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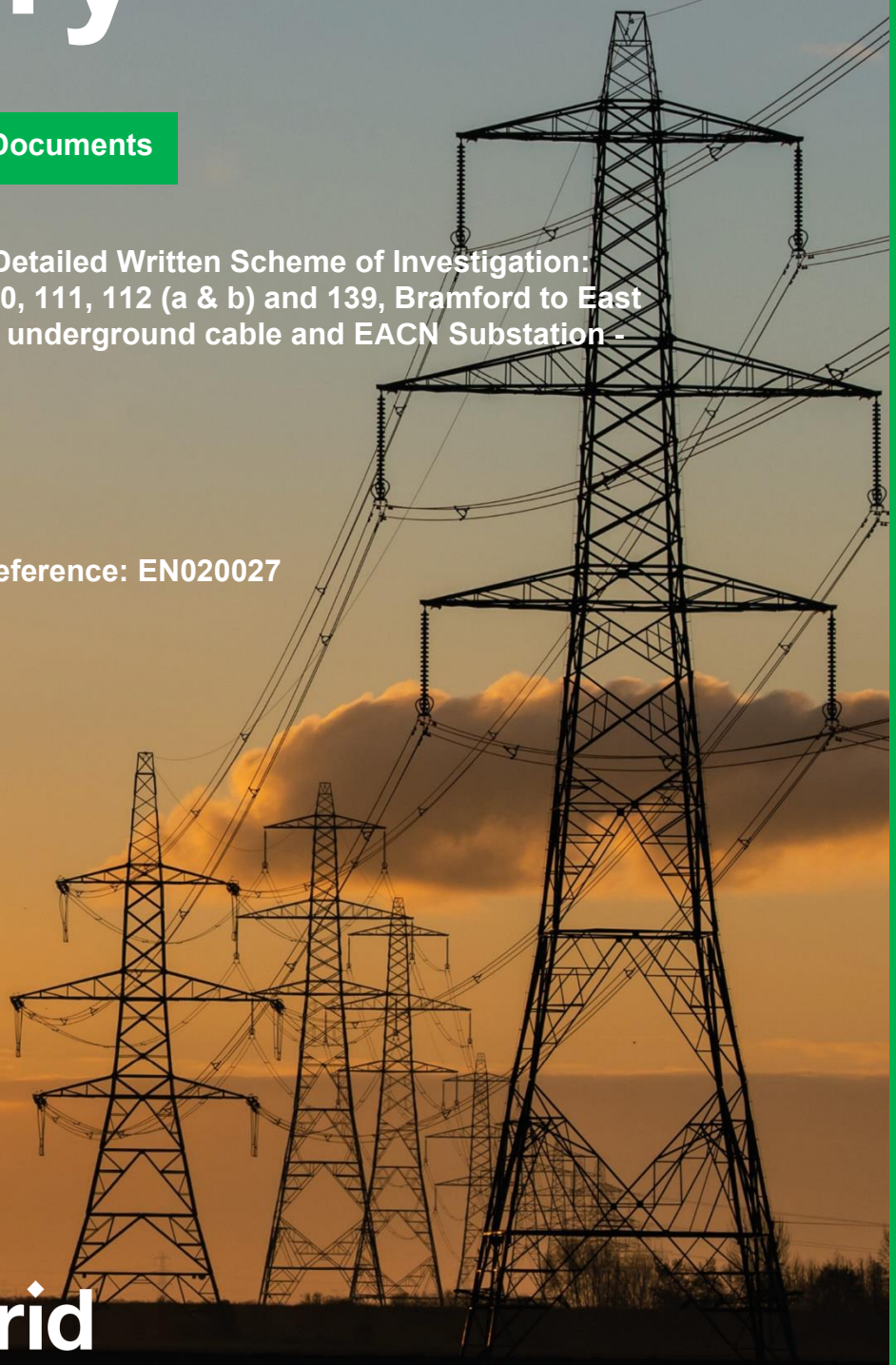

