

# Onshore Cable Route

## Construction Noise and Vibration Management Scheme

**DCO Requirement 22 2(d) and 24**

**Applicable to Works No.s 5B to 20, 25 to  
38, 41 to 49 and 52 to 60**

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1	ALL	ALL	New Document
2	ALL	ALL	Amended in accordance with Consultee comments on Interim Draft and in accordance layout design information
3	ALL	ALL	Amended in accordance with Consultee comments: ESC (13/09/23) and SCC (03/10/23) and to include results of noise assessment

FOR DISCUSSION

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FOR DISCHARGE

## 1. INTRODUCTION AND SCOPE

### 1.1. Project Overview

1. East Anglia Three Limited (EATL) was awarded a Development Consent Order (DCO) by the Secretary of State, Department of Business, Energy & Industrial Strategy (DBEIS) on 7 August 2017 for the East Anglia THREE Offshore Windfarm (EA THREE). The DCO granted consent for the development of a 1,200MW offshore windfarm and associated infrastructure.
2. The DCO has now been subject to three non-material variations:
  - In March 2019 EATL submitted a non-material change application to DBEIS to amend the consent to increase the maximum generating capacity from 1,200MW to 1,400MW and to limit the maximum number of gravity base foundations to 100. In June 2019 DBEIS authorised the proposed change application and issued an Amendments Order.
  - In July 2020 EATL submitted a second non-material change application to DBEIS to amend the parameters of its offshore substations (reducing the number of these to one) and wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). On 15 April 2021 DBEIS authorised this proposed change application and issued an Amendments Order.
  - In August 2021 EATL submitted a third non-material change application to DBEIS to amend the consent to remove the maximum generating capacity of 1,400MW and to amend the parameters of its wind turbines (a decrease in the number of turbines and an increase in their hub height and rotor radius). In September 2022 DBEIS authorised the proposed change application and issued an Amendments Order.
3. The onshore construction works associated with EA THREE will have a capacity of 1,400MW and transmission connection of 1,320MW. The construction works will be spread across a 37km corridor between the Suffolk coast at Bawdsey and the converter station at Bramford, passing the northern side of Ipswich. As a result of the strategic approach taken, the cables will be pulled through pre-installed ducts laid during the onshore works for East Anglia ONE Offshore Windfarm (EA ONE), thereby substantially reducing the impacts of connecting to the National Grid (NG) at the same location. The infrastructure to be installed for EA THREE, therefore, comprises:
  - The landfall site with one associated transition bay location with two transition bays containing the connection between the offshore and onshore cables;
  - Two onshore electrical cables (single core);
  - Up to 62 jointing bay locations each with up to two jointing bays;
  - One onshore converter station, adjacent to the EA ONE Substation;
  - Three cables to link the converter station to the National Grid Bramford Substation;
  - Up to three onshore fibre optic cables; and
  - Landscaping and tree planting around the onshore converter station location.
4. Since the granting of the DCO, the decision has been made that the electrical connection for EA THREE will comprise a high voltage direct current (HVDC) cable rather than a high voltage alternating current cable and, therefore, the type of substation that will be required is a HVDC converter station. The substation will be referred to here as a 'converter station' and this amended terminology has been agreed with the relevant authorities on 15 October 2020. It has also been determined that only one converter station will be constructed rather than two and that the converter station will be installed in a single construction phase.
5. The EA THREE onshore works commenced development in July 2022, with works at the Converter Station, Paper Mill Lane, Playford Corner and Clappits.

### 1.2. Purpose and Scope

6. This Construction Noise and Vibration Management Scheme (CNVMS) sets out the mitigation and control measures to be applied to the construction of the EA THREE cable route to minimise potential noise and vibration impacts on nearby residents and other sensitive receptors during construction. This plan has been produced to fulfil DCO Requirement 22 (2) and 24 (1) & (2) and which state:

- 22.— (2)** The code of construction practice must include -  
(d) a written scheme for noise and vibration management during construction

24.—(1) No stage of the connection works may commence until a noise and vibration management scheme for construction of that stage (which must accord with the written scheme for noise and vibration management contained in the outline code of construction practice) has been submitted to and approved by the relevant planning authority. The scheme for noise and vibration management must form part of the code of construction practice.

(2) The scheme must set out the particulars of—

(a) the construction works, and the method by which they are to be carried out;

(b) the noise attenuation measures to be taken to minimise noise resulting from the construction works, including any noise limits; and

(c) a scheme for monitoring the noise during the construction works to ensure compliance with the noise limits and effectiveness of the attenuation measures.

7. The scope of this document relates to the CNVMS associated with the construction of the onshore cable route that runs from the landfall location at Bawdsey to the Converter Station located near Bramford, Suffolk. comprising Work No.s 5B to 59 (see Figure 1 Site Context Plan) as defined in the EA THREE DCO. The Requirement Discharge Documents (RDDs) relating to the construction and installation of cable route infrastructure within the Clappits Works Stage (Work No.s 21 to 24), Playford Corner Works Stage (Work No.s 39 and 40), Paper Mill Lane Works Stage (Work No.s 50 and 51) and Converter Station Stage (Work No.s 62 to 69) have previously been discharged. For the sake of completeness and to provide a suite of comprehensive RDDs for use by the Principal Contractor for the cable route (NKT), the infrastructure and activities that fall within these areas and the associated management measures for these will also be addressed in this document. Nevertheless, this document seeks only to discharge this Requirement with respect to Works No.s 5B to 21, 25-38, 41-49 and 52 -59.
8. The purpose of this CNVMS is to ensure that the construction works for the EA THREE onshore cable route comply with relevant UK legislation, DCO Requirements, environmental commitments as set out in the Environmental Statement (ES), and environmental and construction best practice.
9. The measures contained herein will be adhered to by the Principal Contractor (and their subcontractors) and the implementation and compliance will be monitored by the EATL Construction Management Team. These measures will only be revised with the agreement of Mid Suffolk District Council (MSDC) and East Suffolk Council (ESC).

## 2. ABBREVIATIONS

<b>BPM</b>	Best practice measures
<b>CCS</b>	Consolidated Construction Sites
<b>CNVMS</b>	Construction Noise and Vibration Management Scheme
<b>CLO</b>	Community Liaison Officer
<b>CoPA</b>	Control of Pollution Act 1974
<b>DBEIS</b>	Department of Business, Energy and Industrial Strategy
<b>DC</b>	Direct Current
<b>DCO</b>	Development Consent Order
<b>EA ONE</b>	East Anglia ONE Offshore Windfarm
<b>EA THREE</b>	East Anglia THREE Offshore Windfarm
<b>EATL</b>	East Anglia THREE Limited
<b>EHO</b>	Environmental Health Officer
<b>EnvCoW</b>	Environmental Clerk of Works
<b>ES</b>	Environmental Statement
<b>ESC</b>	East Suffolk Council
<b>GPS</b>	Global Positioning System

<b>HVDC</b>	High Voltage Direct Current
<b>MSDC</b>	Mid Suffolk District Council
<b>MW</b>	Megawatt
<b>NG</b>	National Grid
<b>NPS – EN1</b>	Overarching National Policy Statement for Energy EN-1
<b>ONIS</b>	Operational Noise Insulation Scheme
<b>PCCS</b>	Primary Construction Consolidation Site
<b>SCCS</b>	Secondary Construction Consolidation Site
<b>SLM</b>	Sound Level Meter
<b>PPV</b>	Particle peak velocity
<b>PRoW</b>	Public Rights of Way
<b>RTK</b>	Real Time Kinematic
<b>SCC</b>	Suffolk County Council
<b>SLM</b>	Sound level meter

### 3. CONSTRUCTION DETAILS

#### 3.1. Construction Overview

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

- Any minor temporary modifications to the public road network.
- Establish 3 additional CCS (approximate duration of 6 weeks for the establishment of each CCS).
- Establish 29 accesses from the public highway. These may require Section 278 Agreement with the Local Highways Authority (see Appendix 2 Transport Route Assessment of the Traffic Management Plan (EA3-LDC-CNS-REP-IBR-00080) for details).
- Establish up to circa 12.7km of stone haul road to access the jointing bay locations from the access points;
- Install 6.4km of proprietary trackway system to reach, *inter alia*, both ends of each Horizontal Directional Drill (HDD). HDDs will be accessed by proprietary trackway system from the jointing bay hardstandings or access points to allow each HDD to be proved.
- Establish 29 temporary jointing bay compounds (including 2 transition jointing bays) (approximate duration of 2 weeks for each compound).
- Excavation of jointing bay pits to locate the existing ducts at each jointing bay location (approximate duration of 3 weeks for each jointing bay location);
- Construct jointing bays (approximate duration of 3 weeks for each jointing bay).
- Transport of cables to site, from designated port to an off-site cable storage location and on to the jointing bay locations.
- Duct proving along the cable route.
- Pull cables through ducts and undertake jointing (approximate duration of 3 weeks per location).
- Backfill and reinstatement of jointing bays (approximate duration of 2 weeks).
- Remove temporary jointing bay hardstandings / compounds and CCS Compounds, haul roads, trackmatting and access points.
- Reinstatement all disturbed land, permanent fences, replacement hedges and vegetation with suitable hedgerow species, during the first appropriate planting season.

11. The layout of the above infrastructure is shown in Figure 1 Site Context Plan. The locations of the soil bunds are currently indicative and may be moved within the previously disturbed areas, following agreement with EATL, the Ecological Clerk of Works (EcoW) and the Archaeological Consultant. Similarly, the stone haul road/ trackway may also be moved laterally within a distance of +/-5m, following agreement with EATL, the EcoW and the Archaeological Consultant. Currently 12.7km of stone haul road and 6.4km of proprietary trackway are proposed, however it may be possible to reduce further the quantity of stone haul road required by using trackway where practicable. The use of trackway is less invasive (being placed directly on the topsoil) and requires fewer HGV movements. EATL commits to consulting MSDC, ESC and SCC (as applicable) with regards to any changes to the layout, should the design change significantly (e.g. changes to: highway access routes including access routes into and along the cable corridor; number of jointing bays; and anything that potentially requires archaeological assessment and mitigation).
12. Circa 8 teams of 5 workers will work in parallel across the cable route, installing the infrastructure at each location.
13. Temporary modification of the existing road networks may be required, such as localized widening, socketing of street signs and temporary moving of street furniture to allow the passage of larger HGVs, as set out in the Access Management Plan (EA3-LDC-CNS-REP-IBR-000079). This will be undertaken prior to construction commencing within relevant sections of the cable corridor route.

### 3.2. Construction Consolidation Sites (CCS)

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

**Table 3-1 – Construction Consolidation Site Locations**

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

15. As shown in Table 3-1, the dimensions of the CCS will be in accordance with Part 3, Requirement 12(9) of the DCO which limits the size of the PCCS to 3,600m<sup>2</sup> and the SCCS to 1,200m<sup>2</sup>.
16. The PCCSs will:
- Provide areas for the storage of materials and equipment;
  - House site administration and welfare facilities for the labour resources;
  - Form an interchange hub for deliveries of material, equipment and resources; and
  - Allow HGVs to park prior to entering the local road network during peak hours.
17. The SCCSs will function as hubs for distribution along the cable route and will include welfare facilities with some limited storage of materials and equipment. SCCS may also include site offices.
18. The Paper Mill Lane PCCS will be the main administrative compound for the onshore works. Top Street PCCS and Landfall SCCS also include designated office space.
19. The CCS will be constructed as follows:



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

### 3.3. Accesses, Stone Haul Roads and Trackway

20. Existing accesses and farm tracks will be used where possible (with reinforcement where necessary) to access the jointing bay and HDD locations. Circa 12.7km of 5m wide stone haul road will be installed, in accordance with the permitted 18.05km (as set out in Part 3, paragraph 12(12) of the DCO). In addition, 6.4km of proprietary trackway system will be used to access, *inter alia*, the HDD proving locations. All tracks will, as far as reasonably possible, follow the track bed used for EA ONE.
21. There will be several HGV turning points and passing bays along the stone haul road and trackway. These are to provide HGVs with a safe location to turn round after driving onto the easement from the public highway and to reverse as short a distance as possible to the leading edge of the haul road/trackway construction. Over longer lengths of haul road/trackway further HGV turning points will be constructed allowing the HGV to drive along the haul road/trackway and reverse shorter distances.
22. The routing of the stone haul road/ trackway will be set out using GPS RTK equipment. For trackway, the proprietary trackway matting would be installed directly on the existing topsoil. For stone haul road the construction will be as follows:
  - Set out the site tracks with the use of GPS RTK equipment;
  - Erect and maintain suitable signage and goal posts where the temporary road runs under overhead lines in accordance with HSE GS6 "Avoiding danger from overhead power lines";
  - Set out and install drainage features along the edges of the length of road to be constructed. Any impacted existing field drains will be located, capped or diverted to areas where any outfall can be managed in accordance with the Surface Water and Foul Drainage Management Plan (EA3-LDC-CNS-REP-IBR-000081);
  - Clear vegetation, strip topsoil and subsoil material for storage in separate designated stockpiles with suitable signage.
  - Topsoil storage bunds will be stored locally and seeded if they are to be stored for longer than 6 months. Subsoil bunds will be kept weed free.;
  - Excavate to formation level and store any excess material;
  - Test the existing ground conditions to ensure suitability of the temporary works design and bearing capacity for the haul road and hard standing areas;
  - Layers of stone and geotextiles/geogrid will then be placed on the cleared surface.
23. Based on the temporary works design and the soil bearing capacity, the 450mm thick stone haul road is likely to include one layer of non-woven geotextile and a layer of Geogrid 30/30 placed on the compacted sub-soil, with a second layer of geogrid 30/30 installed after 300mm of stone is place.
24. Where the stone haul road/trackway crosses over an existing watercourse, a flume will be installed temporarily to allow crossing of the watercourse and the continued flow of the watercourse beneath. When the watercourse is too wide to flume with a single board pipe, a proprietary bridge will be utilised. (See the Watercourse Crossing Method Statement (Appendix 12 of the Onshore Cable Route Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084).

### 3.4. Jointing Bay Compounds

25. 27 jointing bay compounds will be required, in addition to a compound for the 2 transition jointing bays at landfall. The jointing bay compounds will comprise hard standing to provide a working platform and to accommodate containers, drum trailer movement, parking, and welfare. The jointing bay compounds will have areas up to a maximum of 3,690m<sup>2</sup> (In accordance with Part 3 Requirement 12(11) which limits the area to 3,740m<sup>2</sup>). A typical layout is shown in Figure 2 of the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084).
26. Once the location of the jointing bay compounds has been established (using GPS RTK equipment), the creation of the compound will commence with erection of security fencing, removal of topsoil layer and installation of hard standing areas. The jointing bays (25m x 5m) will then be excavated to a depth of up to 2.5m with adequate slope batter or shoring on all sides of the excavation to prevent the soil from collapse. The existing ducts will be exposed and concrete slabs constructed to provide a level working area. Drainage channels and a sump pit will be included to facilitate drainage and dewatering. Installation and jointing of the cables will then take place before the earth link boxes and fibre optic boxes are installed and the area back filled with subsoil and Cement Bound Sand, as required.
27. Earthing link boxes will be installed within the cable system on every fourth jointing bay. All link boxes will be installed into a link box chamber that will be buried to below plough depth at a minimum of 1.2m, within the jointing bay.
28. To enable the fibre optic cable pulling through the already installed ducts, a pulling chamber will be installed at every jointing bay location. All cable joints, link boxes and pulling chambers will be buried to below plough depth of 1.2m.

### 3.5. Duct Proving

29. The ducts to be used for EA THREE, which were installed during the EA ONE project construction works, will require cleaning and proving to ensure that they are intact, free of debris and ready for cable installation. Cleaning and proving will be undertaken by using a foam sponge pig, driven under air pressure from jointing bay to jointing bay followed by drawing a brush and mandrill through from jointing bay to jointing bay.
30. Each set of HDD ducts will also require proving. A larger diameter duct was installed at the HDD locations than is used along the rest of the cable route. Therefore, an excavation (2m x 3m x 1.5m) will be made at each end of each of the HDD locations at the duct diameter transition location. The transition coupler will be removed before cleaning and proving the HDD ducts as described above.
31. The construction of the two transition jointing bays within the transition bay compound is addressed in the Landfall Method Statement (EA3-LDC-CNS-REP-IBR 000078) (Reference to jointing bays in the remainder of this document also includes transition bays). These works will use the adjacent SCCS, located off Ferry Road, Bawdsey.

### 3.6. Cable Pull-through

32. The HVDC cable wound drums will be transported from the docks to the cable drum storage location located in Kesgrave close to Ipswich. Cable drums will then be transported directly to the jointing bay compounds. Cable lengths are dependent on the distance between the jointing bays and are typically between 750m and 1950m in length. Before cable installation commences the cable ducts and communications ducts will be given a final clean through and proved by pulling through a sponge, brush and mandrill.
33. Installation of the cables into the ducts will begin with a cable pulling system being installed into the jointing bay. A steel bond and winching system with free spinning rollers will be installed along the bottom of the jointing bay. The cable will then be drawn off the lorry mounted cable drum using HGV hydraulic assist and cable winch & winch wire.
34. Pulling calculations have confirmed that mechanical cable pushers will be required to assist the cable pull in operation on several of the longer pull locations, where cable pushers will be installed within the jointing bay. A dynamometer will ensure the maximum calculated pulling tension of the cables is not exceeded. Tension on the cable will be reduced using a biodegradable water-based lubricant, for example, "Lubtec-HD" (as used on EA ONE). Once both HVDC cables have been installed, the cable will then be jointed within the jointing bay and tested before moving onto the next pair of cables along the route. This process will be repeated for each of the twenty-eight sections.

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

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

### 3.7. Reinstatement

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

### 3.8. Schedule and Working Hours

38. The cable route construction is proposed to start in Spring 2024 and is expected to take approximately 24 months to complete.

39. DCO Requirement 25 defines the construction working hours as follows:

*25.—(1) Construction work for the connection works must only take place between 0700 hours and 1900 hours Monday to Saturday, with no activity on Sundays or bank holidays, except as specified in paragraph (2).*

*(2) Outside the hours specified in paragraph (1), construction work may be undertaken for essential and non-intrusive activities including but not limited to:*

*(a) continuous periods of operation that are required as assessed in the environmental statement, such as concrete pouring;*

*(b) fitting out works associated with the onshore substation(s) comprised within Work No. 67;*

*(c) delivery to the connection works of abnormal loads that may cause congestion on the local road network;*

*(d) connection works carried out on the foreshore;*

*(e) daily start up or shut down;*

*(f) electrical installation; and*

*(g) non-destructive testing.*

*(3) All construction work undertaken in accordance with paragraph (2)(a) to (d) must be agreed with the relevant planning authority in writing in advance, and must be carried out within the agreed time.*

40. It has been agreed with MSDC and ESC, that for the purposes of Requirement 25, 'essential and non-intrusive' will also include the following activities, which can therefore be undertaken outside of the above working hours without prior notification to MSDC or ESC:

- Fuelling of generator servicing pumping equipment etc, where the need for this was not known during normal working hours and fuelling is required to enable the continued operation of the equipment
- Response to failure of the following to enable return of service:
  - Electrical Generator to Welfare Facilities
  - Site LAN/WAN
  - Utility Power Supply
- Security patrols and response to unauthorised access
- Response to incident on site e.g inclement weather damage

- Non scheduled maintenance of fencing and access points, where the need for this was not known during normal working hours and immediate attention is required<sup>1</sup>

41. Further information regarding the notification of such activities is included within Section 5.3 of the Code of Construction Practice.

## 4. LEGISLATION AND GUIDELINES

42. The following legislation and guidelines for the assessment of noise and vibration, arising from construction activities, will be utilised throughout the duration of the project:

- Noise and Statutory Nuisance Act 1993;
- Environmental Protection Act 1990;
- Control of Pollution Act 1974 (CoPA);
- Overarching National Policy Statement for Energy (EN-1). Department of Energy and Climate Change (July 2011);
- National Planning Policy Framework (NPPF). Department for Communities and Local Government (February 2019);
- BS7445-1:2003: Description and Measurement of Environmental Noise. Guide to quantities and procedures;
- BS5228-1:2009+A1:2014: Code of practice for noise and vibration control on construction and open sites. Part 1: Noise; and
- BS5228-2:2009+A1:2014: Code of practice for noise and vibration control on construction and open sites. Part 2: Vibration.

## 5. CONSTRUCTION NOISE AND VIBRATION MANAGEMENT SCHEME GOVERNANCE

43. Prior to the commencement of construction, an Environmental Clerk of Works (EnvCoW) will be appointed by the Principal Contractor to manage *inter alia* the implementation of the CNVMS. Contact details for the EnvCoW will be submitted to stakeholders for their records prior to commencement of construction.

## 6. LOCAL COMMUNITY LIAISON

44. EATL is committed to providing clear communication to local residents and will manage public relations with local residents and businesses. Proactive community liaison will be maintained, keeping local residents informed of the type and timing of the works involved. As outlined in the Code of Construction Practice (EA3-LDC-CNS-REP-IBR-000084), a combination of communication mechanisms such as posters, notices, exhibitions, letters, newsletters, website updates and parish council meetings will be employed to keep local residents and businesses informed.

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

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

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<sup>1</sup> Where out of hours work associated with maintenance of fencing and access points has been required, MSDC/ESC will be notified of these works the following working day

## 7. BASELINE CONDITIONS

47. An environmental sound survey has been conducted in order to characterise the noise environment for the EA THREE onshore cable construction works. Environmental sound survey locations closest to the proposed jointing bays, HDD proving locations and CCS have been identified and agreed with ESC and MSDC. The survey locations are presented in Table 7-1 and Figure 2.

**Table 7-1 Environmental Sound Survey Locations**

Receptor	Description	Co-ordinates	
		Easting	Northing
R1	Bullenhall Farm	610285	246606
R2	Dairy Farmhouse, Somersham Road	611155	247958
R3	Broomvale House, Bramford Road	612176	249110
R4	Premier Inn, Ipswich North	612997	249212
R5	Hillview Cottage, Old Ipswich Road	613511	248901
R6	The Maples, Henley Road	616028	249232
R7	Willow Tree Farm, Sandy Lane	617037	249156
R8	Fynn Valley Golf Club, Rose Hill	618109	249039
R9	Hawthorns, Tuddenham Lane	618997	249383
R10	Tuddenham Hall Farm, Grundisburgh Road	620035	248885
R11	Culpho Hall, Bealings Road	620820	24690
R12	Clematis Cottage, Bealings Road	621921	248669
R13	Rose Cottage, Bealings Road	622213	248588
R14	Brimar House, Lodge Road	623158	248159
R15	Cherry Tree Farm	624601	248042
R16	1 Top Street	625359	247745
R17	Sandacre, Sandy Lane	626181	247901
R18	Hall Farm, Church Lane	626201	246842
R19	Howes Farm Cottages, Waldringfield Road	626709	245945
R20	Cross Cottage, Waldringfield Road	627371	245362
R21	9 Sullivan Place	627612	244783

48. The measurement durations were determined based on the location of the NSRs. For NSRs located in rural settings, set away from potential noise sources such as roads, railways, plant, etc, a short term daytime 30-minute measurement was undertaken. This is due to the likelihood of the area not exceeding Category A criteria as described in BS 5228-1. For areas close to potential noise sources where it was deemed possible that background noise levels would fall outside of Category A, a long-term noise survey was conducted which recorded weekday and weekend levels.
49. Measurements were undertaken at a height of 1.5m and in free-field conditions i.e. >3.5m from a reflective surface using both a Cirrus and Rion type 1 Sound Level Meter (SLM). The calibration of the SLMs was checked before and after the measurements using the acoustic calibrator, with no drift being observed. The SLMs conform to BS EN 61672-1:2003 Electroacoustics - Sound level meters, and the calibrator conforms to BS EN 60942:2003 Electroacoustics - Sound calibrators. The equipment used has a calibration history that is traceable to a certified calibration institution. Details of the equipment used are presented in Appendix 1: Environmental Sound Survey Equipment.
50. Table 7-2 presents the results of the 2023 environmental noise measurements for day-time and night-time periods:

Table 7-2 2023 Environmental Noise Measurements

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>AF(max)</sub> , dB	L <sub>A90</sub> , dB
R1*	18/07/2023	Daytime (30-minutes)	48	NA	38
R2	14/07/2023	Daytime (07:00 – 23:00)	63	NA	43
		Night-time (23:00 – 07:00)	57	83	26
R3	14/07/2023	Daytime (07:00 – 23:00)	64	NA	53
		Night-time (23:00 – 07:00)	58	79	43
R4	14/07/2023	Daytime (07:00 – 23:00)	57	NA	52
		Night-time (23:00 – 07:00)	50	74	39
R5	13/07/2023	Daytime (07:00 – 23:00)	70	NA	33
		Night-time (23:00 – 07:00)	62	90	33
R6	18/07/2023	Daytime (30-minutes)	48	NA	38
R7	18/07/2023	Daytime (30-minutes)	58	NA	39
R8	13/07/2023	Daytime (07:00 – 23:00)	56	NA	37
		Night-time (23:00 – 07:00)	49	77	29
R9	18/07/2023	Daytime (30-minutes)	59	NA	37
R10	13/07/2023	Daytime (30-minutes)	52	NA	40
R11	13/07/2023	Daytime (07:00 – 23:00)	56	NA	53
		Night-time (23:00 – 07:00)	49	67	32
R12	13/07/2023	Daytime (07:00 – 23:00)	60	NA	55
		Night-time (23:00 – 07:00)	51	72	44
R13	13/07/2023	Daytime (07:00 – 23:00)	59	NA	38
		Night-time (23:00 – 07:00)	50	79	37
R14	18/07/2023	Daytime (30-minutes)	51	NA	37
R15	13/07/2023	Daytime (07:00 – 23:00)	61	NA	39
		Night-time (23:00 – 07:00)	50	79	26
R16	13/07/2023	Daytime (30-minutes)	53	NA	39
R17	14/07/2023	Daytime (30-minutes)	46	NA	39
R18	14/07/2023	Daytime (30-minutes)	43	NA	34

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>AF(max)</sub> , dB	L <sub>A90</sub> , dB
R19	14/07/2023	Daytime (30-minutes)	59	NA	39
R20	13/07/2023	Daytime (07:00 – 23:00)	55	NA	39
		Night-time (23:00 – 07:00)	47	76	32
R21	13/07/2023	Daytime (07:00 – 23:00)	50	NA	35
		Night-time (23:00 – 07:00)	44	63	25

\*Location R1 was inaccessible by surveyors, therefore data from R6 has been applied to R1 as it was deemed to be the most representative in terms of environmental location compared to potential noise sources.

51. Table 7-3 presents the results of the 2023 environmental noise measurements for day-time construction periods as described in Section 3.1.

**Table 7-3 Daytime Weekday and Weekend Measurements**

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>A90</sub> , dB
R1*	18/07/2023	Daytime (30-minutes)	48	38
R2	14/07/2023	Weekday (07:00 – 19:00)	64	43
		Saturday (07:00 – 19:00)	63	49
R3	14/07/2023	Weekday (07:00 – 19:00)	65	53
		Saturday (07:00 – 19:00)	59	54
R4	14/07/2023	Weekday (07:00 – 19:00)	59	53
		Saturday (07:00 – 19:00)	58	56
R5	13/07/2023	Weekday (07:00 – 19:00)	72	44
		Saturday (07:00 – 19:00)	70	52
R6	18/07/2023	Daytime (30-minutes)	48	38
R7	18/07/2023	Daytime (30-minutes)	58	39
R8	13/07/2023	Weekday (07:00 – 19:00)	57	35
		Saturday (07:00 – 19:00)	56	45
R9	18/07/2023	Daytime (30-minutes)	59	37
R10	13/07/2023	Daytime (30-minutes)	52	40
R11	13/07/2023	Weekday (07:00 – 19:00)	57	53
		Saturday (07:00 – 19:00)	52	56

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>A90</sub> , dB
R12	13/07/2023	Weekday (07:00 – 19:00)	60	55
		Saturday (07:00 – 19:00)	52	55
R13	13/07/2023	Weekday (07:00 – 19:00)	60	38
		Saturday (07:00 – 19:00)	53	52
R14	18/07/2023	Daytime (30-minutes)	51	37
R15	13/07/2023	Weekday (07:00 – 19:00)	62	52
		Saturday (07:00 – 19:00)	55	49
R16	13/07/2023	Daytime (30-minutes)	53	39
R17	14/07/2023	Daytime (30-minutes)	46	39
R18	14/07/2023	Daytime (30-minutes)	43	34
R19	14/07/2023	Daytime (30-minutes)	59	39
R20	13/07/2023	Weekday (07:00 – 19:00)	57	39
		Saturday (07:00 – 19:00)	47	49
R21	13/07/2023	Weekday (07:00 – 19:00)	48	47
		Saturday (07:00 – 19:00)	35	49

\*Location R1 was inaccessible by surveyors, therefore data from R6 has been applied to R1 as it was deemed to be the most representative in terms of environmental location compared to potential noise sources.

52. A previous environmental sound survey was conducted for Paper Mill Lane, Playford Corner, Clappits, and the Converter Station in October/November 2021. The survey locations were identified as those presented in Table 7-4 and Figure 2.

**Table 7-4 2021 Environmental Sound Survey Locations**

Receptor	Description	Co-ordinates	
		Easting	Northing
<b>Paper Mill Lane</b>			
R1	Premier Inn, Claydon (R5 2023)	613004	249217
R2	The Rookery	613102	248677
<b>Playford Corner</b>			
R1	High Meadow	621401	247997
R2	Clematis Cottage (R12 2023)	621921	248669
R3	Holly Close	622636	248332



Receptor	Description	Co-ordinates	
		Easting	Northing
<b>Clappits</b>			
R1	Glebe Farm	627255	243781
R2	Low Farm	627540	244883
R3	Hemley	628400	242411
<b>Onshore Converter Station</b>			
MP1	Bullenhall Farm (R1 2023)	610252	246438
MP2	Hill Farm House	609060	245659
MP3	Burstall Hall	610329	244986

53. Measurements were undertaken at a height of 1.5m and in free-field conditions i.e. >3.5m from a reflective surface using Cirrus, Norsonic, and Rion type 1 Sound Level Meters (SLM). The calibration of the SLMs was checked before and after the measurements using the acoustic calibrator, with no drift being observed. The SLMs conform to BS EN 61672-1:2003 Electroacoustics - Sound level meters, and the calibrator conforms to BS EN 60942:2003 Electroacoustics - Sound calibrators. The equipment used has a calibration history that is traceable to a certified calibration institution. Details of the equipment used are presented in Appendix 1: Environmental Sound Survey Equipment.

54. Table 7-5 presents the results of the 2021 environmental noise measurements for day-time and night-time periods:

**Table 7-5 2021 Environmental Noise Measurements**

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>AF(max)</sub> , dB	L <sub>A90</sub> , dB
<b>Paper Mill Lane</b>					
R1	21/10/2021	Daytime (1-hour)	61	82	58
	09/11/2021	Night-time (1-hour)	54	81	45
R2	21/10/2021	Daytime (1-hour)	59	77	56
	09/11/2021	Night-time (1-hour)	50	74	40
<b>Playford Corner</b>					
R1	21/10/2021	Daytime (1-hour)	59	81	49
	09/11/2021	Night-time (1-hour)	32	64	22
R2	21/10/2021	Daytime (1-hour)	58	82	47
	09/11/2021	Night-time (1-hour)	45	76	21
R3	21/10/2021	Daytime (1-hour)	52	75	41
	09/11/2021	Night-time (1-hour)	27	54	24

Location	Start Date	Period	L <sub>Aeq</sub> , dB	L <sub>AF(max)</sub> , dB	L <sub>A90</sub> , dB
<b>Clappits</b>					
R1	20/10/2021	Daytime (1-hour)	54	78	41
	08/11/2021	Night-time (1-hour)	40	74	30
R2	20/10/2021	Daytime (1-hour)	58	76	50
	08/11/2021	Night-time (1-hour)	36	71	30
R3	20/10/2021	Daytime (1-hour)	53	92	41
	08/11/2021	Night-time (1-hour)	38	79	32
<b>Converter Station</b>					
MP1	29/09/2021	Daytime (1-hour)	44	70	32
	30/09/2021	Night-time (1-hour)	33	68	26
MP2	29/09/2021	Daytime (1-hour)	45	68	36
	30/09/2021	Night-time (1-hour)	27	62	22
MP3	29/09/2021	Daytime (1-hour)	41	64	37
	30/09/2021	Night-time (1-hour)	36	67	28

## 8. NOISE AND VIBRATION CRITERIA

55. Noise levels generated by construction activities are deemed to be significant if they exceed the threshold values as derived in accordance with the ABC Method detailed in BS5228-1.
56. The ABC method is based on the measured ambient noise levels (rounded to 5 dBA) in the area and the advice in Table E1 of BS 5228, as shown here in Table 8-1. It is considered that if the site noise level exceeds the appropriate category at the most noise-sensitive receptors then a potential significant effect has been indicated. This will depend upon (as set out in BS 5228) “other project-specific factors, such as the number of receptors affected and the duration and character of the impact.”

**Table 8-1 Threshold of Potential Significant Effect at Dwellings**

Assessment Category and Threshold Value Period	Threshold value, dB L <sub>Aeq, T</sub>		
	Category A	Category B	Category C
Daytime (07:00 – 23:00) and Saturday (07:00 – 13:00)	65	70	75
Weekdays (19:00 – 23:00), Saturdays (13:00 – 23:00) and Sundays (07:00 – 2300)	55	60	65
Night time (23:00 – 07:00)	45	50	55

57. The assessment category and associated threshold value would apply to the relevant working period where required (Daytime, Saturday, Sunday, Weekdays (19:00 – 23:00) and Night time).
58. If the ambient noise level exceeds the Category C threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total  $L_{Aeq, T}$  noise level for the period increases by more than 3 dB due to site noise.
59. Annex E of BS 5228-1 also provides criteria for providing sound insulation at affected receptors. Exceedance of identified levels trigger a responsibility on the developer to provide noise insulation or a scheme to facilitate temporary rehousing.
60. The standard suggests that noise insulation should be provided, despite mitigation measures, in the following cases:
- where noise levels exceed the noise insulation trigger level, presented in Table 8-2; or
  - the total noise (pre-construction ambient plus construction noise) is 5 dB above the existing airborne noise level for the corresponding times of day, whichever is the higher; and
  - for a period of ten or more days of working in any fifteen consecutive days or for a total of days exceeding 40 in any 6-month period.

**Table 8-2 Time Periods, Averaging Times and Noise Levels Applicable to Assessing Eligibility for Noise Insulation BS 5228-1:2009 (Annex E).**

Time	Relevant Time Period	Averaging time, T	Noise trigger level dB $L_{Aeq, T}$
Monday to Friday	07.00-08.00	1 h	70
	08.00-18.00	10 h	75
	18.00-19.00	1 h	70
	19.00-22.00	3 h	65
	22.00-07.00	1 h	55
Saturday	07.00-08.00	1 h	70
	08.00-13.00	5 h	75
	13.00-14.00	1 h	70
	14.00-22.00	3 h	65
	22.00-07.00	1 h	55
Sunday & Public Holidays	07.00-21.00	1 h	65
	21.00-07.00	1 h	55

**Note 1) Equivalent continuous A-weighted noise level predicted or measured at a point in front of the most exposed windows or doors leading directly to a habitable room (living room or bedroom) in an eligible dwelling**

61. BS5228-2 provides guidance on the control of vibration from construction sites and response limits for cosmetic damage in buildings as reproduced in Table 8-3. Table 8-3 shows the limits at which the vibration level (measured as a peak particle velocity) would result in cosmetic damage at a range of vibration frequency levels.

