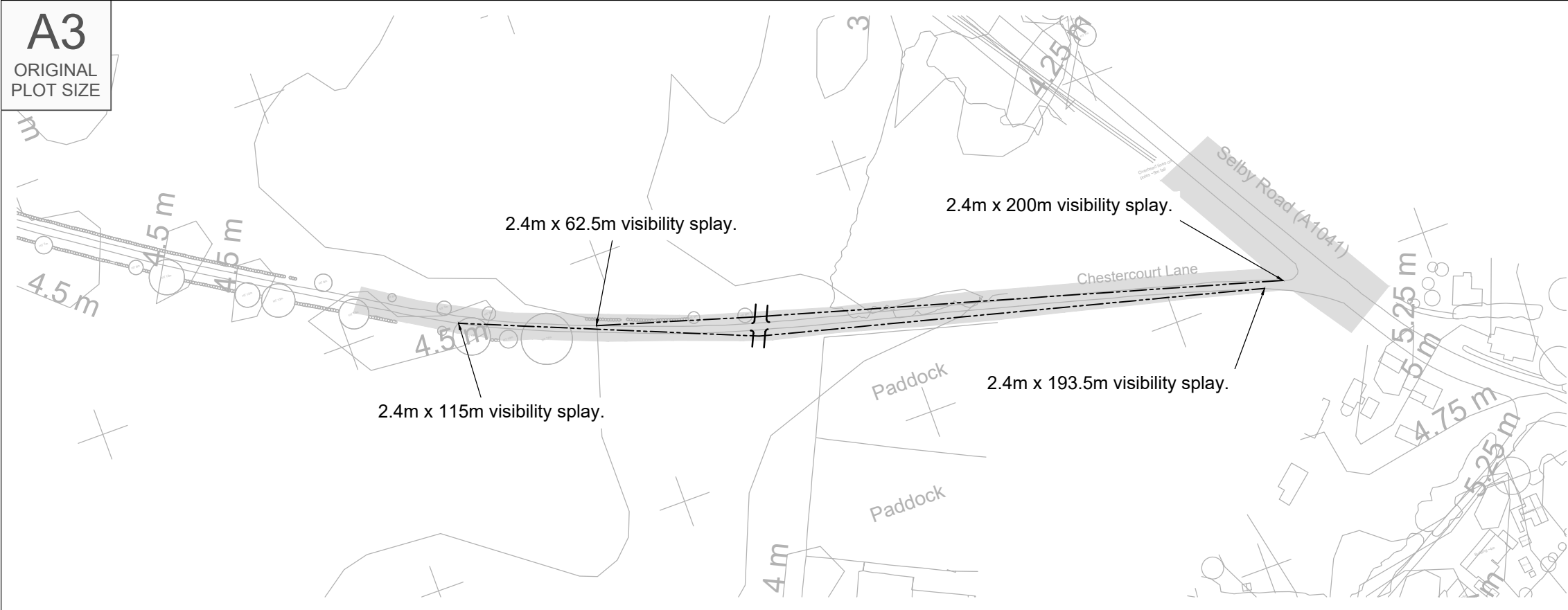


16.5m Articulated HGV Southbound

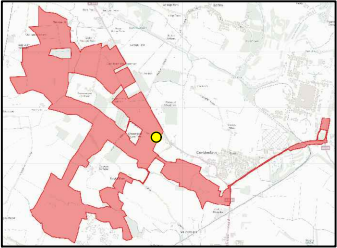
Scale 1:250



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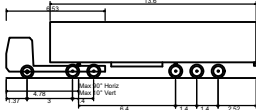
Location Plan

Not To Scale

KEY




Approximate highway boundary



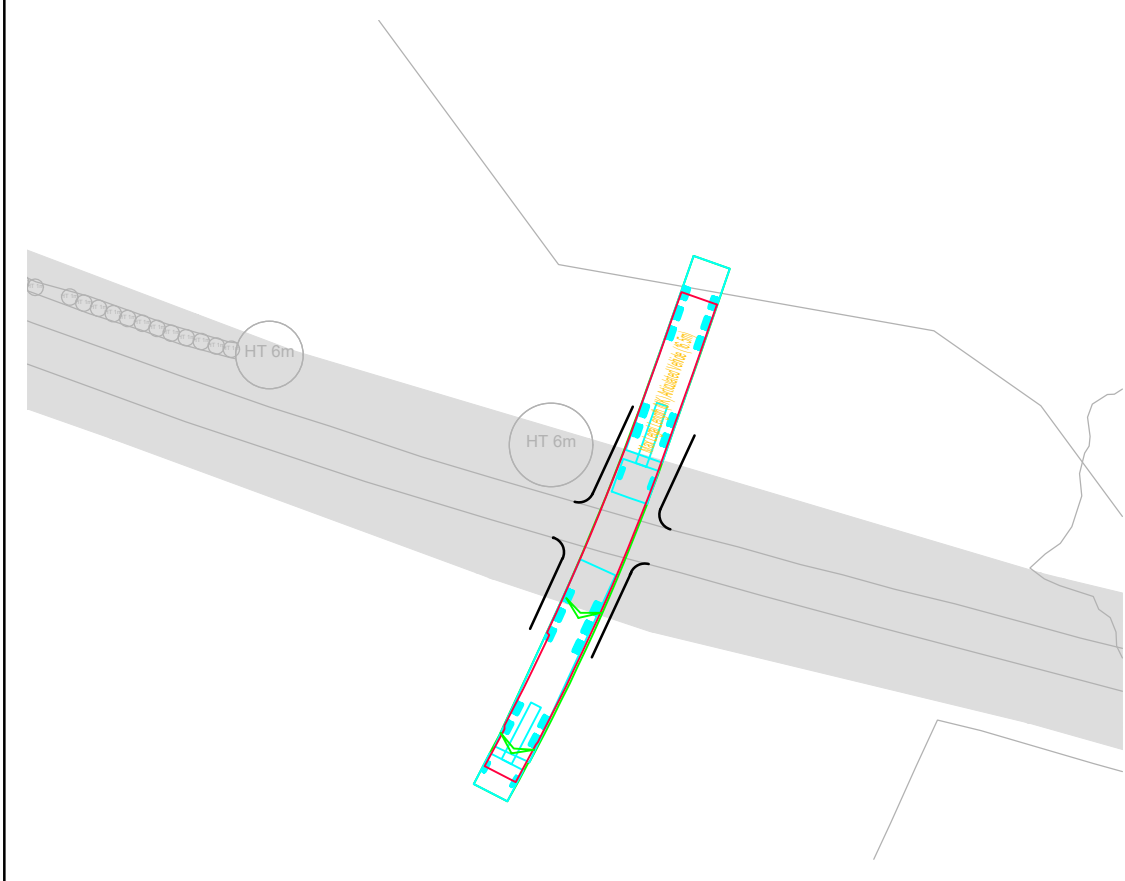
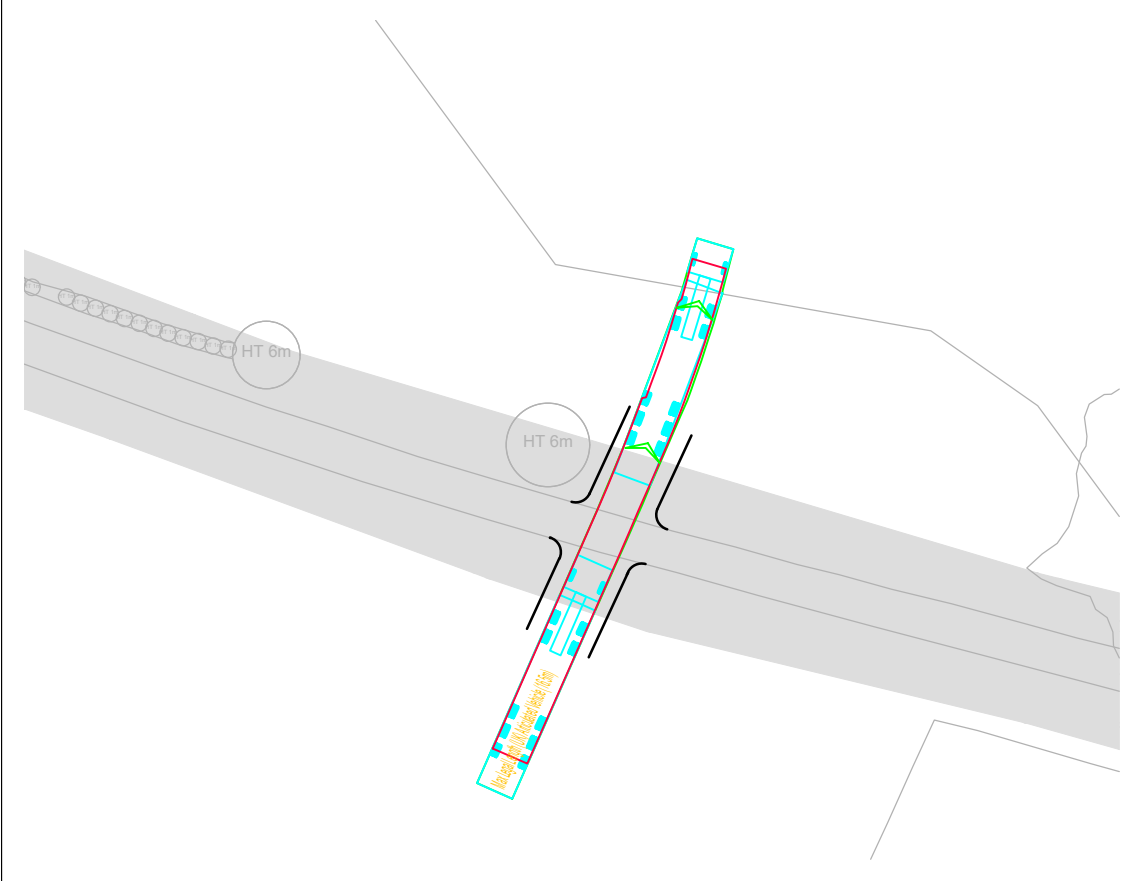
Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.90s
Kerb to Kerb Turning Radius 6.530m


