

AENC-BCLP-LEG-REP-0030

Norwich to Tilbury

Volume 8: Examination Documents

**8.24 Detailed Written Scheme of Investigation: Mitigation Areas
113 (a&b), 114 and 115, Great Horkesley Underground Cable -
Tracked Changes Version**

Final Issue B

July 2026

Planning Inspectorate Reference: EN020027

nationalgrid

Revision History

<u>Version</u>	<u>Date</u>	<u>Submitted at</u>
<u>A</u>	<u>29 Aug 2025</u>	<u>Deadline 5</u>
<u>B</u>	<u>21 Jul 2026</u>	<u>Deadline 7</u>

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Executive summary

This Detailed Written Scheme of Investigation (DWSI) sets out the archaeological mitigation requirements for mitigation areas 113 (a & b), 114, and ~~115: Bramford Substation to East Anglia Connection Node underground cable (EACN) Substation~~ 115 Great Horkesley Underground Cable - underground cable section ~~and EACN Substation~~, located on land adjacent to The Causeway and School Lane, Great Horkesley, and south of Little Horkesley (between Vinesse Road and London Road), approximately 3 km north of Colchester, Essex (**Figure 1**), as part of the Norwich to Tilbury Project. The scope of the archaeological mitigation works comprises four areas of detailed archaeological excavation.

The Project involves reinforcement of the electricity transmission network to support the connection of new low-carbon energy generation. As construction has the potential to impact buried archaeological remains, which are a finite and non-renewable resource, a programme of archaeological mitigation is required in line with the Outline Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (~~AMS~~OAMS-OWSI) (document reference 7.5).

The approach set out in this document has been informed by previous geophysical survey and trial trenching, which identified evidence for multi-period activity across the site. This includes prehistoric remains, including those possibly associated with land division and settlement, Romano-British agricultural features and possible settlement activity and activity associated with a possible medieval farmstead and pottery production.

The key objectives are to establish the character, extent and chronology of archaeological activity within the site, and to place the results within their wider local and regional context, including contributing to the East of England Research Framework.

All works will be undertaken in accordance with the ~~AMS~~OAMS-OWSI and relevant professional standards, including those set out by the Chartered Institute for Archaeologists, Historic England and ~~Archaeological Advisor for Colchester City~~ Place Services at Essex County Council. Post-excavation assessment, reporting and archiving will ensure that the results are appropriately analysed and disseminated.

Health, safety and environmental considerations will be embedded throughout all stages of the archaeological works.

1. Introduction

1.1 Statement of Works Required

- 1.1.1 This document sets out the requirement for archaeological mitigation on land adjacent to The Causeway and School Lane, Great Horkesley, and south of Little Horkesley (between Vinesse Road and London Road), approximately 3 km north of Colchester, Essex. This comprises mitigation areas 113 (a & b), 114, and 115: Bramford to East Anglia Connection Node underground cable (EACN UGC). Hereafter, these archaeological mitigation areas will collectively be referred to as the site. The scope of the archaeological mitigation works comprises four areas of detailed archaeological excavation.
- 1.1.2 This document should be read in conjunction with the Outline Archaeological Mitigation Strategy and Outline Written Scheme of Investigation (~~AMS-OWSI~~[OAMS-OWSI](#)) (document reference 7.5) (Ref 2) for Norwich to Tilbury (the 'Project'), where generic standards for archaeological work are set out in **Section 5** (document reference 7.5) (Ref 2). This document details the types of and scope of archaeological mitigation proposed to reduce the effect of the Project on archaeological remains.
- 1.1.3 Appropriate and proportionate geophysical (magnetometer) survey and archaeological trial trenching has been undertaken to date by Headland Archaeology (Ref 19- and Ref 20), and these works have informed the scope and extent of the archaeological mitigation detailed here. These works are summarised in **Section 1.8** of the ~~AMS-OWSI~~[OAMS-OWSI](#) and detailed in the geophysics reports (document reference 6.11.A4) (Ref 19) and trial trenching reports (Ref 20, Ref 15, Ref 16, Ref 17, Ref 18).

1.2 Site Description

- 1.2.1 National Grid Electricity Transmission plc ('National Grid') owns and maintains the national high voltage electricity transmission network throughout England and Wales.
- 1.2.2 The transmission network connects the power from where it is generated to the regional Distribution Network Operators who then supply businesses and homes.
- 1.2.3 National Grid holds the Transmission Licence for England and Wales, and its statutory duty is to develop and maintain an efficient, coordinated and economical system of electricity transmission and to facilitate competition in the generation and supply of electricity, as set out in the Electricity Act 1989.
- 1.2.4 National Grid has developed plans for the Project. The Project would support the UK's net zero target through the connection of new low carbon energy generation in East Anglia and by reinforcing the transmission network.
- 1.2.5 The Project comprises reinforcement of the transmission network between the existing Norwich Main Substation in Norfolk and Tilbury Substation in Essex, via

Bramford Substation, the new East Anglia Connection Node (EACN) Substation and the new Tilbury North Substation.

- 1.2.6 The reinforcement is needed because the existing transmission network, even with current upgrading, will not have sufficient capacity for the new renewable energy (a substantial proportion of which would be generated by offshore wind) that is expected to connect to the network over the next 10 years and beyond. Completion of the Project, together with other new reinforcements across the country, will meet this future energy transmission demand both in East Anglia and across the UK.
- 1.2.7 The Project comprises:
- A new 400 kilovolt (kV) electricity transmission connection of approximately 180 km overall length from Norwich Main Substation to Tilbury Substation via Bramford Substation, a new EACN Substation and a new Tilbury North Substation, including:
 - Approximately 159 km of new overhead line supported on approximately 509 pylons, either standard steel lattice pylons (approximately 50 m in height) or low height steel lattice pylons (approximately 40 m in height) and some of which would be gantries (typically up to 15 m in height) within proposed Cable Sealing End (CSE) compounds or existing or proposed substations
 - Approximately 21 km of 400 kV underground cabling, some of which would be located through the Dedham Vale National Landscape (an Area of Outstanding Natural Beauty (AONB¹))
 - Up to seven new CSE compounds (with permanent access) to connect the overhead lines to the underground cables.
 - Modification works to connect into the existing Norwich Main Substation and a substation extension at the existing Bramford Substation.
 - A new 400 kV substation on the Tendring Peninsula, referred to as the EACN Substation (with a new permanent access). This is proposed to be an Air Insulated Switchgear (AIS) substation.
 - A new 400 kV substation to the south of Orsett Golf Course in Essex, referred to as the Tilbury North Substation (with a new permanent access). This is proposed to be a Gas Insulated Switchgear (GIS) substation.
 - Modifications to the existing National Grid Electricity Transmission overhead lines to facilitate the connection of the existing network into the new Tilbury North Substation to provide connection to the Tilbury Substation.
 - Ancillary and/or temporary works associated with the construction of the Project.
- 1.2.8 In addition, third party utilities diversions and/or modifications would be required to facilitate the construction of the Project. There would also be land required for environmental mitigation and Biodiversity Net Gain (BNG).
- 1.2.9 As well as the permanent infrastructure, land would also be required temporarily for construction activities including, for example, working areas for construction

¹ National Landscape is the rebranded name of an AONB from 22 November 2023

equipment and machinery, site offices, welfare, storage and temporary construction access.

- 1.2.10 The mitigation areas covered by this DWSI (Mitigation Areas 113 (a & b), 114 and 115) form part of a wider arable landscape characterised by relatively flat, low-lying ground and sustained agricultural land use. The areas comprise several fields that have been subject to long-term cultivation, with evidence of historic land division reflected in field boundaries and drainage features. The surrounding landscape is predominantly rural in character, with dispersed settlement and limited modern disturbance, retaining elements of its historic agricultural setting.
- 1.2.11 Archaeological investigations within these areas have identified evidence of multi-period activity, including limited prehistoric remains, Romano-British settlement and agricultural features, and a concentrated area of medieval activity likely representing a farmstead, alongside later agricultural features. The site therefore lies within a landscape with a demonstrable history of settlement and land use, spanning from prehistory through the Roman and medieval periods to the present day.

1.3 Site Location

- 1.3.1 The Site is located on land adjacent to The Causeway and School Lane, Great Horkesley, and on land to the east of Vinesse Road and west of London Road, south of Little Horkesley, approximately 3 km north of Colchester, within the Colchester District of Essex. They are shown in **Figure 1**. [Mitigation Area 116a is shown on the figure as it is in proximity to the Site but it is not included in this report as it is part of a separate construction element.](#)
- 1.3.2 The ~~site~~Site comprises a combined c. 3.64 hectares (ha) of arable land, split into four distinct mitigation areas across sixteen fields.