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Executive summary

This Detailed Written Scheme of Investigation (DWSI) sets out the archaeological mitigation requirements for mitigation areas 109, 110, 111, 112 (a & b) & 139: Bramford Substation to East Anglia Connection Node (EACN) Substation - underground cable section and EACN Substation, on land west of Grange Road, Ardleigh, Essex (Figure 1), as part of the Norwich to Tilbury Project. The scope of the archaeological mitigation works comprises six 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 (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 mitigation areas. The evidence demonstrates a clear concentration of prehistoric to Roman activity within mitigation Area 139, characterised by enclosure systems and associated features indicative of a multi-phase settlement, including remains spanning the Late Iron Age to Roman transition. Elsewhere, evidence of earlier prehistoric landscape use, in the form of Bronze Age land division and industrial activity was evidenced in mitigation area 109 by the presence of possible field system ditches and pits containing industrial material including charcoal, fired clay and slag. A ring ditch, without dating material but with the character of a Bronze Age feature, was recorded within mitigation area 110, suggesting a link to the wider Bronze Age landscape of settlement and enclosure. Iron Age activity, in the form of a pit containing pottery was identified within mitigation area 112b, along with an undated boundary ditch. Later landscape management activity, in the form of probable medieval boundary ditches has been recorded within mitigation areas 111 and 112a, along with several further undated ditches. Elements of a post-medieval field system were also identified within mitigation areas 109 and 112a.

The key objectives are to establish the character, extent and chronology of archaeological activity within the mitigation areas, 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 OAMS-OWSI and relevant professional standards, including those set out by the Chartered Institute for Archaeologists, Historic England and Places 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 west of Grange Road, Ardleigh, Essex. This comprises mitigation areas 109, 110, 111, 112 (a & b) & 139: Bramford Substation to East Anglia Connection Node (EACN) Substation - underground cable section and EACN Substation. Hereafter, these archaeological mitigation areas will be referred to collectively as the site and individually as mitigation area 'ID number'. The scope of the archaeological mitigation works comprises six 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 (OAMS-OWSI) (document reference 7.5) (Ref 6) for Norwich to Tilbury (the 'Project'), where generic standards for archaeological work are set out in **Section 5** (document reference 7.5) (Ref 6). 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 15 and Ref 16), 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 OAMS-OWSI and detailed in the geophysics report (document reference 6.11.A4) (Ref 15) and interim trial trenching reports (document reference 6.11.A5) (Ref 16).

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 (AONB[1]).
- 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 equipment and machinery, site offices, welfare, storage and temporary construction access.

1.2.10 The mitigation areas covered by this DWSI (Mitigation Areas 109, 110, 111, 112a, 112b and 139) form part of a wider agricultural landscape comprising arable fields

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

and hedgerows, characterised by gently undulating topography. The Site is located on land west of Grange Road, Ardleigh, and is divided into six discrete areas of investigation. The surrounding landscape retains a predominantly rural character, reflecting a long-established pattern of agricultural land use, with evidence of historic field systems and boundary divisions.

1.2.11 Archaeological investigations within the mitigation areas have identified evidence of multi-period activity, ranging from prehistoric through to post-medieval land use. This includes Late Bronze Age pits and ditches associated with industrial and land management activity, a curvilinear feature of probable prehistoric origin, Iron Age activity represented by a pit and boundary ditch, and extensive later prehistoric to Roman enclosure systems indicative of a multi-phase settlement landscape, particularly within Mitigation Area 139. Later activity is represented by medieval boundary features and post-medieval field systems associated with agricultural reorganisation. The Site therefore lies within a landscape characterised by a long sequence of occupation and land use, contributing to its current agricultural character.

1.3 Site Location

1.3.1 The site is located to the west of Grange Road 2km east of Ardleigh and 2.5km south west of Lawford, within the administration of Tendring District Council in the county of Essex. The site is mainly situated in the parishes of Lawford an Ardleigh and is shown in **Figure 1**.

1.3.2 The site comprises a combined c. 6.59 hectares (ha) of arable land, split into six distinct mitigation areas, occupied by fields and hedgerows.

1.4 Standards and Guidance

1.4.1 In line with **Section 5.1** of the OAMS-OWSI (Ref 6) for the Norwich to Tilbury Project, this DWSI has been produced in accordance with relevant professional standards and guidance, including 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 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 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 7)*
- *Chartered Institute for Archaeologists. 2025. Code of Conduct. (Ref 8)*
- *Chartered Institute for Archaeologists. 2023. Standard for Archaeological Excavation (Ref 9)*