Table 8-3 Transient Vibration Guide for Cosmetic Damage (from BS 5228-2:2009)

Type of Building	Peak Component Particle Velocity (PPV) in Frequency Range of Predominant Pulse	
	4Hz to 15Hz	15Hz and above
Reinforced or framed structures Industrial and heavy commercial buildings	50mm/s at 4Hz and above	50mm/s at 4Hz and above
Unreinforced or light framed structures Residential or light commercial buildings	15mm/s at 4Hz increasing to 20mm/s at 15 Hz	20mm/s at 15Hz increasing to 50mm/s at 40Hz and above
Note 1) Values referred to are at the base of the building		
Note 2) For line 2, at frequencies below 4Hz, a maximum displacement of 0.6mm (zero to peak) is not to be exceeded		

62. BS 5228-2 also presents levels of vibration that may cause complaint, which is predicted to occur between 0.3 mm/s (just perceptible) and 1.0 mm/s (likely to cause complaint). BS 5228-2 values have been taken into consideration in the assessment of vibration levels from construction HGV traffic.

## 9. NOISE AND VIBRATION ASSESSMENT

### 9.1. Noise Assessment

63. In undertaking the Environmental Impact Assessment for EA THREE, a noise and vibration assessment was completed to identify and assess the potential activities associated with the proposed onshore construction works that could lead to noise and vibration impacts on receptors (Environmental Statement Volume 1, Chapter 26 Noise and Vibration). The Environmental Statement (ES) was undertaken by Royal HaskoningDHV in November 2015.

64. The noise and vibration assessment was undertaken in accordance with the requirements stated in the Sections 5.11.4 to 5.11.7 of the National Policy Statement EN-1 (NPS EN-1). In this sense, the NPS EN-1 states that, “where noise impacts are likely to arise, the applicant should include:

- a description of the noise generating aspects of the development proposal leading to noise impacts including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise;
- identification of noise sensitive premises and noise sensitive areas that may be affected;
- the characteristics of the existing noise environment;
- a prediction of how the noise environment will change with the proposed development;
- in the shorter term such as during the construction period;
- in the longer term during the operating life of the infrastructure;
- at particular times of the day, evening and night as appropriate;
- an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive area; and
- measures to be employed in mitigating noise.”

65. To carry out the noise and vibration assessment a worst-case scenario was selected taking into account the following aspects:

- The methods within BS 5228-1 and BS 5228-2 were used to assess noise and vibration from the onshore construction works.
- In order to assess the noise from road traffic, the method CRTN (Calculation of Road Traffic Noise) produced by the Department of Transport / Welsh Office and the guidance provided by the Highways Agency (Design Manual for Roads and Bridges. Volume 11, Section 3, Part 7 Had 213/11 Noise and Vibration) were taken into account.
- Cable installation activities.

66. Following further design works by the Principal Contractor, the noise levels of the equipment to be used for the installation of the onshore cable have been revised and are shown in Table 9-1 (taken from Annex C and D of BS 5228-1: 2009+A1:2014). Allocation of plant used in specific activities were provided by the contractor and data provided in the original ES. For activities involved with the Jointing Bays and HDD excavations, Plant equipment has been set into groups of likely simultaneous use. Noise levels for each grouping were determined with the worst case level used for assessment purposes.

Table 9-1 Assumed construction equipment and noise emissions used for noise calculations (BS 5228-1:2009+A1:2014)

Activity	Assumed construction equipment	Noise emissions (dB(A) at 10 m from source)	% On Time (1-hour)
Jointing Bays – Group 1	360° Excavator (40 ton)	75	90%
	360° Excavator (16 ton)	73	90%
	360° Excavator (21 ton)	71	90%
	Piling/Vibrating Hammer	87	80%
	Short wheel base lorry (small plant deliveries)	76	80%
	Dump truck 10ton /A25	81	100%
	Swivel Dumper (6 ton)	81	90%
	Forward / Reverse compactor plate	78	80%
	Tractor	79	75%
	Ramax (trench roller)	73	60%
	Dozer D6	78	100%
	Articulated Lorries (Low-Loader and Hammer Trailer)	67	100%
	Generator	62	100%
	Ride on Roller twin drum (1200 kg )	73	90%
	Ride on Roller twin drum (9000 kg)	73	90%
	8 wheel lorry	80	90%
	Generator	62	100%
Jointing Bays – Group 2	Capstan Winch	76	100%
	Cable pulling winch	76	100%
	Generator	62	100%
	Compressor 600 psi	77	100%
	Cable push / puller	76	100%
	250ton Mobile Craneage	78	50%
	Cable powered reeler (Rope)	76	100%
	Allieys Cable Drum Mounted Trailer and Tractor Unit	79	100%
HDD Excavations – Group 1	360° Excavator (8ton)	69	90%
	360° Excavator (16 ton)	73	90%
	8 wheel lorry	80	90%
	Short wheel base lorry (small plant deliveries)	76	80%
	Swivel Dumper (6 ton)	81	90%
	Forward / Reverse compactor plate	78	80%
	Tractor	79	75%
Ramax (trench roller)	73	60%	
HDD Excavations – Group 2	Compressor 600 psi	77	100%
	Cable powered reeler (Rope)	76	100%
CCS	360°Excavator (16 ton)	75	100%
	Swivel Dumper (6 ton)	77	100%
	Articulated Lorry (Low-loader)	80	90%
	Road Sweeper	76	100%
	Bulldozer D6	86	100%
	Bowser	79	60%
	Articulated Dump Truck	81	80%
	Breaker Mounted on Excavator	90	80%
	Ride on Roller twin drum (1200 kg )	73	80%
	Ride on Roller twin drum (9000 kg)	73	80%
Access Points/ Stone Haul/ Trackway	360°Excavator (21 ton)	71	100%
	Ride on Roller twin drum (1200 kg )	73	80%
	Ride on Roller twin drum (9000 kg)	73	80%
	Paver	75	100%

Activity	Assumed construction equipment	Noise emissions (dB(A) at 10 m from source)	% On Time (1-hour)
	8 wheel lorry (Tarmac & Type 1)	80	90%
	Tractor cw compressor (Trac-air)	77	80%
	Short wheel base lorry (small plant deliveries)	76	90%
	Forward / Reverse compactor plate	78	60%
	Dump truck A25	81	100%
	Road Planer	82	80%
	Hand Held Circular Saw cutting Paving Slabs (Floor Saw)	84	80%
	Breaker Mounted on Excavator (21t excavator pecker)	90	80%

- 67. It was assumed that the majority of construction works would be restricted to daytime working hours. The exceptions to this are limited as described in Section 3.2.
- 68. Based on the survey results detailed in Tables 7-2, 7-3, and 7-5, Table 9-2 below details the assigned assessment category for each receptor presented in Tables 7-1 and 7-4. Categories have been applied based on Daytime levels as per the working hours described in Section 3.2. It should be noted that the 2023 survey repeated some locations that were measured during 2021, as such those locations have been categorised using the most up to date data from 2023.

**Table 9-2 Receptor Assessment Categories**

Receptor	Assigned Assessment Category	Threshold Value, dB
<b>2023 Receptors</b>		
R1	A	65
R2	A	65
R3	B	70
R4	A	65
R5	C	75
R6	A	65
R7	A	65
R8	A	65
R9	A	65
R10	A	65
R11	A	65
R12	A	65
R13	A	65
R14	A	65
R15	A	65
R16	A	65
R17	A	65
R18	A	65
R19	A	65
R20	A	65
R21	A	65
<b>2021</b>		
<b>Paper Mill Lane Receptors</b>		
R1 (2023 R5 data used)	C	75
R2	A	65
<b>Playford Corner Receptors</b>		
R1	A	65
R2 (2023 R12 data used)	A	65
R3	A	65

Receptor	Assigned Assessment Category	Threshold Value, dB
<b>Clappits Receptors</b>		
R1	A	65
R2	A	65
R3	A	65
<b>Converter Station Receptors</b>		
MP1 (2023 R1 data used)	A	65
MP2	A	65
MP3	A	65

69. The majority of locations have been set as Category A, which is in line with the rural setting of most locations. Locations R3 and R4 have been set as Category B and C respectively due to elevated noise levels indicative of their close proximity to the strategic highway network (the B1113 and the A14).
70. A construction assessment has been conducted to determine indicative threshold distances to meet the above Threshold Values, taking into account the operational time and any potential screening of the plant set out in Table 9-1.
71. The distance from the construction works at which the threshold would be met has been calculated using a 3D noise modelling program called CadnaA. Based on the results of the 3D modelling the predicted set back distances for various site activities have been presented in Tables 9-3 to 9-6.

**Table 9-3 Predicted Set back distance Jointing Bays.**

Jointing Bay	Nearest Receptor Category	Predicted Set Back Distance (m)
JB 3/4	B	65
JB 4/5	C	35
All Other Jointing Bays Including Transition Bay	A	115

**Table 9-4 Predicted Set back distance for CCS Construction.**

CCS	Nearest Receptor Category	Predicted Set Back Distance (m)
Paper Mill Lane	B	65
All Other CCS	A	120

**Table 9-5 Predicted Set back distance for HDD Excavations.**

HDD*	Nearest Receptor Category	Predicted Set Back Distance (m)
6, 7, 8, 9	B	50
10, 11	C	30
All Other HDDs	A	85

72. Data from SPR has informed that during a typical working day 250m of track can be constructed. As such our assessment has used this length to calculate a suitable set back distance for each category as presented in **Table 9-6**. Calculations have been based on all plant operating within the length of the specified track.

Table 9-6 Predicted Set back distances for Track.

Indicative Length of Track	Nearest Receptor Category	Typical Predicted Set Back Distance (m)
250	A	125
	B	65
	C	30

73. It should also be noted that distances calculated are based on a worse case scenario of all plant operating at once, in reality this is unlikely to be the case. For properties situated outside of these set back distances a negligible effect, in accordance with BS 5228:2009+A1:2014, is likely to be experienced.

74. For properties likely to experience adverse impacts mitigation measures are likely to be required. Best Practicable Measures set out in Section 10 will be employed across the works to reduce impact as far as practicable.

**9.1.1. Off-site Construction Traffic**

75. Following the methodology contained in Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Chapter 3)(Highways Agency,2011)<sup>2</sup> an initial screening assessment was undertaken to assess whether there would be any significant changes in traffic volumes as a result of the development. An increase in traffic volume of 25% corresponds to a 1dB(A) change in noise level over an 18-hour period on the relevant road link. A change in noise level of less than 1dB(A) is regarded as imperceptible and therefore negligible with regard to impact significance. If there is no increase greater than 25%, then the guidance indicates that no further assessment needs to be conducted (Highways Agency 2011).

76. The ES concluded that no road links associated with the onshore cable works are likely to experience an increase in total traffic or HGV flows greater than 25% and, therefore, the associated noise impacts would be negligible.

**9.2. Vibration Assessment**

77. Ground borne vibration from construction activities was scoped out of detailed assessment in the ES on the basis of separation distance from construction activities and any sensitive receptors, with only properties within 100m of the works given further consideration due to the generally relatively low levels of vibration due to the proposed construction activities. Where properties are located within 100m, the specific receptor distances were deemed by the assessment presented in the ES to be large enough to protect receptors from construction related ground borne vibration. Following the development of the cable route design (as shown in Figure1), 3 residential properties have been identified within 100m of jointing bay excavations, with the nearest being at 90m distance. A review of construction vibration producing activities within the vicinity has, however, indicated that the conclusion of the ES remains valid.

78. Discontinuities (e.g. potholes) on the roads adjacent to sensitive receptors have the potential to result in vibration levels that exceed the minimum peak particle velocity (PPV) as specified in BS5288-2. The majority of buildings would be resilient to the worst case vibration levels anticipated. However, a precautionary approach has been considered for listed buildings and non-earthwork related scheduled ancient monuments as these are considered of high sensitivity. These features have been identified (Appendix 2) within 100m of the designated construction HGV routes (see Cable Route Traffic Management Plan (A3-LDC-CNS-REP-IBR-000080)) that are not designated on the Suffolk Lorry Route Network<sup>3</sup>. Archaeological sites and listed buildings on the existing lorry route network would not be subjected to higher vibration levels than are already within the baseline environment.

<sup>2</sup> The DMRB has since been updated by document Highways England document LA111 Noise and Vibration May 2020, however, it is considered that the scoping assessment still holds true.

<sup>3</sup> The existing lorry route network being taken to be the strategic lorry routes, zone distribution lorry routes and local access routes shown as being red, blue and green on the Suffolk County Council Recommended Lorry Route Network Map (<https://www.suffolk.gov.uk/roads-and-transport/lorry-management/lorry-route-plan-review-in-suffolk/recommended-lorry-route-network-map>)



79. 10m is considered the largest distance from the road at which there is potential for vibration impacts from HGV along roads, with a distance of 5m considered as a distance for a potentially significant effect. A review of the scheduled ancient monuments found no known archaeological sites within 5m of the proposed HGV routes to and from the cable corridor. There are two listed buildings within 5m of the road, on a route not designated on the Suffolk Lorry Route Network as shown on Table 9-4:

**Table 9-4 Listed Buildings within 5m of Relevant HGV Routes**

List Entry	Name	Location	Grade	Easting	Northing
1030720	K6 Telephone Kiosk	Grundisburgh, East Suffolk, Suffolk, IP13	II	622391	250998
1377185	The Swan Inn	Alderton, East Suffolk, Suffolk, IP12	II	634376	241692

80. No issues were experienced with respect to these listed buildings during the EA ONE construction works. These structures will be surveyed prior to the start of the onshore cable works, however it is not considered that vibration monitoring would be required. The need for vibration monitoring at these listed buildings will be discussed and agreed with Historic England.

81. In addition the CCSs, new access points and haul roads/trackway to the jointing bay locations are not located within 5m of any non-earthwork related scheduled ancient monuments or listed buildings and there is therefore, no requirement to monitor their condition with respect to potential vibration impacts.

## 10. NOISE AND VIBRATION CONTROLS

82. EA THREE onshore construction works will comply with the recommendations set out in BS 5228-1 and BS5228-2 and in the ES.

83. Best Practice Measures (BPM) and attenuation measures will be applied during construction works to minimise noise and vibration at neighbouring residential properties and other sensitive receptors arising from construction activities. Whilst the Threshold values indicate when significant impact may occur, BPM will be employed to reduce noise as far as practicable.

84. BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990, as those measures which are '*reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications*'.

85. At this time, the BPM and mitigation measures described in Table 10-1 will be implemented to minimise noise during the onshore construction works. Following receipt of a justified complaint the measures would be reviewed to confirm they have been adopted and are being utilised.

**Table 10-1 Best Practice and Mitigation Measures**

Construction Best Practice Mitigation Measures
<ul style="list-style-type: none"> <li>• Consideration of noise levels when selecting construction methods and equipment used.</li> </ul>
<ul style="list-style-type: none"> <li>• Management of construction operating hours (in accordance with those specified within the DCO).</li> </ul>
<ul style="list-style-type: none"> <li>• Training of construction workers on site to ensure noise is considered through all stages.</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation of traffic management measures such as agreed routes for construction traffic.</li> </ul>
<ul style="list-style-type: none"> <li>• Use of modern, fit for purpose, well maintained plant and equipment to minimise noise generation. Plant and vehicles will be fitted with mufflers / silencers maintained in good working order. Use of silenced equipment, as far as possible and low impact type compressors and generators fitted with lined and sealed acoustic covers. Doors and covers housing noise emitting plant will be kept closed when machines are in use. The positioning and specification of any generators used close to residential properties shall be so as to ensure compliance with the assessed noise guidance thresholds and shall be agreed with MSDC and ESC, as required.</li> </ul>
<ul style="list-style-type: none"> <li>• Where reasonably practicable, vibrating and noisy equipment should be located as far from sensitive premises as possible, and, if on a structure, not on one which is continuous with that of the sensitive premises; contractors and subcontractors should be trained to employ appropriate techniques to keep site noise to a minimum, and should be effectively supervised to ensure that best working practice in respect of noise and vibration reduction are followed.</li> </ul>
<ul style="list-style-type: none"> <li>• Minimise drop height of materials.</li> </ul>

<ul style="list-style-type: none"> <li>• Construction site layout to minimise or avoid reversing with use of banksmen where appropriate. Output noise from reversing alarms set at levels for health and safety compliance.</li> </ul>
<ul style="list-style-type: none"> <li>• Start-up plant, equipment and vehicles sequentially rather than all together.</li> </ul>
<ul style="list-style-type: none"> <li>• No working during night hours except for specific activities which have been agreed with MSDC and ESC and should be discouraged as much as possible.</li> </ul>
<ul style="list-style-type: none"> <li>• Radios (other than two-way radios used for the purposes of communication related to the works) and other forms of audio equipment (other than associated with safety mechanisms (such as reversing beepers) shall not be operated during construction activities.</li> </ul>
<ul style="list-style-type: none"> <li>• Construction activities with the potential for significant impacts should be discouraged if possible, during night hours.</li> </ul>
<ul style="list-style-type: none"> <li>• Avoid shouting and minimise talking loudly and slamming vehicle doors.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensuring engines are switched off when machines are idle.</li> </ul>
<ul style="list-style-type: none"> <li>• Noise and vibration should be controlled at source and the spread of noise and vibration should be limited.</li> </ul>
<ul style="list-style-type: none"> <li>• Use screens and noise barriers / acoustics screens where deemed necessary.</li> </ul>
<ul style="list-style-type: none"> <li>• Regular communication with site neighbours to inform them of the construction schedule, and when noisy activities are likely to occur.</li> </ul>
<ul style="list-style-type: none"> <li>• All residents who are likely to be affected by constructional noise that exceeds 64dB(A) expressed as a 1 hour L(A)eq value shall be notified at least 24 Hours in advance of the works and given an estimate of how long the elevated noise levels will continue</li> </ul>
<ul style="list-style-type: none"> <li>• If it is deemed by MSDC or ESC that during construction monitoring of construction noise is necessary, then the locations for such monitoring will be agreed in advance with MSDC or ESC.</li> </ul>

87. The above table is not an exhaustive list of BPM and should additional, more appropriate, measures be deduced then they should be included as reasonable steps to minimise noise. In particular, should a substantiated and justified complaint be received, a review of BPM will include consideration of the need for measures not included in this table.

88. To ensure that excessive vibration levels on the road network are not caused by HGVs travelling over discontinuities in the road, visual checks should be made of roads adjacent to the buildings listed in Table 9-4 by contractors, the construction management team and EnvCoW.

## 11. NOISE AND VIBRATION MONITORING

### 11.1. Noise Monitoring

89. A scheme of noise monitoring will be implemented and maintained during construction in order to ensure compliance with the noise limits and to verify the effectiveness of the best practice and mitigation measures identified in Section 10. The frequency will be flexible (weekly during initial stages and monthly once compliance with levels established) and should cover all construction activities and stages. Monitoring will also be undertaken, as required, when working near sensitive receptors, or in response to a complaint at the locations shown on Figure 2, unless otherwise agreed with ESC or MSDC.

90. The purpose of the noise monitoring is to facilitate data acquisition to demonstrate that the EA THREE cable is being installed within the noise criteria set out in accordance with the BS 5228-1 and in such a manner to minimise the noise impacts at nearby sensitive receptors, and if required in response to complaints.

91. Short term attended noise measurements shall be taken by a suitably qualified acoustician in the vicinity of the property or at the site boundary, in order to assess the fulfilment of the noise criteria stated in Section 8. Where access to a property is not granted to undertake such measurements, measurements shall be undertaken at a location that is considered by the suitably qualified acoustician, to be representative of noise levels at the property or properties in question.

92. The noise measurement sample duration at each location for both day and night-time monitoring will be no less than 30 minutes. Data collected for the identified receptors will include at least the following parameters:  $L_{A90}$ ,  $L_{Aeq}$ , and  $L_{AFmax}$ .

93. Type 1 integrating averaging SLM and Class 1 Sound Calibrators will be used. SLM and Calibrators must fulfil the requirements established in the following British and European standards:

- BS EN 61672-1:2003. Electroacoustics. Sound level meters. Specifications;
- BS EN 61672-2:2003. Electroacoustics. Sound level meters. Pattern evaluation tests;

- BS EN 61672-3:2006. Electroacoustics. Sound level meters. Periodic tests;
- BS 7580-1:1997. Specification for the verification of sound level meters. Comprehensive procedure; and
- BS EN 60942:2003. Electroacoustics. Sound calibrators.

94. SLM and calibrators shall be calibrated to a traceable standard by a UKAS-accredited laboratory, within a 24- month period before the survey for SLMs and 12-month period for calibrators. The SLMs shall be field-calibrated before and after monitoring using an acoustic calibrator.

95. The SLM shall be positioned such that the microphone is located 1.5m above ground level in free-field conditions (at least 3.5m from the nearest vertical reflecting surface), at all receptors. A note of the prevailing weather conditions shall be made at the time of the measurements.

## 11.2. Vibration Monitoring

96. It is not anticipated that vibration monitoring will be required during the normal course of construction works. Vibration monitoring would only be adopted upon receiving a complaint or a specific directive from MSDC, ESC or Historic England.

97. Where required vibration monitoring instrumentation will be deployed as close to the sensitive buildings as possible. The instrumentation will be installed, operated and maintained by suitable qualified personnel. Vibration levels shall be measured using instrumentation calibrated to a traceable standard by a UKAS-accredited laboratory according with BS 5228- 2:2009.

## 12. REPORTING

### 12.1. Noise Report

98. On completion of each noise survey a report shall be prepared by the Principal Contractor in a format suitable submission to MSDC and/or ESC. The report shall be submitted within seven working days of the scheduled date.

99. The report shall contain at least:

- the results of the noise survey;
- details of the instrumentation and measurement methods used;
- calibration details;
- weather conditions and factors that might have adversely affected the reliability or accuracy of the measurements;
- plans of the site and neighbourhood showing the position of plant, associated buildings and notes of site activities during monitoring period(s); and
- time, date and name of person carrying out the measurement.

### 12.2. Vibration Report

100. If required, on completion of a vibration survey, a report shall be prepared by the Principal Contractor in a format suitable for submission to MSDC, ESC or Historic England. The report shall be submitted within seven working days of the scheduled date.

101. The report shall contain at least:

- the results of the vibration survey;
- details of the instrumentation and measurement methods used;
- plans of the site and neighbourhood showing the position of plant, associated buildings and notes of site activities during monitoring period(s); and
- time, date and name of person carrying out the measurement.

### 13. NOISE AND VIBRATION ENVIRONMENTAL INCIDENT

102. The following situations represent potential noise and vibration environmental incidents and as such will be subject to the relevant controls (as set out in Section 10), including review of control measures to ensure that BPM are being utilised:

- a complaint received from a member of the public, by MSDC or ESC;
- an incident or activity which results in a breach of consent conditions e.g. non-compliance with the working hours, non-permitted plant/equipment or non-compliance with BPM or mitigation measures; and
- measured exceedance.

### 14. NON-COMPLIANCE WITH NOISE LIMITS

103. If the noise criteria levels set out Section 8 are exceeded during the noise and vibration surveys as a result of construction works or a complaint is received by the Principal Contractor, EATL, MSDC or ESC from a local resident, an investigation shall be instigated by the Principal Contractor to identify the cause of the non-compliance. In the event that the Principal Contractor or EATL receives the complaint they shall notify the relevant Environmental Health Officer (EHO) within 48 hours.

104. Such an investigation may involve the identification and cessation of the activity or activities considered to be the cause of the non-compliance and/or the investigation of the mitigation measures to reduce the noise or vibration emission levels from the activity or activities, for example the replacement of the noisy plant with quieter alternatives and/or the use of temporary screens.

105. Where noise or vibration monitoring is required this will be undertaken as soon as possible, in accordance with the methodology set out in Section 11. Following the monitoring a report shall be prepared by the Principal Contractor and submitted to MSDC or ESC within 5 days. Following the report, if required noise mitigation measures will be agreed with the relevant local planning authority and implemented. In the event that a further complaint is made further monitoring may be undertaken in agreement with MSDC or ESC as required.

106. Any deviation from agreed working practices shall be identified immediately and conformance to the working practice reinstated.

### 15. TRAINING

107. All site personnel should be trained to employ appropriate techniques to keep noise to a minimum and should be effectively supervised to ensure that best working practice in respect of noise reduction is followed.

108. All employees should be advised regularly of the following, as part of their training:

- the proper use and maintenance of tools and equipment;
- the positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel;
- the avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment;
- the protection of persons against noise;
- the impact of noise and vibration on ecology; and
- the operation of sound measuring equipment (selected personnel).

109. All site personnel will be made aware of the noise and vibration issues covered in this Noise and Vibration Management Plan during site induction.

## 16. REFERENCES

Department for Energy & Climate Change, July 2021, *Overarching National Policy Statement for Energy* (EN-1). London: The Stationery Office

EA ONE Ltd, 2017, East Anglia ONE Baseline Noise Data Report – FINAL 296926-01(00) EA1 Onshore Enabling Works (ONCA & ONSS), EA1-GRD-F-RDB-116819 Rev0 ONCA & ONSS

Highways Agency, 2011, *Design Manual for Roads and Bridges (DMRB) (Volume 11, Section 3, Chapter 3)*, London, The Stationery Office Ltd

Highways England, May 2020, *LA 111 Noise and vibration* (formerly HD 213/11, IAN 185/15), Revision 2,

Ministry of Housing, Communities and Local Government, *NPPF - National Planning Policy Framework*, 2019, Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2> [accessed 17/12/2020]

FOR DISCHARGE

## APPENDIX 1 ENVIRONMENTAL SOUND SURVEY EQUIPMENT

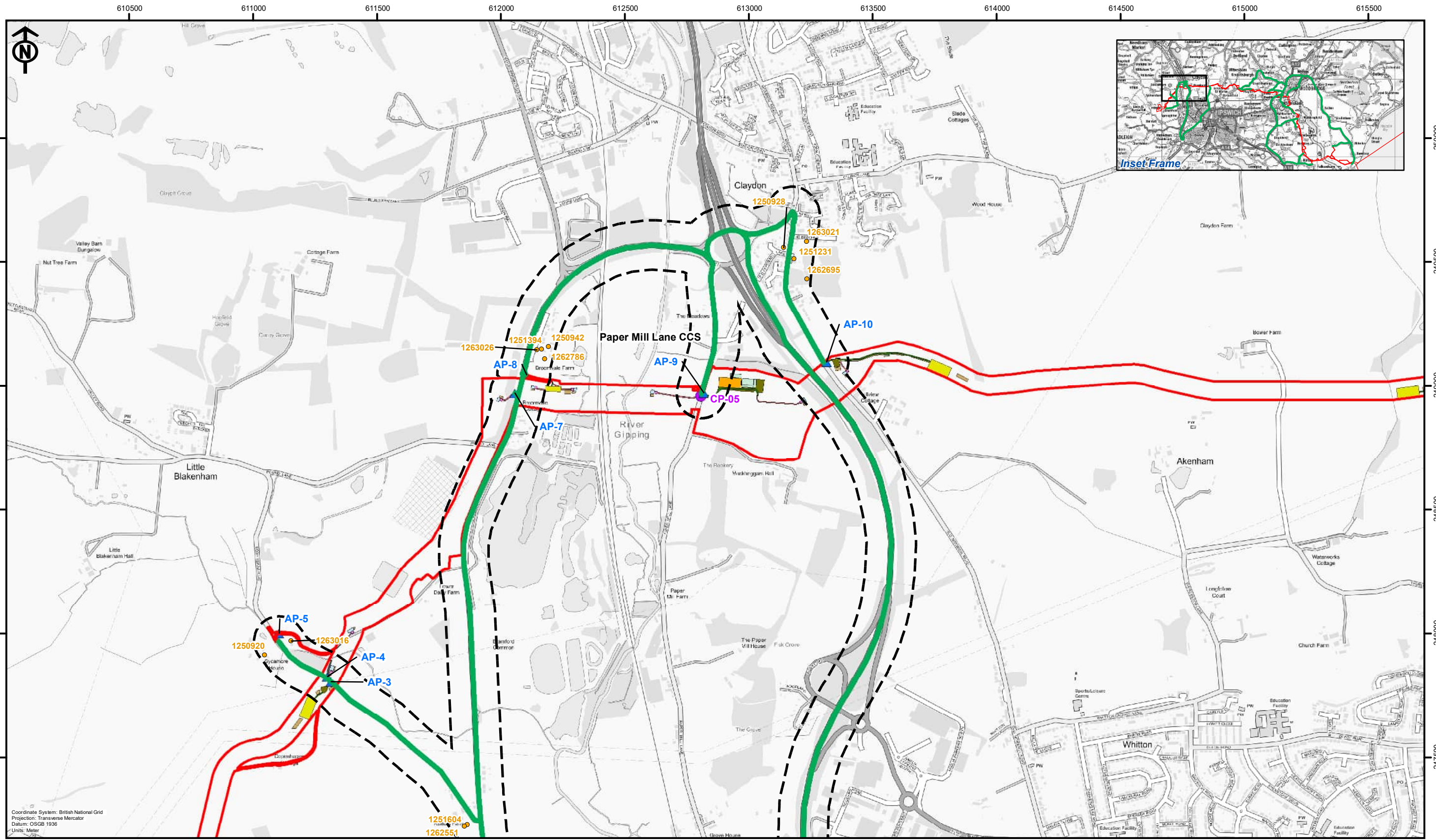
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Norsonic 1251 Acoustic Calibrator	31875
Rion NL-52 Class 1 Sound Level Meter	00331823
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	1087405
	1121402
	732098
	586905
	620864
Rion NC-74 Acoustic Calibrator	34336013
Cirrus CR:171C Class 1 Sound Level Meter	G080284
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	080288
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Cirrus CR:515 Acoustic Calibrator	83164

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**APPENDIX 2 SCHEDULED MONUMENTS AND LISTED BUILDINGS WITHIN 100M OF THE DESIGNATED CONSTRUCTION HGV ROUTES**

FOR DISCHARGE



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Top Soil Strip	Stone Haul Road	<b>Listed Building (Grade)</b> ● II
Crossing Point (Road Crossings Numbered)	Consolidated Construction Site Compound	Top Soil Bund	Trackway	
Joining Bay Hardstanding	Soil Storage	Existing Track	Construction Access Route	
		HGV Turning	Construction Access Route 100 m Buffer	



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

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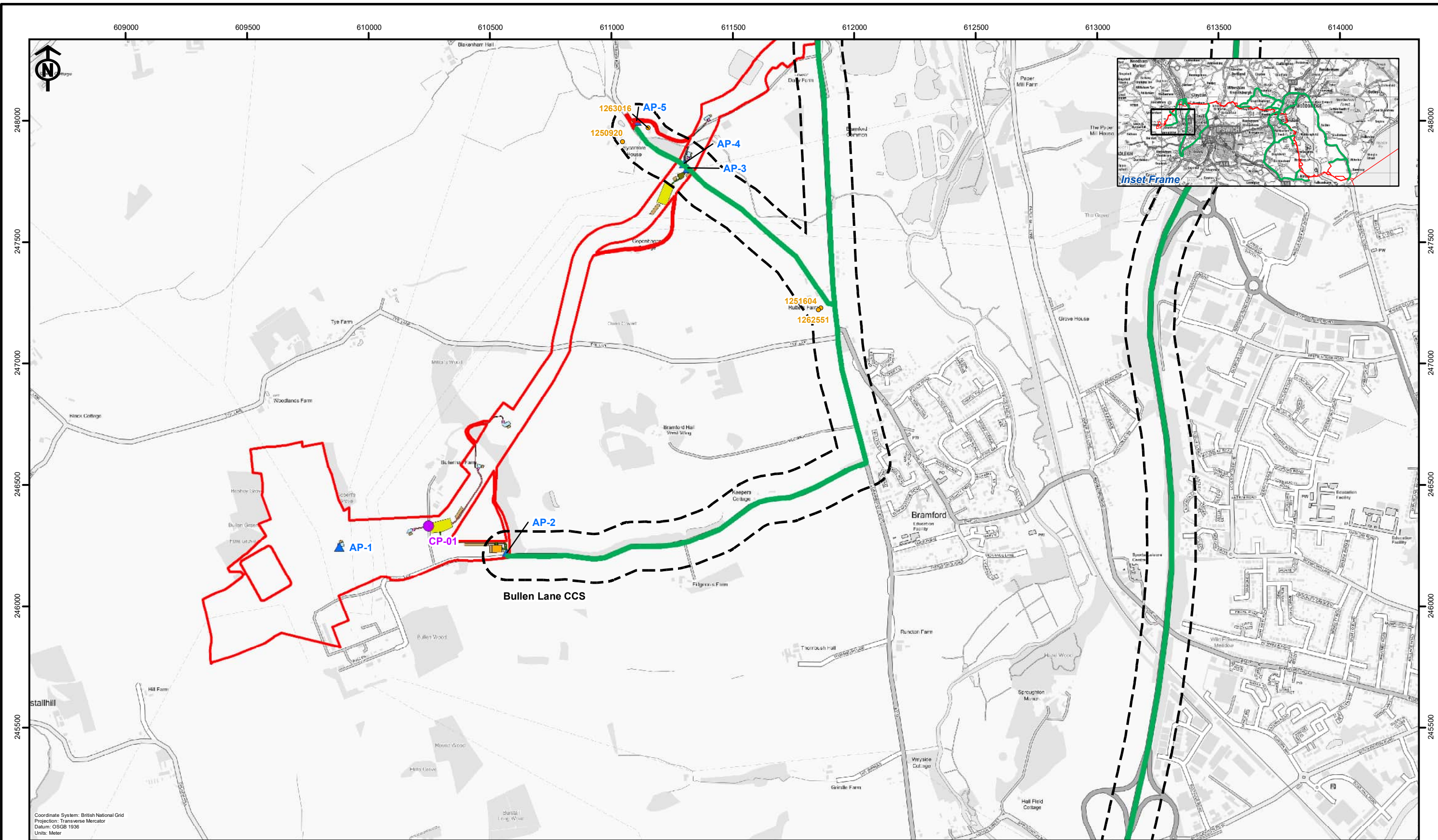
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**EA THREE Cable Route**  
 APPENDIX 2.1 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A





Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	<b>Listed Building (Grade)</b> ● II
Crossing Point (Road Crossings Numbered)	Consolidated Construction Site Compound	Existing Track	Construction Access Route	
Jointing Bay Hardstanding	Top Soil Strip	HGV Turning	Construction Access Route 100 m Buffer	
		Stone Haul Road		