1.4 Standards and Guidance

- 1.4.1 In line with **Section 5.1** of the ~~AMS-OWSI~~[OAMS-OWSI](#) (Ref 2) for the Norwich to Tilbury Project, this DWSI has been prepared in accordance with relevant professional standards and guidance, including ~~the Archaeological Advisor for Colchester City Council and The Client~~[Place Services at Essex County Council \(2023\) Archaeological Advice for Planning Applications and Written Schemes of Investigation \(Ref 21\)](#) in advance of works commencing at the site.
- 1.4.2 This DWSI will set out how the ~~archaeological contractor~~[Archaeological Contractor](#) will apply the principles and objectives for archaeological mitigation (**Section 2**), construction activities requiring mitigation (**Section 4**) and the standards for archaeological work (**Section 5**) as presented in the ~~AMS~~[OAMS](#)-OWSI, and how the requirements of this DWSI will be followed. The document will also include details of staff, specialists, and project programmes.
- 1.4.3 The professional standards and guidance relevant in addressing the research agenda for the site, set out at **Section 4.1** below, include:
- *Chartered Institute for Archaeologists. 2020. Standard and Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials. (Ref 4)*
 - *Chartered Institute for Archaeologists. 2025. Code of Conduct. (Ref 5)*

- Chartered Institute for Archaeologists. 2023. *Standard for Archaeological Excavation* (Ref 6)
- Chartered Institute for Archaeologists. 2023. *Universal Guidance for Archaeological Excavation*. (Ref 7)
- Association of Local Government Archaeological Officers East of England and Historic England. 2021. *East of England Regional Research Framework (EERRF)* (online). (Ref 13)
- Gurney, D. 2003. *Standards for Field Archaeology in the East of England*. (~~Ref 14~~[Ref 14](#))
- Historic England. 2015. *Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record* Ref 21)
- Historic England. 2018. *The Role of the Human Osteologist in an Archaeological Fieldwork Project* (Ref 22)
- Historic England. 2022. *Radiocarbon Dating and Chronological Modelling: Guidelines and Best Practice* (Ref 23)
- Historic England. 2025. *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (third edition) (Ref 24)
- Colchester and Ipswich Museums (CIMS). 2008a. *Guidelines on standards and practices for archaeological fieldwork in the Borough of Colchester (CBC)* (Ref 8)
- CIMS. 2008b. *Guidelines on the preparation and transfer of archaeological archives to Colchester and Ipswich Museums (CBC)* (Ref 9)
- [Place Services \(Essex County Council\). 2023. Archaeological Advice for Planning Applications and Written Schemes of Investigation](#) (Ref 27)

1.5 Project Roles

- 1.5.1 National Grid will be responsible for instructing the works and providing necessary information on scope [of development impacts, including accurate and up-to-date plans for the development](#).
- 1.5.2 The 'Main Works Contractor' will be The Client's contractor in control of the Site and all contractors on it during the construction phase. The Main Works Contractor, when appointed, will oversee all stages of work with responsibility for health and safety, welfare and site security, and will ensure that appropriate temporary works required to facilitate the archaeological work are in place.
- 1.5.3 The Archaeological Clerk of Works (ACoW) team will be responsible for monitoring and assuring the work on behalf of the Client. An ACoW team will be on site for the duration of the works to oversee the archaeological works, monitor progress and assure the works. The team will liaise directly with the LPA Archaeological Advisor.
- 1.5.4 The 'Archaeological Contractor' is responsible for carrying out the excavation, reporting, deposition of the archive and dissemination. All reporting by the ~~archaeological contractor~~[Archaeological Contractor](#) will be via the ACoW team.

~~1.5.5 The Archaeological Advisor for Colchester City Council is the LPA Archaeological Advisor, who provides the development control and planning advice and signs off the work when it is complete, in consultation with the Archaeological Clerk of Works team.~~

1.5.5 Place Services at Essex County Council is the LPA Archaeological Advisor, will be responsible for confirming that the requirements of the DCO are met and for sign-off of the archaeological works, in accordance with the OAMS-OWSI.

1.5.6 The 'project archive repository' is the organisation, a suitable museum in Essex, responsible for the long-term curation of the project archive, including the field notes, plans, photographs and archived finds. The ~~archaeological contractor~~Archaeological Contractor will establish the project archive repository prior to starting the work and will be assigned a unique project reference number ('site code').

2. Archaeological and Historical Background

2.1 Geology and Topography

- 2.1.1 The British Geological Survey (~~Ref 37.1.8~~[Ref 3](#)) records the underlying bedrock geology across mitigation 113 (a & b), 114 and 115 as London Clay Formation (clay, silt and sand), belonging to the Palaeogene period.
- 2.1.2 The overlying superficial geology across the site is recorded as:
- Mitigation areas 113 (a & b) Cover Sand (sand, silt and clay) in the north-east, and Lowestoft Formation (diamicton) in the south-west
 - Mitigation area 114 Lowestoft Formation (diamicton) and Head deposits (clay, silt, sand and gravel)
 - Mitigation area 115: Lowestoft Formation (sand and gravel)
- 2.1.3 The soils across the site are recorded as slightly acid loamy and clayey soils with impeded drainage (Ref 25).
- 2.1.4 Mitigation areas 113 (a & b), 114 and 115 are situated on largely level ground, with only slight variations in elevation across the site. The topography is generally flat, with a gentle decline noted locally towards the western extent of mitigation area 114. Ground levels across the site are broadly comparable and reflect a relatively low-lying agricultural landscape typical of the surrounding area (Ref 26).

2.2 Previous Investigations and Archaeological Background

- 2.2.1 Geophysical (magnetometer) survey (**Figure 3**) (document reference 6.11.A4) (Ref 19) and archaeological trial trenching (**Figures 2a-b**) (document reference 6.11.A5) (Ref 20) has been undertaken by Headland Archaeology across parts of the Project, including that which contains the mitigation areas referred to in this document. Historic England Aerial Investigation and Mapping data (formerly the National Mapping Programme) has also been reviewed and are presented as **Figure 4**.
- 2.2.2 The following section summarises results of the geophysical survey and trial trenching, where relevant to the mitigation areas. A detailed archaeological baseline for the wider project is presented within the Historic Environment Baseline Report (document reference 6.11.A1) (Ref 5).

Prehistoric Period (800,000 BC–AD 43)

- 2.2.3 Trial trenching identified very limited evidence for prehistoric activity within the site. The exception was Area 115, where a Bronze Age pit was identified.

- 2.2.4 No clear dated prehistoric features were identified in Areas 113 (a & b) or 114. The recovered prehistoric material, where present, appears to be residual within later features, suggesting earlier activity in the wider landscape.

Roman Period (Roman (AD 43–410))

- 2.2.5 Roman remains were identified in Area 114. Remains consisted of boundary ditches, a potential adjoining enclosure and a localised compacted gravel surface, with dating supported by the presence of Roman pottery, including Samian ware. The extent of this activity was restricted, suggesting a localised area of Roman land use, rather than extensive occupation. This area may have been located on the periphery of any organised settlement activity, as indicated by the nature of features and material recorded.

Early medieval Period (AD 410–1066)

- 2.2.6 There were no early medieval archaeological remains identified during trial trenching.

Medieval Period (AD 1066–1540)

- 2.2.7 Medieval activity was identified in mitigation Areas 113 (a & b) and 115. In Area 115 boundary ditches and discrete features containing medieval pottery were recorded. The presence of domestic ceramic assemblages, including relatively large quantities of pottery, as well as daub and tile, suggests the likelihood of a medieval farmstead located within the northern and eastern part of the area.
- 2.2.8 Additional medieval features in Area 115 include ditches forming part of a wider field system, likely associated with agricultural land use.
- 2.2.9 In Area 113, large quantities of pottery recovered from pits and spreads, including wasters, have been postulated to relate to medieval pottery production, with an area of magnetic disturbance originally interpreted as modern potentially indicating the presence of a kiln. Further ditches extending north may form field systems.

Post-medieval Period (AD 1540–1900)

- 2.2.10 Post-medieval archaeological remains were recorded across Areas 113 (a & b), 114 and 115, predominantly in the form of field boundary ditches associated with agricultural land division. In Area 14, these boundary features correspond with those depicted on historic Ordnance Survey mapping, indicating continued use of the landscape for farming.
- 2.2.11 In Area 113 (a & b), post-medieval activity was represented by boundary features and disturbance associated with agricultural use, some of which may relate to later land management or enclosure. In Area 115, post-medieval features were present but and largely comprised boundary ditches and agricultural drainage features.

Modern Period (1901–present)

- 2.2.12 Evidence for modern activity was limited and primarily relates to ongoing agricultural use and associated disturbance. In Area 113 (a & b), some features and magnetic disturbance are likely associated with post-medieval to modern activity, including agricultural land management and division.