- *Chartered Institute for Archaeologists. 2023. Universal Guidance for Archaeological Excavation. (Ref 10)*
- *Association of Local Government Archaeological Officers East of England and Historic England. 2021. East of England Regional Research Framework (EERRF) (online). (Ref 2).*
- *Gurney, D. 2003. Standards for Field Archaeology in the East of England. (Ref 14)*
- *Historic England. 2015. Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (Ref 17)*
- *Historic England. 2018. The Role of the Human Osteologist in an Archaeological Fieldwork Project (Ref 18)*
- *Historic England. 2022. Radiocarbon Dating and Chronological Modelling: Guidelines and Best Practice (Ref 19)*
- *Historic England. 2025. Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (third edition) (Ref 20)*
- *Place Services (Essex County Council). 2023. Archaeological Advice for Planning Applications and Written Schemes of Investigation (Ref 21)*
- *Museums Essex. 2022. Archaeological Archives in Essex: Guidelines for the Preparation and Deposition of Archives (Ref 22)*

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 appointed by National Grid and will act on its behalf to monitor the implementation of archaeological mitigation measures. An ACoW team will be on site for the duration of the works to oversee the archaeological works and monitor them to ensure that all archaeological works are undertaken in compliance with the OAMS-OWSI and relevant DWSIs. An ACoW team will be responsible for liaising with the LPA Archaeological Advisor on behalf of National Grid in accordance with the roles and responsibilities set out in the OAMS-OWSI (Section 1.7).

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 will be via the ACoW 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 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 7.1.8Ref 1) records the underlying bedrock geology of the site as Thames Group-Clay comprised of silt and sand. The overlying superficial geology is recorded as Coversands-Clay comprised silt and sand. These sedimentary deposits are aeolian in origin.

2.1.2 The soils in the majority of the site are recorded as slightly acid loamy and clayey soils with impeded drainage (Ref 3).

2.1.3 The topography is gently undulating, ranging between 34-36m Above Ordnance Datum (AOD) across the six mitigation areas (Ref 4).

2.2 Previous Investigations and Archaeological Background

2.2.1 Geophysical (magnetometer) survey (**Figure 3**) (document reference 6.11.A4) (Ref 15) and archaeological trial trenching (**Figure 2**) (document reference 6.11.A5) 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 the results have been included in the following background section and are shown on **Figure 4**.

2.2.2 The following section summarises results of these geophysical survey (document reference 6.11.A4) (Ref 15) and archaeological (document reference 6.11.A5) (Ref 16) evaluation works. 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 Prehistoric activity has been recorded across the site, with a clear concentration of settlement activity within mitigation area 139, and evidence of landscape management and industrial activity recorded elsewhere within mitigation areas 109–112b.

2.2.4 Within mitigation area 139, prehistoric activity is clearly established and spatially coherent. A curvilinear enclosure, together with associated ditches, indicates the presence of prehistoric, enclosed settlement. Additional ditches nearby demonstrate that these remains formed part of a broader system of rectilinear enclosures and boundary divisions. The recovery of residual artefactual material within later features, including an Early Neolithic leaf-shaped arrowhead, indicate earlier phases of activity within the same landscape. The recovery of Iron Age and Roman pottery within ditch fills suggest the settlement dates from this transitional period.

2.2.5 Earlier prehistoric activity has been recorded within mitigation area 109, in the form of five circular/sub-circular rubbish pits containing dumped layers of dark reddish brown

or brownish grey silty coarse sand with varying degrees of charcoal, lithics, fired clay and Bronze Age pottery. Rare fragments of slag were also recovered from one pit. An associated east-west oriented ditch was also identified in this area, indicating the presence of both land management and potential industrial activity dating to the Late Bronze Age.

2.2.6 An undated curvilinear ditch was identified in 110, although the feature was of a type consistent with Bronze Age ring ditches in the wider landscape.

2.2.7 A single pit, dated through the presence of Iron Age pottery, was recorded in mitigation Area 112b, although the precise purpose of the feature in unclear. An undated ditch was also identified in this area.

Roman Period (Roman (AD 43–410)

2.2.8 Roman activity is present but variable, with a clear concentration in mitigation area 139 and no confirmed evidence in the remaining mitigation areas.

2.2.9 Within mitigation area 139, Roman activity is represented by continued use of the rectilinear enclosure system and associated ditches with evidence of Roman remains overlying and reusing earlier features.

2.2.10 Although no major structural features (e.g. buildings or roads) are recorded, the finds assemblage and form of the enclosure system suggest that mitigation area 139 formed part of a rural settlement, which likely extended outside of the Project Order Limits to the east.