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

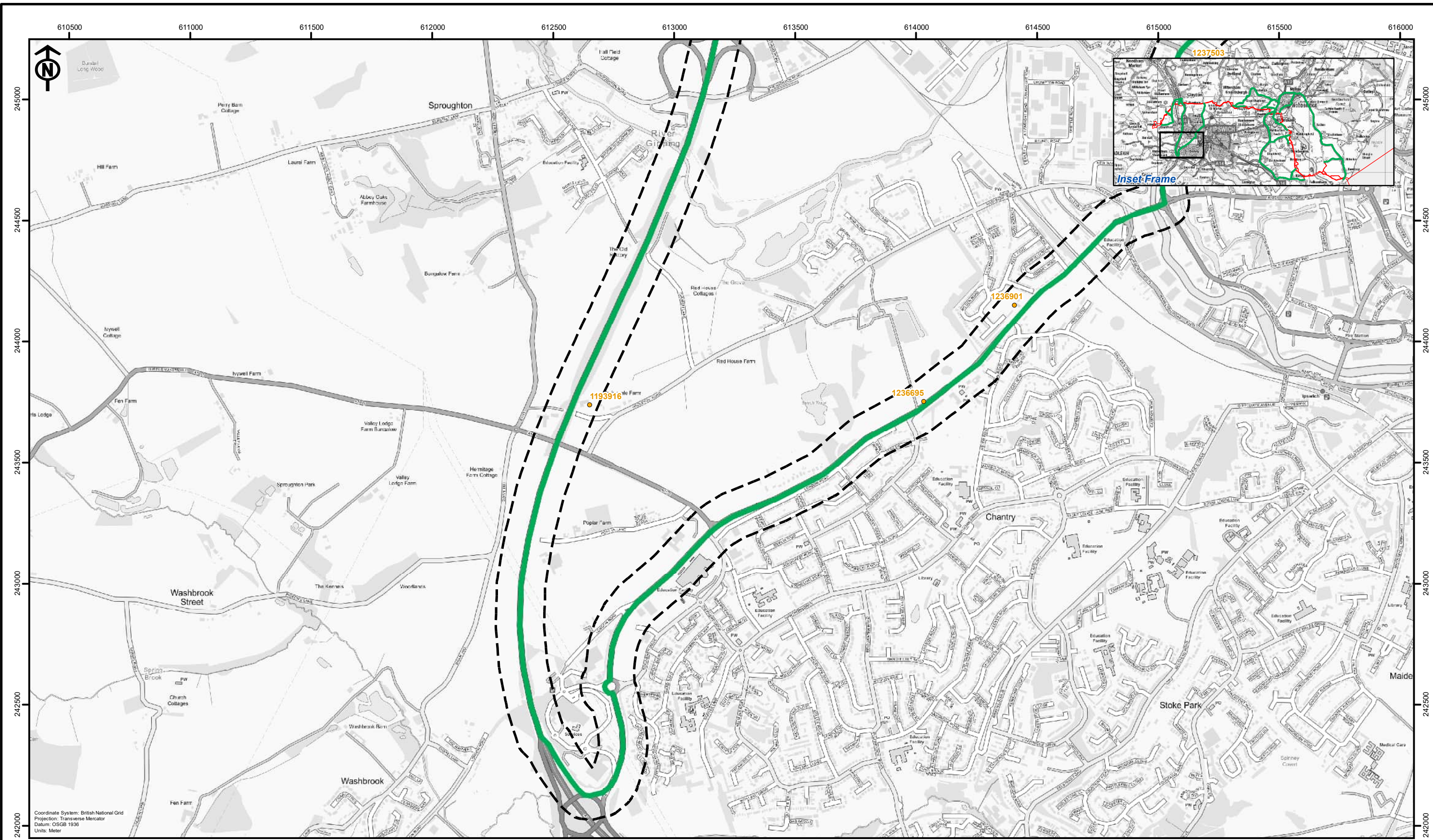
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 APPENDIX 2.2 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

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Rev	0
Date	22/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

— Construction Access Route  
 Construction Access Route 100 m Buffer  
**Listed Building (Grade)**  
● II



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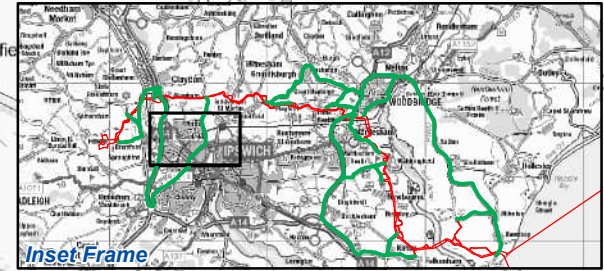
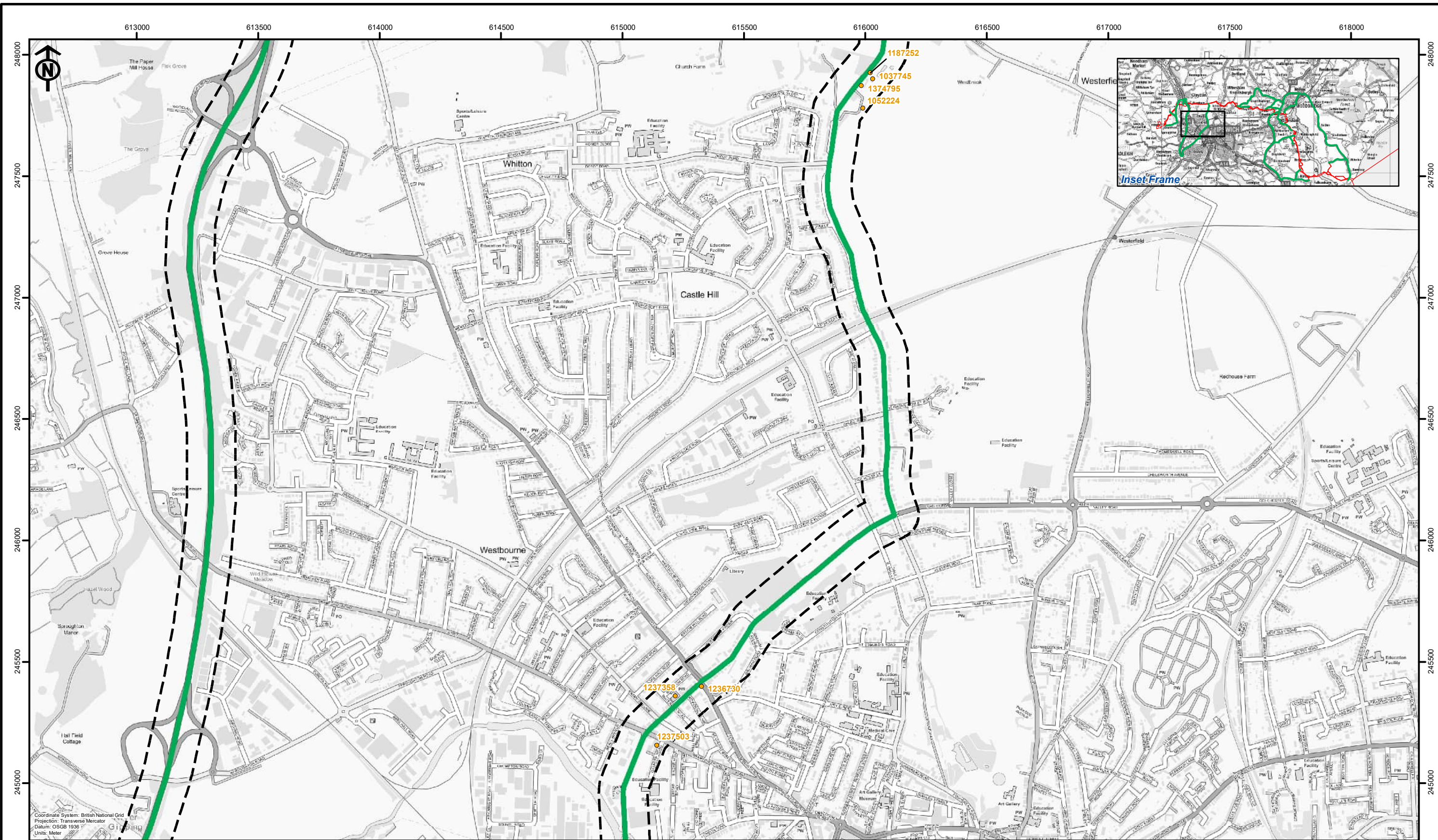
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APPENDIX 2.3 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

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Layout	N/A



— Construction Access Route  
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**Listed Building (Grade)**  
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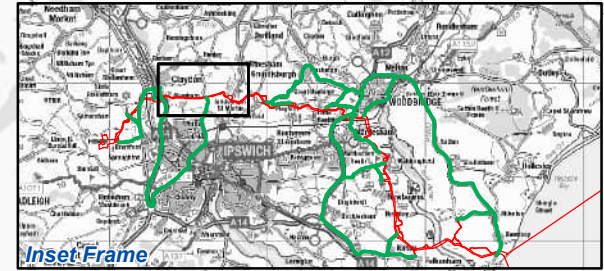
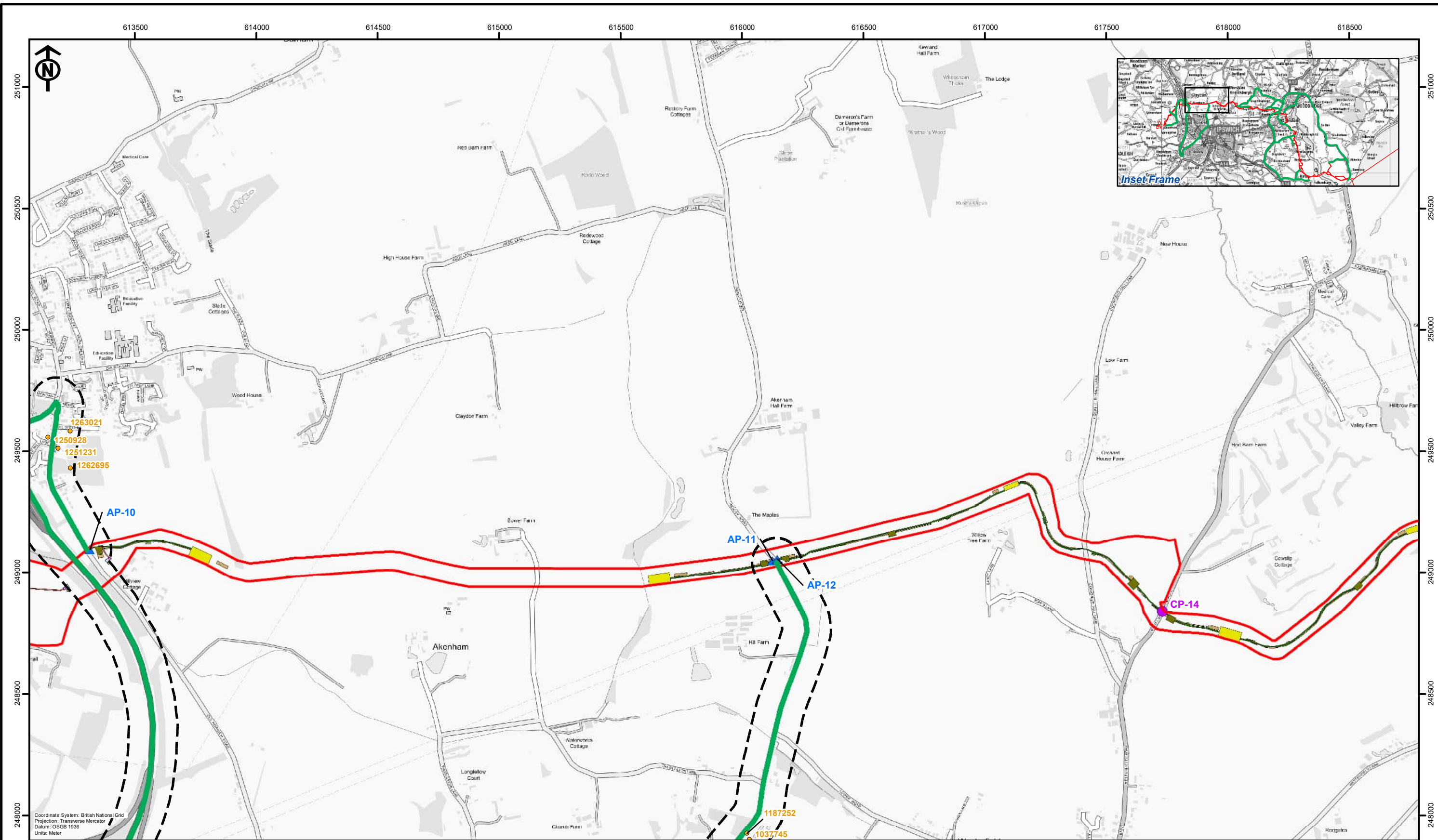
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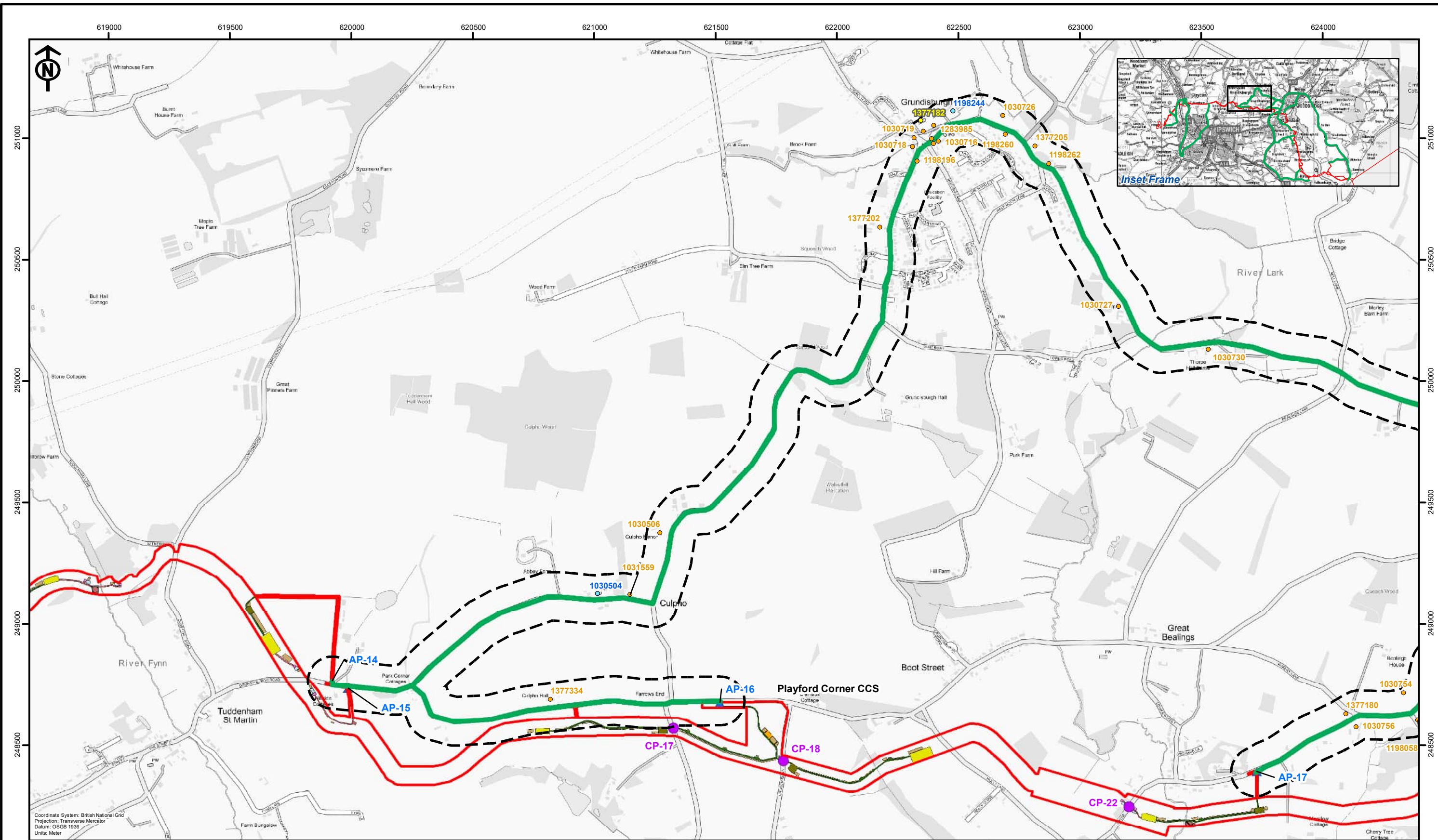
EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Stone Haul Road	<b>Listed Building (Grade)</b>
Crossing Point (Road Crossings Numbered)	Top Soil Strip	Trackway	II
Jointing Bay Hardstanding	Top Soil Bund	Construction Access Route	
	HGV Turning	Construction Access Route 100 m Buffer	



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APPENDIX 2.5 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

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Rev	0
Date	22/11/2023
Layout	N/A



EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	<b>Listed Building (Grade)</b> I II II*
Crossing Point (Road Crossings Numbered)	Consolidated Construction Site Compound	Existing Track	Trackway Crane Pad	
Jointing Bay Hardstanding	Top Soil Strip	HGV Turning	Construction Access Route	
		Stone Haul Road	Construction Access Route 100 m Buffer	



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A	22/11/2023	PW	First Issue

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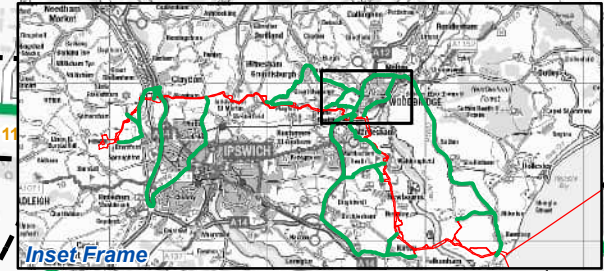
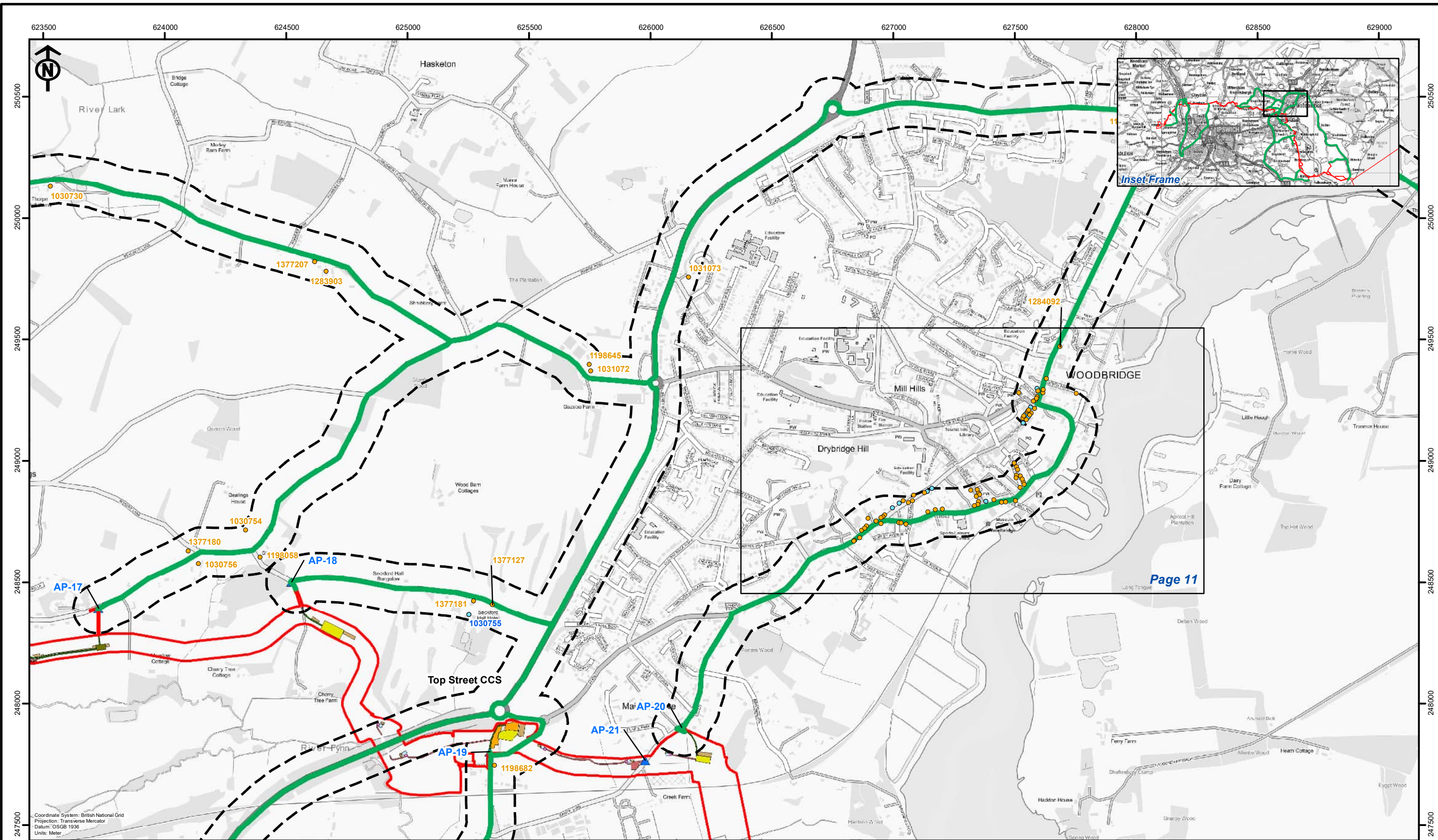
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APPENDIX 2.6 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

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Rev	0
Date	22/11/2023
Layout	N/A



Page 11

EA THREE Development Order Limits	Consolidated Construction Site Compound	HGV Turning	Construction Access Route	II*
Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road	Construction Access Route 100 m Buffer	II
Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	Trackway Crane Pad	<b>Listed Building (Grade)</b>
	Existing Track			



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

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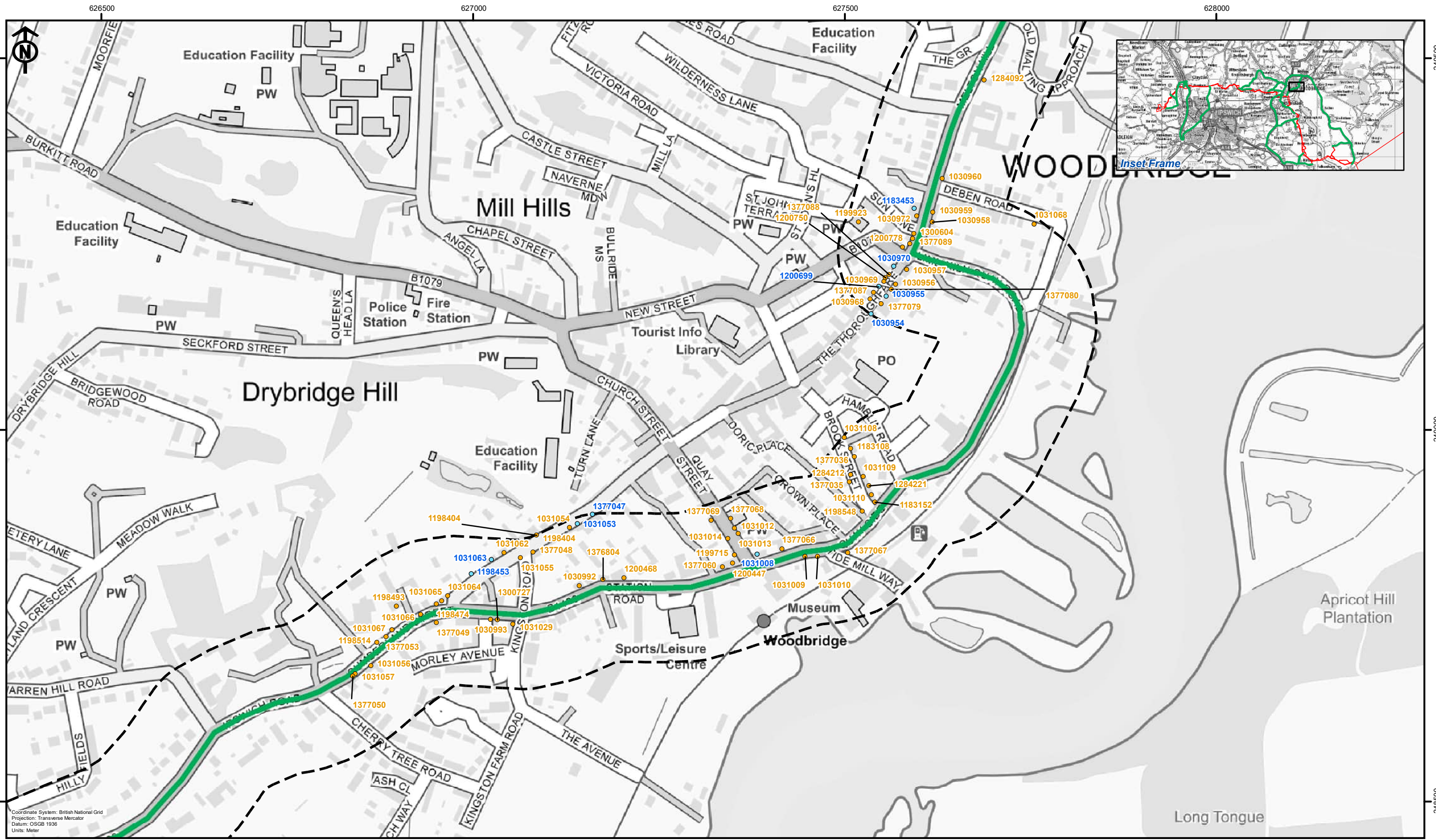
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APPENDIX 2.7 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

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Rev	0
Date	22/11/2023
Layout	N/A



— Construction Access Route      ● II\*  
 Construction Access Route 100 m Buffer  
**Listed Building (Grade)**  
● II



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

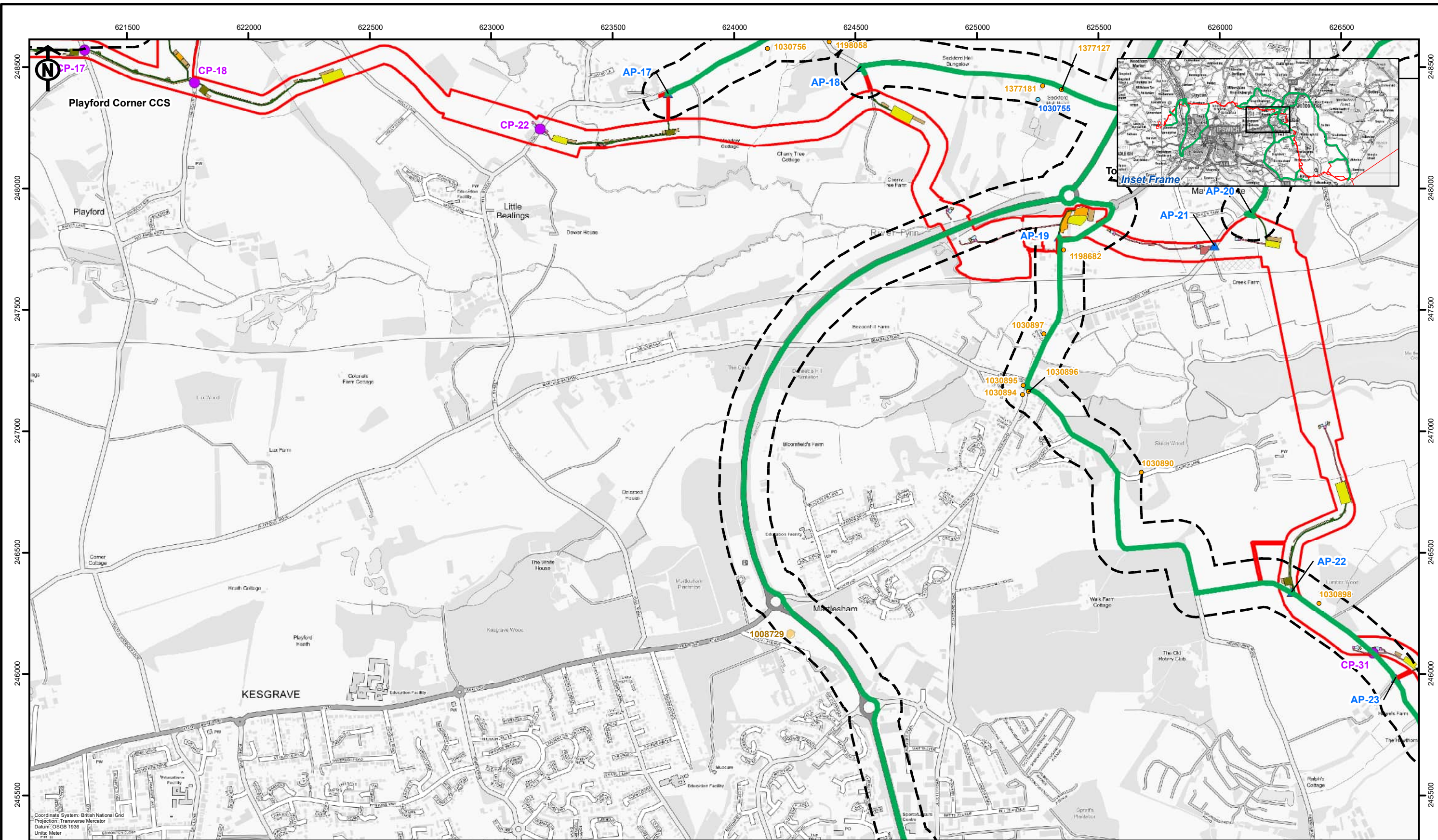
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**EA THREE Cable Route**

APPENDIX 2.8 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	Scheduled Monument
Crossing Point (Road Crossings Numbered)	Consolidated Construction Site Compound	Existing Track	Trackway Crane Pad	<b>Listed Building (Grade)</b>
Joining Bay Hardstanding	Top Soil Strip	HGV Turning	Construction Access Route	II
		Stone Haul Road	Construction Access Route 100 m Buffer	II*



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

Original A3 Plot Scale 1:15,000

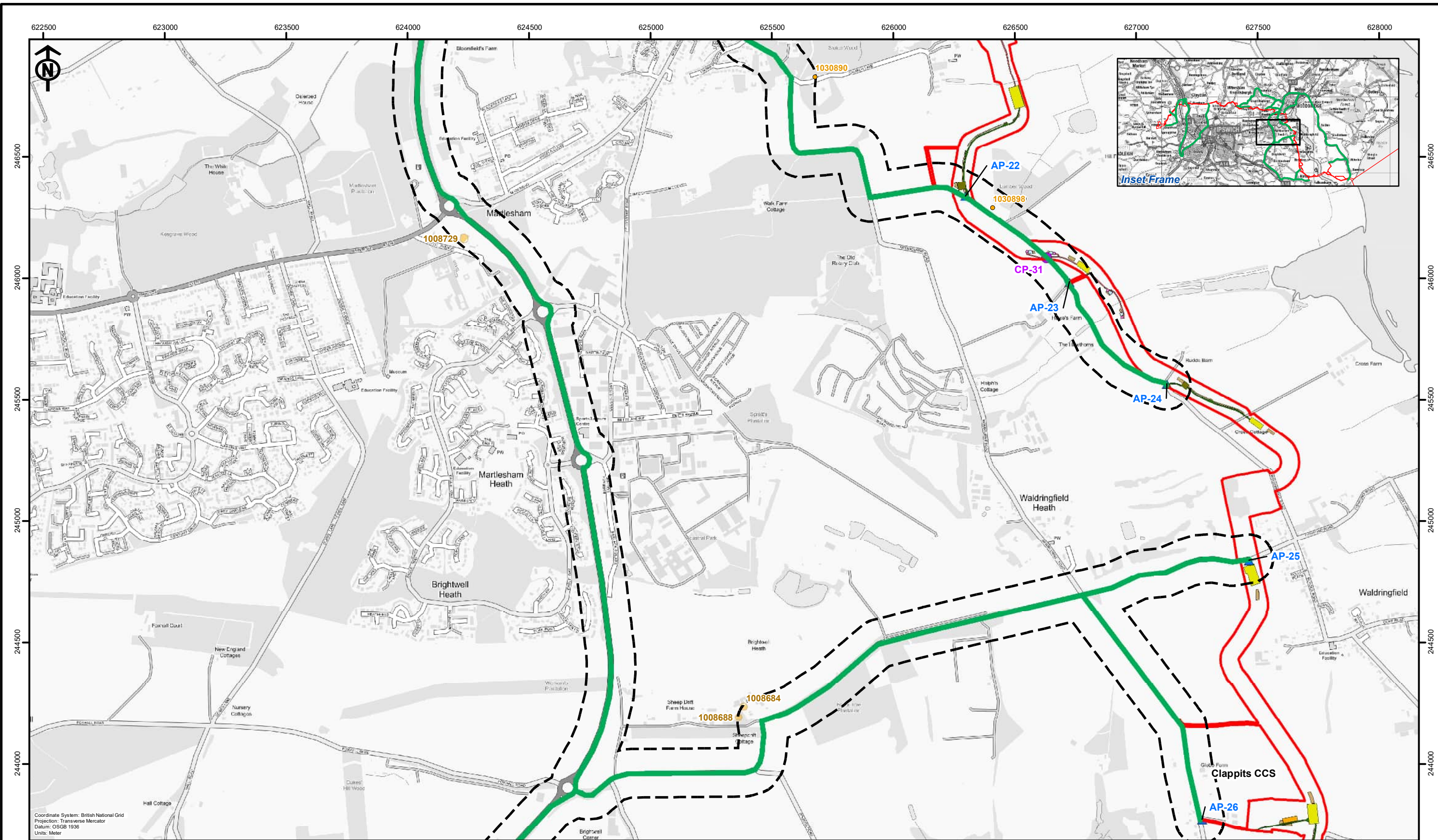
0 250 500 Metres

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**EA THREE Cable Route**  
APPENDIX 2.9 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A





- |  |  |                 |  |                                |
|--|--|-----------------|--|--------------------------------|
| EA THREE Development Order Limits        | Horizontal Direct Drilling Duct Proving Platform | Top Soil Bund   | Trackway                               | <b>Listed Building (Grade)</b> |
| Crossing Point (Road Crossings Numbered) | Consolidated Construction Site Compound          | Existing Track  | Construction Access Route              | II                             |
| Joining Bay Hardstanding                 | Top Soil Strip                                   | HGV Turning     | Construction Access Route 100 m Buffer | Scheduled Monument             |
|  |  | Stone Haul Road |  |                                |