3. Scope of Works

3.1 Introduction

- 3.1.1 This section defines the scope of archaeological mitigation works to be undertaken within the mitigation areas identified in **Section 1**.
- 3.1.2 In accordance with the ~~AMS-OWSI~~[OAMS-OWSI](#), any additional archaeological works or alternative mitigation measures within the site in variance to this DWSI will be subject to further discussion and agreement with the ACoW team, The Client, ~~1.5.5 The Archaeological Advisor for Colchester City Council is the LPA- Archaeological Advisor, who provides the development control and planning advice and signs off the work when it is complete, in consultation with the Archaeological Clerk of Works team,~~ [Place Services at Essex County Council](#), and if appropriate Historic England. Additional archaeological work could include the extension of mitigation areas, changes to sampling strategy, or a methodology for preservation in situ.
- 3.1.3 [Where significant archaeological remains extending beyond the limits of the defined mitigation areas are identified during mitigation works, and where these have the potential to contribute to national and/or regional research aims, mitigation areas may be extended, where necessary and practical, within the area of project impact or DCO Order Limits \(whichever is smaller\). Any such extension, and the extents of it, will be agreed with Place Services at Essex County Council, in consultation with the Client and Main Works Contractor, in advance of the additional works being undertaken.](#)

3.2 Archaeological Detailed Excavation Areas

- 3.2.1 The archaeological mitigation will comprise of four detailed excavation areas (Areas 113 (a & b), 114, and 115), [as defined in Appendix B of the OAMS-OWSI. These are illustrated in Figure 1.](#)
- 3.2.2 The individual mitigation areas comprise the following:
- Mitigation Area 113a comprises c. 0.94 ha and will examine a likely medieval pottery production site and field systems.
 - Mitigation Area 113b comprises c. 0.47 ha and will examine Roman settlement activity as well as a likely medieval pottery production site and field systems
 - Mitigation Area 114 comprises c. 0.82 ha and will examine Roman remains, including boundary ditches and a compacted gravel surface.
 - Mitigation Area 115 comprises c. 1.39 ha and will examine a concentrated area of medieval activity, likely representing a farmstead, including boundary ditches, pits and domestic pottery assemblages, together with associated field systems and later agricultural boundaries. It will also examine the presence of Bronze Age features

3.2.3 An overview of the aims and objectives for the site can be found in **Section 4**. The details of the nature, scope of works and specific aims of the detailed excavation area is set out in **Section 5**.

3.2.4 Table 4.1 outlines the trenching information that has informed the design of the mitigation areas.

Table 3.1 The Rationale for each Mitigation Area.

<u>Mitigation Area</u>	<u>Headland Trenching Site and Area</u>	<u>Trench Numbers</u>
<u>113a</u>	<u>Site 10</u> <u>Area 39</u>	<u>TR10.172</u> <u>TR10.174</u> <u>TR10.175</u> <u>TR10.176</u> <u>TR10.185</u> <u>TR10.186</u> <u>TR10.187</u> <u>TR10.196</u> <u>TR10.197</u>
<u>113b</u>	<u>Site 10</u> <u>Area 39</u>	<u>TR10.201</u> <u>TR10.202</u> <u>TR10.203</u> <u>TR10.204</u>
<u>114</u>	<u>Site 10</u> <u>Area 44</u>	<u>TR10.450</u> <u>TR10.452</u> <u>TR10.457</u> <u>TR10.461</u> <u>TR10.463</u> <u>TR10.464</u> <u>TR10.465</u> <u>TR10.467</u>
<u>115</u>	<u>Site 10</u> <u>Area 40</u>	<u>TR10.528</u> <u>TR10.529</u> <u>TR10.530</u> <u>TR10.531</u> <u>TR10.532</u> <u>TR10.533</u> <u>TR10.534</u> <u>TR10.535</u> <u>TR10.536</u> <u>TR10.537</u> <u>TR10.539</u> <u>TR10.541</u>

4. Aims and Objectives Overview

4.1 Research Agenda

- 4.1.1 The archaeological mitigation strategy for the site has been developed in accordance with the principles and objectives set out in the (~~AMS~~SOAMS-OWSI) for the Norwich to Tilbury Project (document reference 7.5) (Ref 2). The research questions, aims and objectives will be subject to ongoing review during the mitigation works and may be refined as appropriate in response to emerging results, subject to agreement with ~~the Archaeological Advisor for Colchester City~~Place Services at Essex County Council and The Client.
- 4.1.2 The ~~AMS~~SOAMS-OWSI establishes a research-led and proportionate approach to archaeological mitigation, ensuring that archaeological remains affected by the Project are appropriately investigated, recorded and analysed to advance understanding of the historic environment.
- 4.1.3 The approach adopted for the site therefore seeks to:
- Mitigate the impact of construction through appropriate investigation and recording.
 - Ensure that the results of archaeological works are placed within a wider local, regional and national context.
 - Contribute to established research frameworks, including the East of England Regional Research Framework (EERRF) (Ref 13).
 - Ensure that mitigation is proportionate to the significance, extent and character of the archaeological resource.

Aims

- 4.1.4 The principal research aims are to:
- Characterise prehistoric activity.
 - Investigate the extent and organisation of Roman settlement.
 - Assess the nature, chronology and function of the medieval farmstead and associated features.
 - Identify whether a medieval pottery production site, including kiln, is present.
 - Understand the impact of later activity on earlier landscapes, including continuity, reorganisation and truncation.

Objectives

- 4.1.5 The principal research objectives are to:
- Investigate and record archaeological remains to determine character and extent.

- Develop a site chronology; and
- Set the results of investigation into the context of the existing and emerging Regional Research Agendas. The current revision of the East of England Regional Research Framework (EERRF) (Ref 13) augments both the original version of the framework, published in two parts in 1997 and 2000, and a revised and updated version, published in 2011.

4.2 Mapping to East of England Regional Research Framework (EERRF)

4.2.1 The table below provides an overview of how the results of work may fit into the context of the existing East of England Regional Research Framework (EERRF), available online and updated in 2021 (Ref 13):

Table 4.1 Alignment with Regional Research Agendas

Anticipated Remains	Key Issues	Mapping to previous EERRF (2021)	Mapping to current EERRF (2026)
Later Prehistoric archaeological features	What is the nature and extent of the limited prehistoric activity identified? Do the remains represent settlement activity and was this permanent or seasonal/transient? How does this evidence contribute to understanding low-density prehistoric activity in the area?	Settlement types and distribution The agrarian economy Regional variation in later prehistoric landscapes	E-MBA 15: What can archaeology tell us about Bronze Age settlement mobility? E-MBA 17: How can we characterise relationships between Bronze Age settlements? LBA-MIA 09: Were settlements permanently or periodically occupied? LBA-MIA 10: How can we better understand the relationships between contemporary sites?
Roman settlement	What is the character and organisation of Roman settlement within the site? How do the identified features relate to wider patterns of Roman rural land use? What evidence exists for continuity or reorganisation of activity	Rural settlement and farmsteads The agrarian economy and landscape organisation Regional variation in Roman rural landscapes	LIA-Rom 13: How can we increase our understanding of Late Iron Age and Roman farmsteads?

Anticipated Remains	Key Issues	Mapping to previous EERRF (2021)	Mapping to current EERRF (2026)
	across the landscape?		
Medieval farmstead and associated activity. Medieval pottery production	What do the features indicate about agricultural practices and land use? What evidence exists for change, development or abandonment? How does this evidence relate to medieval activity recorded elsewhere along the Project corridor? Was medieval pottery production taking place and what can this tell us about the pottery industry of that period and place?	Dispersed rural settlement patterns Agricultural practices and land management Settlement development, change and abandonment.	Med (Rural) 03: How can we improve our understanding of medieval agricultural practices? Med (Rural) 04: How can we improve our understanding of medieval rural industries? Med (Rural) 09: How can we characterise medieval rural settlement morphology and relationships? Med (Rural) 17: How can we characterise medieval rural farms and farmsteads?

5. Standards for Archaeological Work

5.1 Standards for archaeological work

- 5.1.1 All archaeological works will be undertaken in accordance with the [AMSOAMS](#)-OWSI for the Norwich to Tilbury Project (document reference 7.5) (Ref 2), which establishes the overarching principles, methodologies and standards for archaeological mitigation, and the detailed methodology set out within this DWSI.
- 5.1.2 Prior to the commencement of works, the appointed ~~archaeological contractor~~[Archaeological Contractor](#) will prepare a site-specific method statement for the archaeological mitigation areas set out within this DWSI. This will present a response to the standards set out within this DWSI, and will comply with the standards set out in the [AMSOAMS](#)-OWSI. The method statement will include a full programme for the archaeological work that would be referenced against key milestones and events in the overall design and construction programme. All work will comply with relevant standards and technical guidance (Chartered Institute for Archaeologists, 2023 (Ref 6 and Ref 7).
- 5.1.3 The archaeological method statement must include:
- A detailed programme of work that sets out the proposed sequence of tasks, anticipated timescales, staffing arrangements, and any other factors that may affect delivery.
 - A Data Management Plan which will describe the type of data that will be acquired and/or generated during the project, the way the data will be managed and stored, and the mechanisms to be employed to preserve and share the data.
 - The site-specific Health and Safety arrangements that outline the main risks associated with the works and control measures to mitigate these. Information on inductions, PPE, welfare, access, and emergencies will be included.
 - Confirmation of insurances that cover the planned works.
 - The number of staff and the relevant staff CVs.
 - The museum accession numbers and relevant archive repository.
 - The specific parish codes that will be used during the project.
- 5.1.4 Areas defined for archaeological mitigation will be clearly demarcated on site. No plant or vehicles not directly involved in the archaeological works will be permitted within these areas until archaeological excavation has been completed and the area has been formally signed off by and released by ~~the Archaeological Advisor for Colchester City~~[Place Services at Essex County](#) Council. All plant access within archaeological mitigation areas will be supervised and directed by a suitably qualified and experienced archaeologist.
- 5.1.5 To facilitate the construction phase of the Project, specific areas of the site may require completion and sign-off in advance of full excavation of the site, for example

temporary haul roads. Any such process would be agreed with the Archaeological Advisor for Colchester City Council and would include:

- full excavation of the specified area to the standards set out in this DWSI.
- sign-off by ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#) before any construction works take place.
- demarcation and protection of the remainder of the site through appropriate fencing and signage.