Early Medieval Period (AD 410–1066)

2.2.11 There was no clear evidence for early medieval settlement identified during trial trenching across the site. Limited artefactual material of this date was recovered from later features, but this is considered likely to be residual. The absence of early medieval structural remains suggests a period of reduced activity or a shift in land use away from settlement within the site.

Medieval Period (AD 1066–1540)

2.2.12 Within mitigation area 139, later activity is present but generally classified as post-medieval or undated agricultural boundaries, with only limited medieval attribution to boundaries and cultivation activity.

2.2.13 Within mitigation area 111, a ditch forming part of a wider medieval agricultural landscape was recorded.

Post-medieval Period (AD 1540–1900)

2.2.14 Post-medieval activity is present and generally agricultural in character.

2.2.15 Within mitigation area 139, post-medieval activity is represented by boundary and drainage features, landscape reorganisation following abandonment of earlier enclosure systems and a general shift to agricultural land use. Ditches forming part of the wider post-medieval field system were identified within mitigation area 109 and features of a probable contemporary use and date were identified within mitigation area 112a.

Modern Period (1901–present)

2.2.16 Across all mitigation areas there is no significant archaeological evidence of modern-period activity. Any activity present relates to agricultural enclosure and cultivation. No discrete modern archaeological features are recorded.

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 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, 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 six detailed excavation areas (mitigation areas 109, 110, 111, 112 (a & b) & 139), 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 109 comprises c. 0.11 ha and will examine areas where a concentration of five pits and a ditch of Late Bronze Age date have been recorded with finds (including pottery, charcoal, fired clay and slag) indicate the presence of industrial and land management activity of that period. Ditches forming part of a wider post-medieval field system have also been identified.
- Mitigation area 110 comprises c. 0.07 ha and will examine an area where an undated curvilinear ditch, of a character consistent with Bronze Age features in the wider landscape, was identified.
- Mitigation area 111 comprises c. 0.25 ha and will examine an area where a medieval boundary ditch, along with another undated drainage/boundary ditch, was recorded.
- Mitigation area 112a comprises c. 0.15 ha and will examine an area where three ditches were recorded, with at least one of these forming part of a wider post-medieval field system.

- Mitigation area 112b comprises c. 0.11 ha and will examine an area of recorded Iron Age activity, containing a pit dated by the presence of Iron Age pottery and an adjacent (undated) boundary ditch.
- Mitigation area 139 comprises c. 5.91 ha and will examine a concentrated area of archaeological activity, characterised by prehistoric enclosure features and associated ditches, with evidence for continued use into the Late Iron Age–Roman period, representing a multi-phase settlement landscape.

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 3.1 outlines the trenching information that has informed the design of the mitigation areas.

Table 3.1 The Rationale for each Mitigation Area.

Mitigation Area	Headland Trenching Site and Area	Trench Numbers
109 Small area focused on two Bronze Age pits identified in the evaluation within cropmark complex (3232)	Site 1 Area 1	TR01.94 TR01.95
110 Small area focused on a partial possible ring ditch. No finds but interim report suggests BA within cropmark complex (3232)	Site 1 Area 1	TR01.33
111 Focused on a curvilinear feature that potentially is part of an enclosure within cropmark complex (3232)	Site 1 Area 1	TR01.75 TR01.76
112a Focused on possible R-B linear features within cropmark complex (3232)	Site 1 Area 1	TR01.88 TR01.93
112b Focused on possible R-B linear features within cropmark complex (3232)	Site 1 Area 1	TR01.102 TR01.103
139 Widespread concentration of prehistoric, Iron Age/Romano-British, Romano-British, post-	Site 9 Area 34	TR09.690 TR09.692 TR09.693

Mitigation Area	Headland Trenching Site and Area	Trench Numbers
medieval and undated archaeological remains (3039)		TR09.694 TR09.695 TR09.696 TR09.697 TR09.698 TR09.699 TR09.700 TR09.701 TR09.702 TR09.703 TR09.704 TR09.705 TR09.706 TR09.707 TR09.708 TR09.710 TR09.711 TR09.712 TR09.713 TR09.714 TR09.715 TR09.716 TR09.717 TR09.718 TR09.719 TR09.720 TR09.721 TR09.722 TR09.723 TR09.724 TR09.725 TR09.726 TR09.727 TR09.728 TR09.729 TR09.730 TR09.731 TR09.732 TR09.733 TR09.734

Mitigation Area	Headland Trenching Site and Area	Trench Numbers
		TR09.735 TR09.736 TR09.737 TR09.738 TR09.739 TR09.740

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 OAMS-OWSI for the Norwich to Tilbury Project (document reference 7.5) (Ref 6). 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 Place Services at Essex County Council and The Client.