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Proposed Site Crossing and Visibility Splay

Scale 1:2,000




INDICATIVE

Northbound

Scale 1:500

Southbound

Scale 1:500

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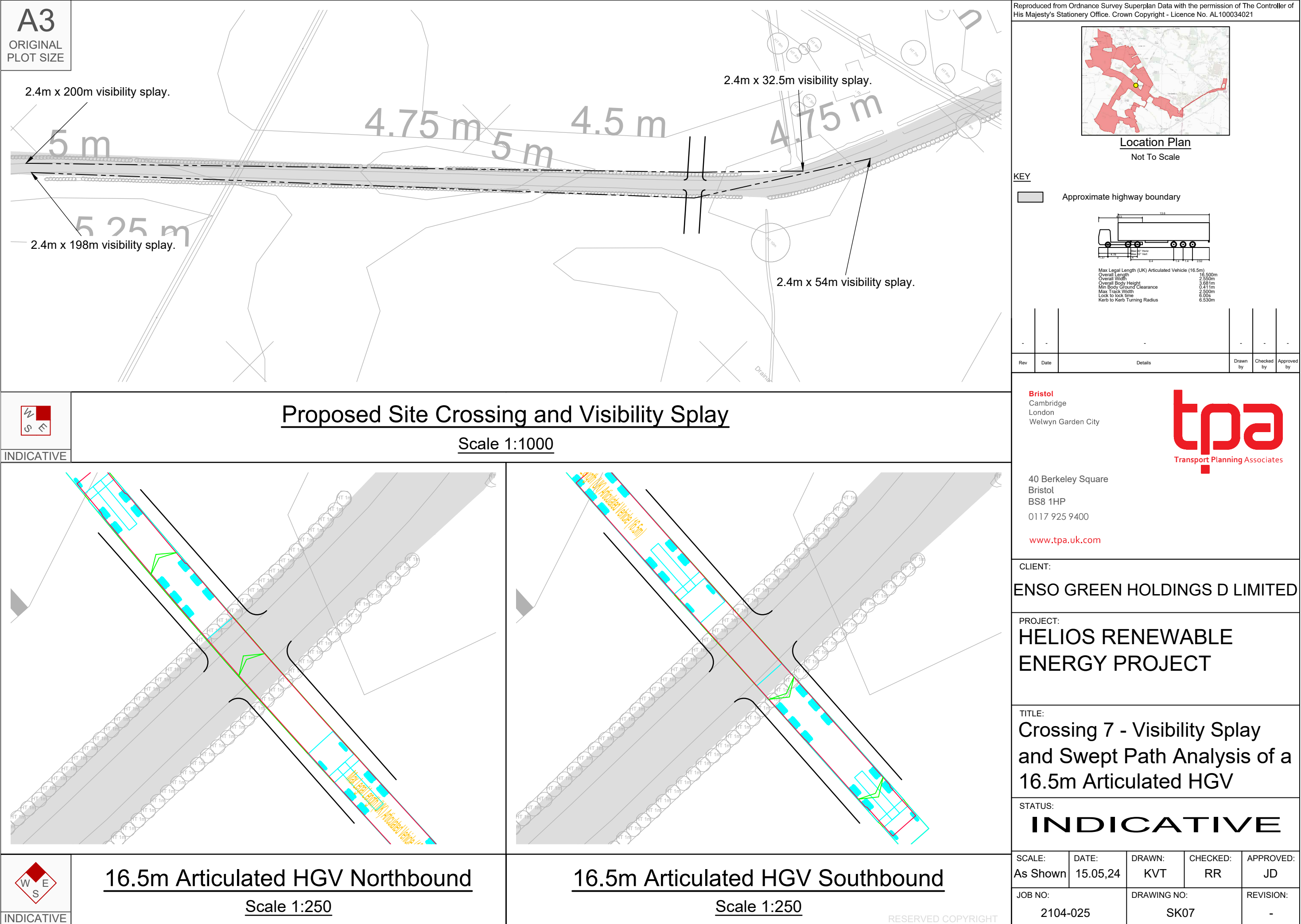
CLIENT:
ENSO GREEN HOLDINGS D LIMITED