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

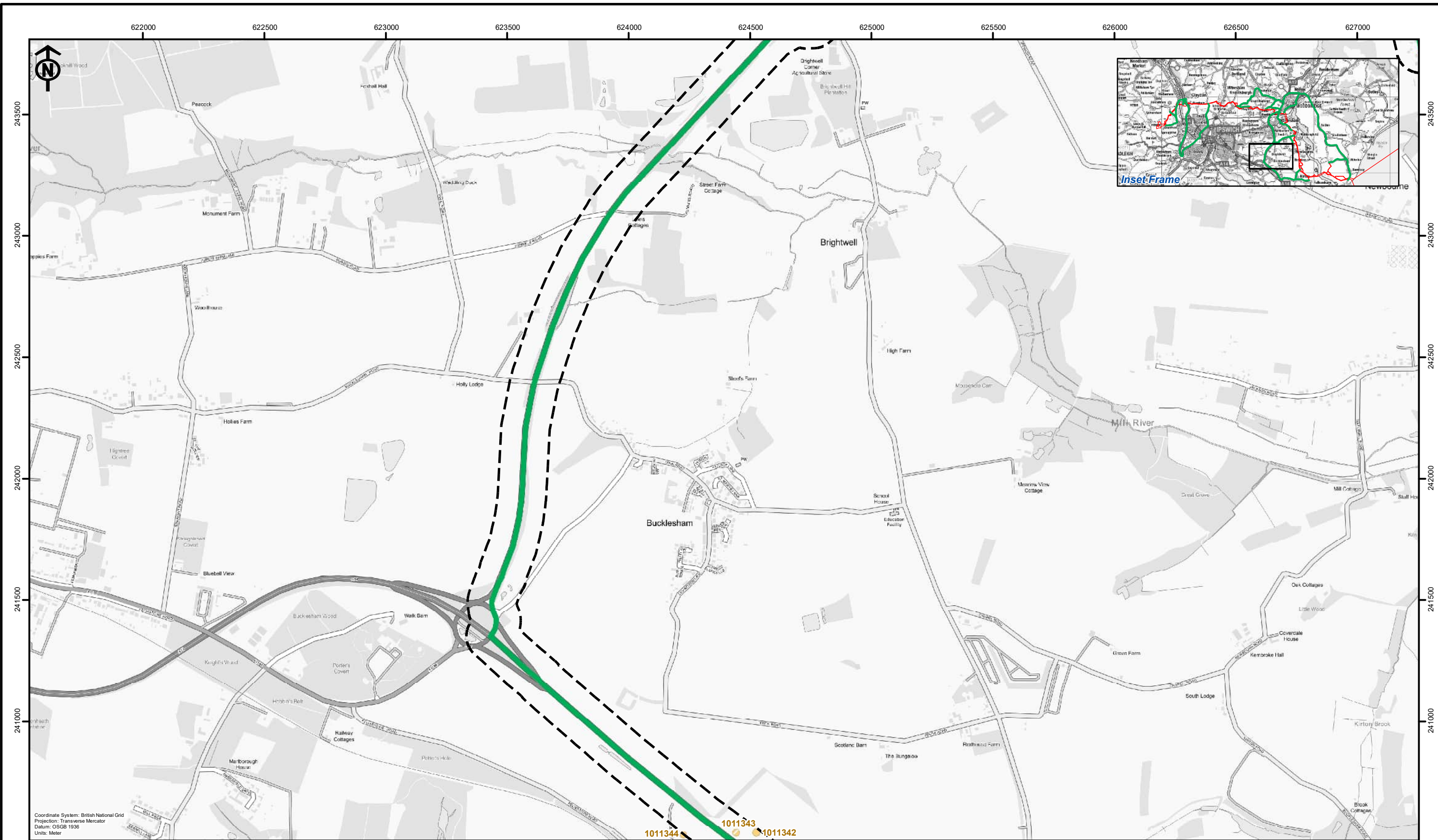
Original A3 Plot Scale 1:15,000

0 250 500 Metres

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**EA THREE Cable Route**  
 APPENDIX 2.10 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- Construction Access Route
- Construction Access Route 100 m Buffer
- Scheduled Monument



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

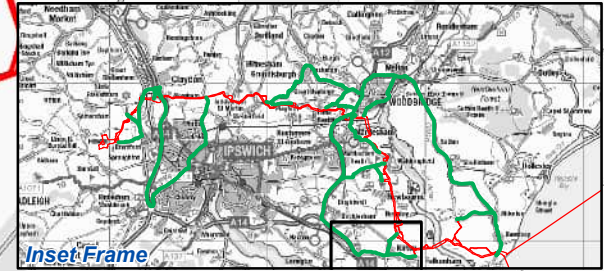
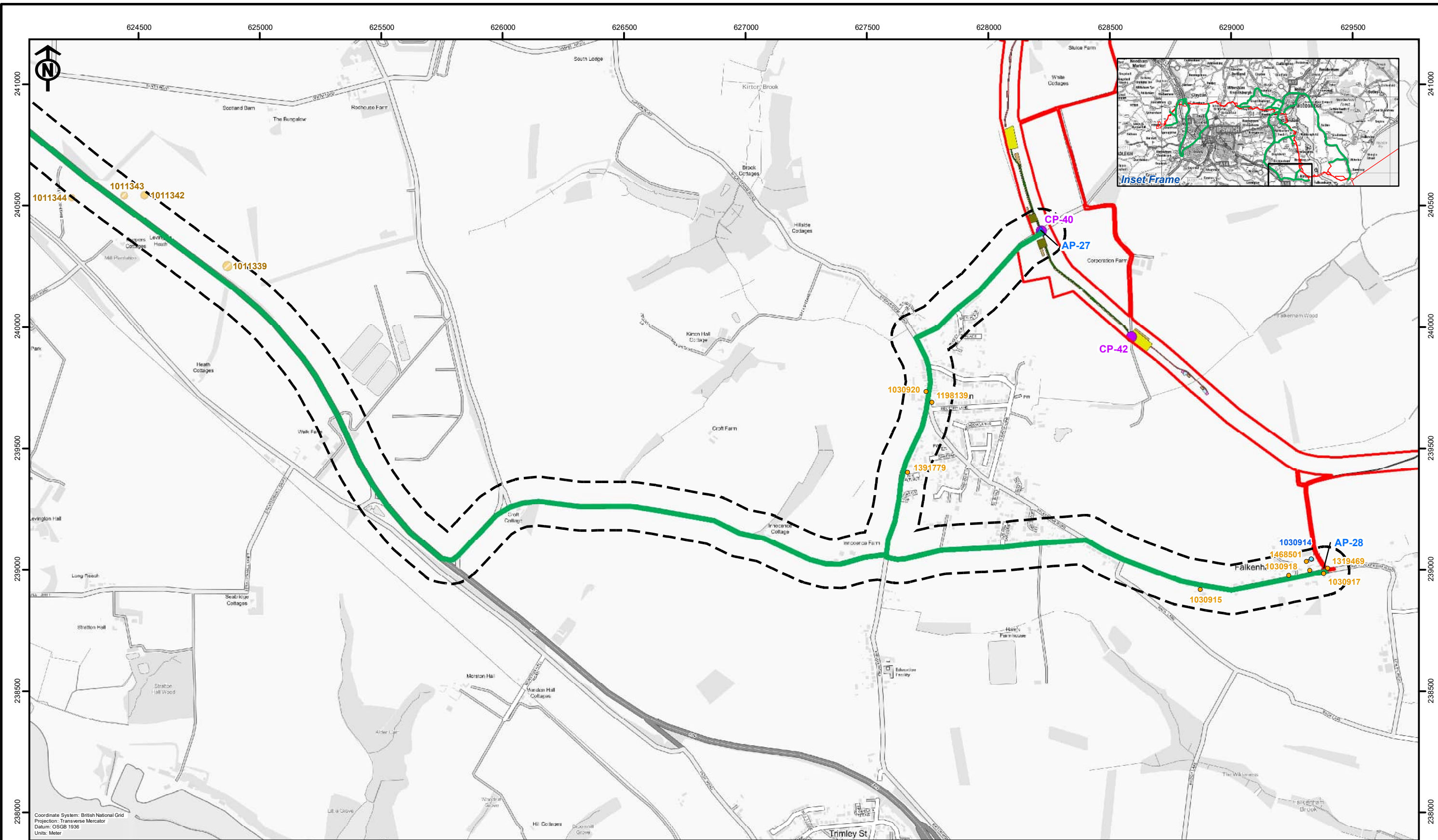
Original A3 Plot Scale 1:15,000

0 250 500 Metres

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**EA THREE Cable Route**  
 APPENDIX 2.11 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



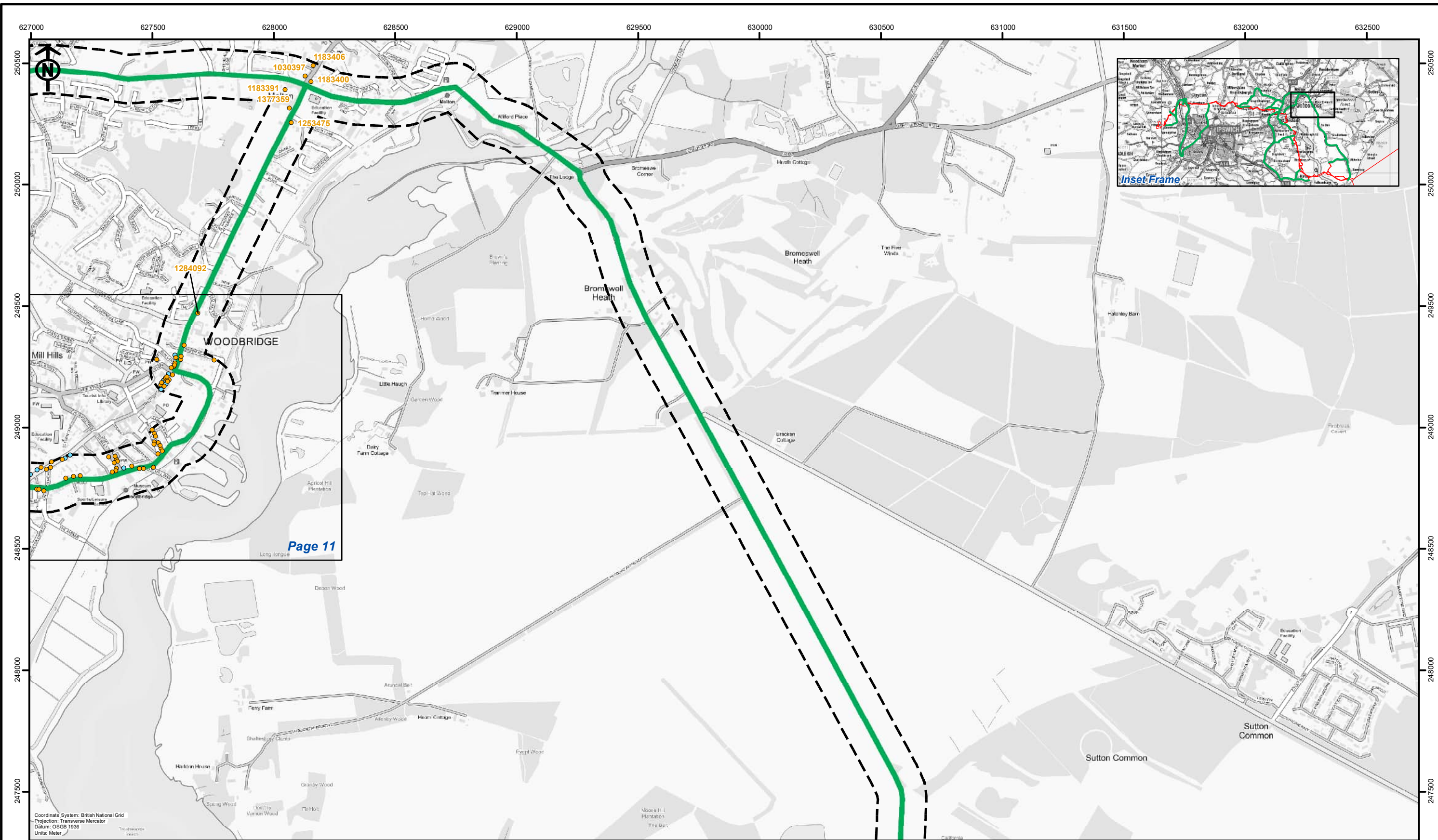
EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	HGV Turning	Construction Access Route 100 m Buffer	II*
Crossing Point (Road Crossings Numbered)	Top Soil Strip	Stone Haul Road	Scheduled Monument	II
Jointing Bay Hardstanding	Top Soil Bund	Trackway	Construction Access Route	<b>Listed Building (Grade)</b>
	Existing Track			



Original A3 Plot Scale	1:15,000		
Scale	0 250 500 Metres		
Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

**EA THREE Cable Route**  
 APPENDIX 2.12 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
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Layout	N/A



Page 11

- Construction Access Route
- Construction Access Route 100 m Buffer
- Listed Building (Grade II)
- II\*



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

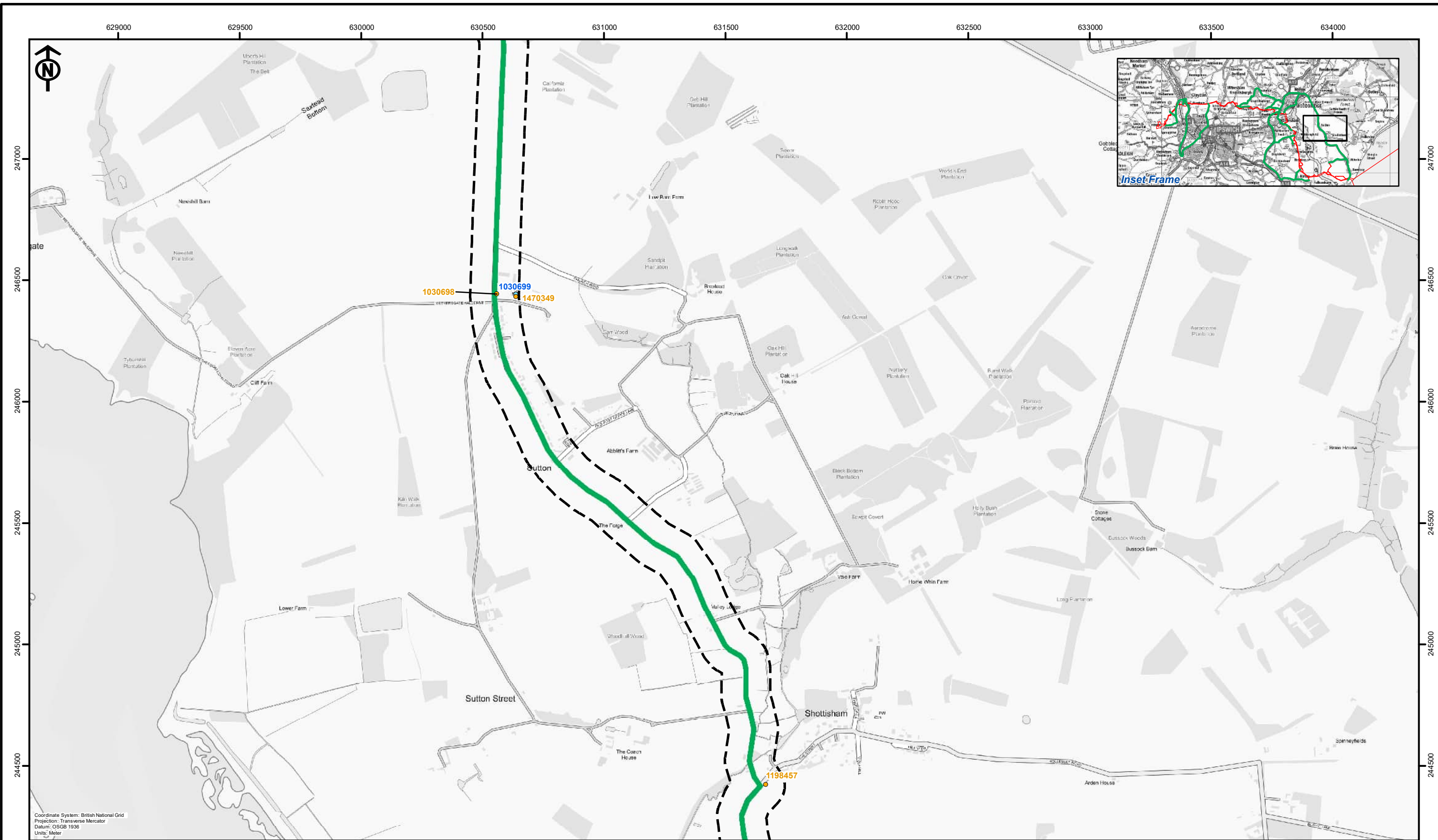
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**EA THREE Cable Route**  
APPENDIX 2.13 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drp No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- Construction Access Route
- Construction Access Route 100 m Buffer
- Listed Building (Grade II)



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

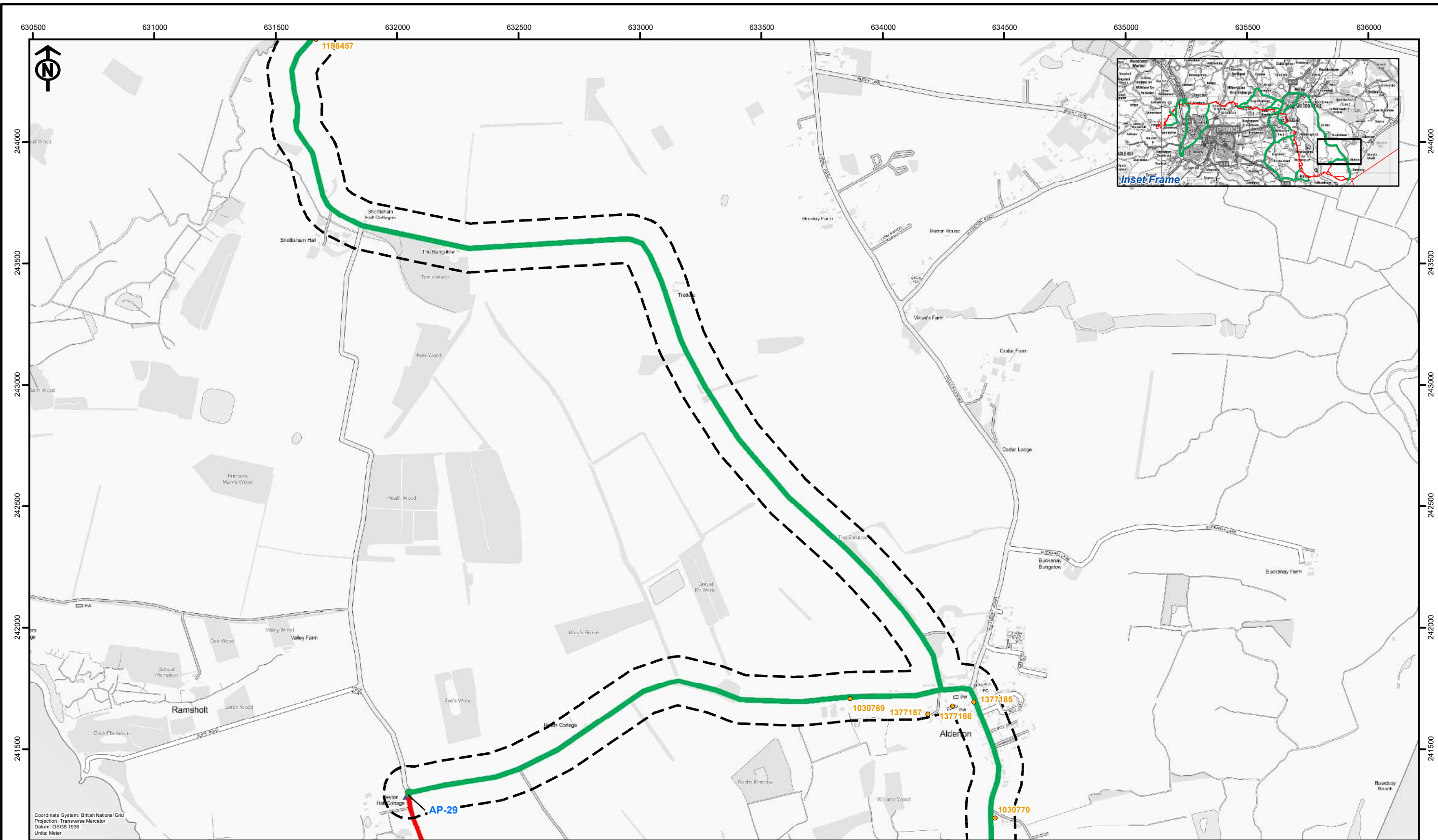
Original A3 Plot Scale 1:15,000

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 APPENDIX 2.14 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drp No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Construction Access Route 100 m Buffer
- Existing Track
- Construction Access Route
- Listed Building (Grade)
- II



Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

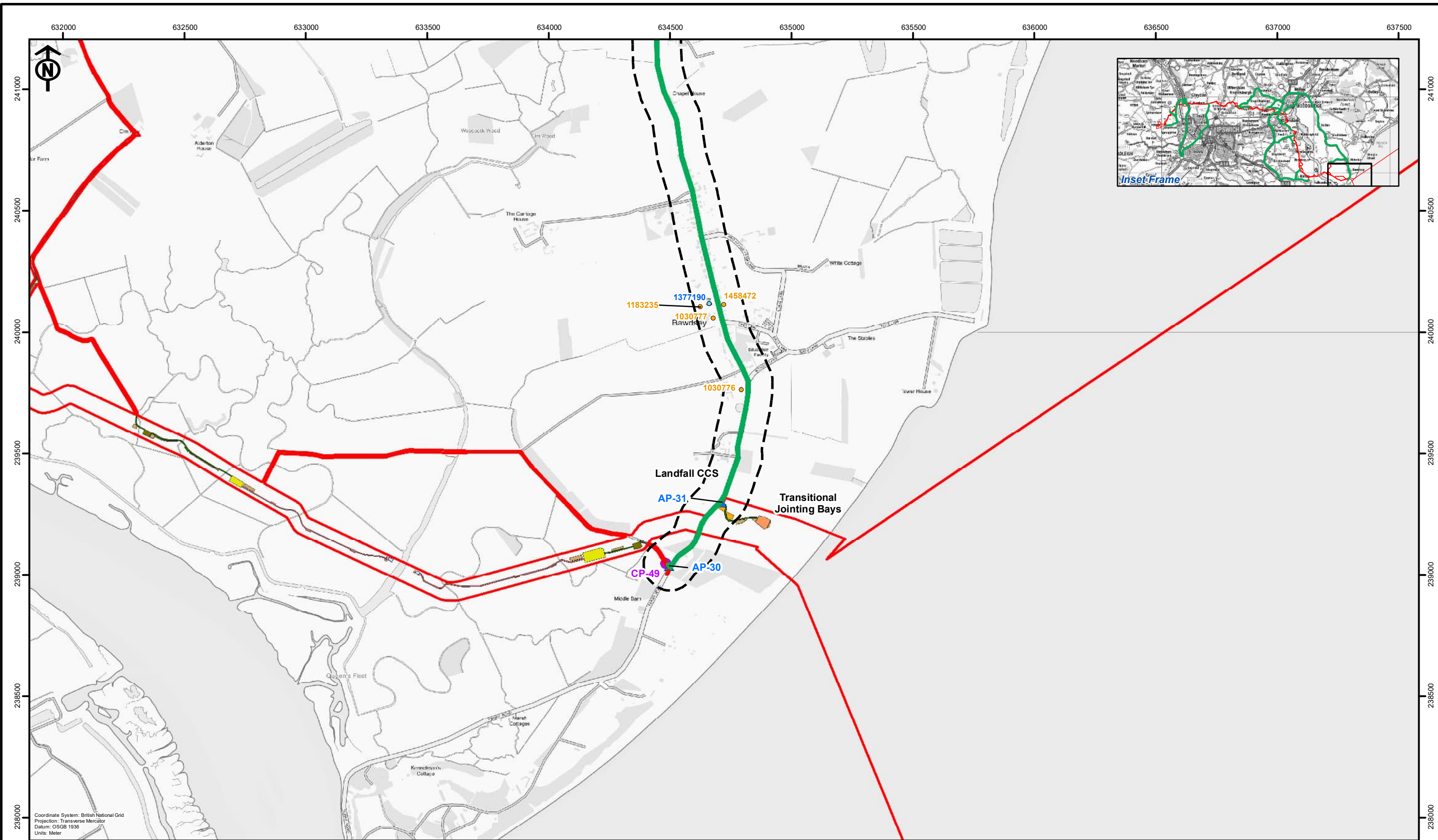
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 APPENDIX 2.15 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road	<b>Listed Building (Grade)</b> II II*
Crossing Point (Road Crossings Numbered)	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	
Transition Jointing Bays	Consolidated Construction Site Compound	Existing Track	HGV Turning	Construction Access Route 100 m Buffer

Rev	Date	By	Comment
A	22/11/2023	PW	First Issue

Original A3 Plot Scale 1:15,000

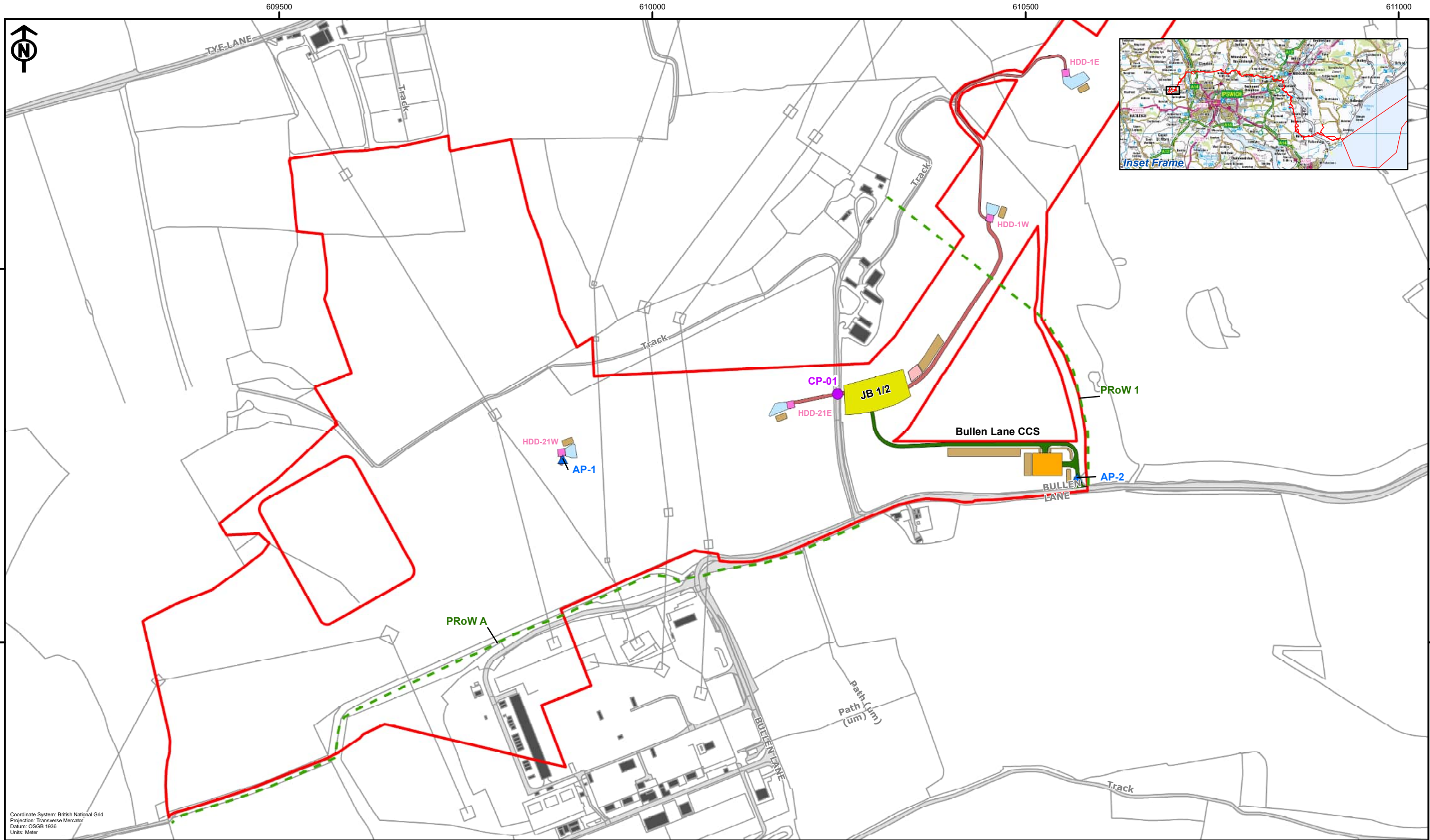
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**EA THREE Cable Route**

APPENDIX 2.16 Scheduled Monuments and Listed Buildings Within 100 m Of The Designated Construction HGV Routes

Drg No	404.5356.00006.0046.0
Rev	0
Date	22/11/2023
Layout	N/A



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 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

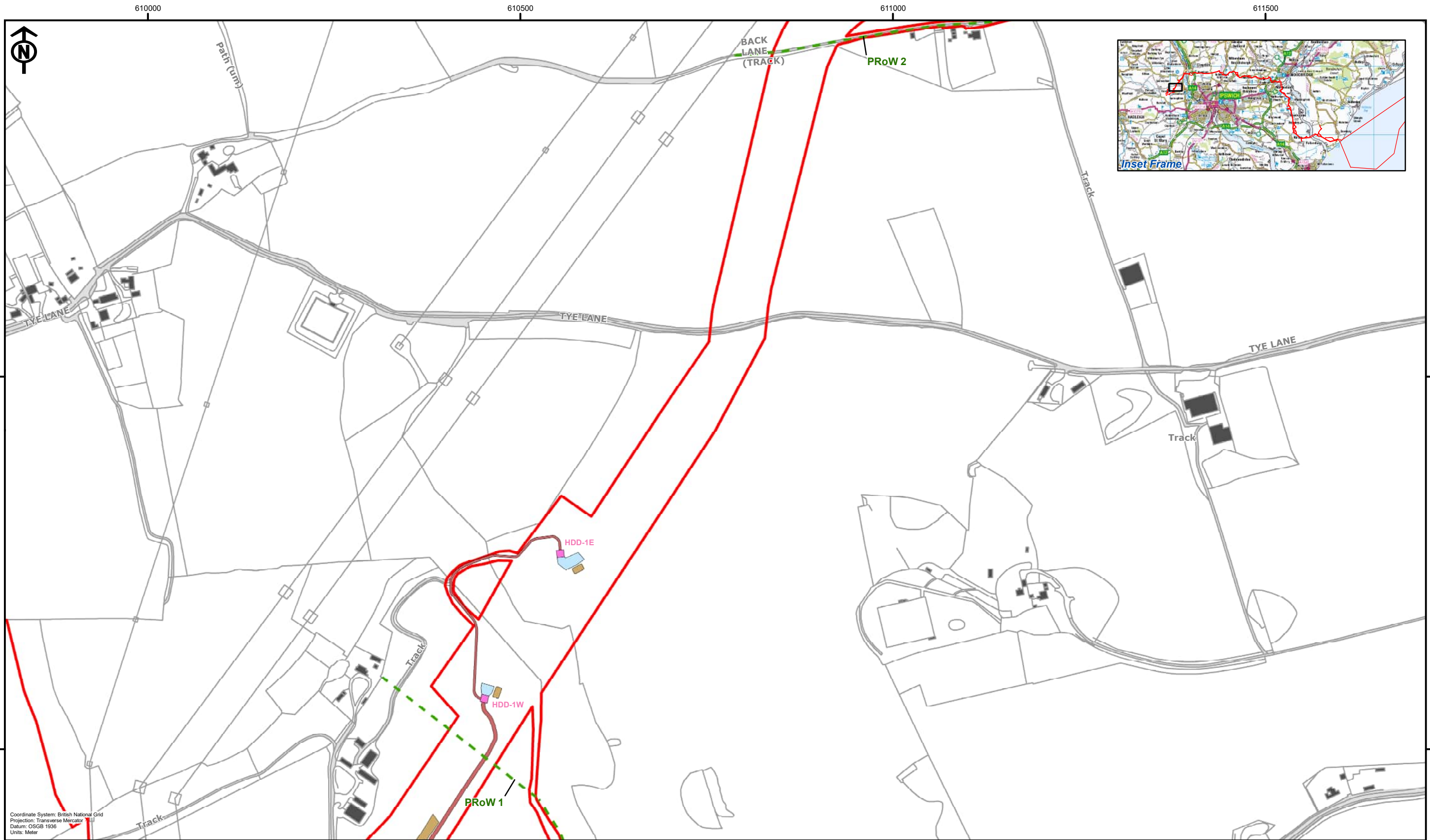
EA THREE Development Order Limits	Jointing Bay Hardstanding	Top Soil Strip	Trackway
Crossing Point (Road Crossings Numbered)	Horizontal Direct Drilling Duct Proving Platform	Indicative Top Soil Bund	Indicative Subsoil Bund
Public Right of Way	Consolidated Construction Site Compound	Stone Haul Road	



Original A3 Plot Scale 1:5,000	0 100 200 Metres								
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Drg No	404.5356.00006.0001.0
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Layout	N/A





Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Top Soil Strip
Public Right of Way	Indicative Top Soil Bund
Horizontal Direct Drilling Duct Proving Platform	Trackway



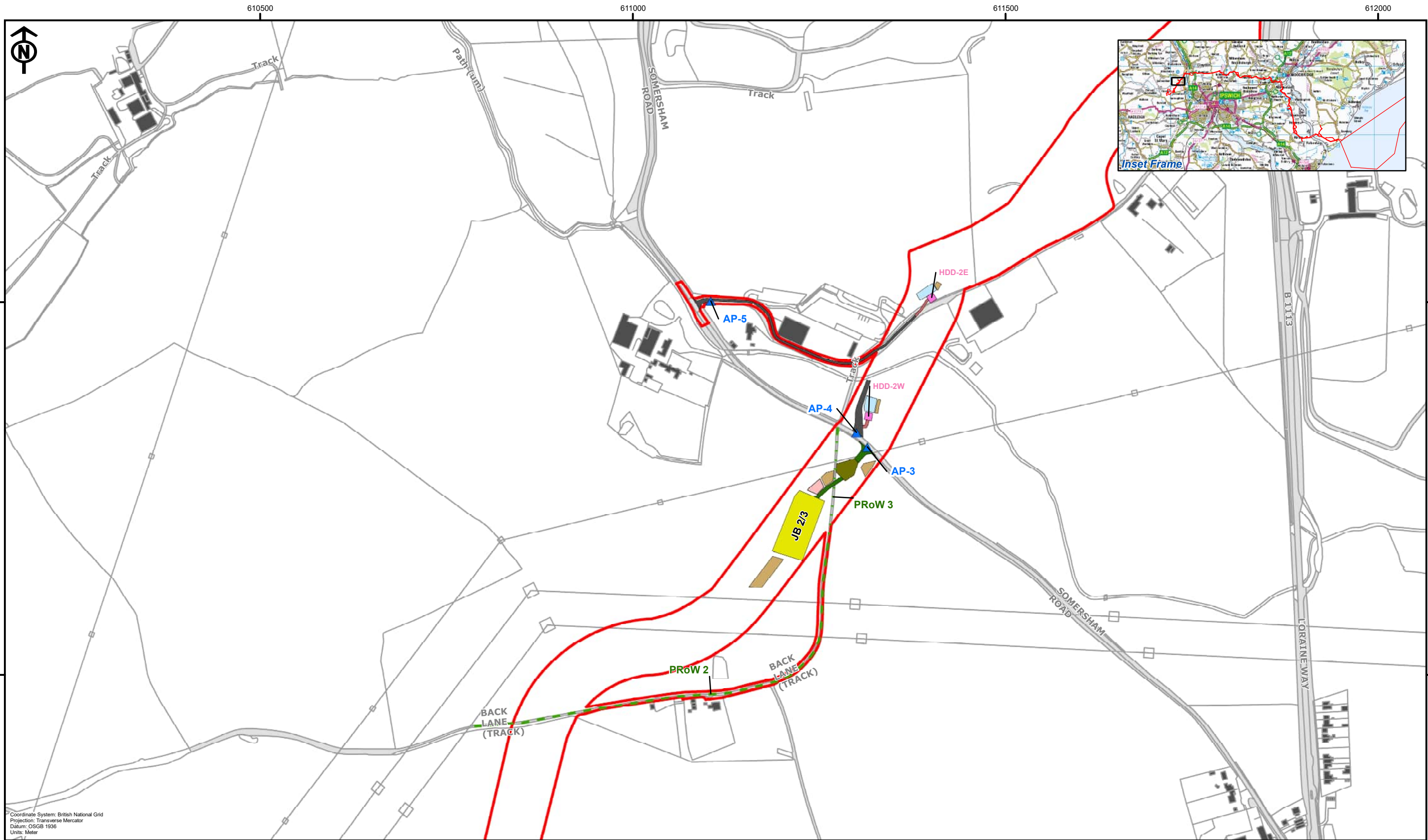
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Original A3 Plot Scale 1:5,000