4.1.2 The OAMS-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 2).
- 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:

- Investigate the extent, nature and significance of the Late Bronze Age industrial activity identified within mitigation area 109, including its relationship to the wider Bronze Age settlement and land management landscape recorded within the wider vicinity.
- Further assess the character and function of the undated curvilinear ditch, of a character consistent with Bronze Age features in the wider landscape, identified in mitigation area 110. Assess the character and function of the recorded Iron Age activity within mitigation area 112b, and to establish any connection it had with the transitional Iron Age-Roman activity within mitigation area 139 and the wider later prehistoric landscape.
- Characterise the extent, nature and significance of later prehistoric activity concentrated within mitigation area 139, with particular emphasis on enclosure systems and associated ditches and their role within a wider settlement landscape.

- Investigate the spatial organisation, chronology and development of the enclosure systems identified within mitigation area 139, including their relationship to earlier features and their potential continuation beyond the limits of excavation.
- Assess the character and function of Late Iron Age–Roman activity within mitigation area 139, establishing the degree to which this reflects continuity, reuse or reorganisation of earlier prehistoric land divisions and the extent to which the area formed part of a wider managed rural landscape.
- Identify and interpret any additional or previously unrecorded archaeological features, including undated and residual remains, and refine their chronology and relationship to the established prehistoric–Roman landscape.
- Assess the extent and phasing of medieval land division within the site, of which elements have been identified within mitigation area 111, and to establish whether undated ditches within mitigation areas 112a and 112b formed part of this.
- Assess the extent and phasing of the post-medieval field system, of which elements have been identified within mitigation areas 109 and 112a, and to establish whether undated ditches within mitigation areas 111 and 112b formed part of this.

Objectives

4.1.5 The principal research objectives are to:

- Investigate and record archaeological remains to determine character and extent.
- Develop a site chronology.
- 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 2) 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 2):

Table 4.1 Alignment with Regional Research Agendas

Anticipated Remains	Key Issues	Mapping to previous EERRF (2021)	Mapping to current EERRF (2026)
Late Bronze Age industrial activity (mitigation area 109)	What is the nature and extent of industrial activity within mitigation area 109? The slag material recovered is indicative of	Metal artefacts being studied to understand demography and exploitation of the land	LBA-MIA 22: How can we improve our understanding of manufacturing and industry during the LBA to MIA?

Anticipated Remains	Key Issues	Mapping to previous EERRF (2021)	Mapping to current EERRF (2026)
	metal working. In terms of the raw materials, as there was no native source of Bronze, where did this material originate from?		
Later Prehistoric to Iron Age enclosure activity (mitigation areas 112b and 139)	What is the nature, extent and organisation of the prehistoric enclosure systems identified within mitigation area 139? How do curvilinear and rectilinear enclosure elements relate spatially and chronologically, and what do they indicate about settlement form and development? How does this concentrated activity compare to the surrounding areas where lower density remains were identified, and what does this indicate about settlement distribution and hierarchy within the wider landscape?	Settlement types and distribution Regional variation in later prehistoric landscapes Agrarian economy	LBA–MIA 10: How can we better understand the relationships between contemporary later prehistoric sites, including settlement foci and peripheral activity?
Late Iron Age–Roman transitional and Roman enclosure systems (mitigation areas 112b and 139)	What is the character, scale and organisation of the enclosure systems spanning the Late Iron Age–Roman transition? To what extent do Roman-period features represent continuity, modification, or reorganisation of earlier prehistoric land divisions? Does the evidence indicate sustained occupation, agricultural management, or a shift in land use during the Roman period?	Rural settlement and farmsteads 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 rural landscapes, including farmed land without associated settlement?