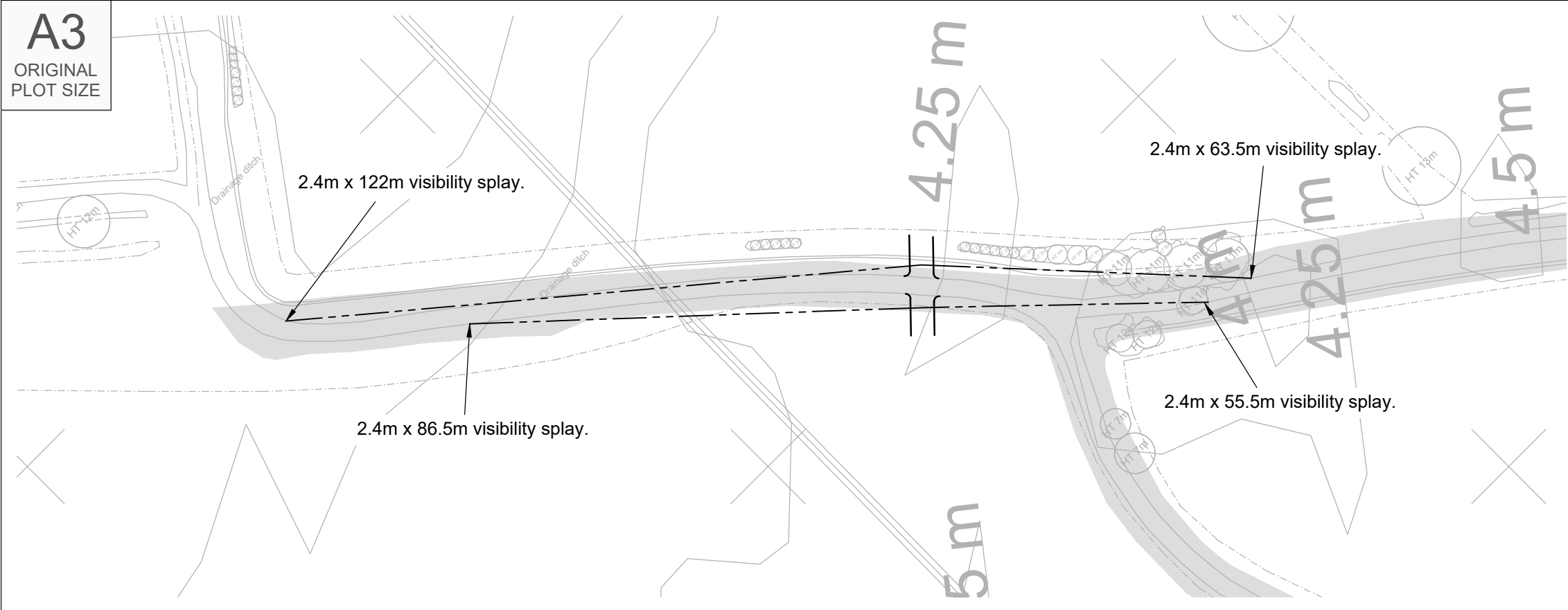
PROJECT:
HELIOS RENEWABLE ENERGY PROJECT

TITLE:
Crossing 6 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV

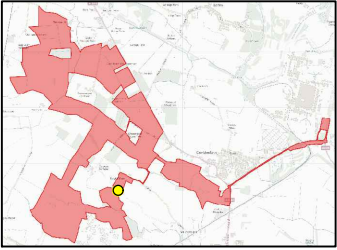
STATUS:
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SCALE: As Shown	DATE: 15.05,24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025	DRAWING NO: SK06	REVISION: -		

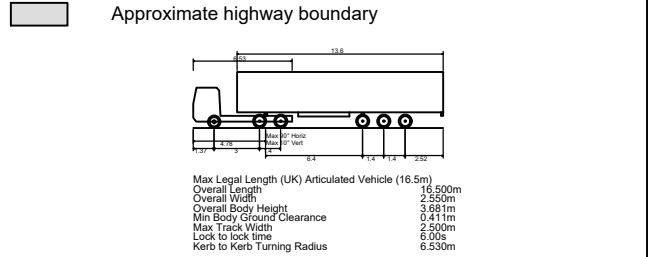




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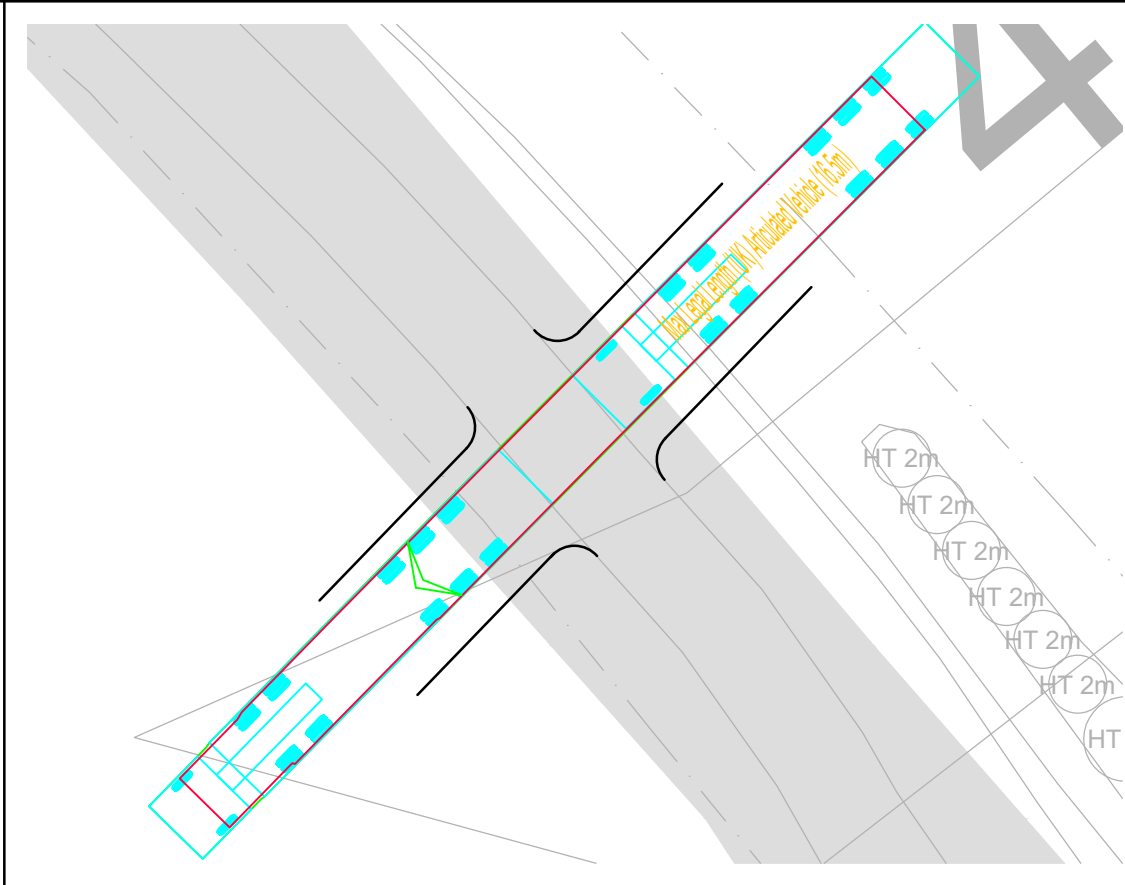
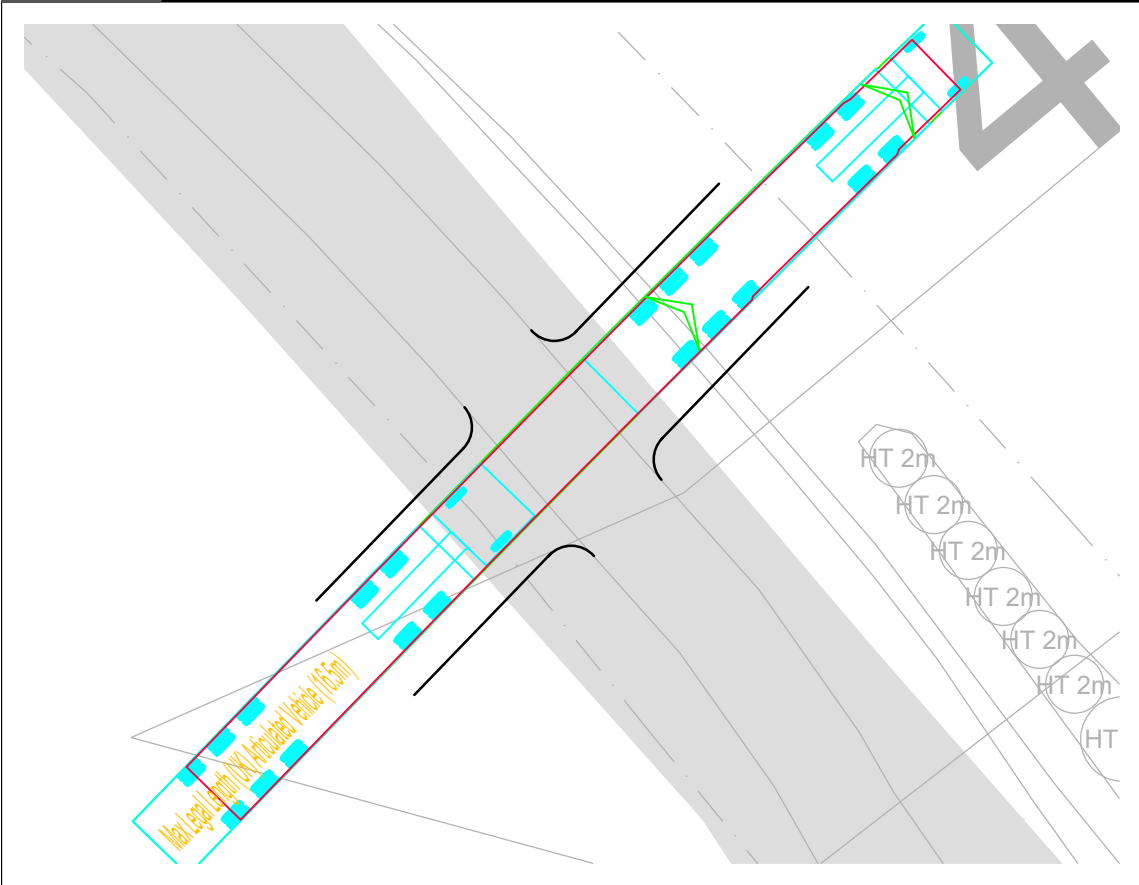