5.2 Detailed Excavation

5.2.1 Detailed excavation will be undertaken in adherence to the methodologies for archaeological excavation and recording set out within **section 5** of the ~~AMS~~[OAMS](#)-OWSI (Ref 2), including:

- Controlled machine stripping and hand excavation, where required in accordance with the methodology set out in **section 5.3** of the ~~AMS-OWSI~~[OAMS-OWSI](#).
- Systematic recording of archaeological deposits, features and structures, in accordance with the methodology set out in **section 5.3** of the ~~AMS-OWSI~~[OAMS-OWSI](#).
 - Data-capture for site plans will be by electronic distance measurement, PPGPS survey, measured survey or a combination of these measures; data-capture for site plans will as standard be capable of reproduction at a scale of 1:100; more complex features or areas of complex archaeological remains will be recorded at greater resolution.
- Implementation of appropriate sampling strategies, proportionate to the nature and significance of remains (**section ~~5.3.67-5.3.82~~5.3.72-5.3.75**). These may be varied to suit the research value of the remains, subject to agreement with the ACoW team ~~and the Archaeological Advisor for Colchester City~~, [Place Services at Essex County Council](#), and, if appropriate, Historic England. In terms of the hand excavation of archaeological features, these will include the following:
 - ~~—~~A minimum of 10% of the fills of linear features (ditches, etc) are to be excavated (**section ~~5.3.71~~5.3.72**). The interventions must be representative of the available length of the feature and must consider any variations of size, depth, fills and any concentration of artefacts. For linear features 1.00m wide slots should be excavated across their width. Depending on the significance of the feature and whether research aims/objectives (see **Section 4**) can be answered, a higher percentage sample may be required, increasing in 10% (up to a maximum of 50%) increments through agreement with the ACoW team, ~~Archaeological Advisor for Colchester City~~[Place Services at Essex County Council](#) and National Grid.
 - ~~—~~For discrete features, such as pits, 50% of their fills will be excavated. In some instances, where significant archaeological remains have been identified or to address specific research questions, 100% will be excavated (**section ~~5.3.72~~5.3.73**).
 - ~~—~~Features which are, or could be interpreted as, structural (such as drip gullies, post holes, internal or external surfaces, hearths, etc.) must be fully excavated (**section ~~5.3.78-5.3.80~~5.3.79-5.3.81**). Post-holes and pits must be

examined in section and then fully excavated. Fabricated surfaces within the excavation area (e.g. yards and floors) must be fully exposed and cleaned. Any variation from this process can only be made by through agreement with the ~~Archaeological Advisor for Colchester City~~[Place Services at Essex County Council](#) and The Client, and must be confirmed in writing.

- ~~Large or deep features may be excavated in opposing quadrants in the first~~
= instance, in agreement with ~~the Archaeological Advisor for Colchester-~~
~~City~~[Place Services at Essex County Council](#) and The Client, or in other such
gridded or systematic excavation as may be appropriate to the feature type (Section 5.3.7.81).
- ~~Provision should be made for hand excavation of any stratified layers (e.g.~~
= dark earth) in 2.50m or 1.00m systematic and gridded squares, to be agreed
with the ACoW team, ~~the Archaeological Advisor for Colchester City~~[Place Services at Essex County Council](#) and The Client on the basis of the
complexity/extent of such layers. This should be accompanied by an
appropriate finds recovery strategy which must include metal detector survey
and on-site sieving to recover smaller artefacts/ecofacts.
- ~~Provision should be made to fully investigate the depth of sequences and~~
= the depth of archaeological features. This may involve the use of stepping or
shoring.
- ~~Appropriate provision should be made for extracting water from sites and~~
= features.
- ~~Hand auger or a power auger (where appropriate) is recommended to gain~~
= information from very deep features so a safe excavation strategy can be
designed and implemented in discussion with ~~the Archaeological Advisor for~~
~~Colchester City~~[Place Services at Essex County Council](#). ~~And, and~~ The Client.
- ~~Machine/mechanical assistance may only be used for very large/deep~~
= features, following agreement with the Archaeological Advisor for Colchester
City Council and The Client.
- ~~Measures to ensure the preservation of archaeological evidence, where~~
= preservation in situ is feasible.
- Controlled metal detecting will be undertaken on all areas designated for
archaeological mitigation prior to the excavation areas being opened. Detecting
will also be completed after any surface clearance and prior to any hand
excavation of archaeological features (~~section 5.3.27-5.3.32~~[5.3.26-5.3.31](#)). The
location of any metalwork will be surveyed.

5.2.2 Fieldwork will be undertaken following best practice to ensure that archaeological remains are investigated to a level appropriate to their character, extent and significance, and that results can contribute to the agreed research objectives.

5.3 Environmental Sampling and Scientific Dating

5.3.1 The Archaeological Contractor will present a sampling strategy (based on the sampling requirements outlined in this DWSI, all available guidance and the specialist advice of their in-house or subcontracted palaeoenvironmental specialist) to Place Services at Essex County Council and (if warranted) the Historic England Regional Advisor for Archaeological Science (RSA). Their in-house or subcontracted

palaeoenvironmental specialist will take the role of co-ordinator for environmental archaeology for the Site, in accordance with the ~~AMS~~[OAMS](#)-OWSI (Ref 6)

- 5.3.2 As set out in this section, site-specific environmental sampling strategy will include:
- Targeted sampling for charred plant remains, charcoal, and palaeoenvironmental material
 - Recovery of material suitable for palaeoenvironmental reconstruction and economic interpretation
 - Provision for specialist analysis where appropriate
- 5.3.3 Specific sampling guidance should be followed, including:
- Bulk samples must be a minimum of 40 litres. If a feature is too small to produce this size of sample (e.g. a post hole) then 100% of the feature should be retained for processing.
 - All samples will be retained until their potential has been assessed and until a retention strategy has been agreed with ~~the Archaeological Advisor for Colchester City~~[Place Services at Essex County](#) Council. Where necessary, advice on the appropriateness of the proposed strategy should be sought from the Historic England Science Advisor (East of England).
 - Samples of burnt flint or pottery retained for lipid analysis should not be washed.
- 5.3.4 Appropriate scientific dating techniques will be applied, where justified, to support the development of a robust chronological framework. These may include:
- Radiocarbon (C-14) dating which can be used to date any carbon-based organic materials, such as wood, bone, or plant remains. If remnant peat is found, reliable and high-resolution dating will be essential, and multiple methods will be employed unless otherwise justified
 - Archaeomagnetism dating for highly fired structures such as kilns or ovens and in situ burning
 - Luminescence dating (e.g. OSL or TL), where relevant.
 - If preserved wood is present, for example, in waterlogged deposits then dendrochronology may be able to provide precise and accurate dates (suitable on-site provision to retain the wood in stable condition will be required).

5.4 Finds Processing, Conservation and Human Remains

- 5.4.1 Procedures for the recovery, treatment and storage of artefactual and ecofactual material will be set out within the ~~archaeological contractor's~~[Archaeological Contractor's](#) method statement and will accord with:
- ClfA standards and guidance (~~Ref 7~~[Ref 4](#))
 - Historic England best practice (Ref 24)
- 5.4.2 The recovery strategy for artefacts will be as follows:

- General principle: All artefacts from stratified contexts will be retained unless otherwise stated. Material from unstratified contexts will only be retained where of significance.
- Ceramic materials: All pottery, CBM and ceramic objects (e.g. loomweights, spindlewhorls) will be collected from stratified contexts. Unstratified material will only be retained where significant. In situ structural material will be recorded and sampled where appropriate.
- Stone materials: Building stone and portable objects will be retained from stratified contexts; unstratified material will only be collected where significant. Unworked stone will only be retained where it is clearly anthropogenic or functionally relevant.
- Metalwork and industrial residues: All metalwork and metalworking residues will be retained from stratified contexts. Obviously modern material from topsoil or unstratified contexts will not normally be retained.
- Flint and lithics: All worked flint will be retained. Burnt or unworked flint will be retained from stratified contexts.
- Ecofactual material: Animal bone, marine shell, and other ecofacts will be retained from stratified contexts. Where large assemblages occur, an appropriate sampling strategy will be adopted to characterise the assemblage.
- Glass and small finds: All glass, coins, worked bone, antler, leather, textile, and other small finds will be retained from stratified contexts. Unstratified material will only be retained where significant.
- Structural and in situ material: Structural elements (e.g. timbers, masonry, plaster, daub) will be recorded in situ, with sampling undertaken where appropriate for analysis, dating or identification.
- Bulk or modern material: Large assemblages of modern or post-medieval material (e.g. bottle dumps) will be recorded in situ and sampled where appropriate, rather than fully retained.
- Specialist analysis and retention: Retention, discard and sampling will be subject to specialist assessment and agreement with the ACoW team and ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#).