Anticipated Remains	Key Issues	Mapping to previous EERRF (2021)	Mapping to current EERRF (2026)
Medieval land division within mitigation area 111	Can the evidence of medieval land division provide evidence on the land use during this period, in terms of agricultural techniques and arable/pastural usage? Does the evidence of medieval land division provide data that links it to local settlements and/or other forms of land ownership (e.g. manorial/ecclesiastical)?	Field systems, enclosures, or roads and trackways Origins and development of the different rural settlement types The form of farms	Med (Rural) 03: How can we improve our understanding of medieval agricultural practices?
Post-medieval field systems within mitigation areas 109 and 112a	Does the post-medieval field system represent a marked departure from medieval practices of land division or does it represent a longer, more gradual chronology? What does the post-medieval field system tell us about links to nearby farmsteads and settlements, in terms of land use, ownership and the process of social and economic change during this period?	Field systems, enclosures, roads and trackways	P-Med 14: How can we characterise the post-medieval historic landscape and the factors which affected it?

5. Standards for Archaeological Work

5.1 Standards for Archaeological Work

5.1.1 All archaeological works will be undertaken in accordance with the OAMS-OWSI for the Norwich to Tilbury Project (document reference 7.5) (Ref 6), 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 will prepare a site-specific method statement for the archaeological mitigation areas set out within this DWSI. It will present a response to the standards set out within this DWSI, and will comply with the standards set out in the OAMS-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 9 and Ref 10.

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 site 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 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 Place Services at Essex County Council and would include:

- full excavation of the specified area to the standards set out in this DWSI.

- sign-off by 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 OAMS-OWSI (Ref 6), including:

- Controlled machine stripping or hand excavation, where required in accordance with the methodology set out in **section 5.3** of the OAMS-OWSI.
- Systematic recording of archaeological deposits, features and structures, in accordance with the methodology set out in **section 5.3** of the 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 and iterative sampling strategies, proportionate to the nature and significance of remains (**Section 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, 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 5.3.72**). 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 agreed, increasing in 10% (up to a maximum of 50%) increments through agreement with the ACoW team, and Place Services at Essex County Council and The Client.
  - 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 5.3.73**).
  - 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 5.3.79-5.3.81**). 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 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 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 5.3.81**).

- 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, 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 Place Services at Essex County Council and The Client.
- Machine/mechanical assistance may only be used for very large/deep features, following agreement with Place Services at Essex County 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 5.3.26-5.3.31**). 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 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 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 accord with:

- CIfA standards and guidance (Ref 10)
- Historic England best practice (Ref 19)

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 Place Services at Essex County Council.

5.4.3 In accordance with **Sections 5.3.108-5.3.119** of the 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 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 18) and CIfA (Ref 10) 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 CIfA, 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 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 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 Place Services at Essex County Council and The Client.

- 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 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 Place Services at Essex County Council, in accordance with the OAMS-OWSI (Ref 6):

- Archaeological areas will remain under archaeological control until formally agreed as completed.

- Clear communication will be maintained between the Archaeological Contractor and construction teams via the ACoW team.
- Areas will only be released once archaeological works have been signed off by Place Services at Essex County Council.

5.5.2 A unique site code will be obtained by the Archaeological Contractor from Essex Historic Environment Record (HER) and used for all recording, archiving and reporting.

5.5.3 The Archaeological Contractor will provide The Client, ACoW team and, if appropriate, 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 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 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, Place Services at Essex County Council (and Historic England, if appropriate), the 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 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 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 OAMS-OWSI (Ref 6) and will include:

- An interim statement, to be submitted by the Archaeological Contractor within six weeks of completing the fieldwork.

- Post-excavation assessment (PXA), to be submitted within 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 the approval of the PXAs. The UPD will provide details of timescales and costs for delivery of the archaeological project and detail full publication and archive deposition.
- Specialist analysis of finds 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 2).
- 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 OAMS-OWSI (Ref 6) **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 mitigation is anticipated to start in March 2027.