KEY



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Proposed Site Crossing and Visibility Splay
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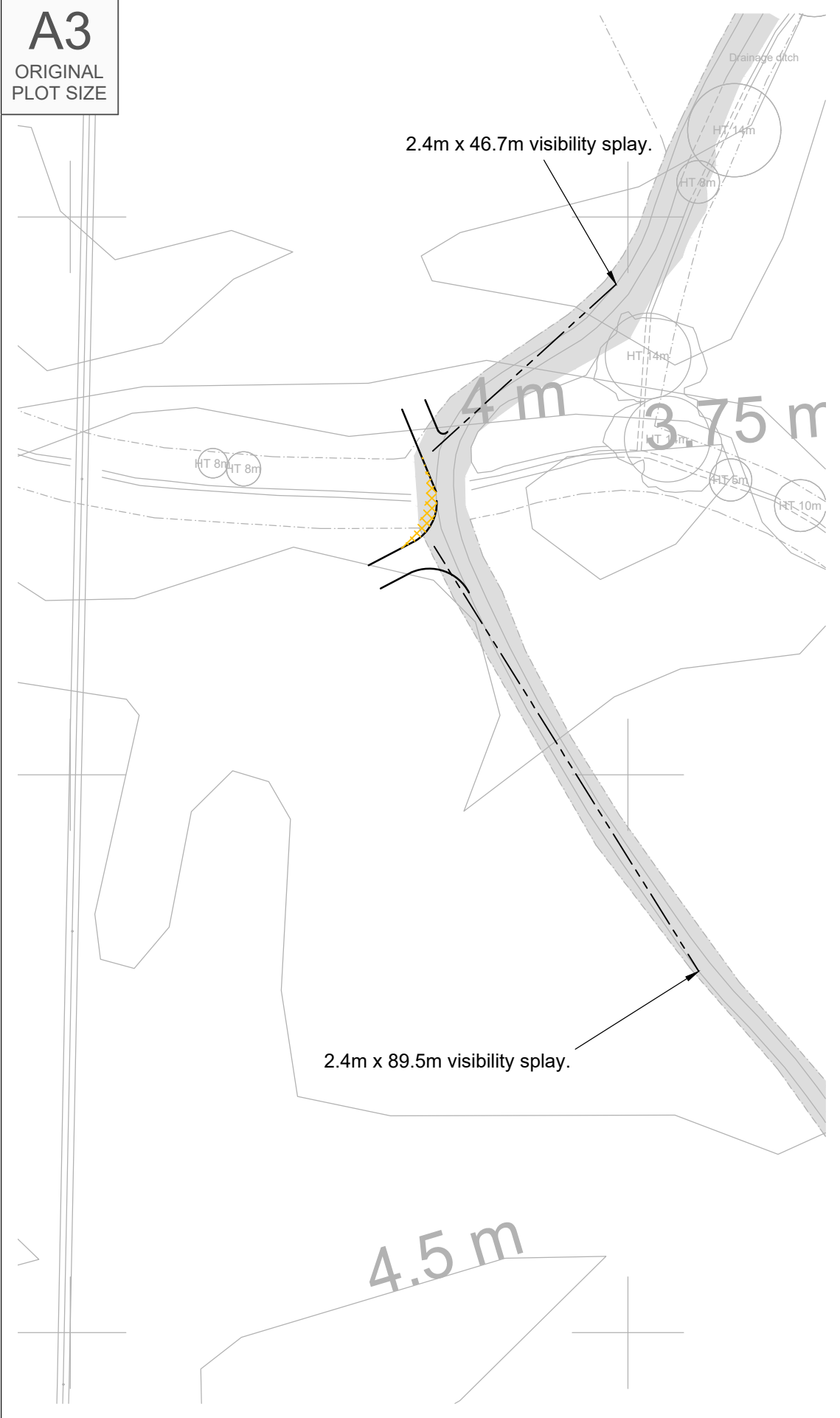
TITLE:
Crossing 8 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV


STATUS:
INDICATIVE

SCALE: As Shown	DATE: 15.05.24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025	DRAWING NO: SK08	REVISION: -		

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A3
ORIGINAL
PLOT SIZE



 **Proposed Site Crossing & Visibility Splay**
Scale 1:1,000

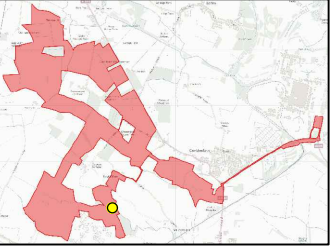


16.5m Articulated HGV Westbound
Scale 1:500



16.5m Articulated HGV Northbound
Scale 1:500

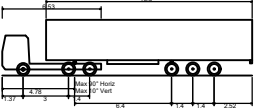
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Location Plan
Not To Scale

KEY

- Approximate highway boundary
- Area required for vehicle movement



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.881m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.99s
Kerb to Kerb Turning Radius 6.530m

Rev	Date	Details	Drawn by	Checked by	Approved by
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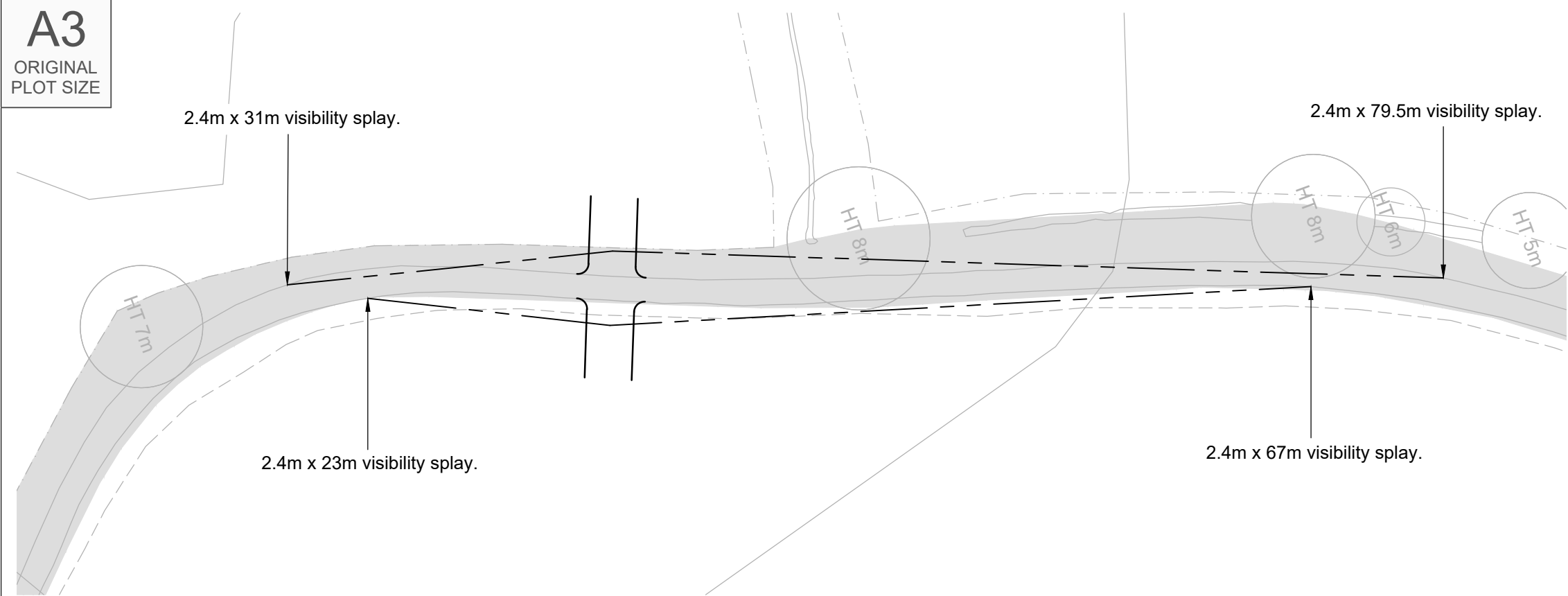
TITLE:
Crossing 9 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV


STATUS:
INDICATIVE

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
As Shown	15.05.24	KVT	RR	JD

JOB NO:	DRAWING NO:	REVISION:
2104-025	SK09	-

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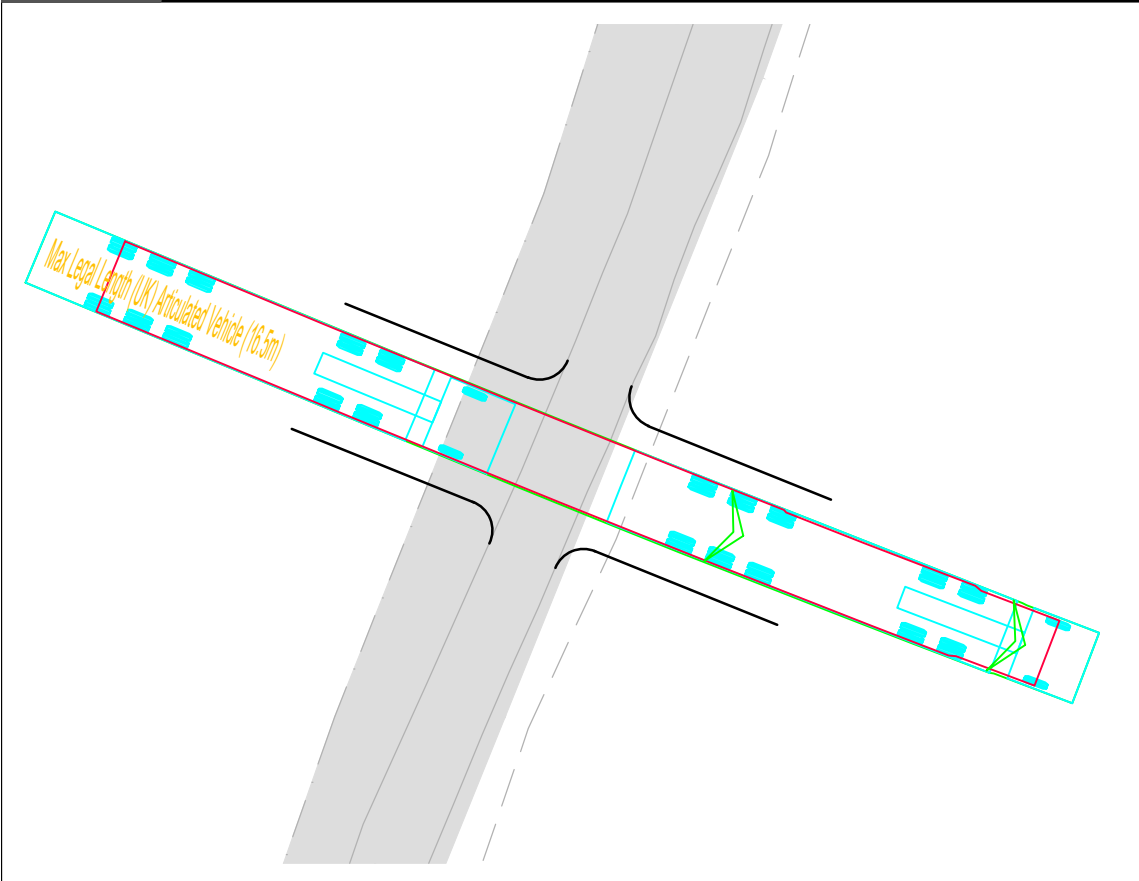





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Proposed Site Crossing and Visibility Splay

Scale 1:500

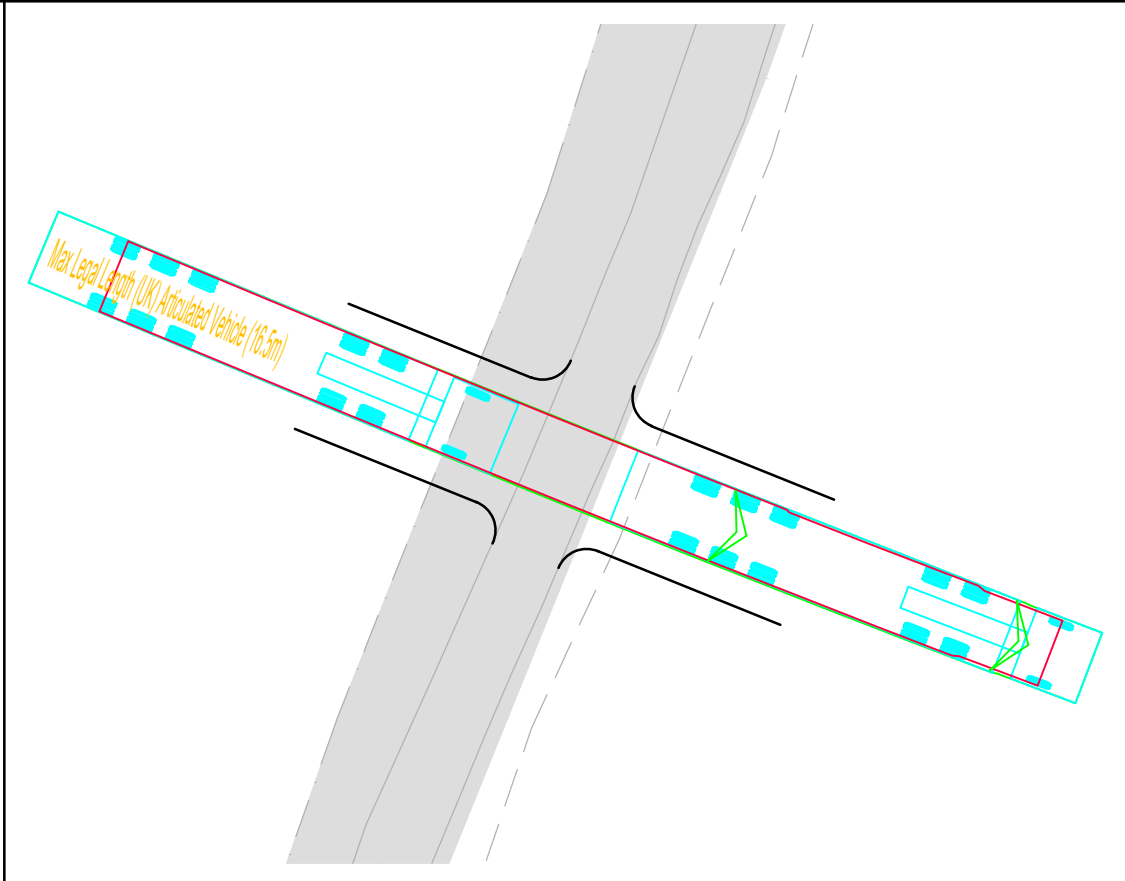




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16.5m Articulated HGV Eastbound

Scale 1:250



16.5m Articulated HGV Westbound

Scale 1:250

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Location Plan
Not To Scale

KEY

 Approximate highway boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.90s
Kerb to Kerb Turning Radius 6.530m