5.4.3 In accordance with **Sections 5.3.108-5.3.119** of the ~~AMS-OWSI~~ [OAMS-OWSI](#), in the event that human remains are encountered:

- Works will stop in the affected area.
- The ACoW and The Client will be notified immediately. The ACoW will notify ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#) and relevant authorities in order to agree an excavation strategy. Human remains will need to be fully excavated and recorded in accordance with Historic England (Ref 24) and ClfA (Ref 7) guidance. The treatment, excavation and removal of human remains will be undertaken in accordance with Article 23 of the draft Development Consent Order, which sets out the relevant provisions for the removal of human remains.

- Procedures will follow the requirements set out in Article 23 of the draft Development Consent Order, together with relevant Historic England guidance.
- Conservator and specialists should be on-site when excavation of burials begins to advise on conditions, potential and approaches. It may be possible to feedback results from the laboratory investigation of soil blocks to inform approaches on site.
- Human remains are to be treated at all stages with care and respect and are to be dealt with in accordance with the law. They must be recorded in situ and subsequently lifted, packed and marked to the standards compatible with those described in current guidance from ClfA, Historic England, Advisory Panel on the Archaeology of Burials in England (APABE) and the British Association of Biological Anthropology and Osteoarchaeology (BABAO). Where inhumations are encountered, the ~~archaeological contractor~~ [Archaeological Contractor](#) should make provision for the following:
 - Where human burials (inhumations and/or cremation), funerary monuments or other important funerary archaeological features are identified, detailed excavation is necessary to understand the context, dating and osteological features, in an effort to understand their significance. In accordance with Section 5.3.99 of the ~~AMS-OWSI~~ [OAMS-OWSI](#), excavation of human remains will not extend beyond the limits of the mitigation area; however, it may be followed under the baulk so that it may be lifted in its entirety, provided this will not result in disturbance of further burials, or extend beyond the Order Limits. Decisions on extensions to any mitigation areas will need to be made in consultation with ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#) and The Client.
 - ~~The Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#) should be consulted with regards to the most appropriate mitigation approach for sites where furnished burials are known, anticipated, or identified and amendments to the existing WSI may be necessary.
 - The following sampling strategy should be followed:
 - Full excavation is necessary to understand the context, dating and osteological features, in an effort to understand their significance. Leaving human remains in situ should only be considered when excavation is not feasible, for example if the burial is only partially within the excavation area or the proposed development boundary, the decision to not excavate is with the osteologist, otherwise excavation is the standard procedure.
 - provision for retrieval of small bones in the head area (e.g. inner ear bones), torso/pelvic area (foetal remains, gall/bladder stones, hand bones depending on position), and the feet.
 - If grave goods are identified and are not subject to block lifting, additional specialist samples should be taken from the areas around the grave goods.
 - Cremation deposits should be subject to sampling and assessment for charcoal, charred plant remains, finds and the recovery of human bone.
 - Where un-urned cremations are suspected or identified, these will be subject to 100% sampling. Where large deposits of pyre debris are

identified the human remains specialist will be contacted to devise an appropriate strategy for excavation and sampling. The strategy will be developed at site consultation meeting(s) between the Archaeological Contractor(s), The Client, the relevant Historic England Regional Science Advisor and ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#).

- It may be beneficial to consider half sectioning the excavation of un-urned cremations to aid an understanding of the vertical distribution of the deposit; the deposit may then be excavated in spits.
- Block lift cremation urns to allow for X-radiography and excavation under laboratory conditions. The conservator or field staff experienced in lifting cremation urns will be present when lifting takes place. In the first instance, the conservator will be contacted for advice.

5.5 Communication, Monitoring, and Sign-Off

- 5.5.1 All archaeological works will be subject to monitoring and sign-off by ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#), in accordance with the ~~AMS~~ [OAMS](#)-OWSI (Ref 2):
- Archaeological areas will remain under archaeological control until formally agreed as completed
 - Clear communication will be maintained between the ~~archaeological contractor~~ [Archaeological Contractor](#) and construction teams
 - Areas will only be released once archaeological works have been signed off by ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#).
- 5.5.2 A unique site code will be agreed with the Archaeological Advisor for Colchester City Council and used for all recording, archiving and reporting.
- 5.5.3 The ~~archaeological contractor~~ [Archaeological Contractor](#) will provide The Client, ACoW team and, if appropriate, ~~the Archaeological Advisor for Colchester City~~ [Place Services at Essex County Council](#), with a weekly summary progress memo (1–2 pages). This will:
- Summarise the work undertaken during the week and the key findings.
 - Report on site attendance, where appropriate.
 - Confirm that the work will be completed to programme and identify any potential issues to programme.
 - Identify any health and safety issues (including near miss).
 - Post Excavation Programming, following fieldwork.
- 5.5.4 The ~~archaeological contractor~~ [Archaeological Contractor](#) will provide all information reasonably practicable to the ACoW team to enable them to monitor compliance with this DWSI – e.g. site surveys, intervention plans, records and finds data etc.
- 5.5.5 As outlined in the ~~AMS-OWSI~~ [OAMS-OWSI](#) sections 5.2.16-5.2.21, the formal sign off procedure will be as follows:

- Once the Archaeological Contractor(s) believes the fieldwork to be completed, a sign-off meeting would be held on site (unless alternative communication is agreed) between the ACoW, Client, ~~Archaeological Advisor for Colchester-~~
~~CityPlace Services at Essex County~~ Council (and Historic England, if appropriate), the ~~archaeological contractor~~Archaeological Contractor and the Main Works contractor.
- Sites that have been completed would be subject to a formal signing off procedure, in order to allow the mitigation areas (or parts thereof) to be released to the construction team. The ~~archaeological contractor~~Archaeological Contractor would submit a completion statement to the ACoW. This statement will include a final site plan, showing locations of archaeological features and interventions (in both PDF and Shapefile format). The ACoW would submit the accepted completion statement to the Client and ~~SCCAS~~Place Services at Essex County Council for confirmation (in consultation with Historic England, where required) that the relevant works have been completed in compliance with the relevant DWSIs.

5.6 Post-Excavation, Reporting and Archiving

5.6.1 Post-excavation works will be undertaken in accordance with the ~~AMS~~OAMS-OWSI Section 6.3 (Ref 2) and will include:

- An interim statement, to be submitted by the ~~archaeological-~~
~~contractor~~Archaeological Contractor within six weeks of completing the fieldwork.
- Post-excavation assessment (PXA), to be submitted within ~~six months~~one year of completion of the archaeological mitigation for relevant development stage, unless otherwise agreed in writing with the Client and SCCAS.
- An updated project design (UPD), to be completed within one year of ~~completion~~the approval of the PXAs. The UPD will provide details of timescales and costs for delivery of the archaeological ~~mitigation for the relevant development stage~~project and detail full publication and archive deposition.
- Specialist analysis of artefacts and environmental material
- Production of reports appropriate to the scale and significance of the remains

5.6.2 All results will be:

- Integrated into the wider project framework
- Assessed against the East of England Regional Research Framework (EERRF) (Ref 13)
- Made available through appropriate dissemination and reporting

5.6.3 A complete archive (including digital data) will be prepared and deposited.

5.7 Public Outreach and Dissemination

5.7.1 A programme of dissemination and public engagement will be implemented in accordance with the ~~AMS~~OAMS-OWSI (~~Ref 6~~Ref 2) **Section 6.8**, proportionate to the significance of the findings. These will fit within wider a Public Archaeology and

Community Engagement Strategy (PACE), which will set out a Project-wide strategy for public engagement. This may include:

- Public summaries and outreach materials.
- Engagement with local stakeholders, schools and interest groups.
- Wider dissemination of significant results through appropriate channels.

6. Programme, staffing and attendance

6.1 Initial timetable and staffing

- 6.1.1 The archaeological ~~evaluation~~mitigation is anticipated to start in March 2027.
- 6.1.2 The ~~archaeological fieldwork subcontractor~~Archaeological Contractor will provide a detailed programme for the archaeological works within their method statement, which will also include estimated staff resources and CVs for key project team members.
- 6.1.3 A programme of archaeological works will be prepared and implemented in advance of construction, setting out the timing and sequence of investigative works. The programme will identify how archaeological activities interface with construction works and will be aligned with key project milestones, in accordance with the requirements of the ~~AMS-OWSI~~OAMS-OWSI (Section 5.1.4).
- 6.1.4 The programme will be agreed with the Archaeological Contractor, ACoW, and Main Works Contractor, and will allow for flexibility to accommodate site conditions, weather, and the nature and extent of archaeological remains encountered during the works.

7. Health, Safety, Security and Environment (HSSE)

- 7.1.1 Health and Safety will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. The project will be carried out in accordance with safe working practices.
- 7.1.2 The ~~archaeological contractor's~~[Archaeological Contractor's](#) method statement shall include details of site-specific Health and Safety arrangements. Should services be detected and work be required in proximity, the contractor will provide supplementary documentation detailing how work will be managed in a Mitigation Statement For Excavation.
- 7.1.3 The appointed ~~archaeological contractor~~[Archaeological Contractor](#) will also arrange appropriate security provisions with the Main Works Contractor at the site.
- 7.1.4 Currently known site-specific HSSE issues will need to be considered within the site-specific risk assessment prior to commencement of the fieldwork and copies sent to the representatives of The Client and their Main Works Contractor for approval.