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**EA THREE Cable Route**  
 FIGURE 1.2 Site Context Plan

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Date	29/11/2023
Layout	N/A



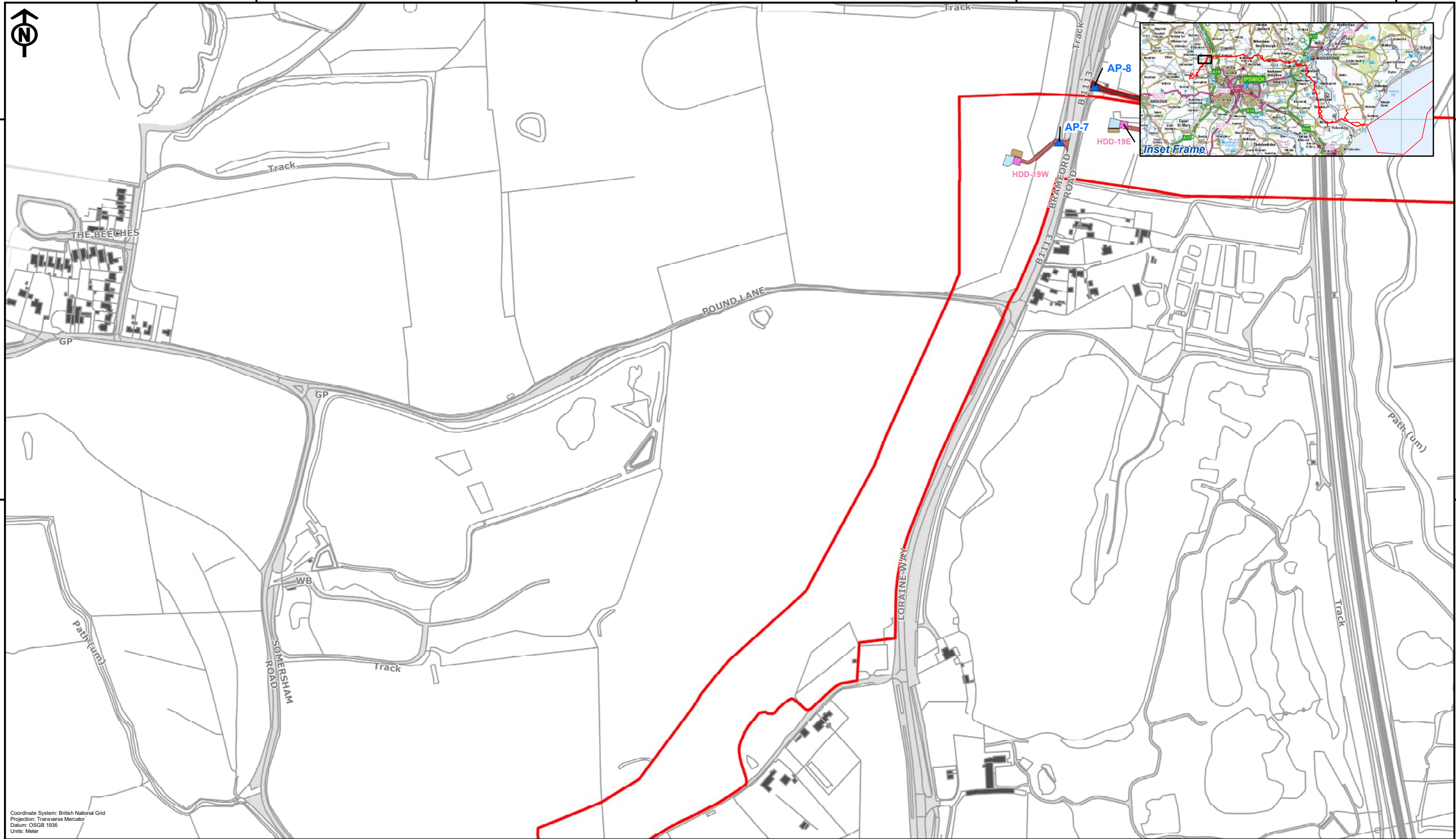
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 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Existing Track
Public Right of Way	Top Soil Strip	HGV Turning
Jointing Bay Hardstanding	Indicative Top Soil Bund	Stone Haul Road
Indicative Subsoil Bund	Trackway	

Original A3 Plot Scale 1:5,000	0 100 200 Metres
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**EA THREE Cable Route**  
 FIGURE 1.3 Site Context Plan

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Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Stone Haul Road
- Trackway
- Existing Track



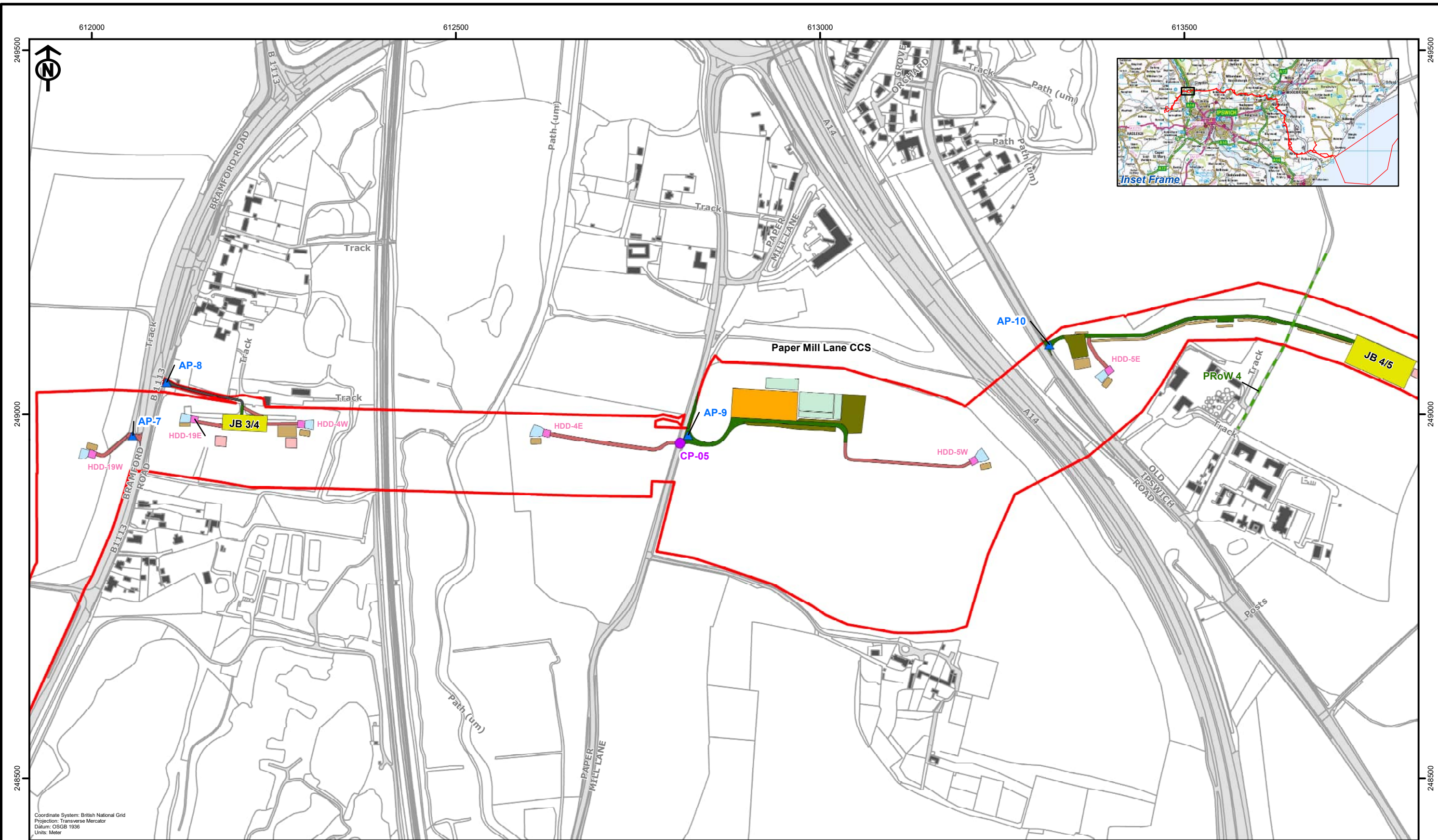
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Original A3 Plot Scale 1:5,000

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**EA THREE Cable Route**  
 FIGURE 1.4 Site Context Plan

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Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Jointing Bay Hardstanding
- Soil Storage
- Existing Track
- Crossing Point (Road Crossings Numbered)
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- HGV Turning
- Public Right of Way
- Consolidated Construction Site Compound
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Trackway



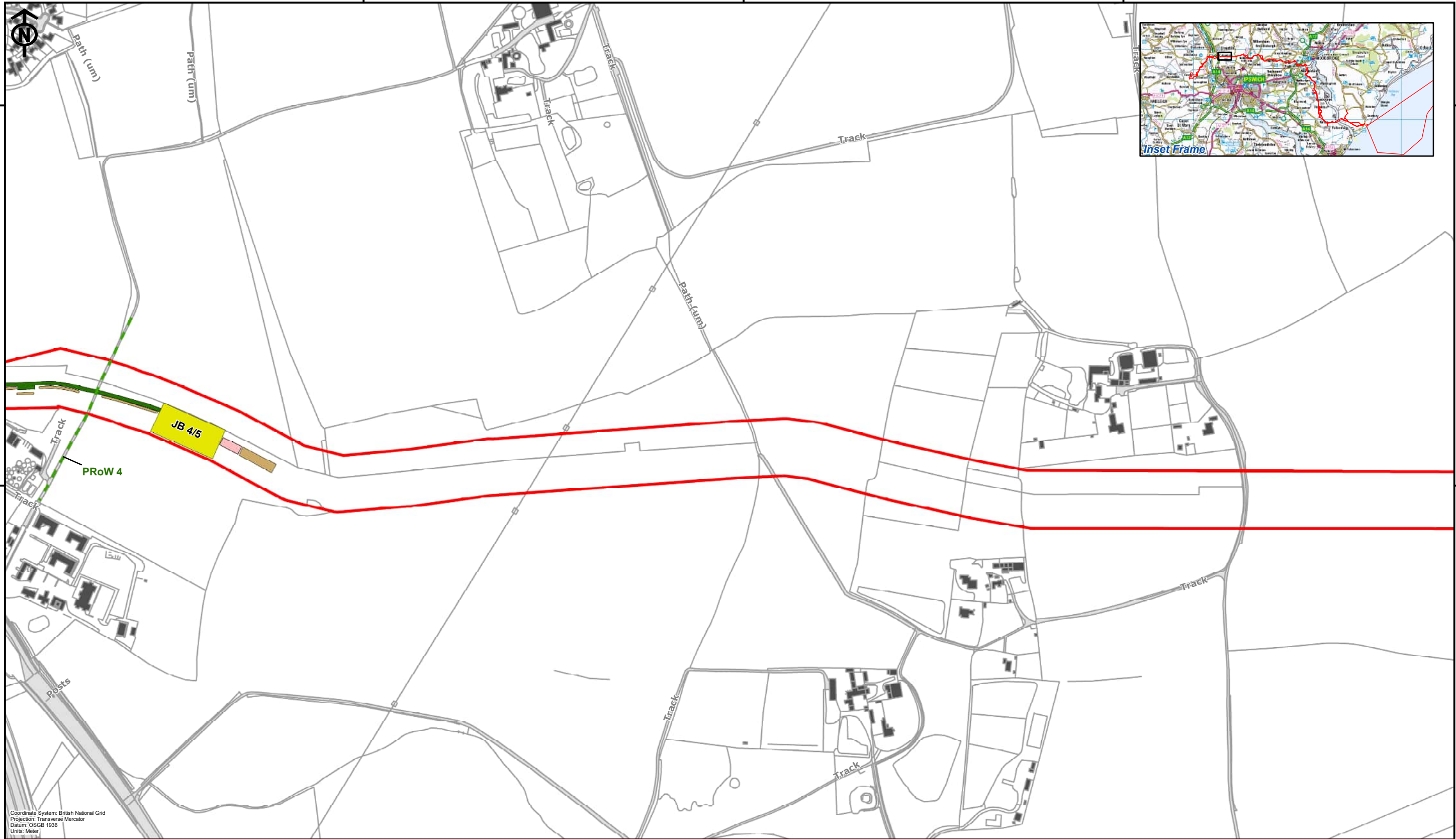
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Original A3 Plot Scale 1:5,000  
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**EA THREE Cable Route**  
 FIGURE 1.5 Site Context Plan

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Rev	0
Date	29/11/2023
Layout	N/A



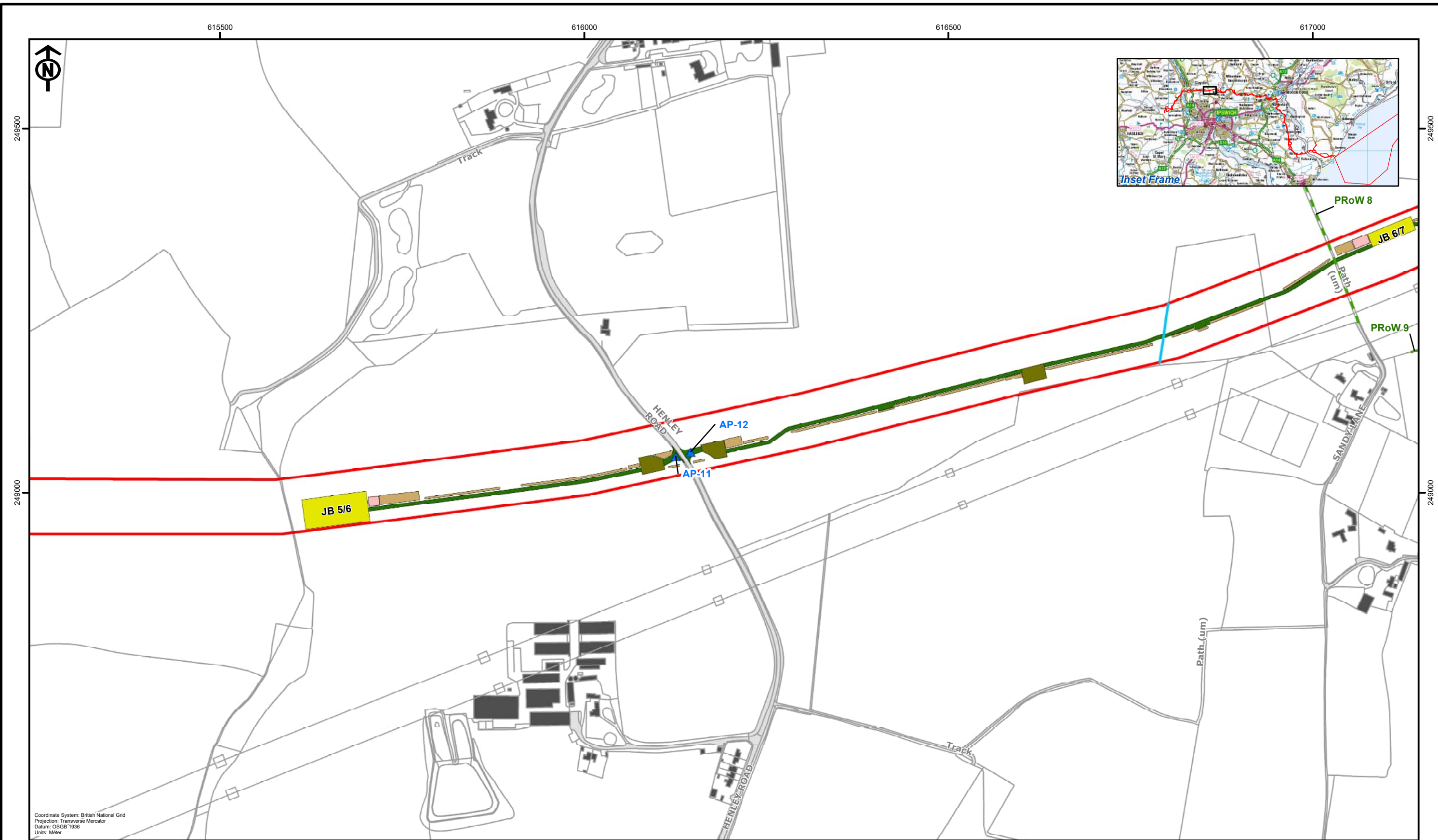
EA THREE Development Order Limits	Indicative Subsoil Bund
Public Right of Way	Stone Haul Road
Jointing Bay Hardstanding	
Indicative Top Soil Bund	



Original A3 Plot Scale	0	100	200 Metres
1:5,000			
Rev	Date	By	Comment
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**EA THREE Cable Route**  
 FIGURE 1.6 Site Context Plan

Drg No	404.5356.00006.0001.0
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Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- HGV Turning
- Stone Haul Road



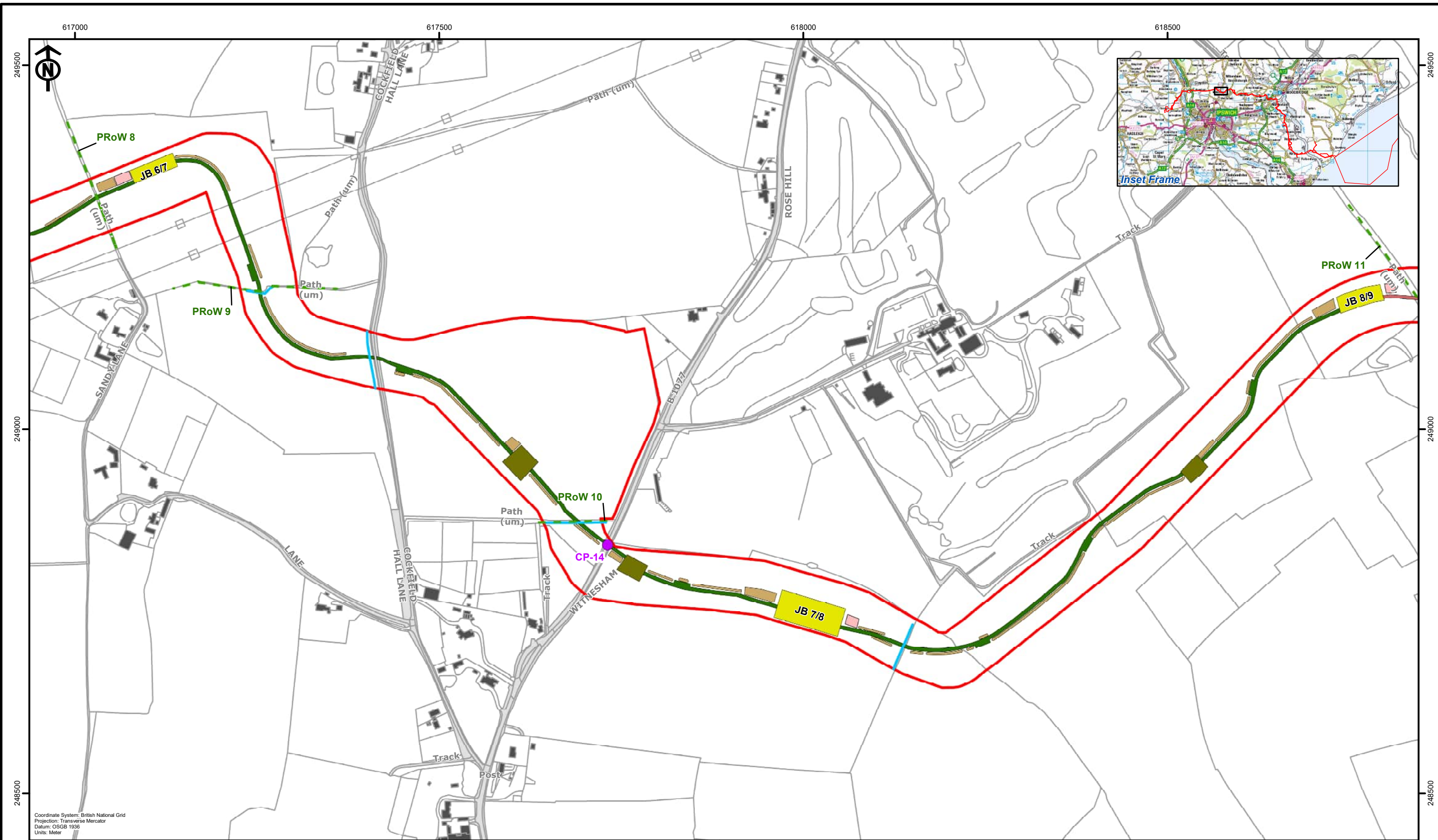
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**EA THREE Cable Route**  
 FIGURE 1.7 Site Context Plan

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Rev	0
Date	29/11/2023
Layout	N/A



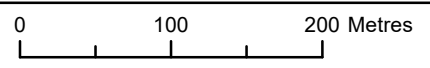
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 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Watercourse within the DOL
- HGV Turning
- Jointing Bay Hardstanding
- Indicative Top Soil Bund
- Stone Haul Road
- Crossing Point (Road Crossings Numbered)
- Public Right of Way
- Indicative Subsoil Bund
- Trackway



Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

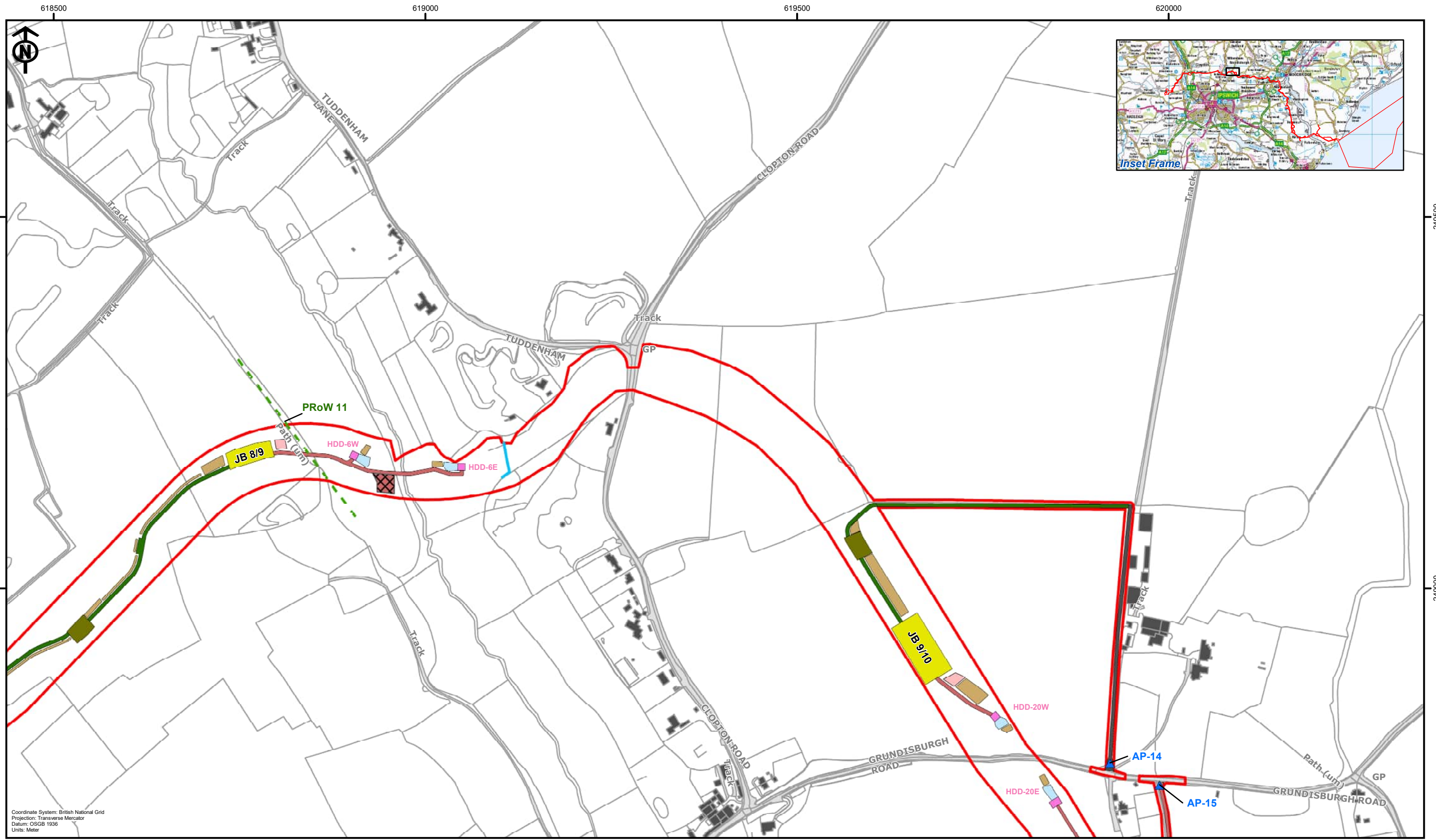
Original A3 Plot Scale  
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**EA THREE Cable Route**  
 FIGURE 1.8 Site Context Plan

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Layout	N/A

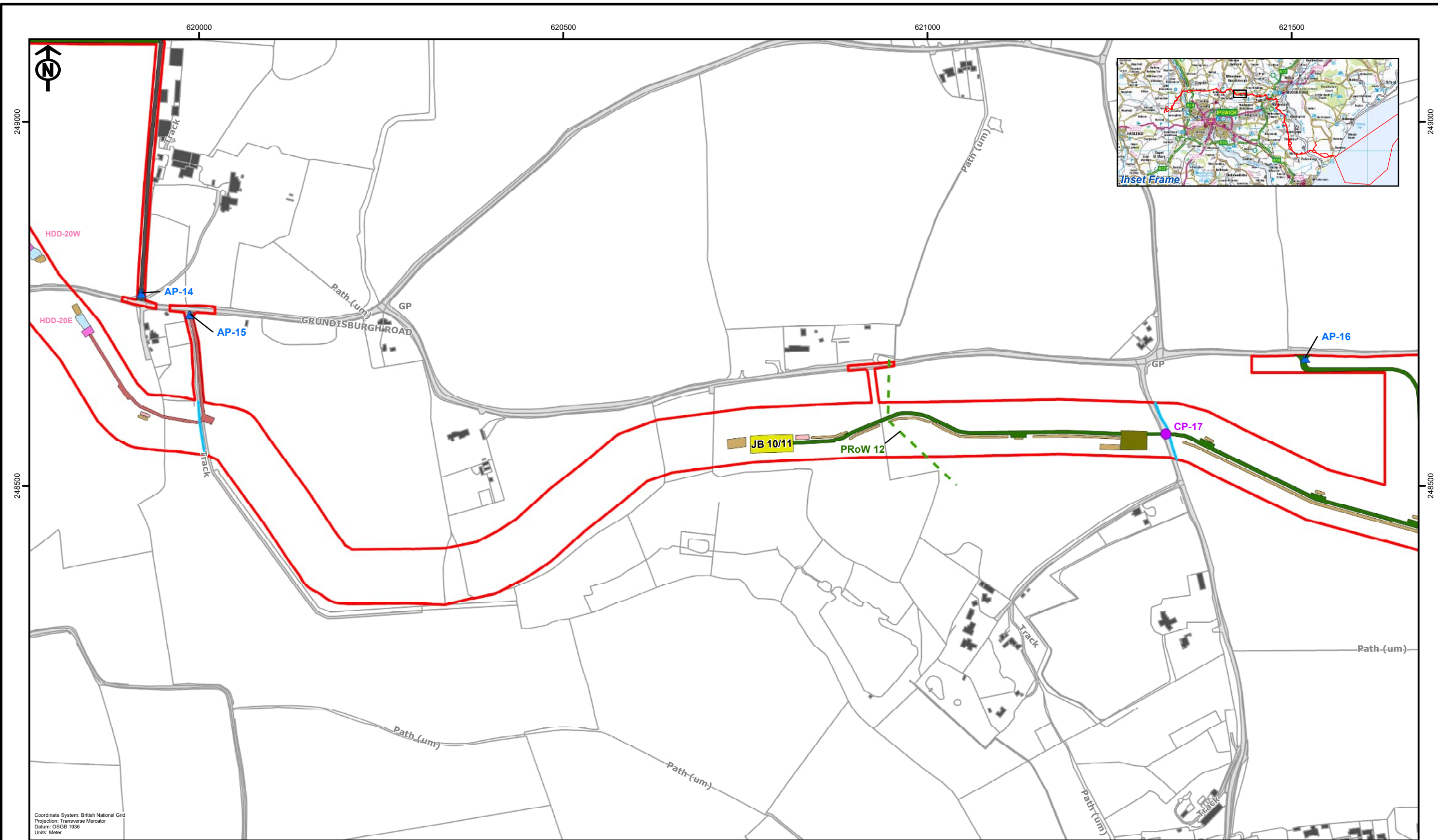


EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Existing Track	Trackway Crane Pad
Public Right of Way	Top Soil Strip	HGV Turning	Stone Haul Road
Watercourse within the DOL	Indicative Top Soil Bund	Trackway	
Jointing Bay Hardstanding	Indicative Subsoil Bund		

	Original A3 Plot Scale 1:5,000			<b>EA THREE Cable Route</b>		Drng No	404.5356.00006.0001.0						
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Rev	Date	By	Comment										
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						Layout	N/A						

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Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Watercourse within the DOL
- Indicative Top Soil Bund
- Stone Haul Road
- Jointing Bay Hardstanding
- Indicative Subsoil Bund
- Trackway
- Crossing Point (Road Crossings Numbered)
- Horizontal Direct Drilling Duct Proving Platform
- Existing Track
- HGV Turning
- Public Right of Way
- Top Soil Strip



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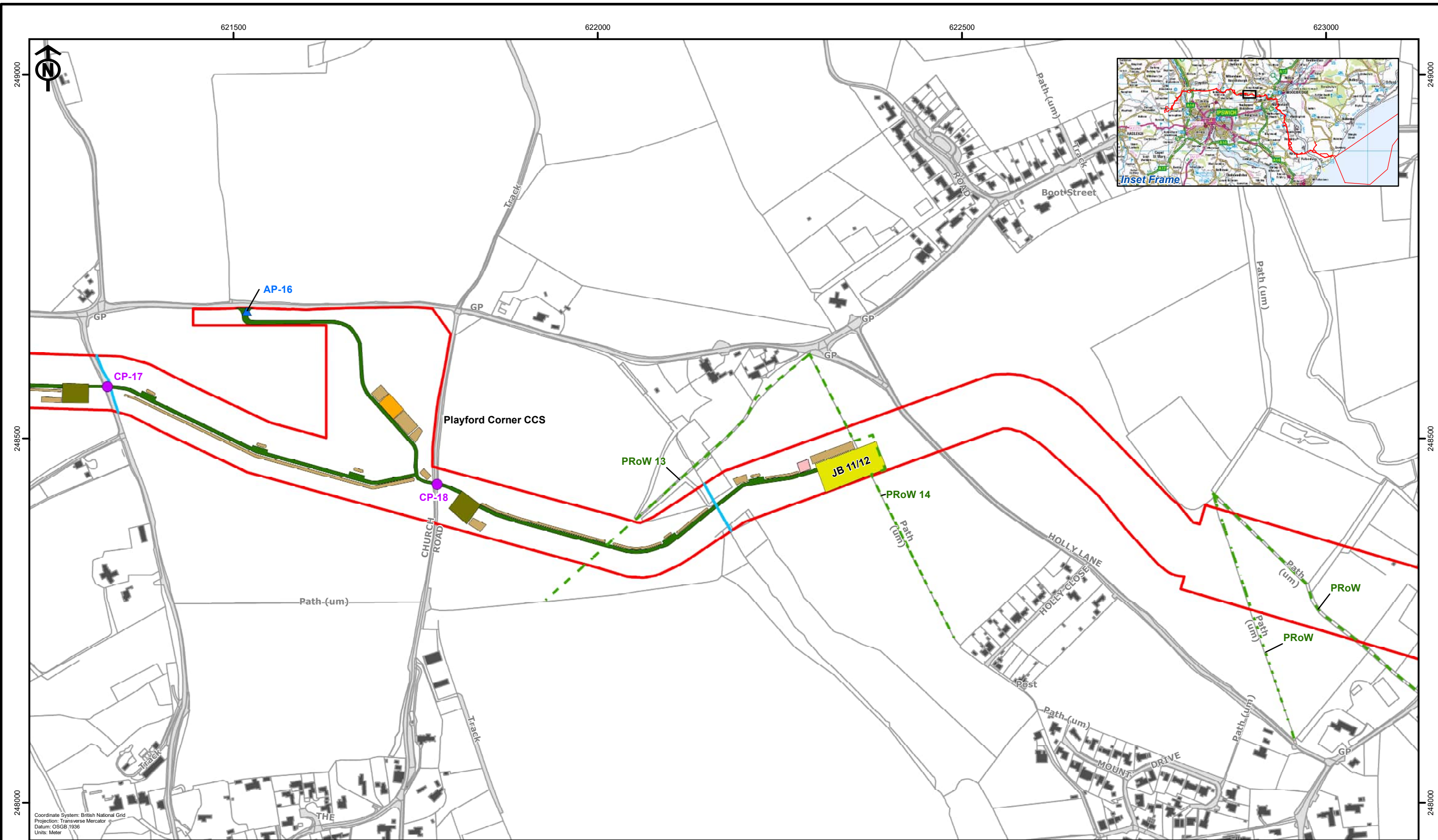
Original A3 Plot Scale 1:5,000

0 100 200 Metres

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**EA THREE Cable Route**  
 FIGURE 1.10 Site Context Plan

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Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Watercourse within the DOL
- Indicative Subsoil Bund
- Jointing Bay Hardstanding
- HGV Turning
- Consolidated Construction Site Compound
- Stone Haul Road
- Crossing Point (Road Crossings Numbered)
- Indicative Top Soil Bund
- Public Right of Way