Rev	Date	Details	Drawn by	Checked by	Approved by
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PROJECT:
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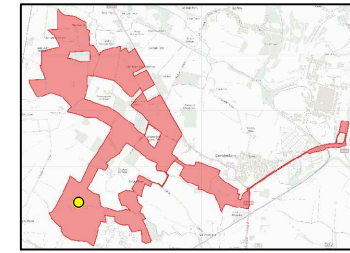
TITLE:
Crossing 10 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV

STATUS:
INDICATIVE

SCALE: As Shown	DATE: 16.05.24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025		DRAWING NO: SK10		REVISION: -



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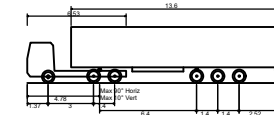
Location Plan

Not To Scale

KEY



Approximate highway boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.90s
Kerb to Kerb Turning Radius 6.530m

Rev	Date	Details	Drawn by	Checked by	Approved by
-	-	-	-	-	-



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Proposed Site Crossing and Visibility Splay

Scale 1:1000



16.5m Articulated HGV Eastbound
Scale 1:250



16.5m Articulated HGV Westbound
Scale 1:250

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CLIENT:

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PROJECT:

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TITLE:

**Crossing 11 - Visibility Splay
and Swept Path Analysis of a
16.5m Articulated HGV**

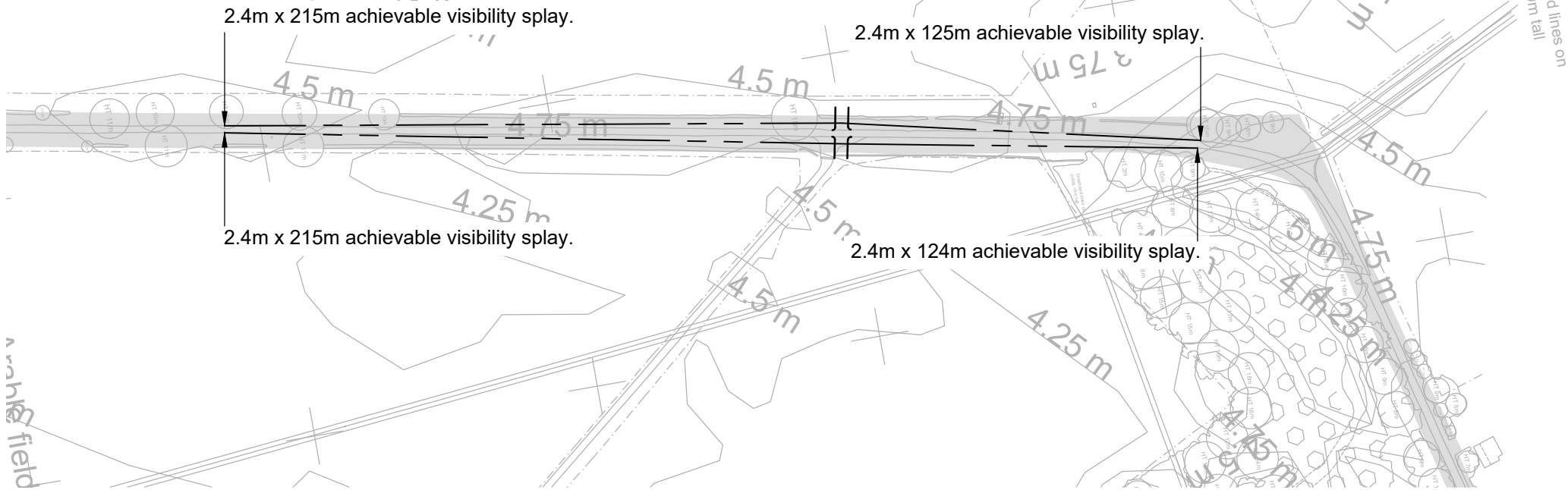
STATUS:

INDICATIVE

SCALE:	DATE:	DRAWN:	CHECKED:	APPROVED:
As Shown	16.05.24	KVT	RR	JD
JOB NO:	DRAWING NO:	REVISION:		
2104-025	SK11	-		

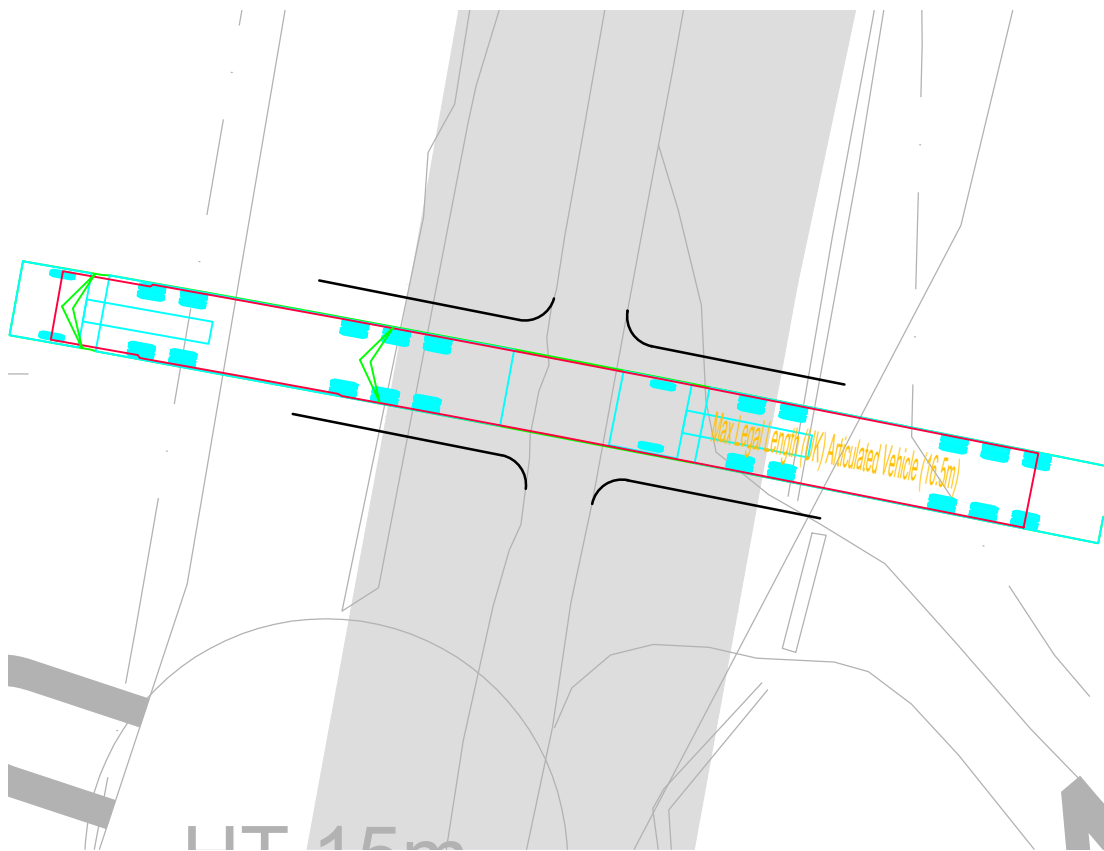
RESERVED COPYRIGHT

ORIGINAL
PLOT SIZE



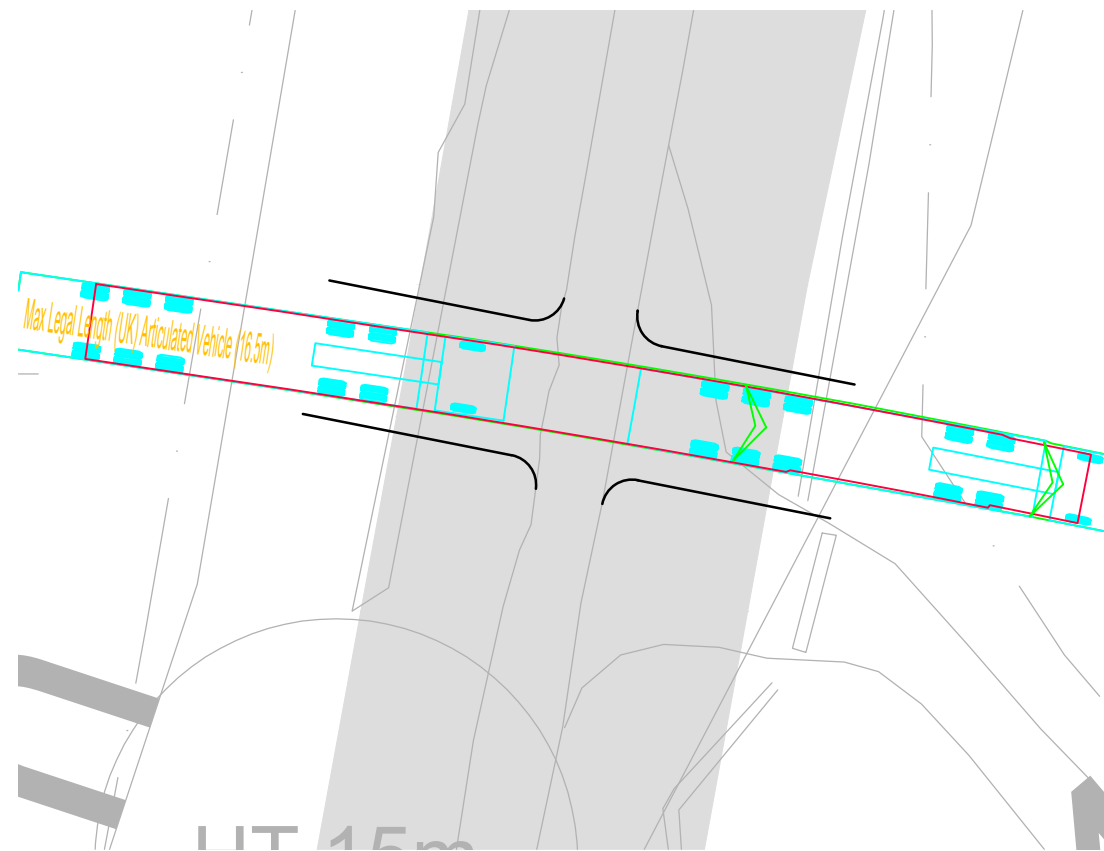
INDICATIVE

Scale 1:2,000



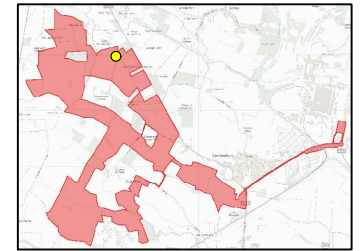
INDICATIVE

Scale 1:250



Scale 1:250

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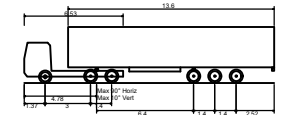
Location Plan

Not To Scale

KEY



Approximate highway boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

-	-	-	-	-	-
Rev	Date	Details	Drawn by	Checked by	Approved by

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PROJECT:

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TITLE:

Crossing 12 - Visibility Splay and Swept Path Analysis of a 16.5m Articulated HGV

STATUS:

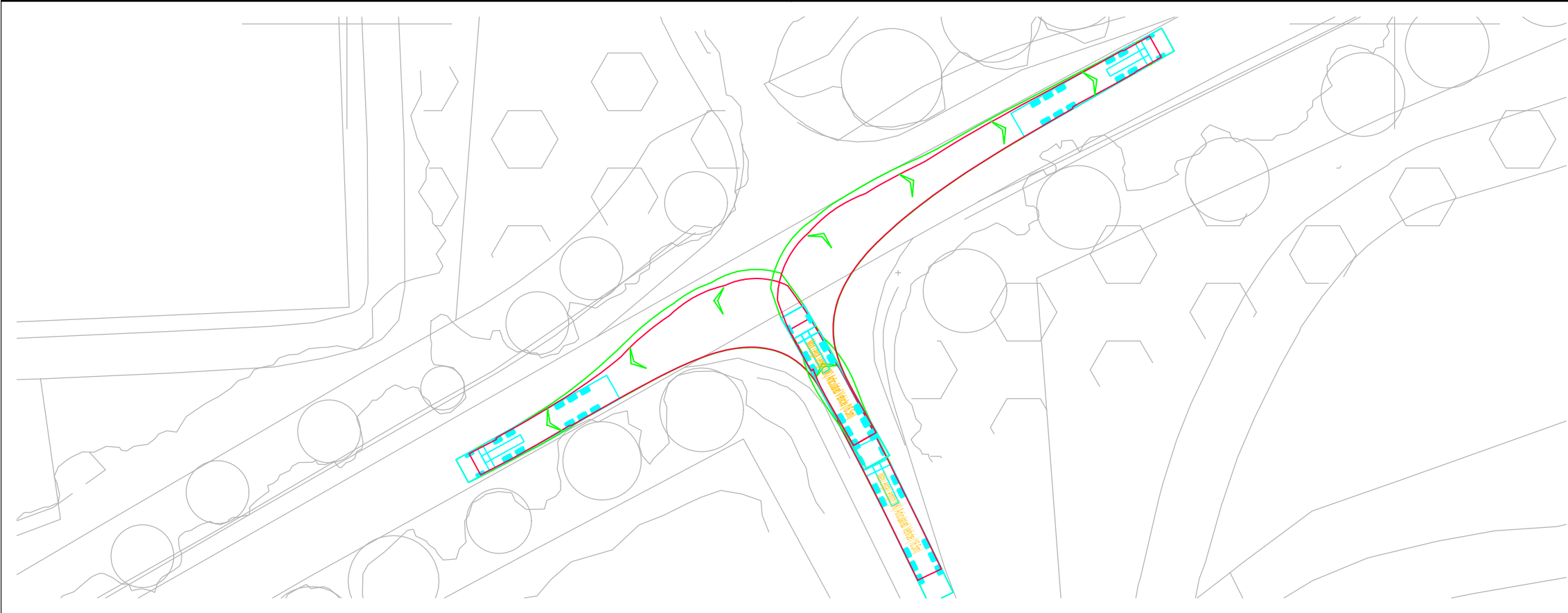
INDICATIVE

SCALE: As Shown	DATE: 17.05.24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025		DRAWING NO: SK12		REVISION: -

APPENDIX D



16.5m Articulated HGV Entering

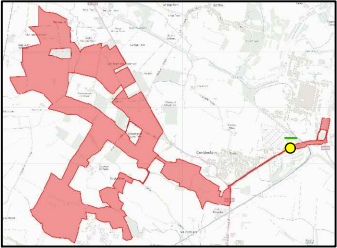


16.5m Articulated HGV Exiting

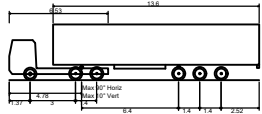


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Location Plan
Not To Scale



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.90s
Kerb to Kerb Turning Radius 6.530m