Risk assessment and methodology statement (RAMS)

- 7.1.5 The ~~archaeological contractor~~[Archaeological Contractor](#) will produce a site-specific Risk Assessment and Methodology Statement (RAMS) to cover the onsite fieldwork and will supply a copy of the company's Health and Safety Policy. These will be reviewed by the WSP Cultural Heritage and Archaeology Team to ensure that the policy and measures are appropriate.
- 7.1.6 The RAMS will have been read, understood, and signed by all staff attending the site before any fieldwork commences. Cross-disciplinary industry standards should be followed, considerations include:
- Clear, concise, and site-specific. Bespoke to the site, and without generic text for hazards that do not apply or mitigation that is not applicable;
 - Tabulation of site-specific hazards, risk grading and mitigation measures;
 - Site manager contact details provided, along with a deputy.
 - Emergency action plan, with an address and route map to the closest Accident and Emergency.
 - Archaeological Contractor RAMS will be reviewed by an appropriately qualified and experienced member of staff (e.g. Project Manager), ideally with final approval by the H&S Manager/Senior Manager prior to review by The Client.

Personal protective equipment (PPE)

- 7.1.7 Staff present on site will be required to wear the appropriate Personal Protective Equipment (PPE), as identified in the RAMS. As a minimum this will be protective

shoes, high-visibility vest, gloves, protective glasses and safety helmet. The requirement for any additional PPE will be identified in the RAMS.

Welfare

- 7.1.8 The Main Works Contractor will be responsible for providing and positioning suitable welfare facilities on site, including toilet and water for washing.

Abbreviations

Abbreviation	Full Reference
AIS	Air Insulated Switchgear
AONB	Area of Outstanding Natural Beauty
BNG	Biodiversity Net Gain
CPRSS	Corridor and Preliminary Routeing and Siting Study Report
CSE	Cable Sealing End
DCO	Development Consent Order
DNO	Distribution Network Operators
EACN	East Anglia Connection Node
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESO	Electricity System Operator
GIS	Gas Insulated Switchgear
GW	Gigawatts
kV	Kilovolt
NSIP	Nationally Significant Infrastructure Project
NETS	National Electricity Transmission System
NETS SQSS	National Electricity Transmission System Security and Quality of Supply Standard
NGET	National Grid Electricity Transmission
Ofgem	Office of Gas and Electricity Markets
PEIR	Preliminary Environmental Information Report
SOBR	Strategic Options Backcheck and Review
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Glossary

Term	Description
Alignment	The proposed overhead line and underground cable route.
Ancient woodland	Land that has been continually wooded since at least 1600 in England. Regarded as 'irreplaceable habitat' in national planning policy and guidance. Ancient woodland greater than 2 ha is recorded on the Natural England Ancient Woodland Inventory.
Archaeological Clerk of Works (ACoW)	A suitably qualified archaeologist or team appointed by National Grid to oversee and monitor archaeological works in accordance with the AMS OAMS OWSI and relevant DWSIs.
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.
Biodiversity Net Gain	An approach for developments to ensure habitats for wildlife are left in a measurably better state than they were before the development.
Cable	An insulated conductor designed for underground installation.
Cable Sealing End compound	Electrical infrastructure used as the transition point between overhead lines and underground cables. A compound on the ground acts as the principal transition point.
Conservation Area	An area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance as defined in s69(1)(a) in the Planning (Listed Building and Conservation Areas) Act 1990.
Development Consent Order	A statutory instrument which grants consents and other rights to build a Nationally Significant Infrastructure Project, as defined by the Planning Act 2008.
Distribution Network Operator	Companies that own and operate the power lines and infrastructure that connect the National Grid network to individual properties.
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
Suffolk County Council Archaeological Service (SCCAS)	The Local Planning Authority Archaeological Advisor responsible for confirming that Development Consent Order requirements are met and for sign off of archaeological works.

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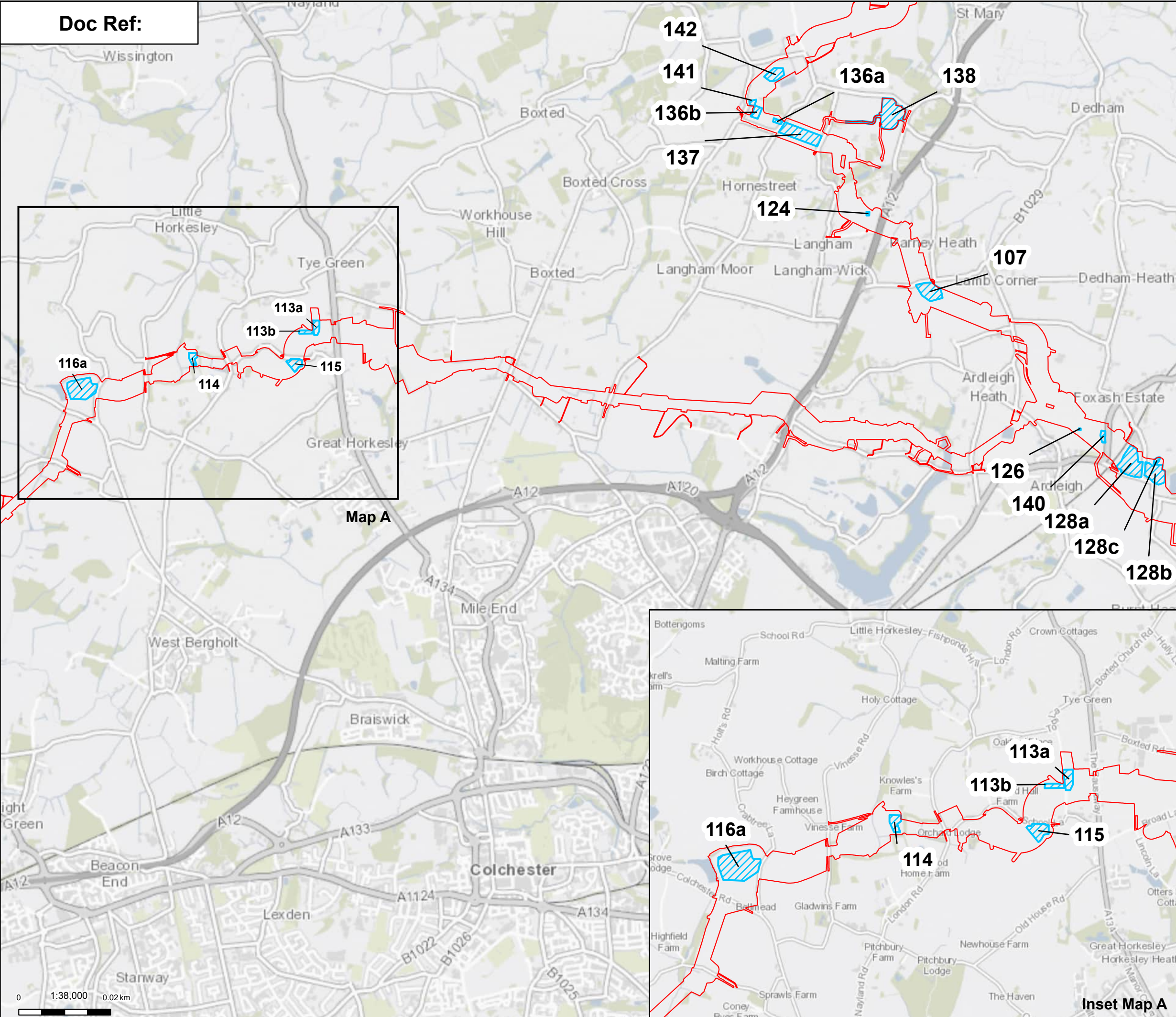
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Appendix A.

Figures

Figure 1: Location of Mitigation Areas 113a&b, 114, 115

Doc Ref:



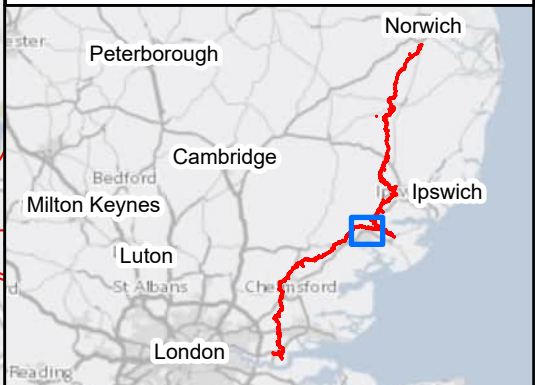
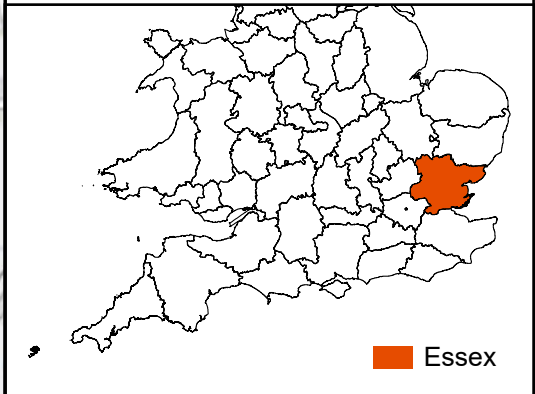
Legend