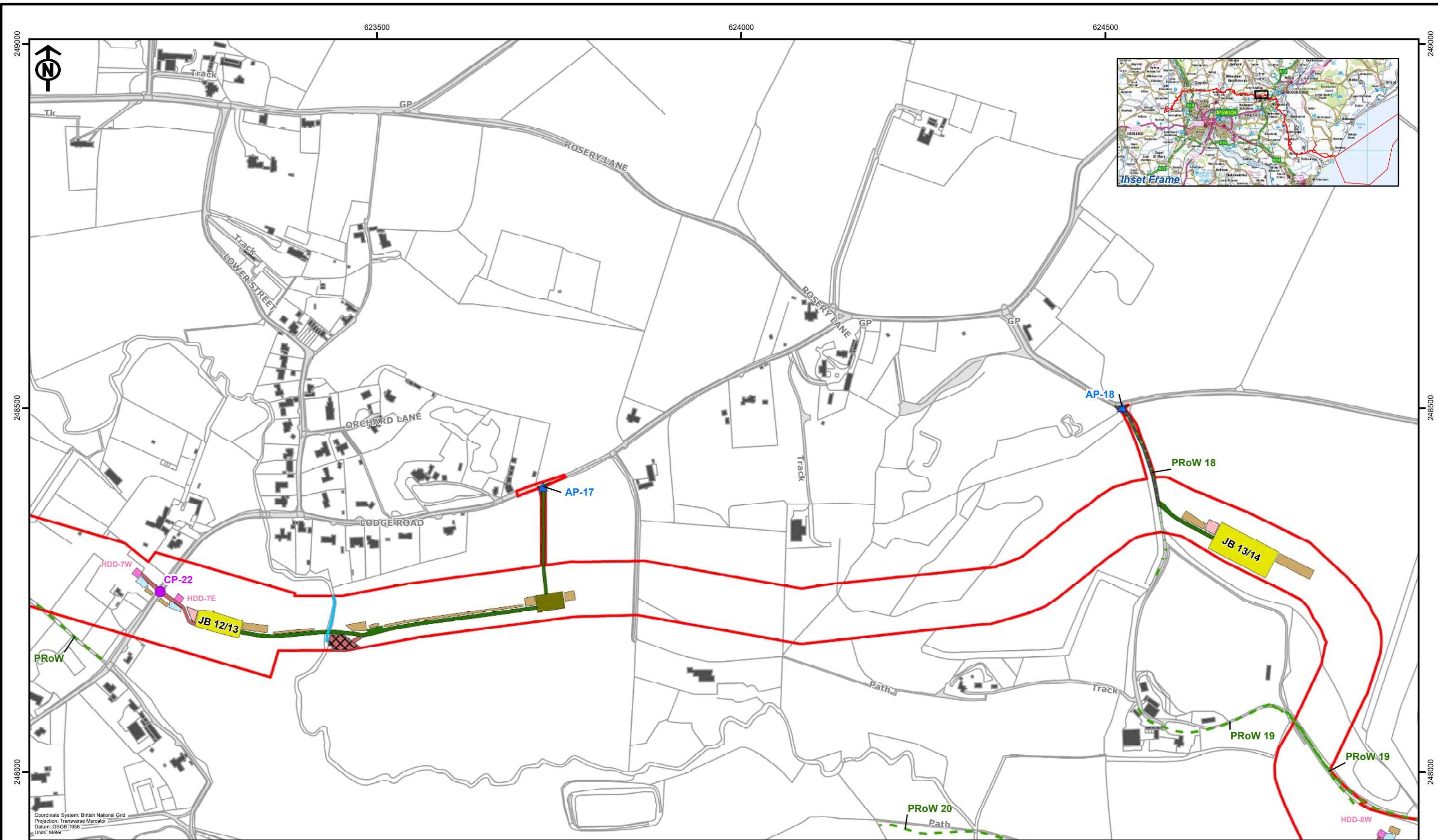
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 0 100 200 Metres

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**EA THREE Cable Route**  
 FIGURE 1.11 Site Context Plan

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Layout	N/A



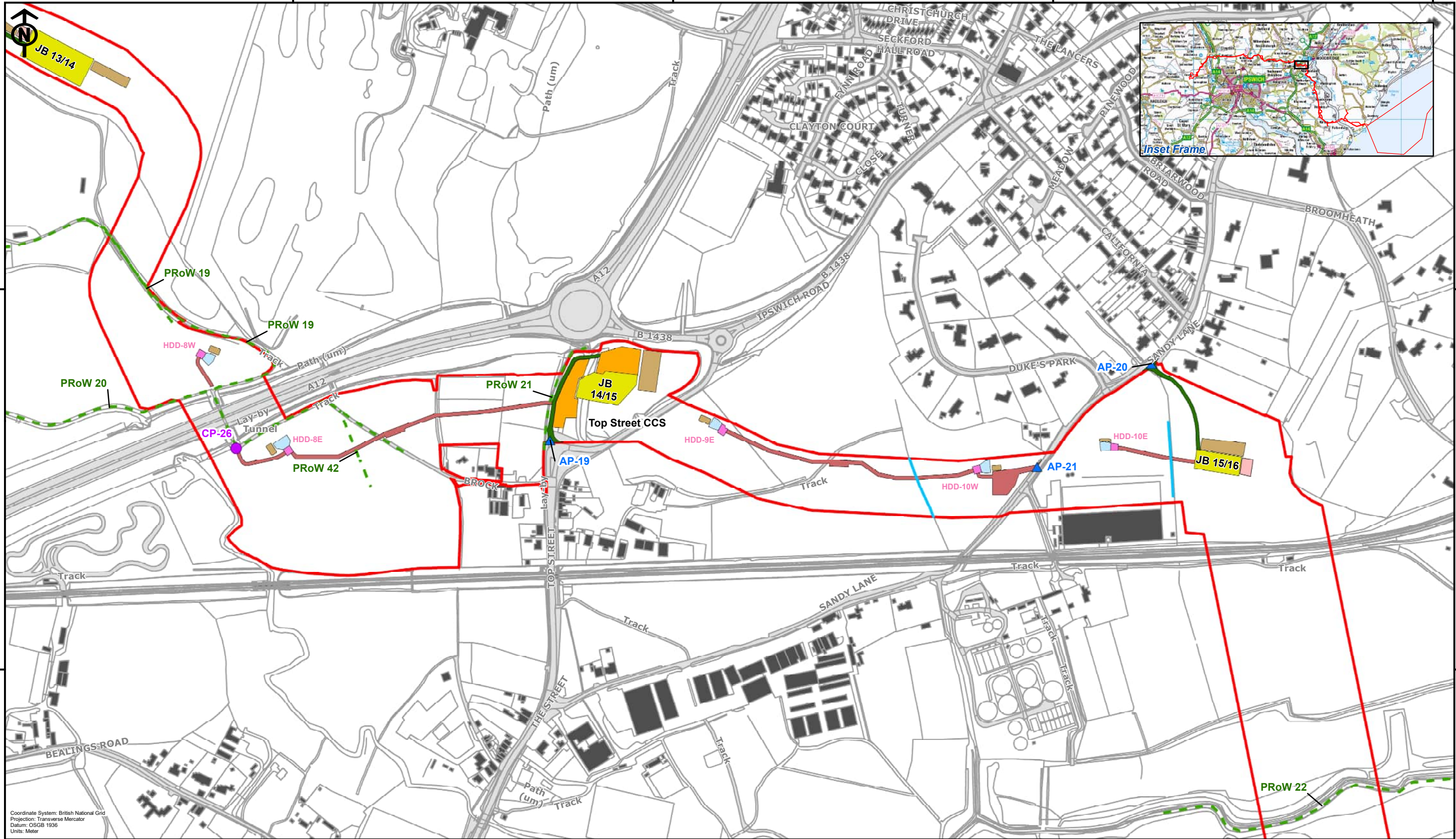
EA THREE Development Order Limits	Watercourse within the DOL	Indicative Top Soil Bund	Stone Haul Road
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Indicative Subsoil Bund	Trackway
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Existing Track	Trackway Crane Pad
Top Soil Strip	Top Soil Strip	HGV Turning	



Original A3 Plot Scale	0	100	200 Metres
1:5,000			
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**EA THREE Cable Route**  
 FIGURE 1.12 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



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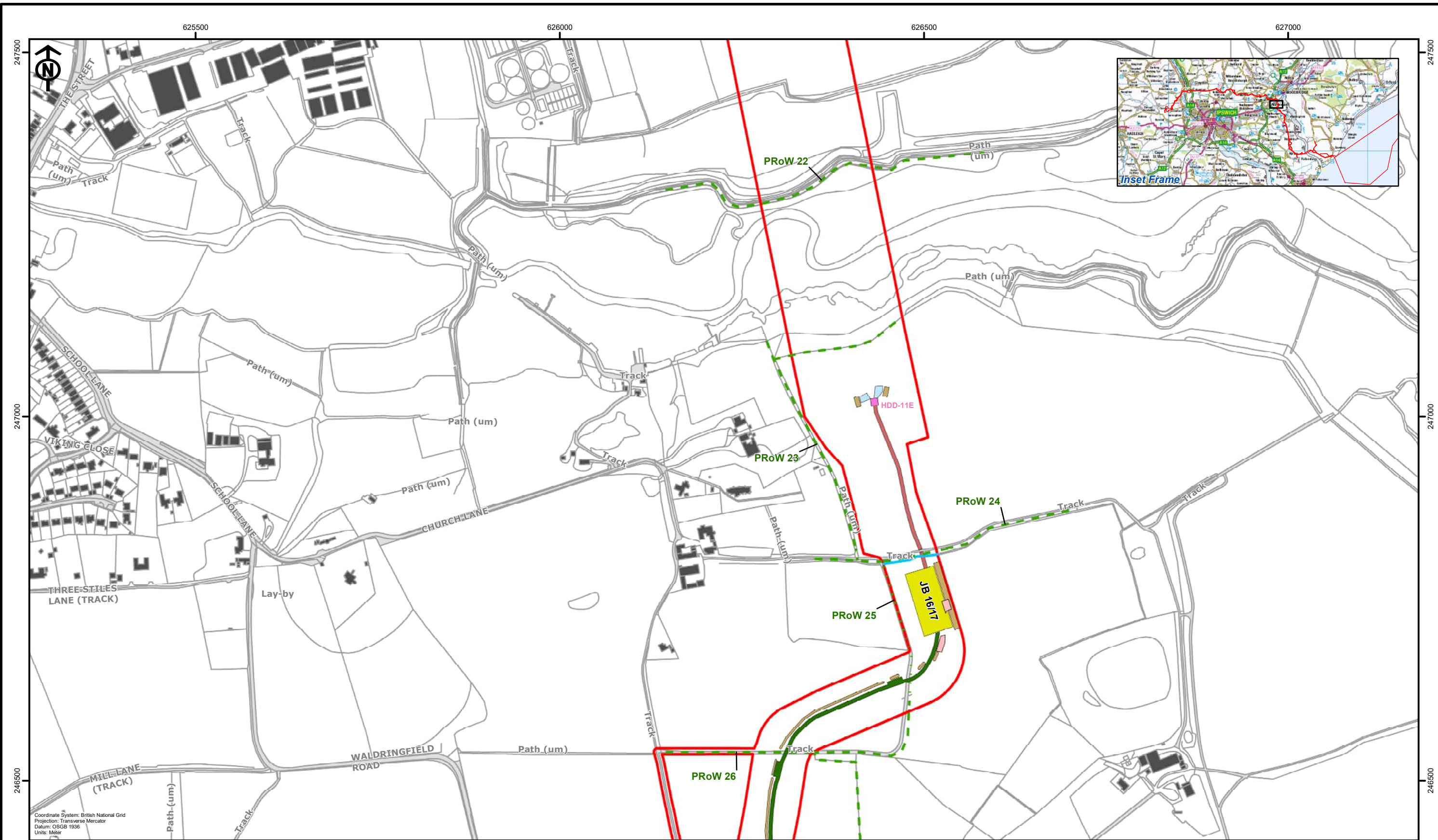
EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	Stone Haul Road
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Top Soil Strip	Trackway
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Indicative Top Soil Bund	
		Indicative Subsoil Bund	



				Original A3 Plot Scale 1:5,000	0 100 200 Metres
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**EA THREE Cable Route**  
 FIGURE 1.13 Site Context Plan

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Layout	N/A



- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Stone Haul Road
- Trackway



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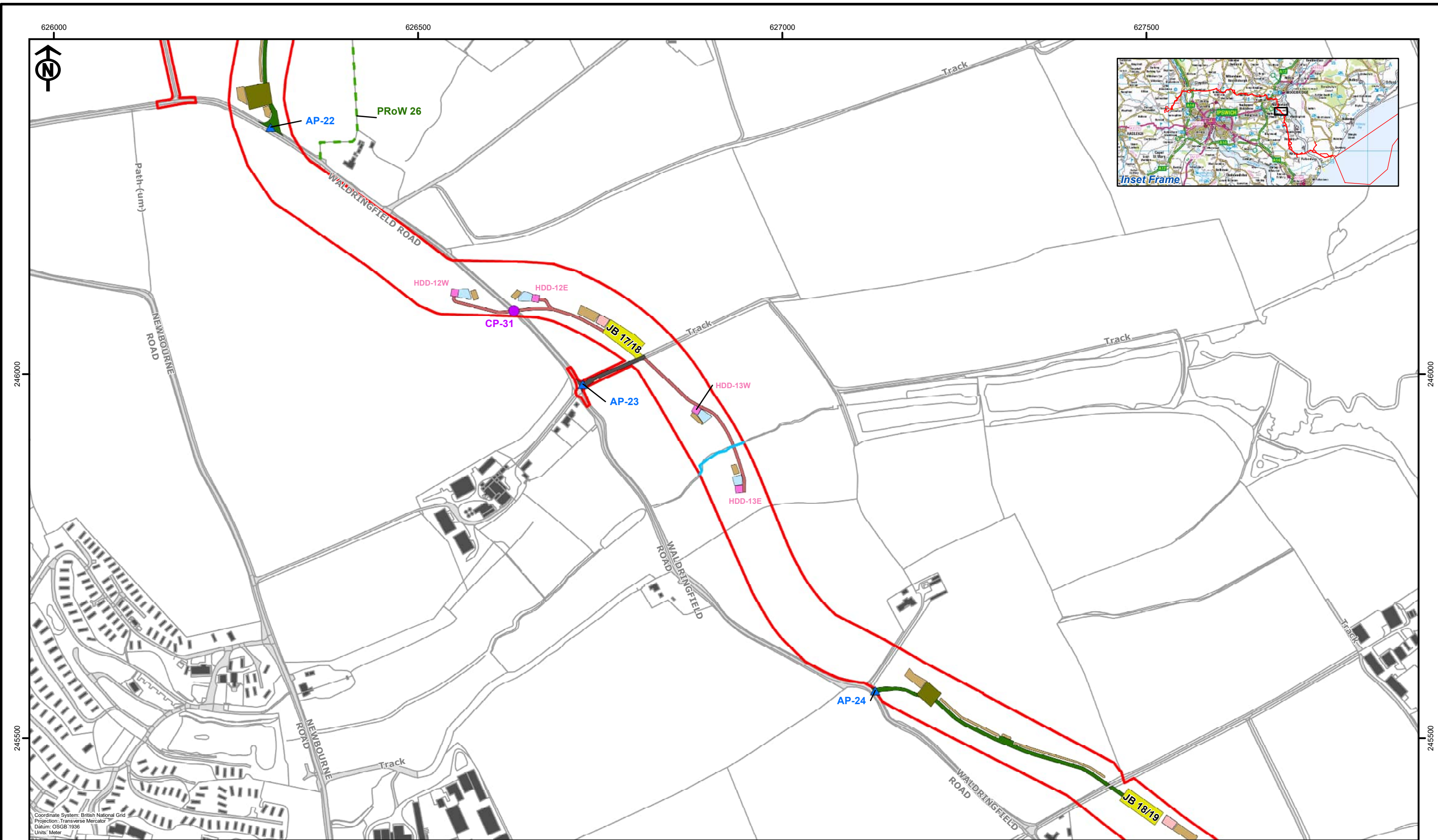
Original A3 Plot Scale 1:5,000

0 100 200 Metres

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**EA THREE Cable Route**  
 FIGURE 1.14 Site Context Plan

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Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Watercourse within the DOL	Indicative Top Soil Bund	Stone Haul Road
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Indicative Subsoil Bund	Trackway
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Existing Track	
	Top Soil Strip	HGV Turning	



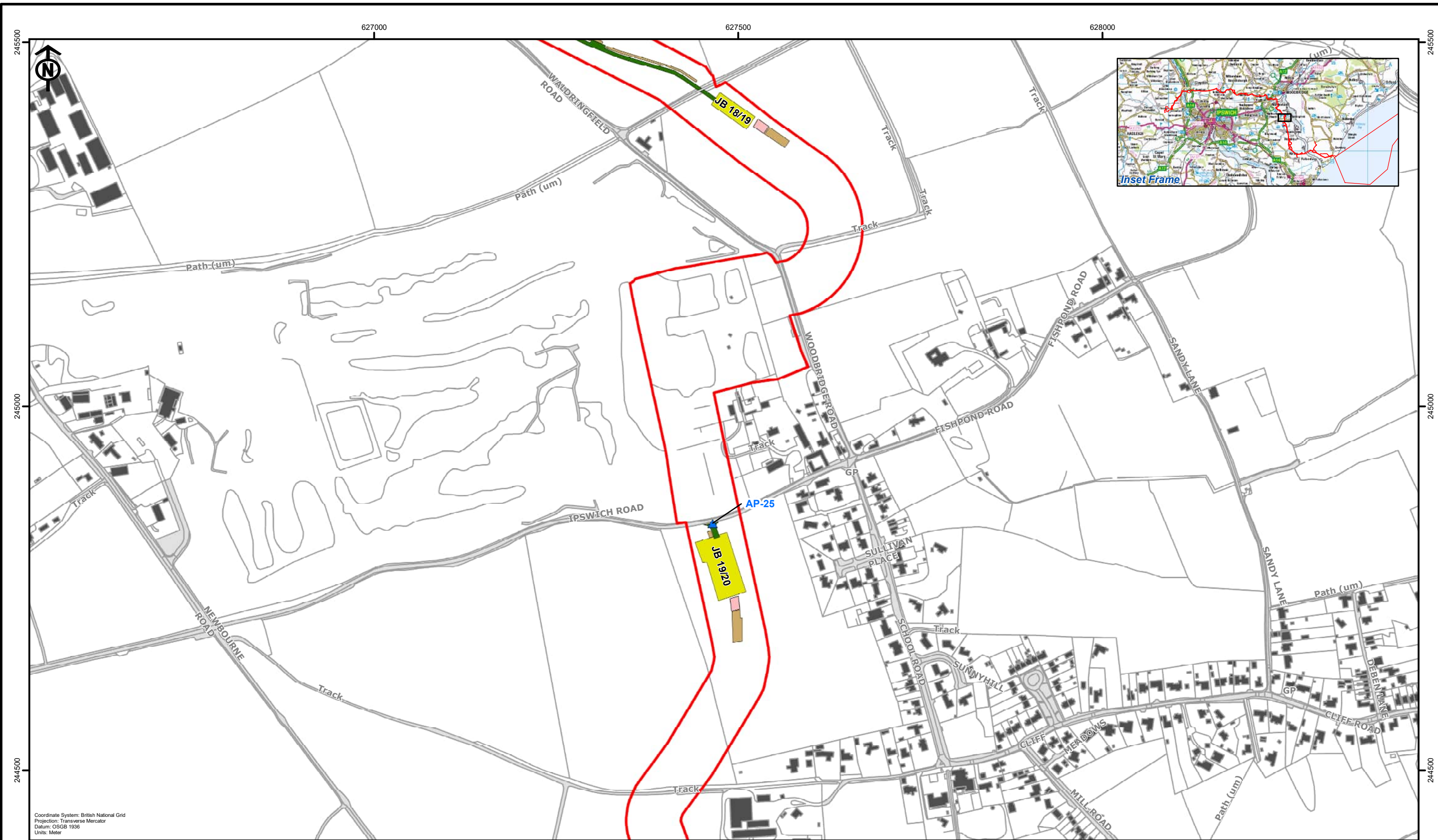
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**EA THREE Cable Route**  
 FIGURE 1.15 Site Context Plan

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Layout	N/A



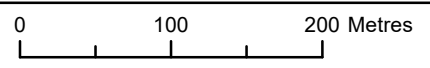
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 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Jointing Bay Hardstanding
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Stone Haul Road



Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

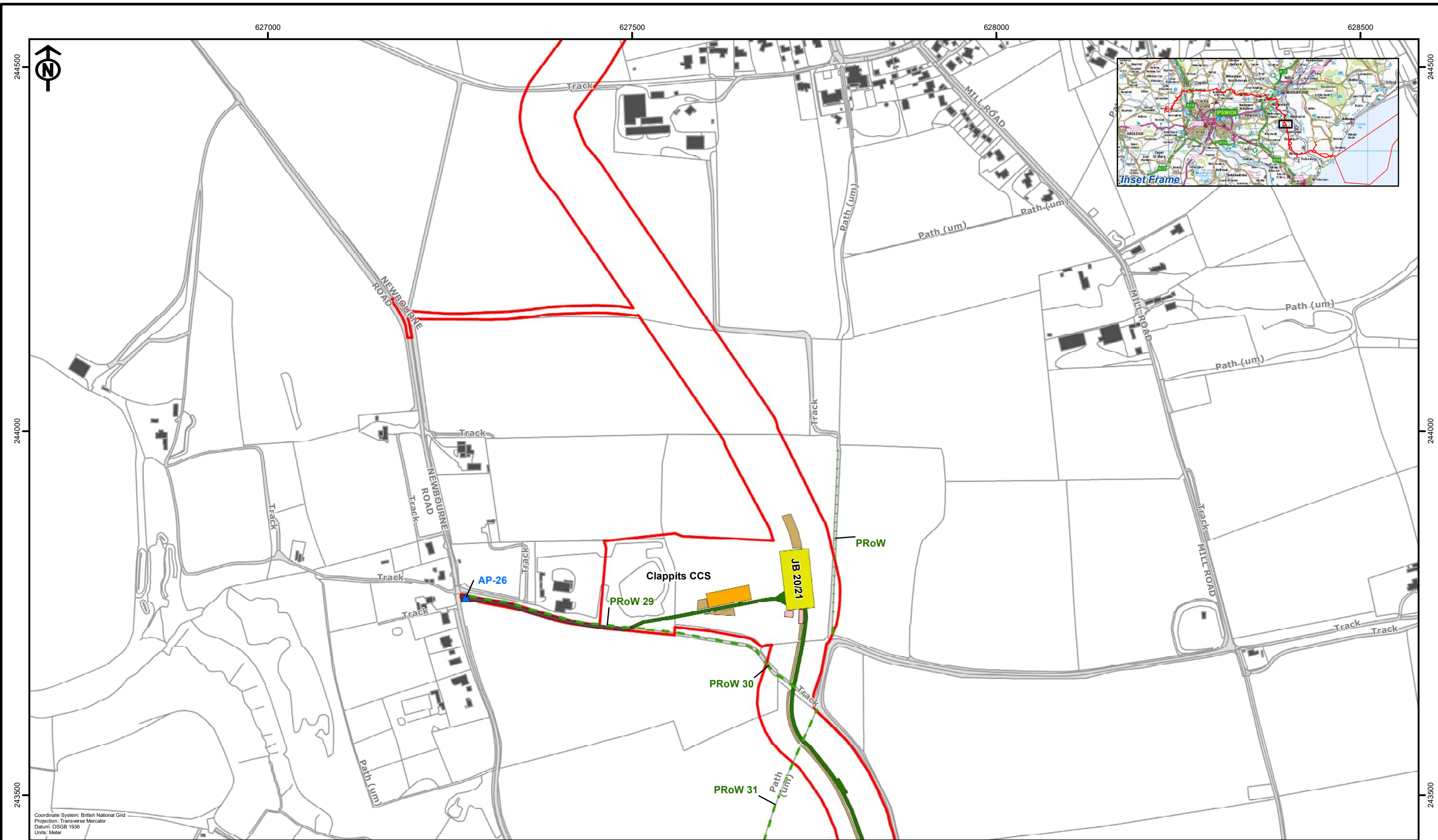
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**EA THREE Cable Route**  
 FIGURE 1.16 Site Context Plan

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- EA THREE Development Order Limits
- Public Right of Way
- Jointing Bay Hardstanding
- Consolidated Construction Site Compound
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- Stone Haul Road



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Original A3 Plot Scale 1:5,000

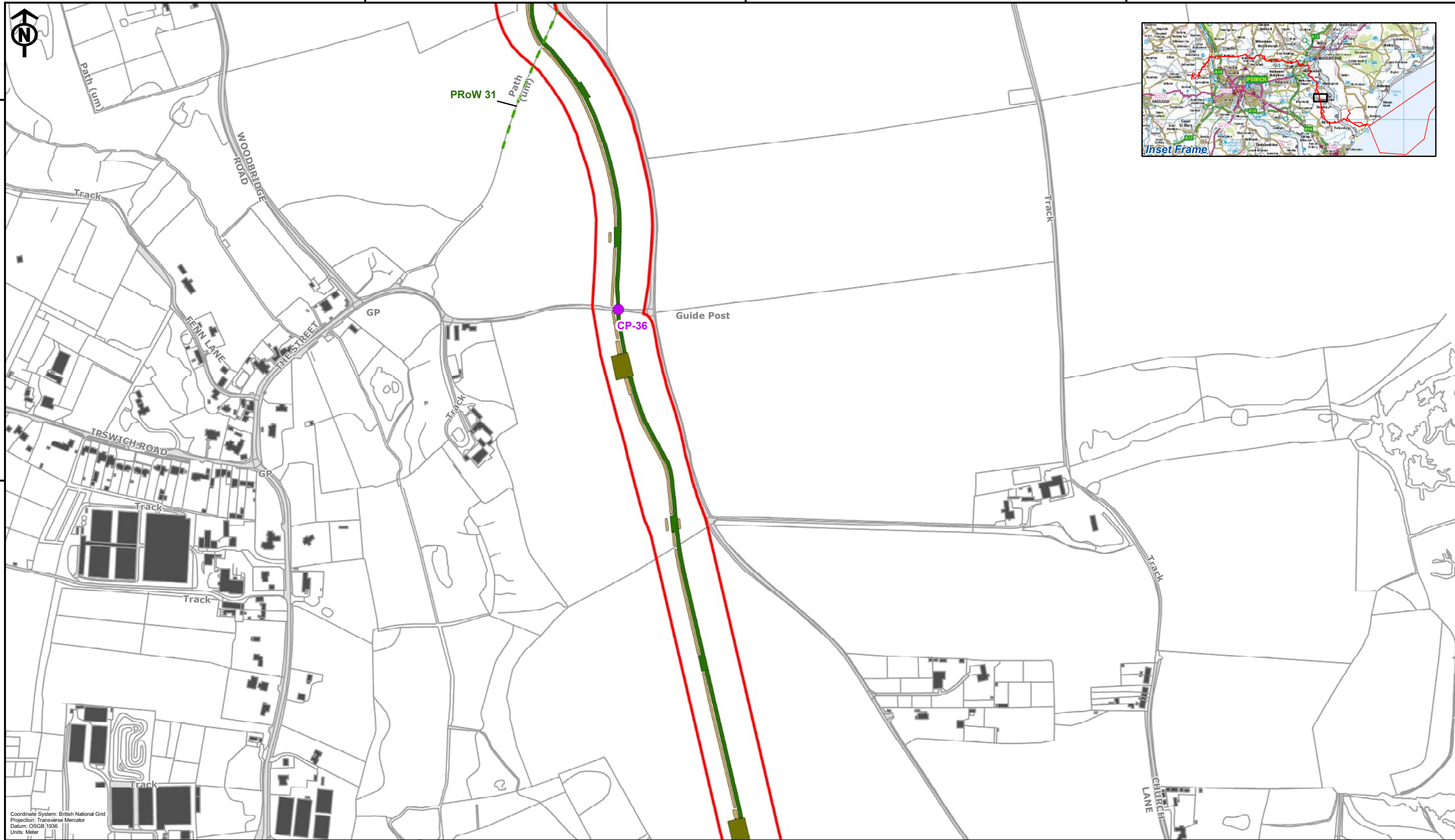
0 100 200 Metres

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**EA THREE Cable Route**  
 FIGURE 1.17 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A





Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

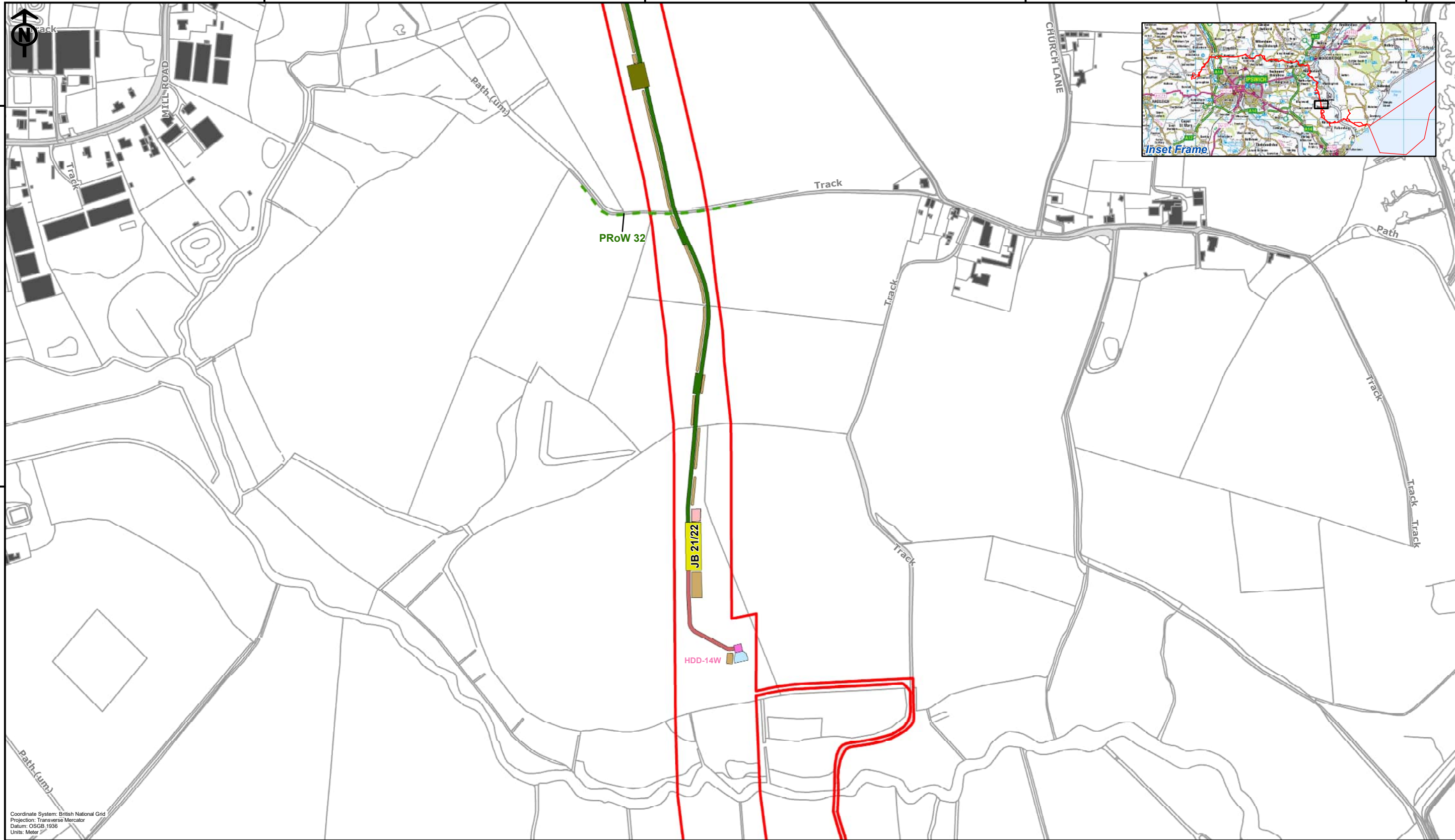
EA THREE Development Order Limits	Indicative Top Soil Bund
Crossing Point (Road Crossings Numbered)	HGV Turning
Public Right of Way	Stone Haul Road



Original A3 Plot Scale	0	100	200 Metres
1:5,000			
Rev	Date	By	Comment
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**EA THREE Cable Route**  
 FIGURE 1.18 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	HGV Turning
Public Right of Way	Top Soil Strip	Stone Haul Road
Jointing Bay Hardstanding	Indicative Top Soil Bund	Trackway
	Indicative Subsoil Bund	



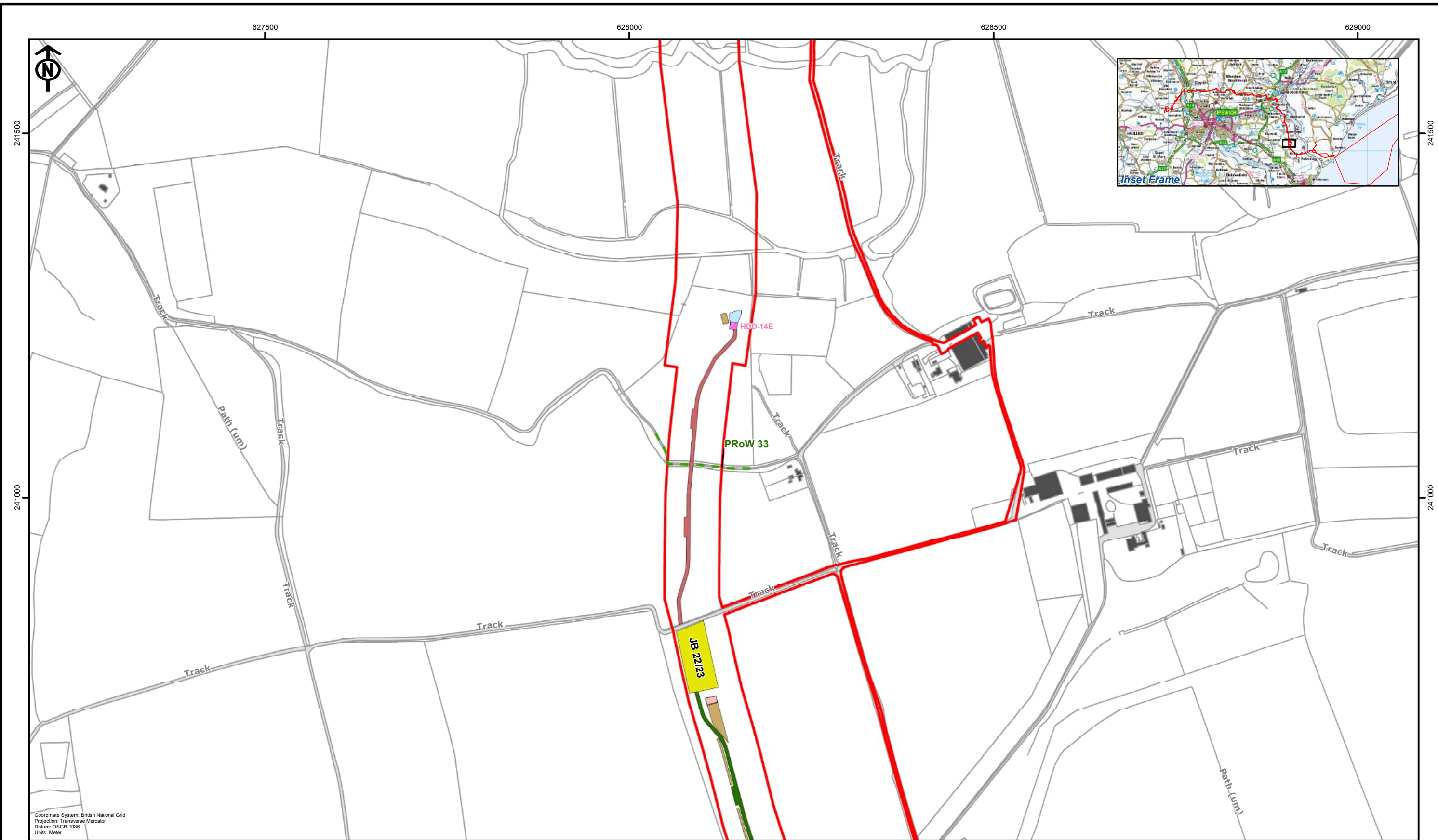
Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