-	-	-	-	-	-
Rev	Date	Details	Drawn by	Checked by	Approved by

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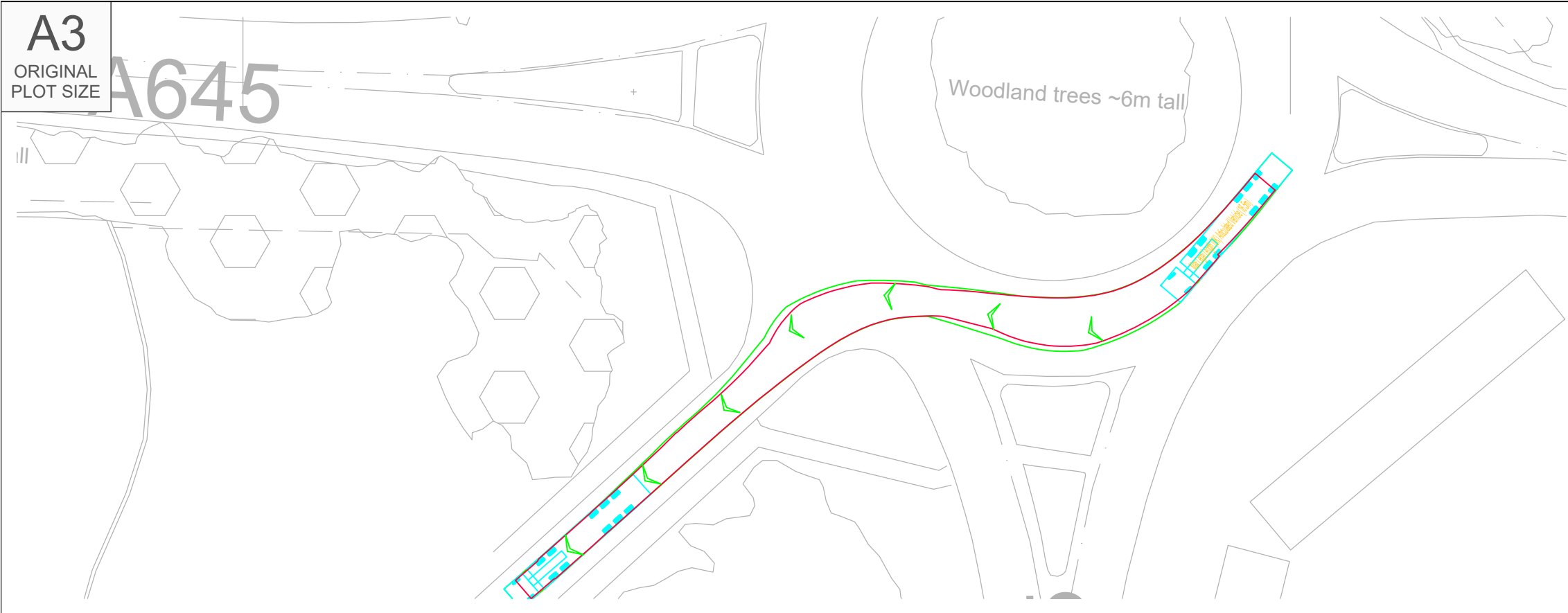
PROJECT:
HELIOS RENEWABLE
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TITLE:
Site Access 13 - Swept
Path Analysis of a 16.5m
Articulated HGV

STATUS:
INDICATIVE

SCALE: 1:500	DATE: 17.05.24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025		DRAWING NO: SK13		REVISION: -

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16.5m Articulated HGV Entering

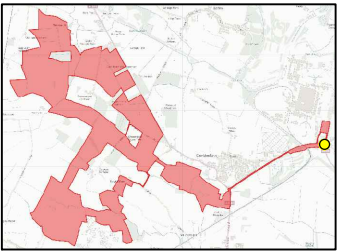
Scale 1:500



16.5m Articulated HGV Exiting

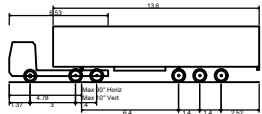
Scale 1:500

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Location Plan

Not To Scale



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.681m
Min Body Ground Clearance 0.411m
Max Track Width 2.500m
Lock to lock time 6.90s
Kerb to Kerb Turning Radius 6.530m

Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Welwyn Garden City



40 Berkeley Square
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CLIENT:

ENSO GREEN HOLDINGS D LIMITED

PROJECT:

**HELIOS RENEWABLE
ENERGY PROJECT**

TITLE:

**Site Access 14 - Swept
Path Analysis of a 16.5m
Articulated HGV**

STATUS:

INDICATIVE

SCALE: 1:500	DATE: 17.05.24	DRAWN: KVT	CHECKED: RR	APPROVED: JD
JOB NO: 2104-025	DRAWING NO: SK14	REVISION: -		



INDICATIVE

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APPENDIX E

Enso Green Holdings D Limited

Helios Renewable Energy Project,
North Yorkshire

Project Reference: 2104-025/TP/01

Construction Worker Travel Plan

1 Introduction

- 1.1 This Construction Worker Travel Plan (CWTP) has been prepared by Transport Planning Associates (TPA) on behalf of Enso Green Holdings D Ltd (the 'Applicant') in relation to an application for a Development Consent Order (DCO) for Helios Renewable Energy Project (hereafter referred to as the 'Scheme'). It supports the Construction Traffic Management Plan which forms **Appendix 10.2** of the **Environmental Statement**. It has been prepared to encourage construction workers to travel to the Site via sustainable modes of transport, where possible, during the construction phase of the proposed development.

Aims and Objectives

- 1.2 Travel planning presents the opportunity to raise awareness of the consequences of travel choices, the benefits of alternatives and the opportunity to minimise the impact of motorised travel on the environment. A Travel Plan can bring the following benefits:
- To the individual - through improved health, reduced stress and cost savings;
 - To the community - by the developer demonstrating commitment to environmental priorities and setting an example to others; and
 - To the environment - through improved local air quality with less noise, dirt and fumes, which can contribute to other national and global improvements.
- 1.3 The core aims of this Construction Worker Travel Plan are to:
- Set out the objectives of travel planning at the Site;
 - Set out information on the accessibility of the Site by non-car modes of transport;

- Set out initiatives and measures to promote accessibility by non-car modes, including the proposed construction worker minibus arrangement; and
- Set out the management requirements of the Travel Plan.

1.4 The following key aims and objectives are identified:

- To reduce single occupancy car travel by construction workers;
- To increase car sharing and minibus use;
- To increase knowledge of the public transport opportunities available to construction workers.

1.5 The remainder of this travel plan includes the following Chapters:

- Chapter 2: Management Strategy; and
- Chapter 3: Measures.

2 Management Strategy

Roles and Responsibilities

- 2.1 Coordinator (TPC) will be to be appointed to oversee the implementation of this Travel Plan. The TPC will be responsible for overseeing the implementation of measures and ensuring the objectives set out in **Chapter 1** are achieved.
- 2.2 The responsibilities of the TPC will comprise, but not necessarily be limited to, the following:
- Implement measures set out in the Travel Plan;
 - Raise awareness of the Travel Plan; and
 - Provide advice to construction workers regarding sustainable travel.
- 2.3 It is anticipated that the TPC will be the Construction Site Manager (CSM) or a member of the project management team.

3 Measures

- 3.1 A number of measures have been identified that will be implemented in order to help achieve the objectives of this Travel Plan. The main objective is to reduce single occupancy vehicle travel to the Site by construction workers. A summary of the proposed measures is provided in **Table 3.1** below.

Table 3.1 Proposed Travel Plan Measures

Item	Measure	Responsible
1	Establish car share scheme for construction workers, including a 'guaranteed lift home' policy (details below).	TPC
2	Arrange on-site facilities for workers, such as storage lockers for equipment.	Contractor
3	Provide a map with identified cycling routes to the Site on a noticeboard in communal areas.	TPC
4	Provide bus timetable information and bus routes to the Site on a noticeboard in communal areas.	TPC
5	Provide emergency cycle repair kit on-site.	TPC
6	Provision of construction worker shuttlebus (details below).	Contractor
7	Encourage travel outside of highway network peak hours.	TPC
8	Encourage use of electric vehicles (EV).	TPC
9	Appointment of Travel Plan Coordinator.	Project Management Team

- 3.2 The measures outlined in **Table 3.1** will be continuously reviewed by the TPC to ensure they remain effective in encouraging travel to the Site by non-car modes.

Car Share Scheme

- 3.3 There is potential for car sharing to also occur between construction workers, especially if they are travelling from the same origin place to the Site.
- 3.4 The TPC will be responsible for determining which staff members may benefit from car sharing and form car sharing group for the Site for workers to communicate availability and schedule car shares between each other.

- 3.5 The TPC will promote a car-sharing scheme throughout the construction program. The TPC would also make construction workers aware of existing car sharing schemes such as liftshare.com/uk.

Construction Worker Shuttlebus

- 3.6 It is anticipated the majority of non-local construction workers will stay at local accommodation and be transported to Site by shuttlebus. This can be used by local workforce as well. This aids to further reduce single occupancy vehicle travel to the Site, the appointed contractor and TPC will be responsible for organising a shuttlebus for construction workers.

Monitoring

- 3.7 The uptake of travel plan measures will be continuously monitored by the TPC. Additional measures will be provided as appropriate.