	Order Limits
	Mitigation Areas

Order Limits Mitigation Areas

Mitigation Areas

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A	July 2026	DETAILED WSIs FOR DETAILED EXCAVATION	MH	DA	OP
Rev	Date	Description	Drawn	Check	Approv

PROJECT:
Norwich to
Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 1 - Location of Mitigation Areas 113a&b , 114, 115

Designed		Date	15 July 2026
Drawn	M. Harshavardhan	Date	15 July 2026
Checked	D. Astbury	Date	15 July 2026
Approved	O. Prestidge	Date	15 July 2026
Scale:	1:38,000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	UK0035003.1497

Suitability Description:

Accepted as Concept Stage

Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00291	Revision: A
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Revision:
A

Figure 2a: Mitigation Areas 113a&b, ~~115~~ over Trial Trench Locations

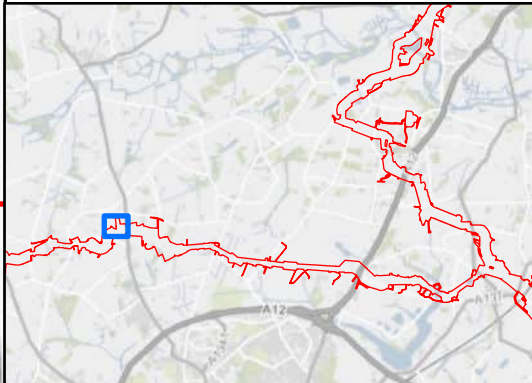
Doc Ref:



Legend

- Order Limits
- Mitigation Areas
- Excavated
- Archaeology
- Spread or Layer
- Trench Base
- Trench Top

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A	July 2026	DETAILED WORKS FOR DETAILED EXCAVATION	MH	DA	OP
Rev	Date	Description	Drawn	Check	Approv

PROJECT:
Norwich to
Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 2a - Mitigation Areas 113 a&b
over Trial Trench Locations

Designed		Date	15 July 2026
Drawn	M. Harshavardhan	Date	15 July 2026
Checked	D. Astbury	Date	15 July 2026
Approved	O. Prestidge	Date	15 July 2026
Scale:	1:1,500	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	UK0035003.1497