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**EA THREE Cable Route**  
 FIGURE 1.19 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



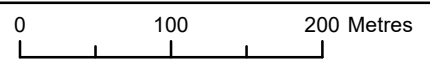
Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Stone Haul Road
- Trackway
- Indicative Subsoil Bund



Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

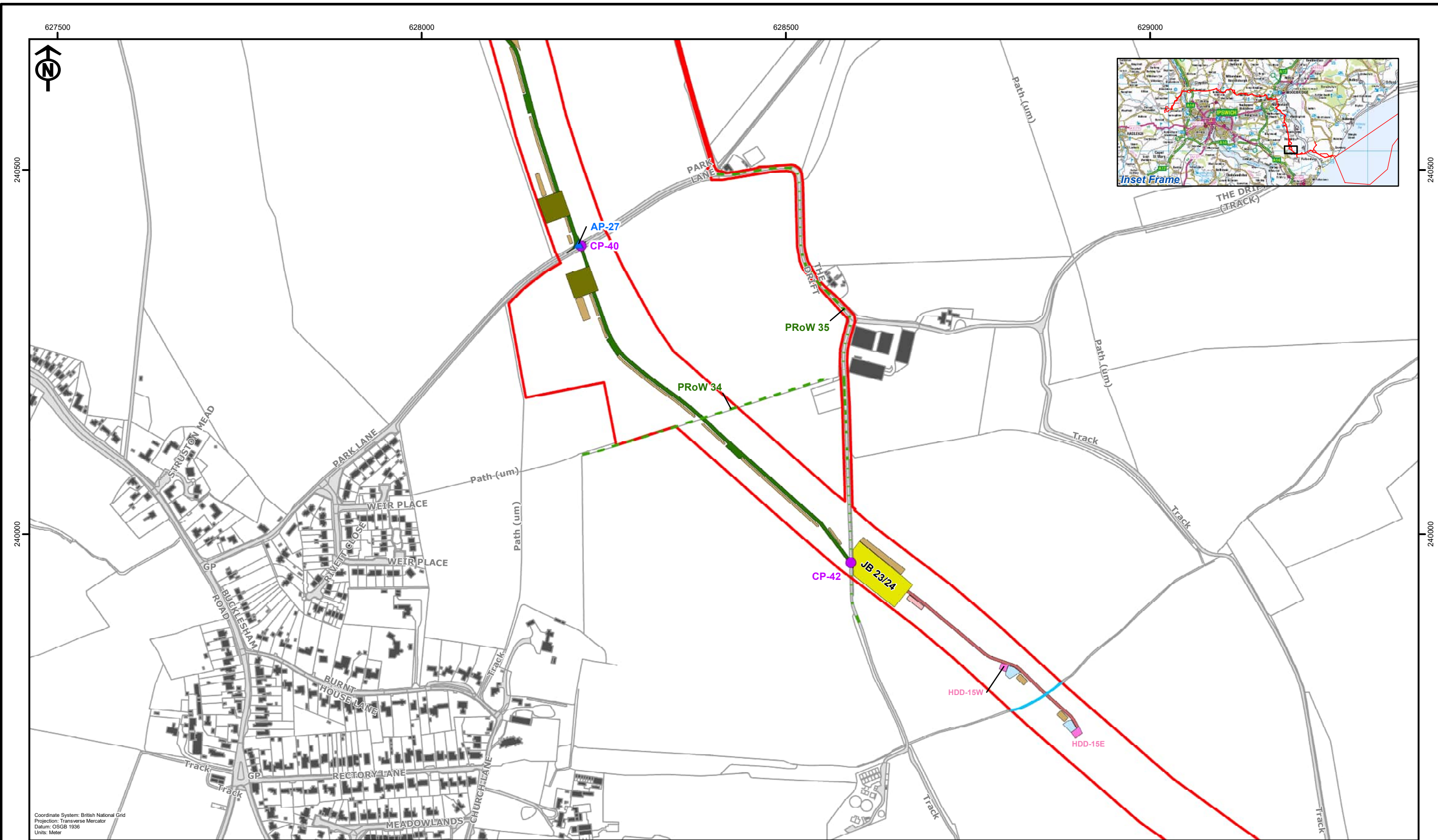
Original A3 Plot Scale 1:5,000



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**EA THREE Cable Route**  
 FIGURE 1.20 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Watercourse within the DOL	Indicative Top Soil Bund	Trackway
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Indicative Subsoil Bund	
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	HGV Turning	
	Top Soil Strip	Stone Haul Road	



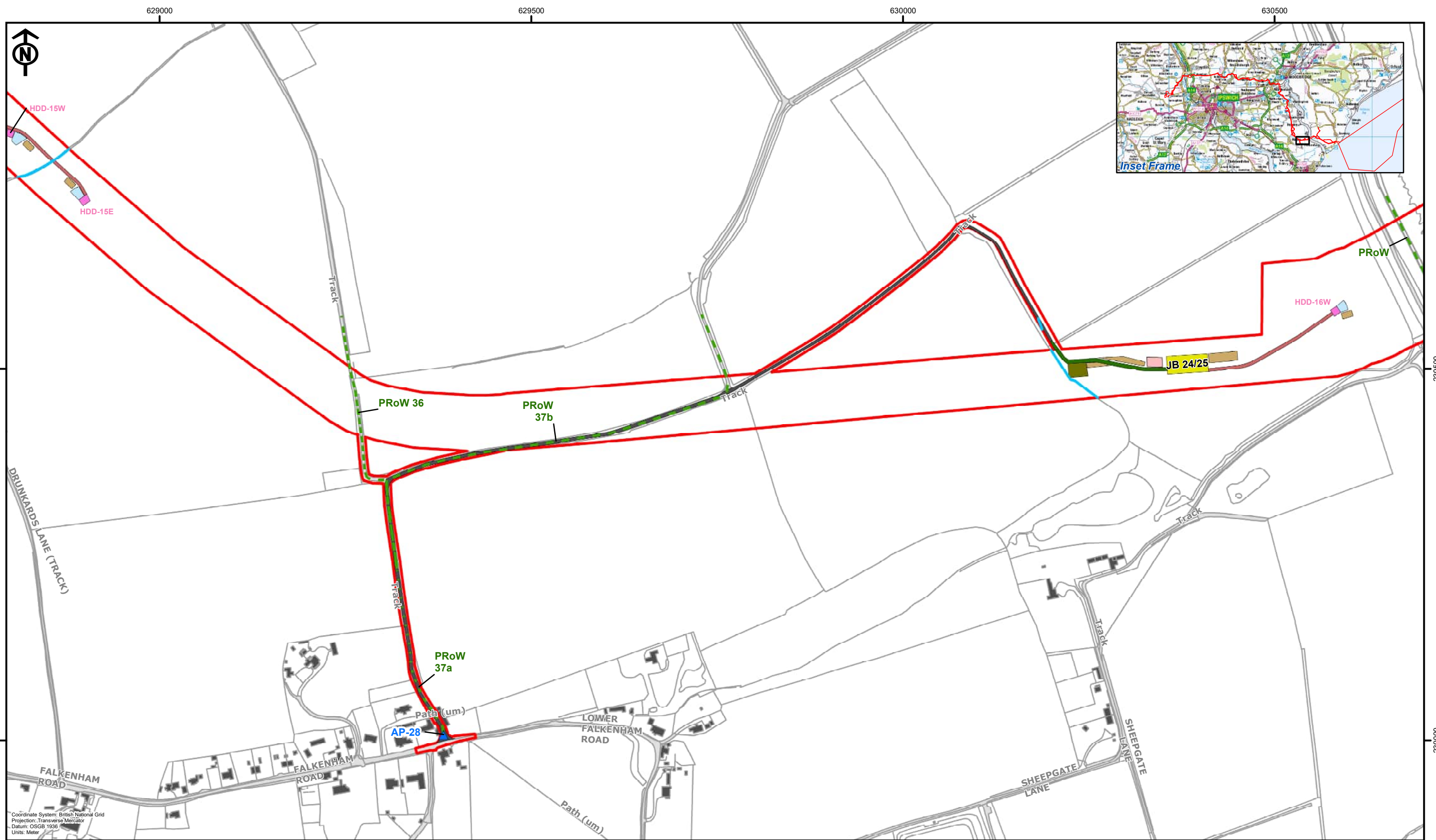
Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

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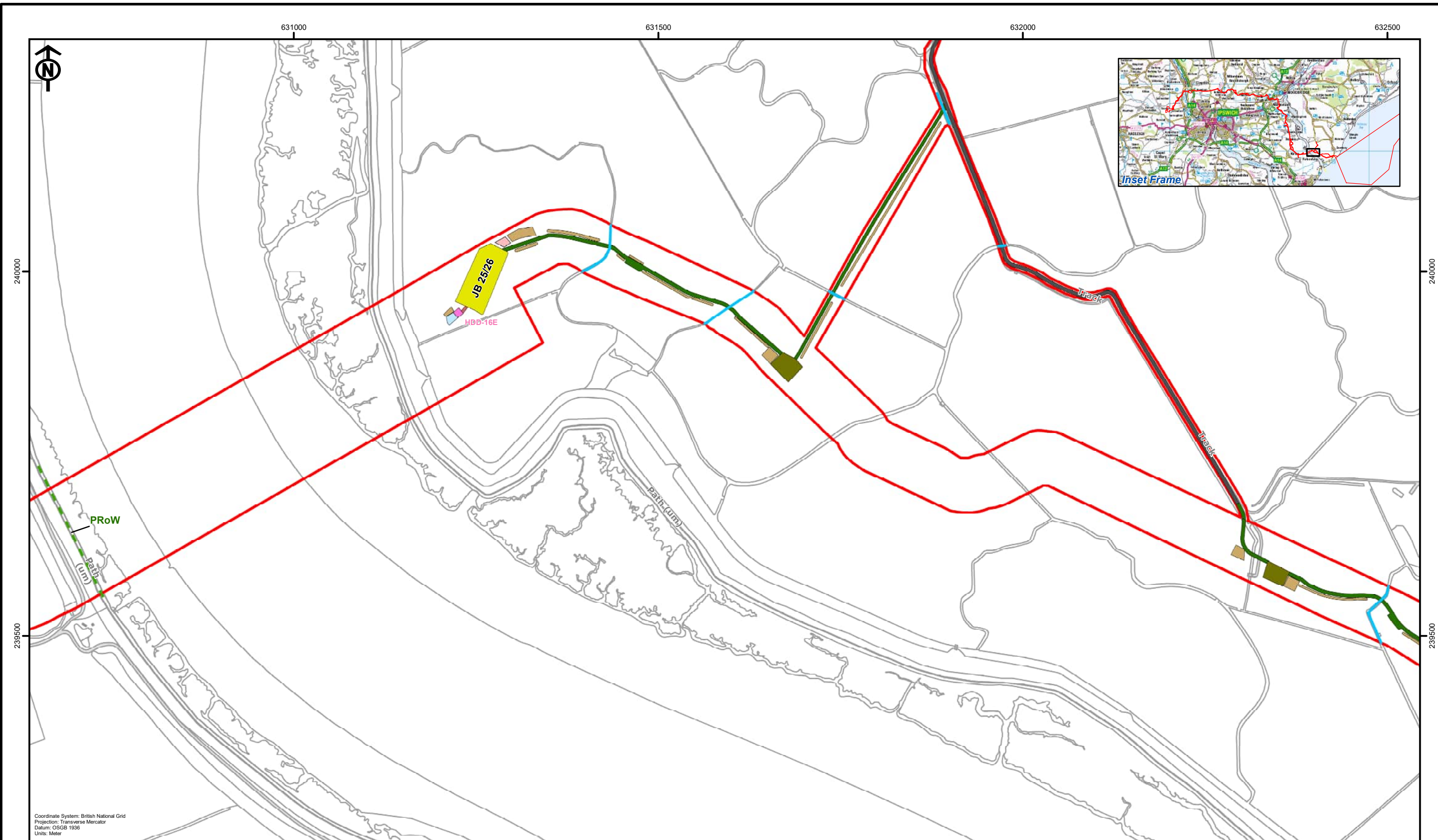
**EA THREE Cable Route**  
 FIGURE 1.21 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	Existing Track
Public Right of Way	Top Soil Strip	HGV Turning
Watercourse within the DOL	Indicative Top Soil Bund	Stone Haul Road
Jointing Bay Hardstanding	Indicative Subsoil Bund	Trackway

	Original A3 Plot Scale 1:5,000			<b>EA THREE Cable Route</b> FIGURE 1.22 Site Context Plan	Drg No 404.5356.00006.0001.0
	A 29/11/2023 PW First Issue				Date 29/11/2023
Rev Date By Comment		© Crown copyright. All rights reserved. (2023) Licence number 0100031673.		Layout N/A	



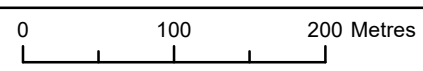
Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Indicative Top Soil Bund
- Indicative Subsoil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway



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Original A3 Plot Scale  
1:5,000



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### EA THREE Cable Route

FIGURE 1.23 Site Context Plan

Drg No	404.5356.00006.0001.0
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Date	29/11/2023
Layout	N/A



631500

632000

632500

633000

241000

240500

241000

240500



PRoW 39

Path (unm)

AP-29

GP

Track

Track

Track

Track




Track

Track

Track

DUKE'S LANE (TRACKS)

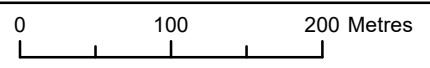
Coordinate System: British National Grid  
Projection: Transverse Mercator  
Datum: OSGB 1936  
Units: Meter

-  EA THREE Development Order Limits
-  Public Right of Way
-  Existing Track



Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

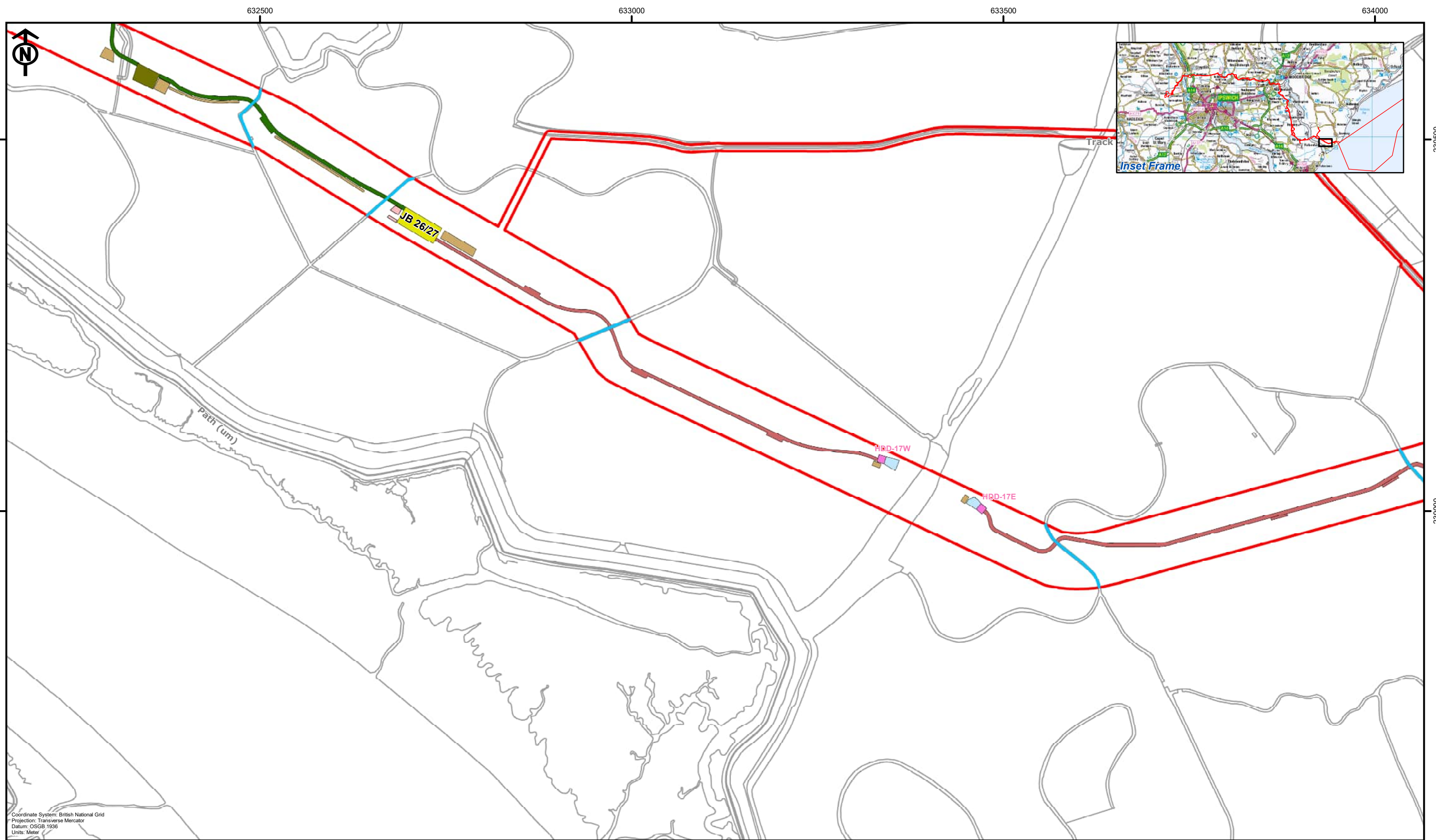


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### EA THREE Cable Route

FIGURE 1.24 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Horizontal Direct Drilling Duct Proving Platform	HGV Turning
Watercourse within the DOL	Top Soil Strip	Stone Haul Road
Jointing Bay Hardstanding	Indicative Top Soil Bund	Trackway
	Indicative Subsoil Bund	



Rev	Date	By	Comment
A	29/11/2023	PW	First Issue

Original A3 Plot Scale 1:5,000

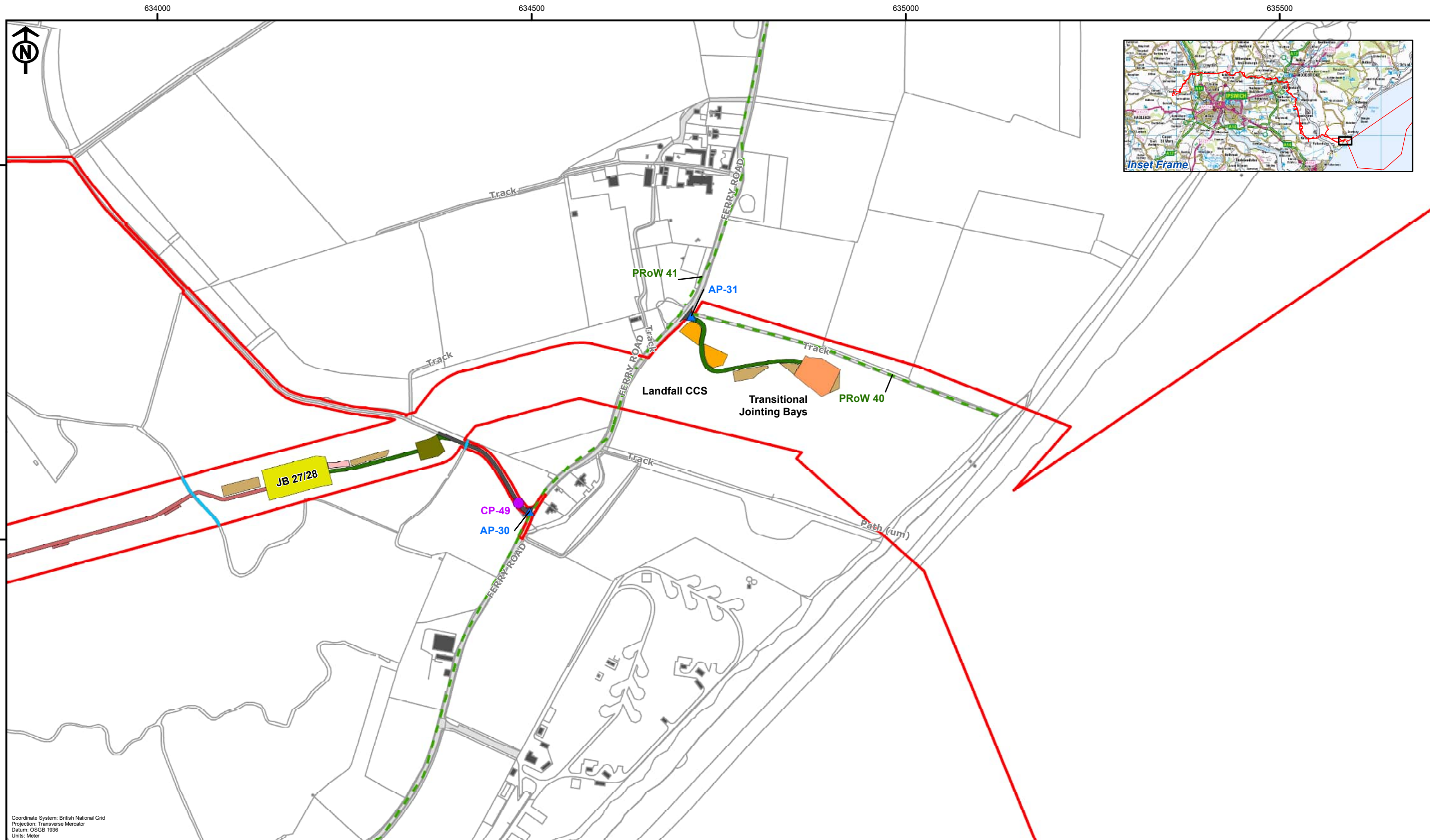
0 100 200 Metres

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**EA THREE Cable Route**  
 FIGURE 1.25 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A





Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

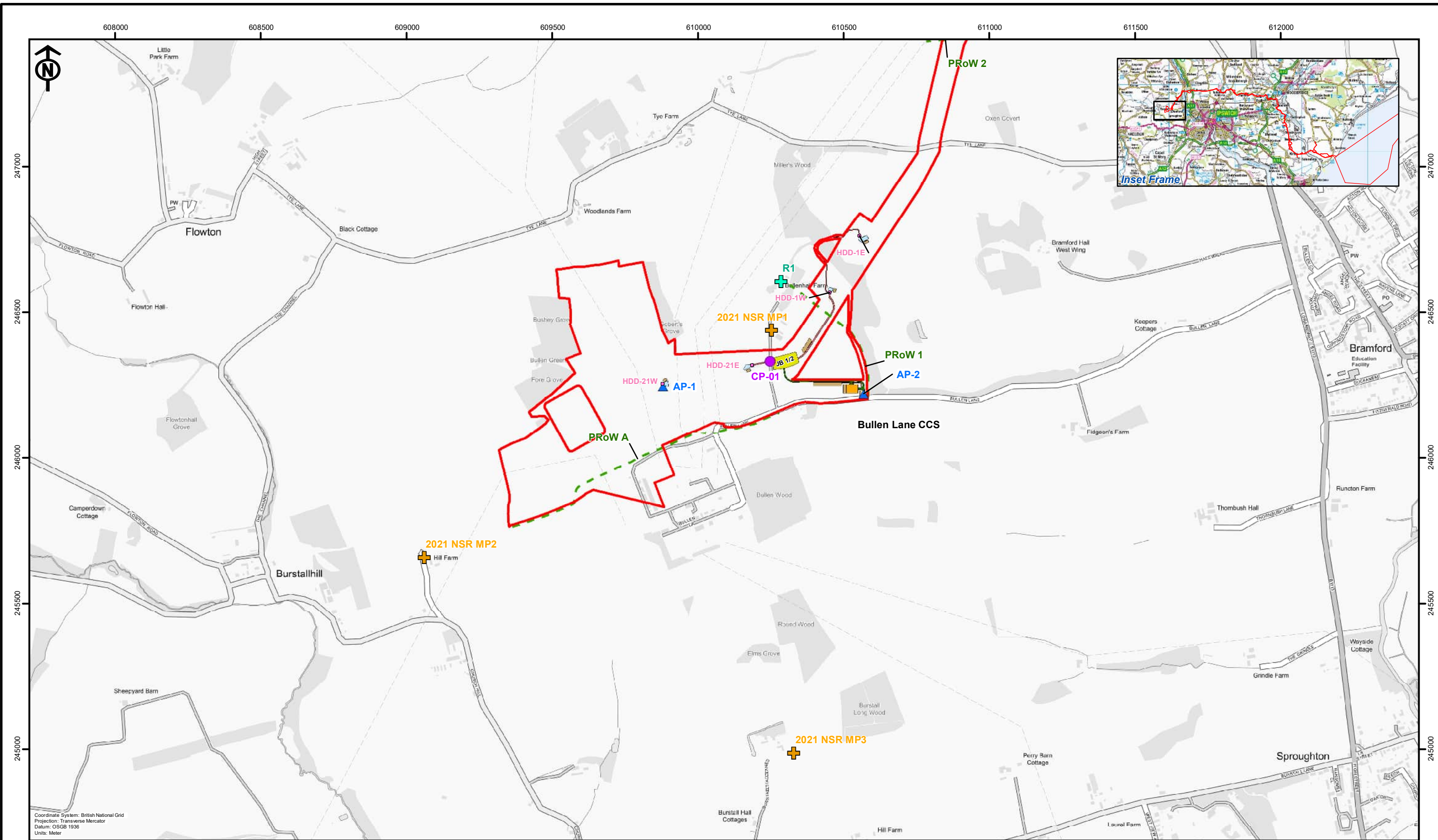
EA THREE Development Order Limits	Watercourse within the DOL	Indicative Top Soil Bund	Stone Haul Road
Crossing Point (Road Crossings Numbered)	Transition Jointing Bays	Indicative Subsoil Bund	Trackway
Public Right of Way	Jointing Bay Hardstanding	Existing Track	HGV Turning
	Consolidated Construction Site Compound		



Original A3 Plot Scale 1:5,000	0 100 200 Metres		
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**EA THREE Cable Route**  
 FIGURE 1.26 Site Context Plan

Drg No	404.5356.00006.0001.0
Rev	0
Date	29/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

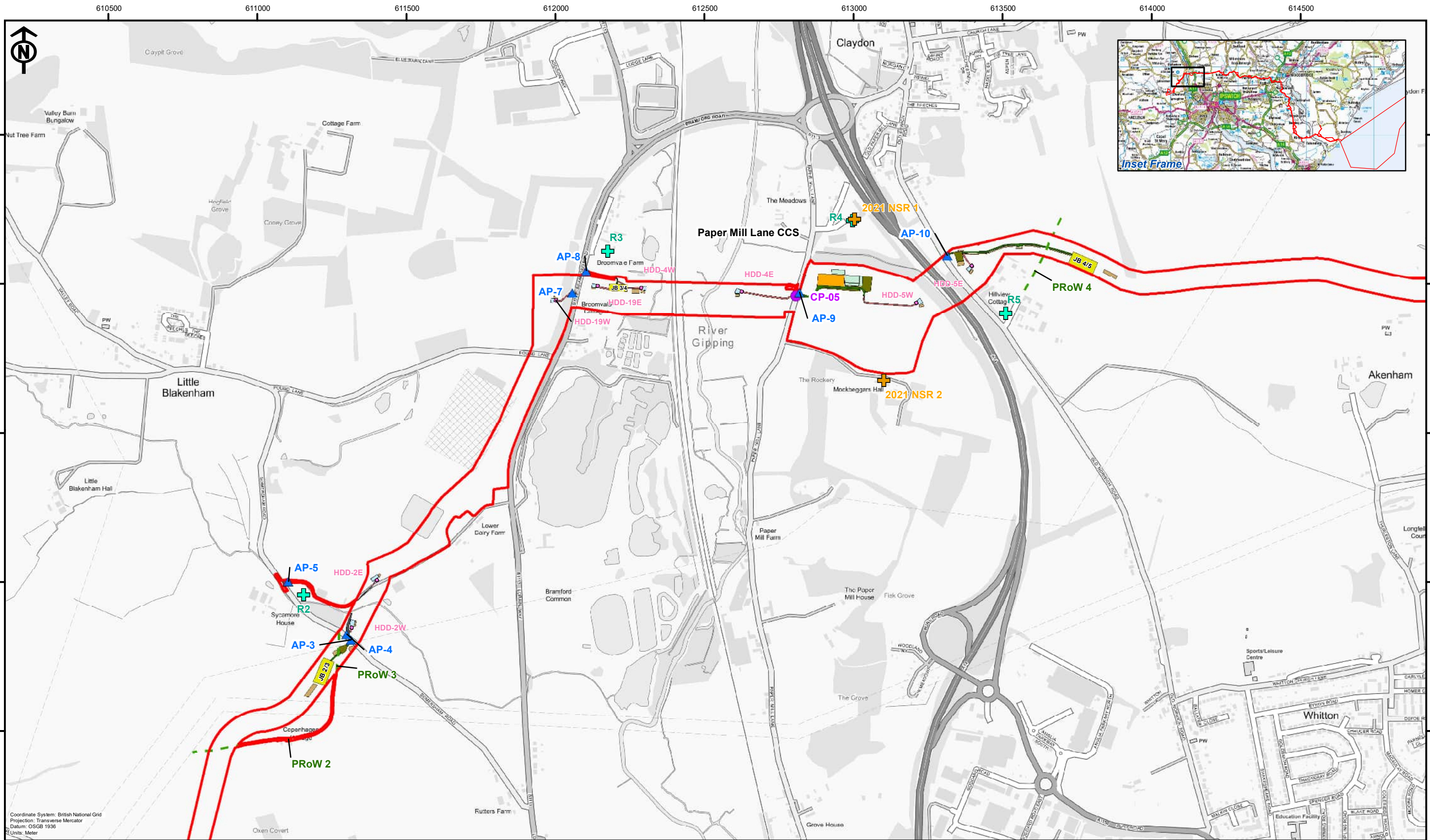
EA THREE Development Order Limits	Jointing Bay Hardstanding	Top Soil Strip	2021 Noise Sensitive Receptor
Crossing Point (Road Crossings Numbered)	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	2023 Noise Sensitive Receptor
Public Right of Way	Consolidated Construction Site Compound	Stone Haul Road	Trackway



Original A3 Plot Scale 1:12,500	0 200 400 Metres		
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**EA THREE Cable Route**  
 FIGURE 2.1 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

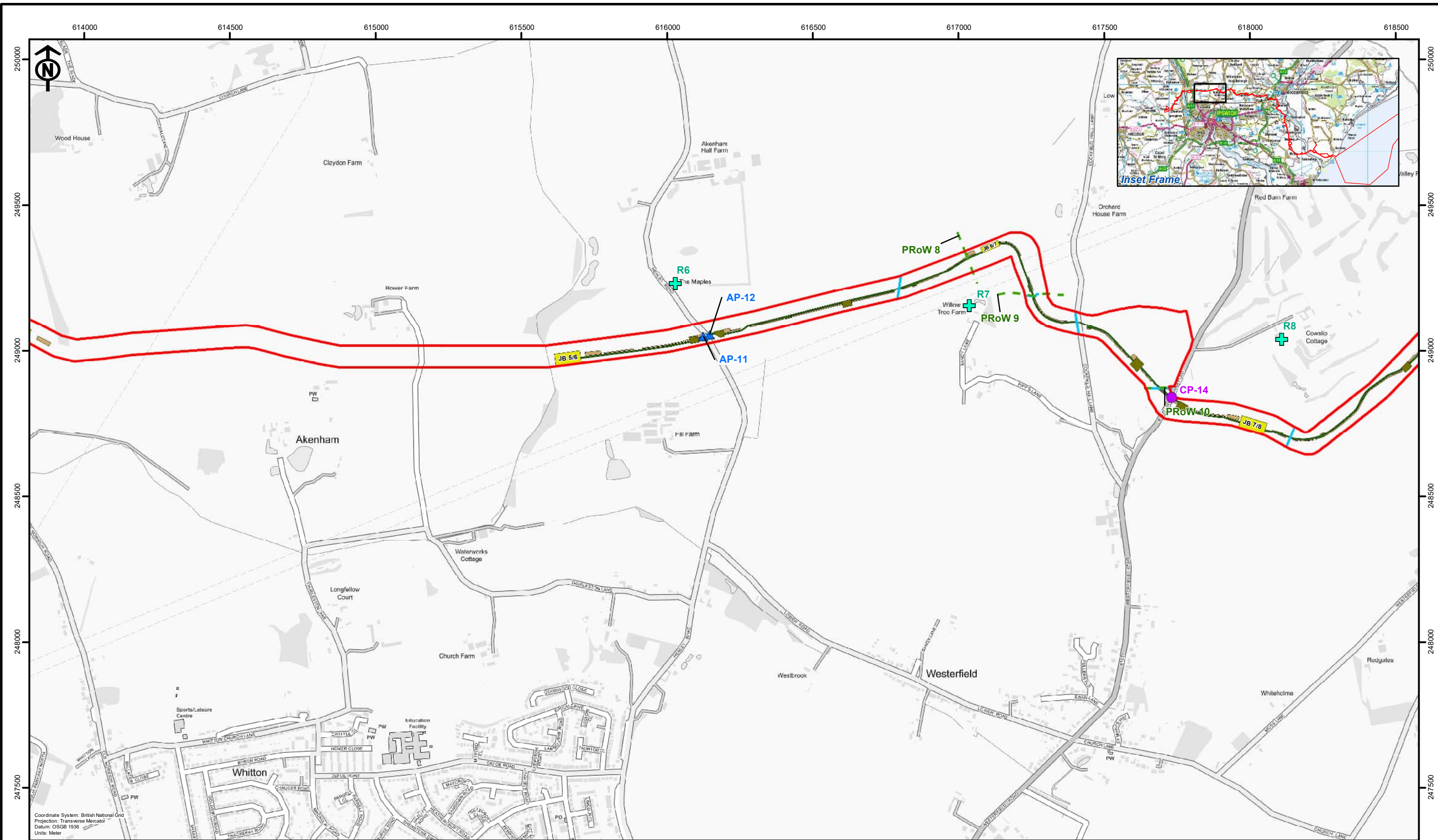
EA THREE Development Order Limits	Jointing Bay Hardstanding	Soil Storage	HGV Turning	2023 Noise Sensitive Receptor
Crossing Point (Road Crossings Numbered)	Horizontal Direct Drilling Duct Proving Platform	Top Soil Strip	Stone Haul Road	
Public Right of Way	Consolidated Construction Site Compound	Top Soil Bund	Trackway	
		Existing Track	2021 Noise Sensitive Receptor	



				Original A3 Plot Scale 1:12,500	0 200 400 Metres
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**EA THREE Cable Route**  
 FIGURE 2.2 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

- EA THREE Development Order Limits
- Watercourse within the DOL
- Stone Haul Road
- Jointing Bay Hardstanding
- Top Soil Bund
- HGV Turning
- Crossing Point (Road Crossings Numbered)
- + 2023 Noise Sensitive Receptor
- Public Right of Way



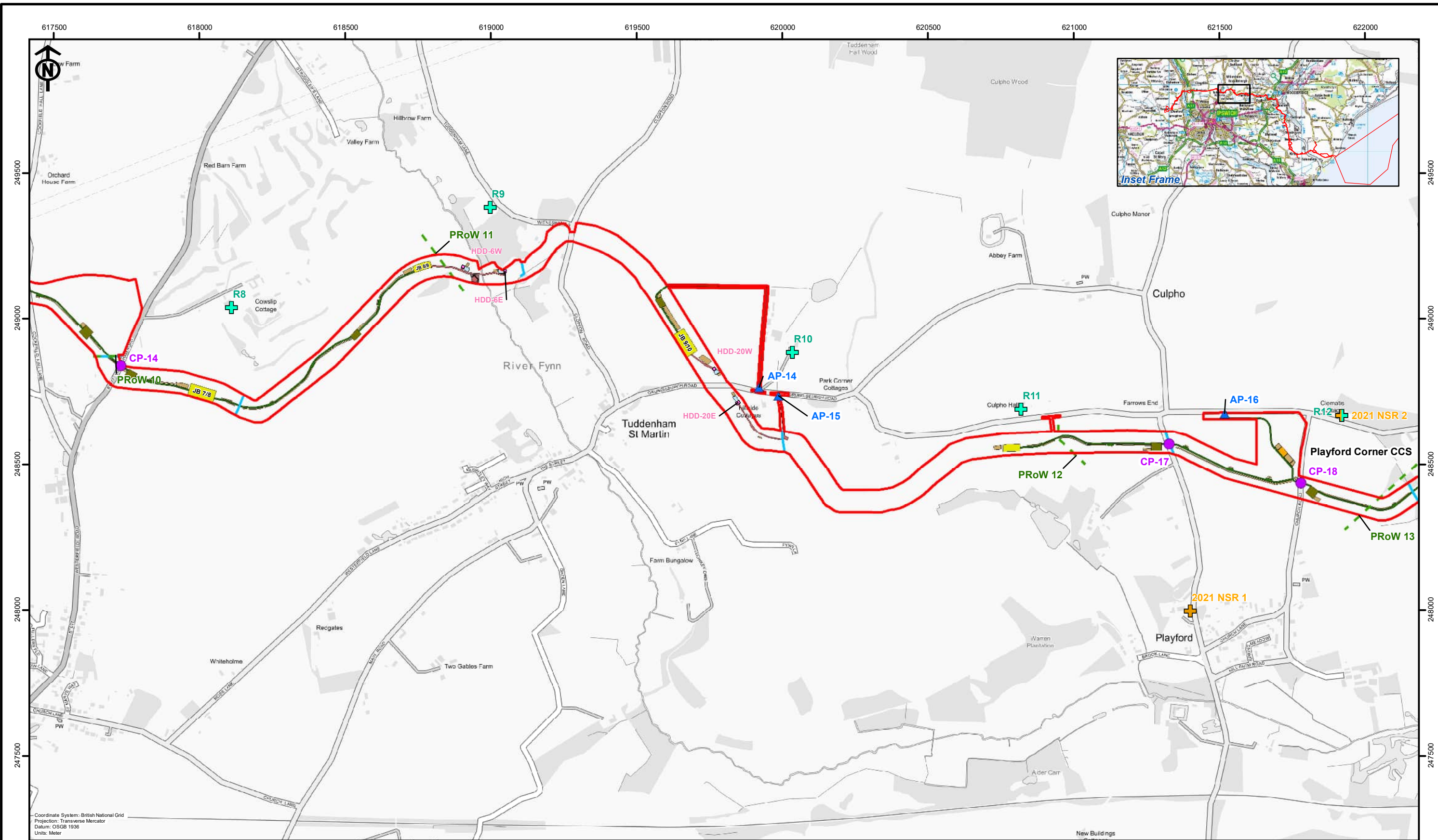
Rev	Date	By	Comment
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Original A3 Plot Scale 1:12,500  
 0 200 400 Metres

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**EA THREE Cable Route**  
 FIGURE 2.3 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



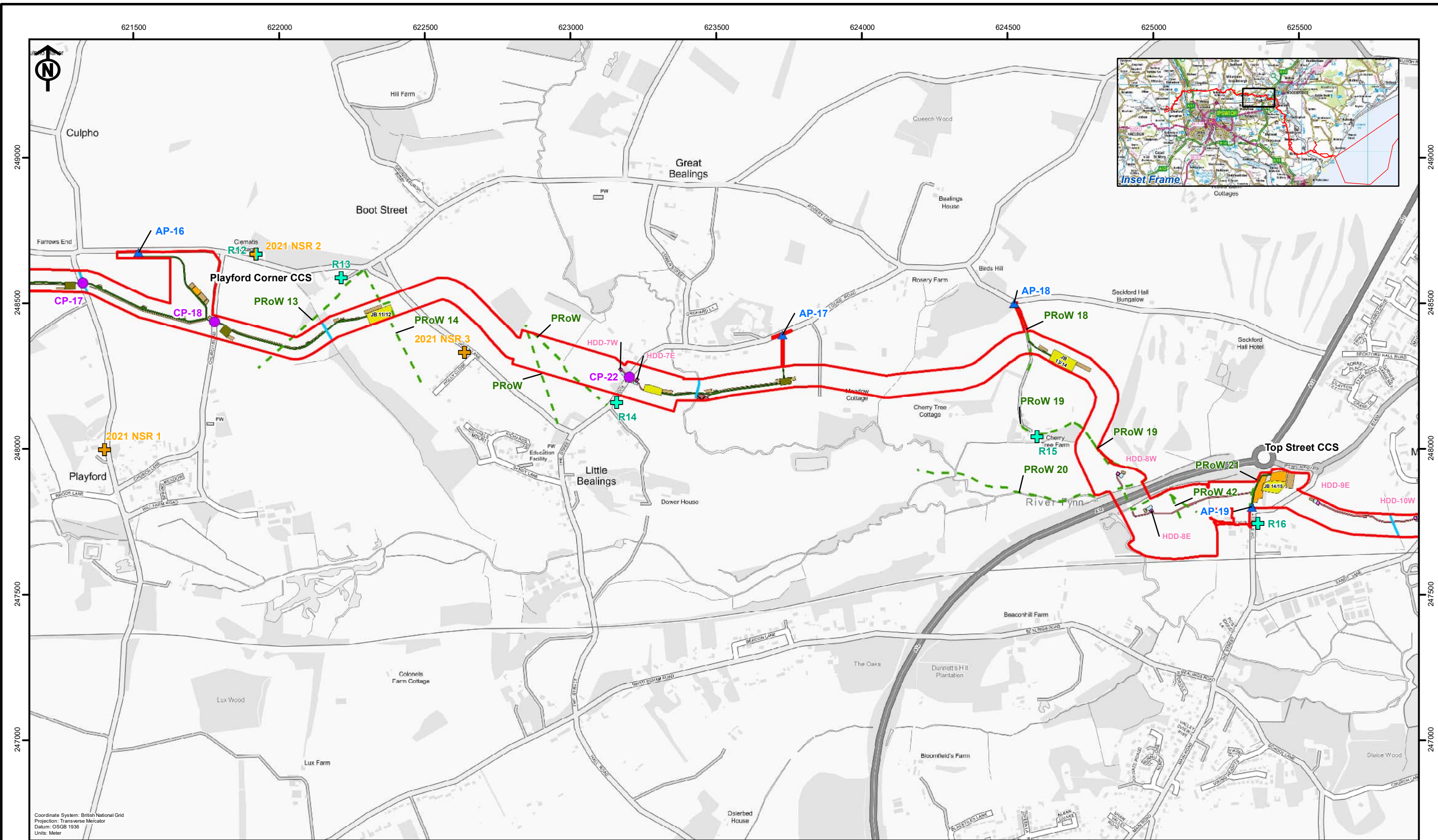
EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	HGV Turning	2021 Noise Sensitive Receptor
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road	2023 Noise Sensitive Receptor
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	
		Existing Track	Trackway Crane Pad	



				Original A3 Plot Scale 1:12,500	0 200 400 Metres	
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**EA THREE Cable Route**  
FIGURE 2.4 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

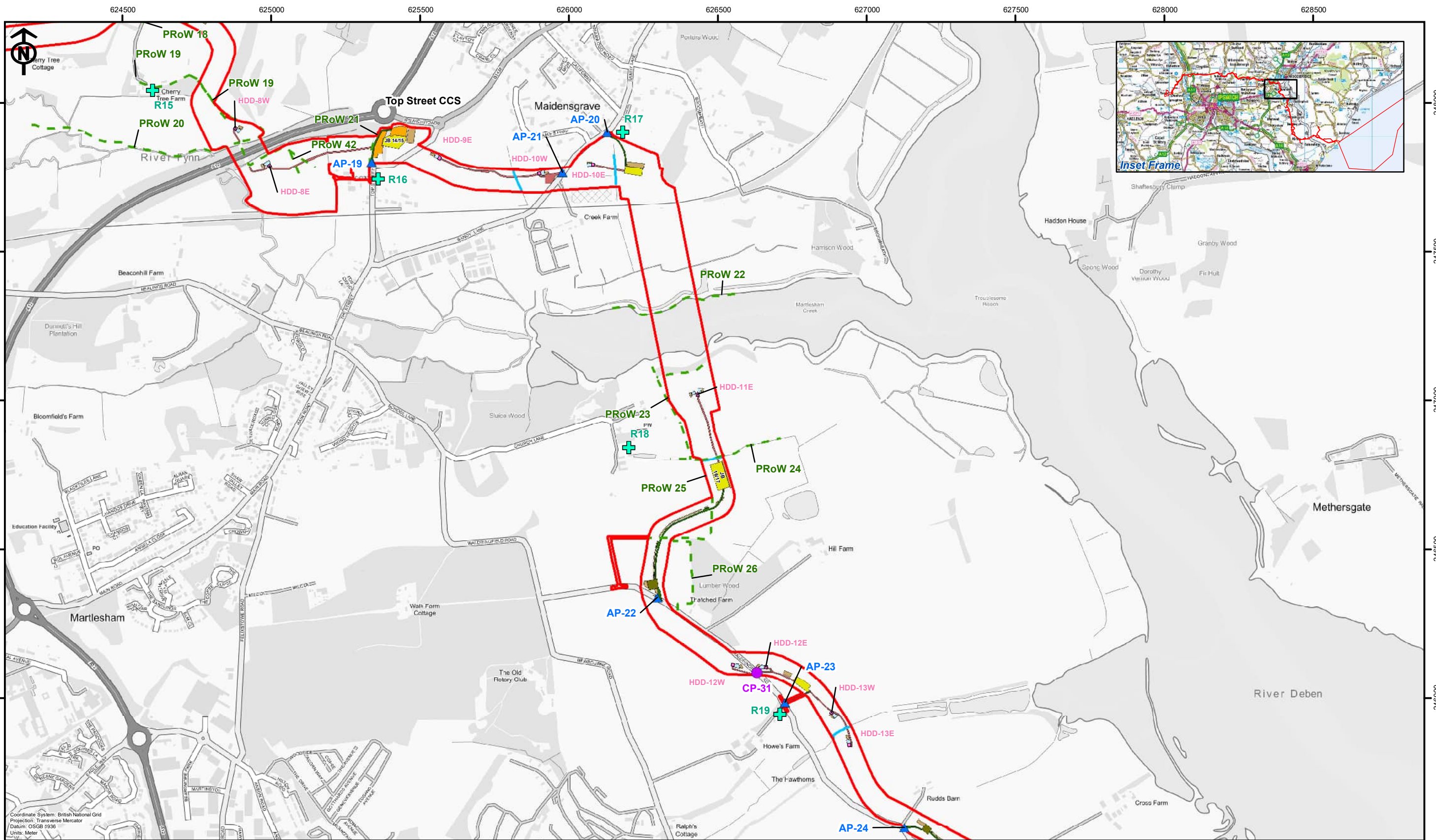
EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	HGV Turning	2021 Noise Sensitive Receptor
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road	2023 Noise Sensitive Receptor
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	
		Existing Track	Trackway Crane Pad	



				Original A3 Plot Scale 1:12,500	0 200 400 Metres
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Rev	Date	By	Comment		

**EA THREE Cable Route**  
 FIGURE 2.5 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	HGV Turning
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway
		Existing Track	2023 Noise Sensitive Receptor

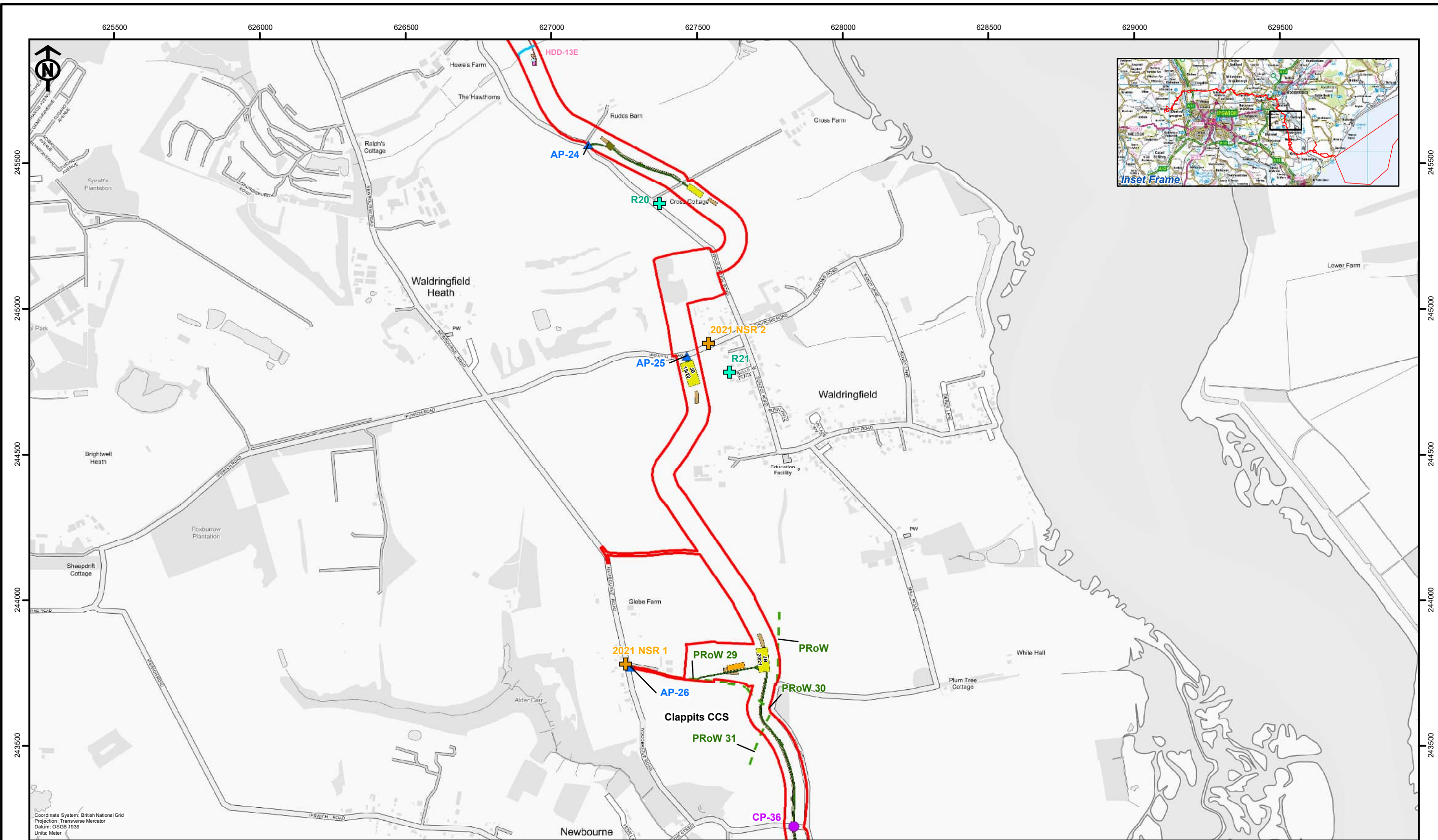


Original A3 Plot Scale	1:12,500		
Scale	0 200 400 Metres		
Rev	Date	By	Comment
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**EA THREE Cable Route**  
 FIGURE 2.6 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	HGV Turning	2023 Noise Sensitive Receptor
Crossing Point (Road Crossings Numbered)	Jointing Bay Hardstanding	Top Soil Strip	Stone Haul Road	
Public Right of Way	Horizontal Direct Drilling Duct Proving Platform	Top Soil Bund	Trackway	
		Existing Track	2021 Noise Sensitive Receptor	

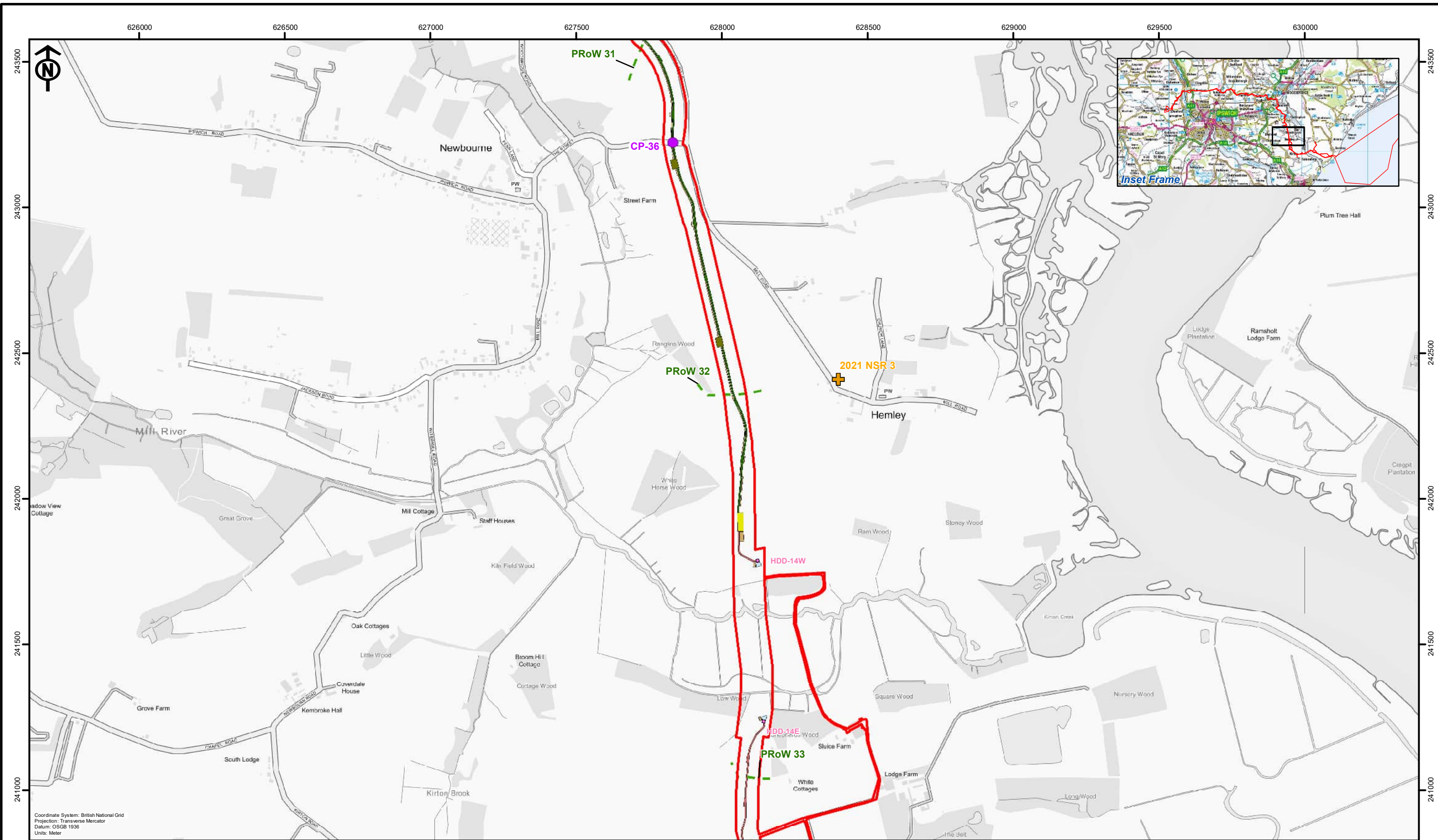


				Original A3 Plot Scale 1:12,500	0 200 400 Metres	
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**EA THREE Cable Route**  
 FIGURE 2.7 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A





Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

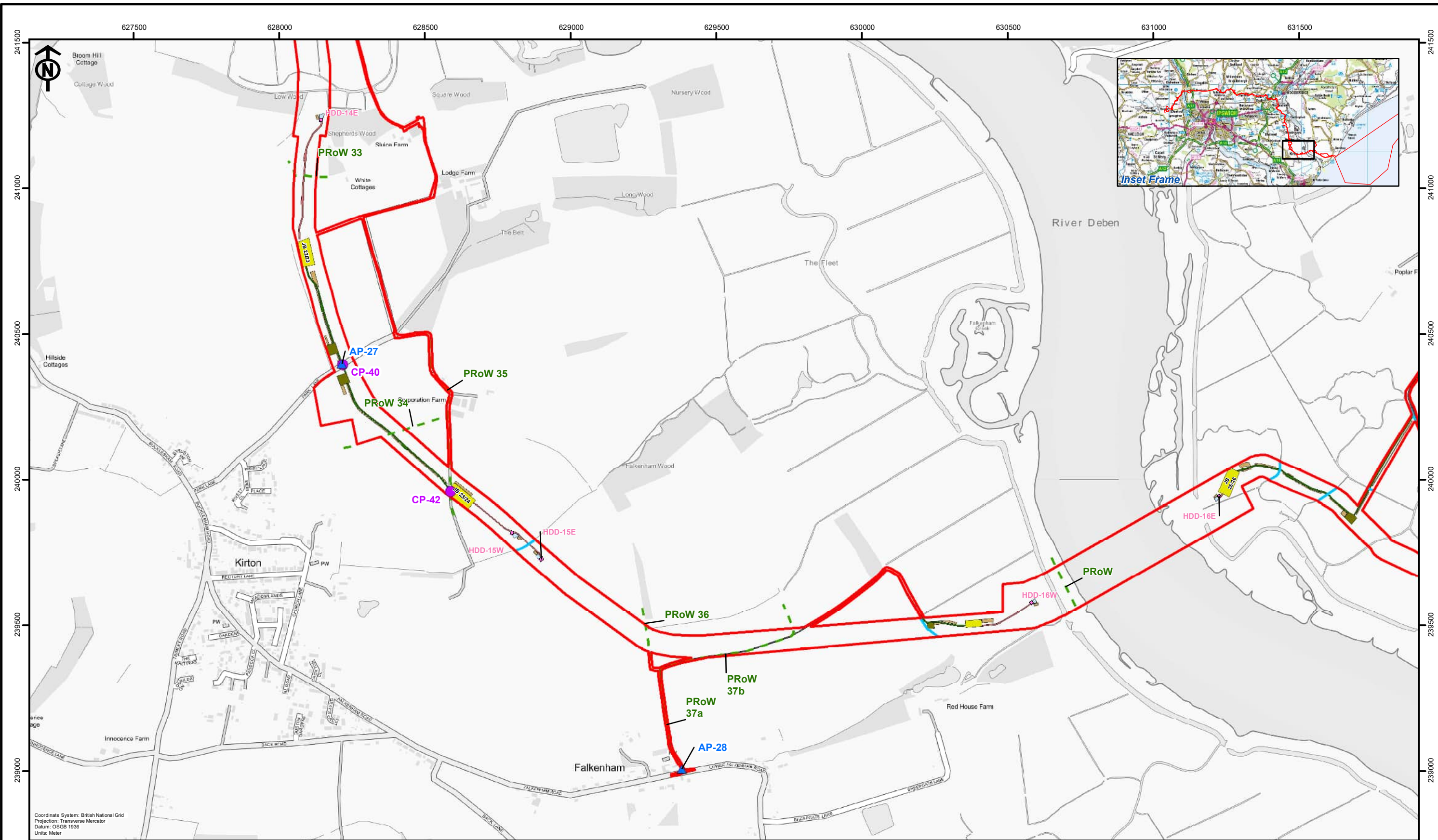
EA THREE Development Order Limits	Jointing Bay Hardstanding	HGV Turning
Crossing Point (Road Crossings Numbered)	Horizontal Direct Drilling Duct	Stone Haul Road
Public Right of Way	Top Soil Strip	Trackway
Top Soil Bund	2021 Noise Sensitive Receptor	



Original A3 Plot Scale	0	200	400 Metres
1:12,500			
Rev	Date	By	Comment
A	21/11/2023	PW	First Issue

**EA THREE Cable Route**  
 FIGURE 2.8 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



- EA THREE Development Order Limits
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Top Soil Bund
- Existing Track
- Trackway
- Crossing Point (Road Crossings Numbered)
- Horizontal Direct Drilling Duct Proving Platform
- HGV Turning
- Stone Haul Road
- Public Right of Way
- Top Soil Strip



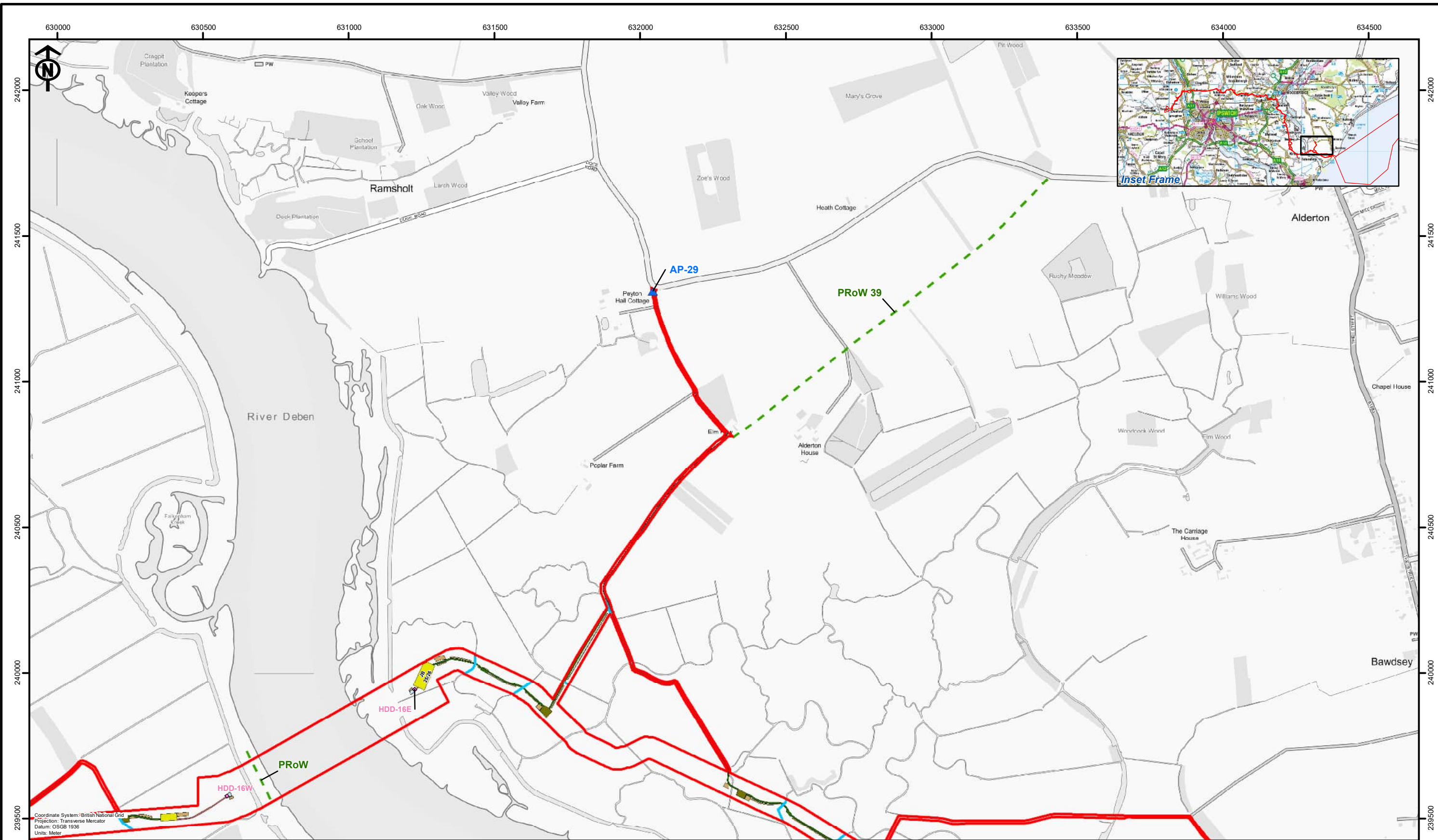
Rev	Date	By	Comment
A	21/11/2023	PW	First Issue

Original A3 Plot Scale 1:12,500

0 200 400 Metres

**EA THREE Cable Route**  
 FIGURE 2.9 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



- EA THREE Development Order Limits
- Public Right of Way
- Watercourse within the DOL
- Jointing Bay Hardstanding
- Horizontal Direct Drilling Duct Proving Platform
- Top Soil Strip
- Top Soil Bund
- Existing Track
- HGV Turning
- Stone Haul Road
- Trackway



Rev	Date	By	Comment
A	21/11/2023	PW	First Issue

Original A3 Plot Scale 1:12,500

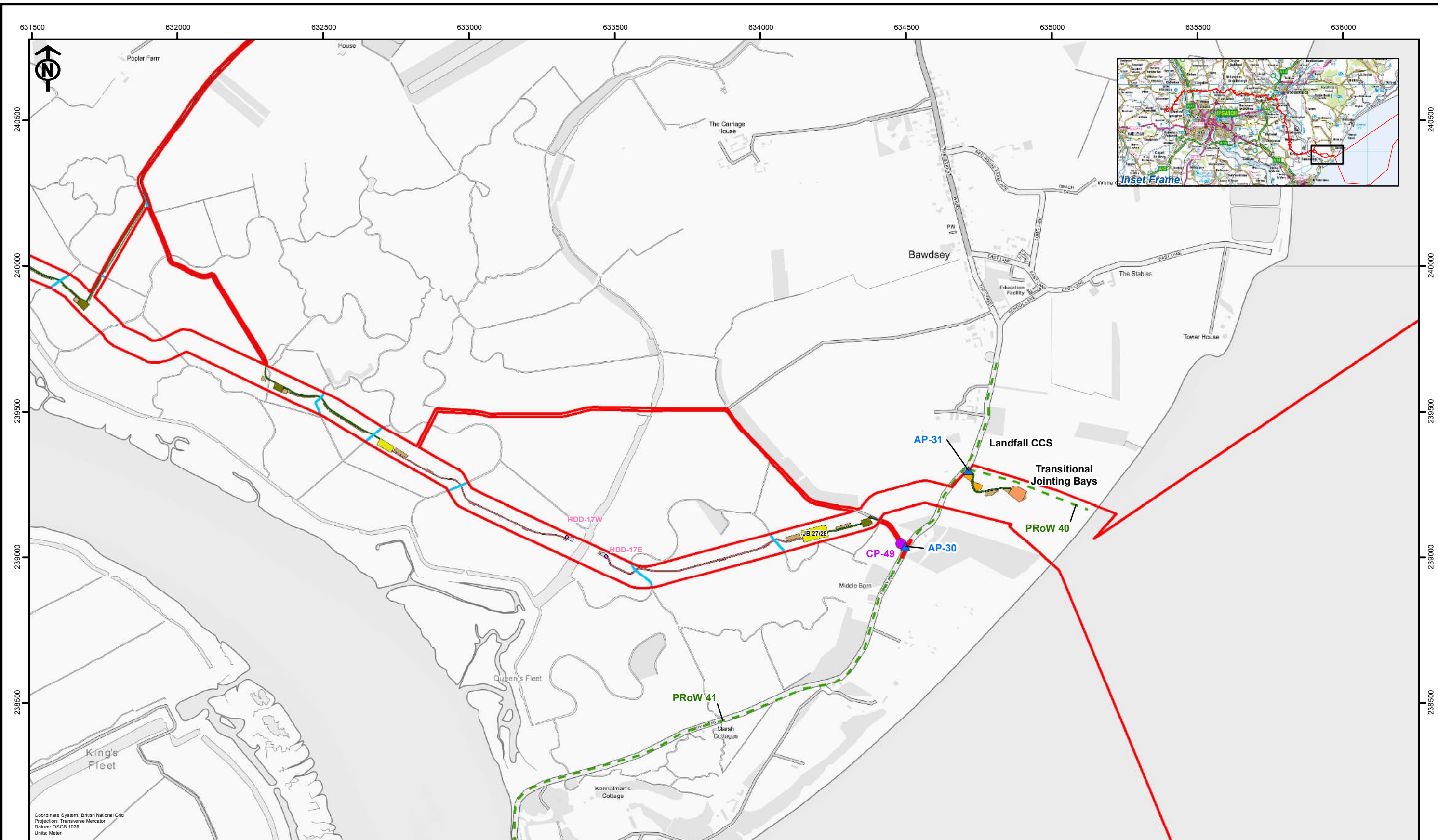
0 200 400 Metres

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**EA THREE Cable Route**

FIGURE 2.10 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A



Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Units: Meter

EA THREE Development Order Limits	Watercourse within the DOL	Consolidated Construction Site Compound	HGV Turning
Crossing Point (Road Crossings Numbered)	Transition Jointing Bays	Top Soil Strip	Stone Haul Road
Public Right of Way	Jointing Bay Hardstanding	Top Soil Bund	Trackway
	Horizontal Direct Drilling Duct Proving Platform	Existing Track	



				Original A3 Plot Scale 1:12,500	0 200 400 Metres	
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**EA THREE Cable Route**  
 FIGURE 2.11 Environmental Sound Survey Locations

Drg No	404.5356.00006.0011.0
Rev	0
Date	21/11/2023
Layout	N/A