Suitability Description:
Accepted as Concept Stage

Drawing Number:	Revision:
10059280-ARC-EGN-ZZ-DR-ZZ-00291	A

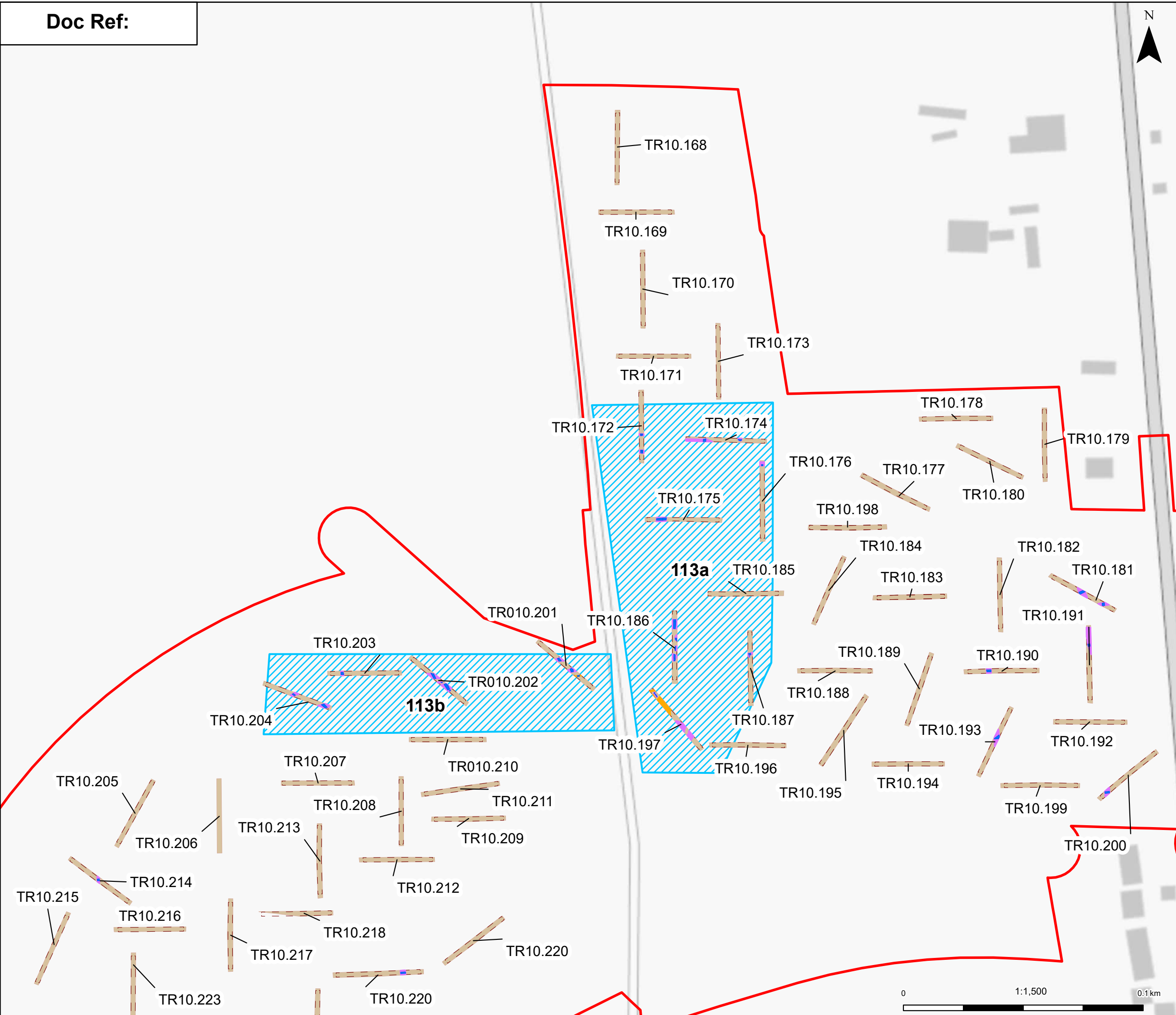


Figure 2b: Mitigation Area ~~114~~115 over Trial Trench Locations

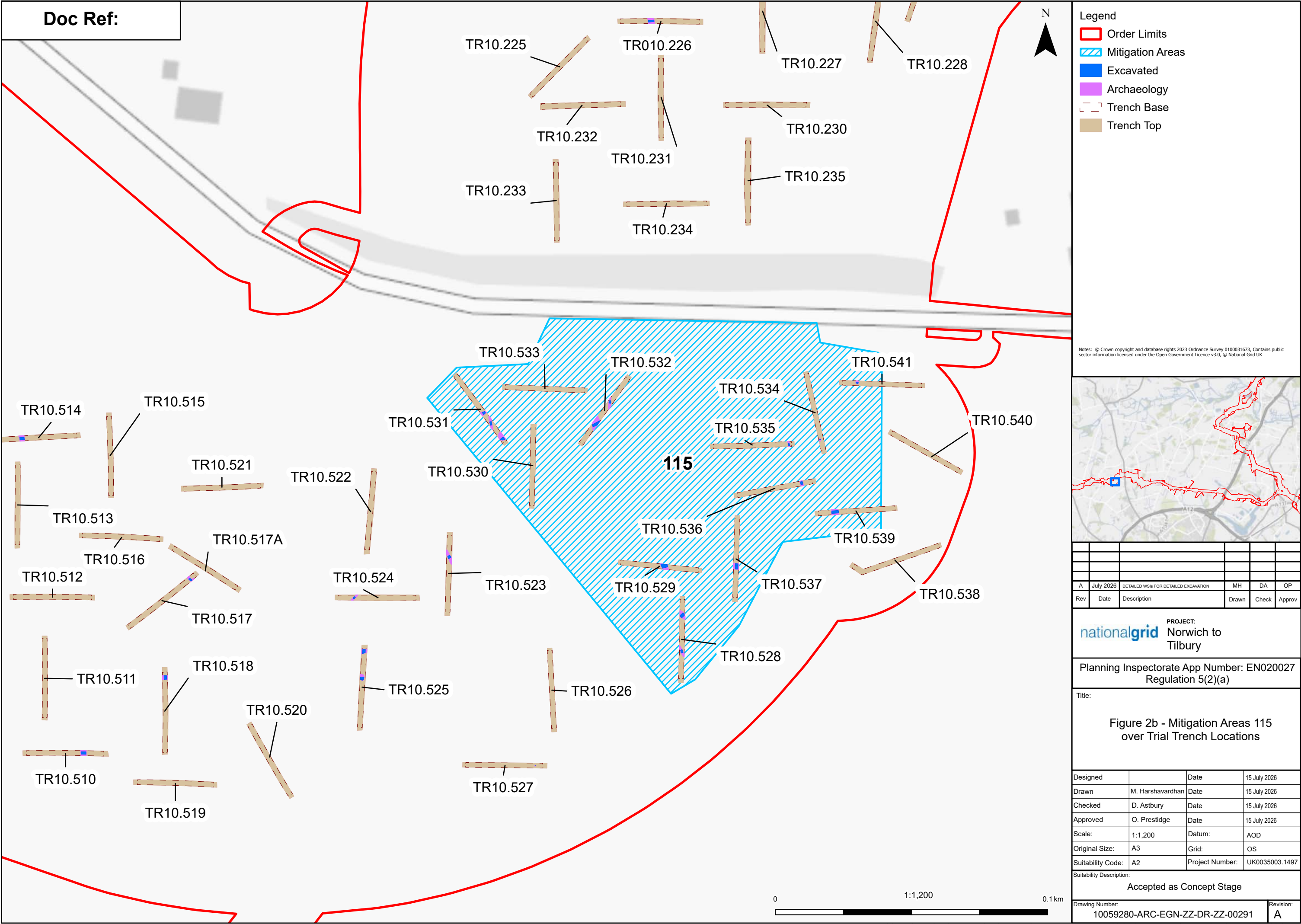


Figure 2c: Mitigation Area 114 over Trial Trench Locations

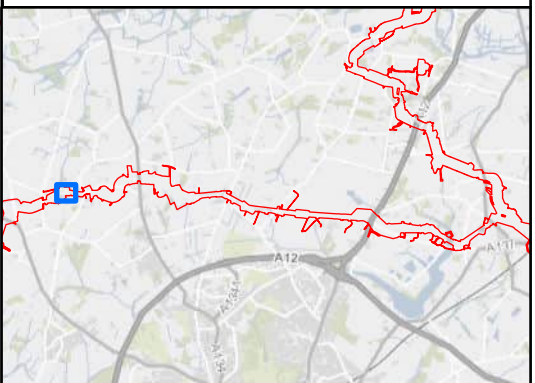
Doc Ref:



Legend

-  Order Limits
-  Mitigation Areas
-  Archaeology
-  Excavated
-  Spread or Layer
-  Trench Top
-  Trench Base

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A	5 July 2024	DETAILED WSs FOR DETAILED EXCAVATION	MH	DA	OP
Rev	Date	Description	Drawn	Check	Approv

nationalgrid PROJECT: Norwich to Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 2c - Mitigation Area 114
over Trial Trench Locations

Designed		Date	15 July 2026
Drawn	M. Harshavardhan	Date	15 July 2026
Checked	D. Astbury	Date	15 July 2026
Approved	O. Prestidge	Date	15 July 2026
Scale:	1:1,200	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	UK0035003.1497

Suitability Description:	Accepted as Concept Stage
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Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00291	Revision: A
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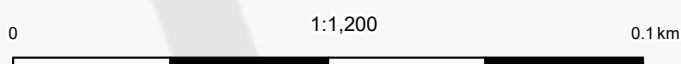


Figure 3: Mitigation Areas 113a&b, 114, 115 over the Geophysical Interpretation

Doc Ref:



Legend

-  Site Boundary
-  Mitigation Areas

Geophysical Interpretation (Points)

-  Spike

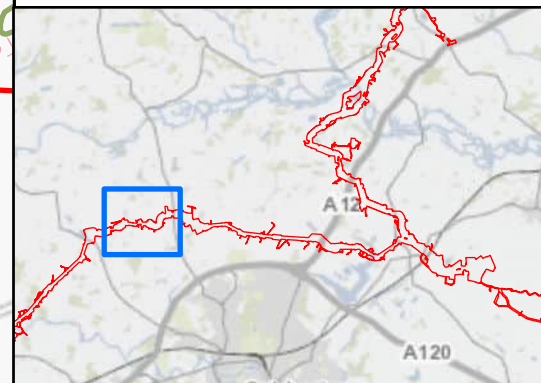
Geophysical Interpretation (Line)

- Agriculture
- Field Boundary
- Field Drain
- Natural

Geophysical Interpretation (Polygon)

- Magnetic Disturbance (Above Ground)
- Magnetic Disturbance (Below Ground)
- Natural
- Possible Archaeology
- Uncertain

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A	May 2026	DETAILED WSIs FOR DETAILED EXCAVATION	MH	DA	OP
Rev	Date	Description	Drawn	Check	Approv

nationalgrid PROJECT:
Norwich to
Tilbury

Planning Inspectorate App Number: EN020027
Regulation 5(2)(a)

Title:

Figure 3 - Mitigation Areas
113a&b , 114, 115 over
the Geophysical Interpretation

Designed		Date	25 May 2026
Drawn	M. Harshavardhan	Date	25 May 2026
Checked	D. Astbury	Date	25 May 2026
Approved	O. Prestidge	Date	25 May 2026
Scale:	1:7,500	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	A2	Project Number:	UK0035003.1497

Suitability Description:

Accepted as Concept Stage

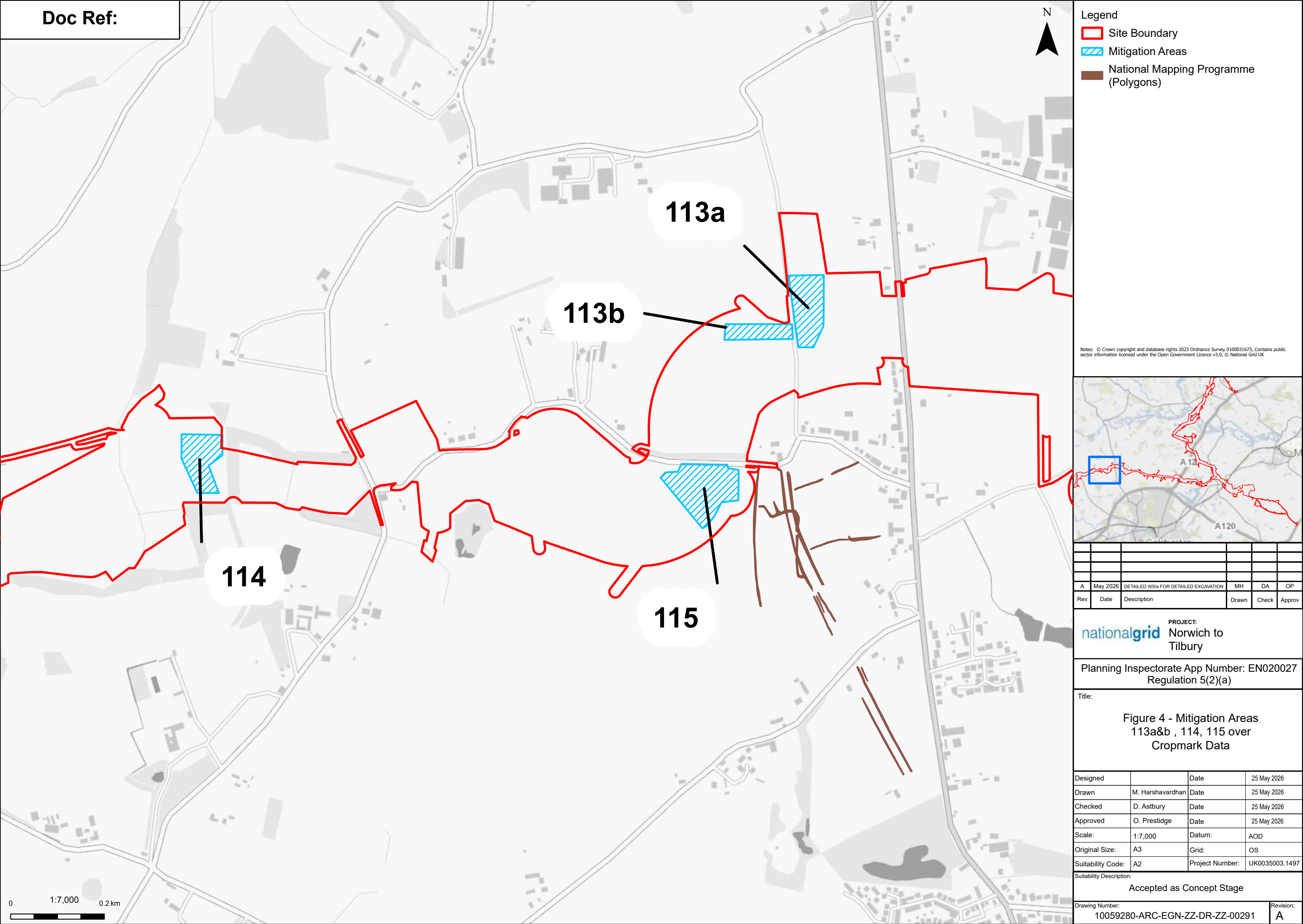
Drawing Number: 10059280-ARC-EGN-ZZ-DR-ZZ-00291	Revision: A
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0 1:7,500 0.2 km

Print Date: 09-06-26 11:25:20

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Figure 4: Mitigation Areas 113a&b, 114, 115 over Cropmark Data



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Summary report: Litera Compare for Word 11.16.0.74 Document comparison done on 21/07/2026 14:30:07	
Style name: Default Style	
Intelligent Table Comparison: Active	
Original filename: 8.24 REVA.docx	
Modified filename: 8.24 Detailed Written Scheme of Investigation - Mitigation areas 113 (a & b), 114 & 115 Revision B v2.3.docx	
Changes:	
<u>Add</u>	161
Delete	130
Move From	0
<u>Move To</u>	0
<u>Table Insert</u>	2
Table Delete	0
<u>Table moves to</u>	0
Table moves from	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	0
Total Changes:	293