6.1.2 The 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 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 method statement shall include details of site-specific Health and Safety arrangements incorporating all elements of the archaeological works, including details on specific risks and mitigation requirements in relation to the programme of works. 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 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 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 Client 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 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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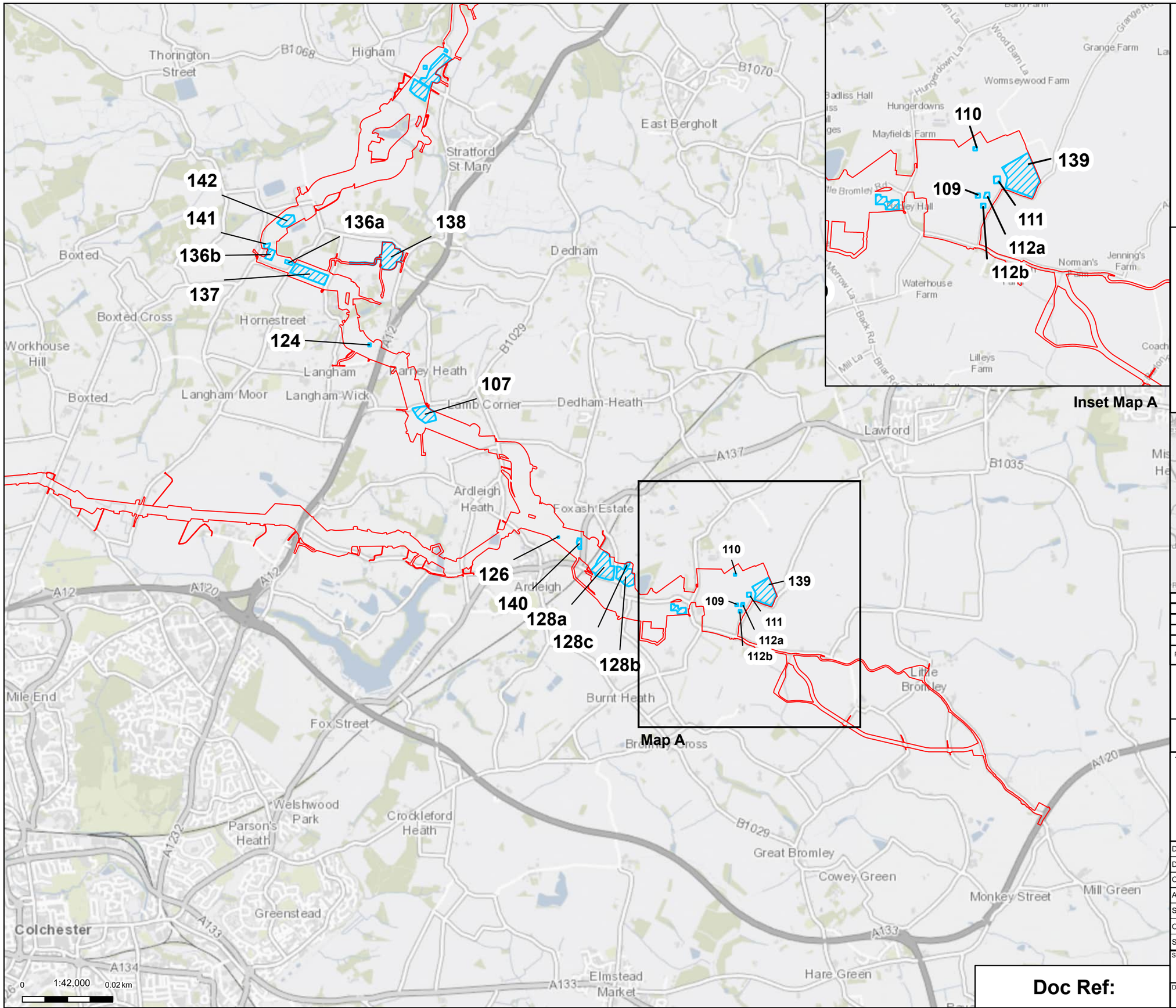
Appendix A. Figures

nationalgrid

Figure 1: Location of Mitigation Areas



Legend

- Order Limits
- Mitigation Areas

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Essex

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

nationalgrid

PROJECT: Norwich to Tilbury

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

Title:

Figure 1 - Location of Mitigation Areas 109, 110, 111, 112a&b, 139

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:	1:42,000	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

Doc Ref:

Print Date: 15-07-26 11:36:46

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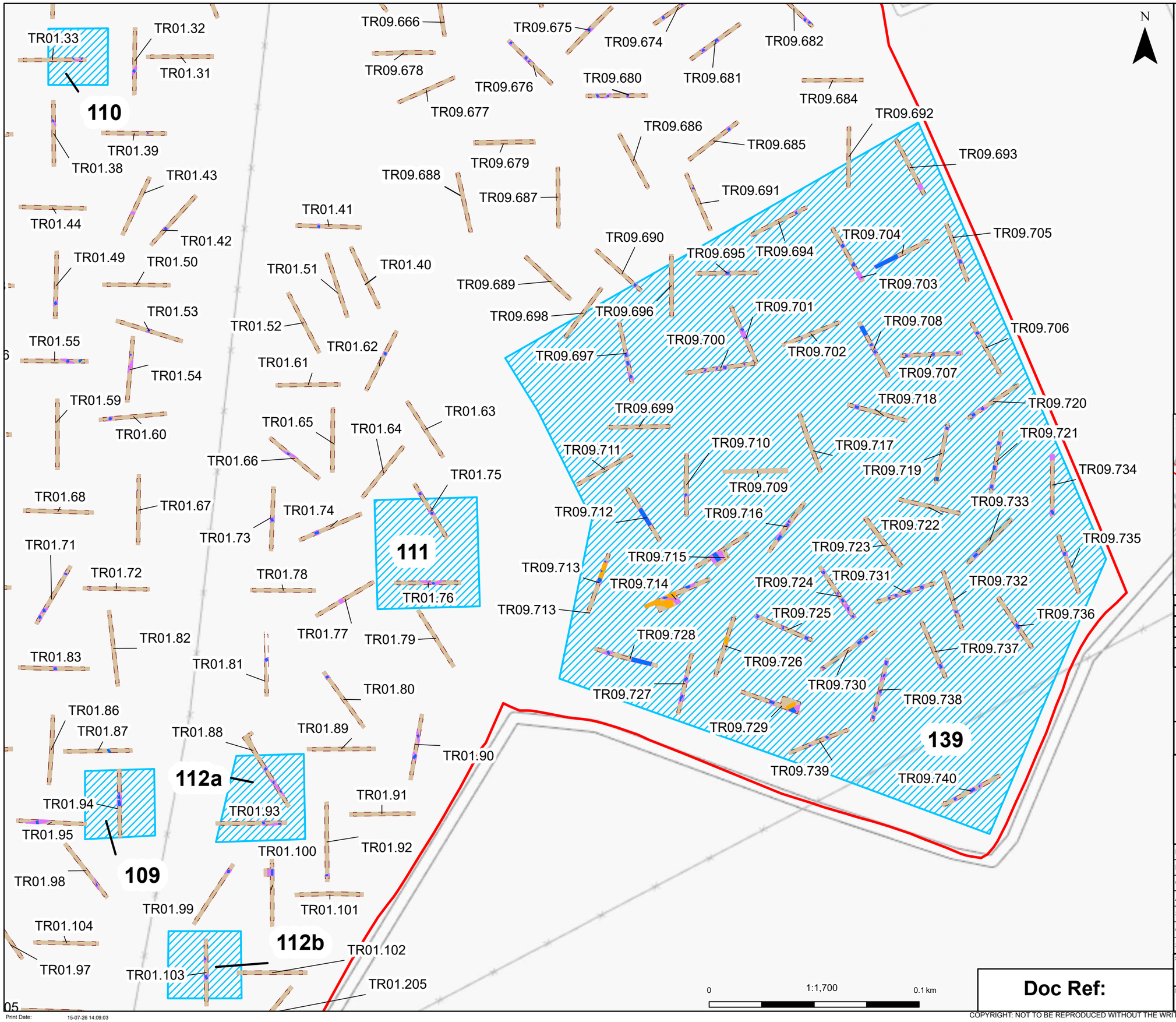
Figure 2: Mitigation Areas 109, 110, 111, 112 a & b, 139 over Trial Trench Locations



Legend

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

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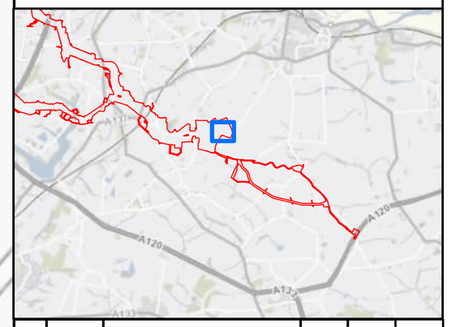

Rev	Date	Description	Drawn	Check	Approv
A	May 2026	DETAILED WSIs FOR DETAILED EXCAVATION	MH	DA	OP

nationalgrid

PROJECT: Norwich to Tilbury

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

Title:

Figure 2 - Mitigation Areas 109, 110, 111, 112a&b, 139 over Trial Trench Locations

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:	1:1,700	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

Doc Ref:

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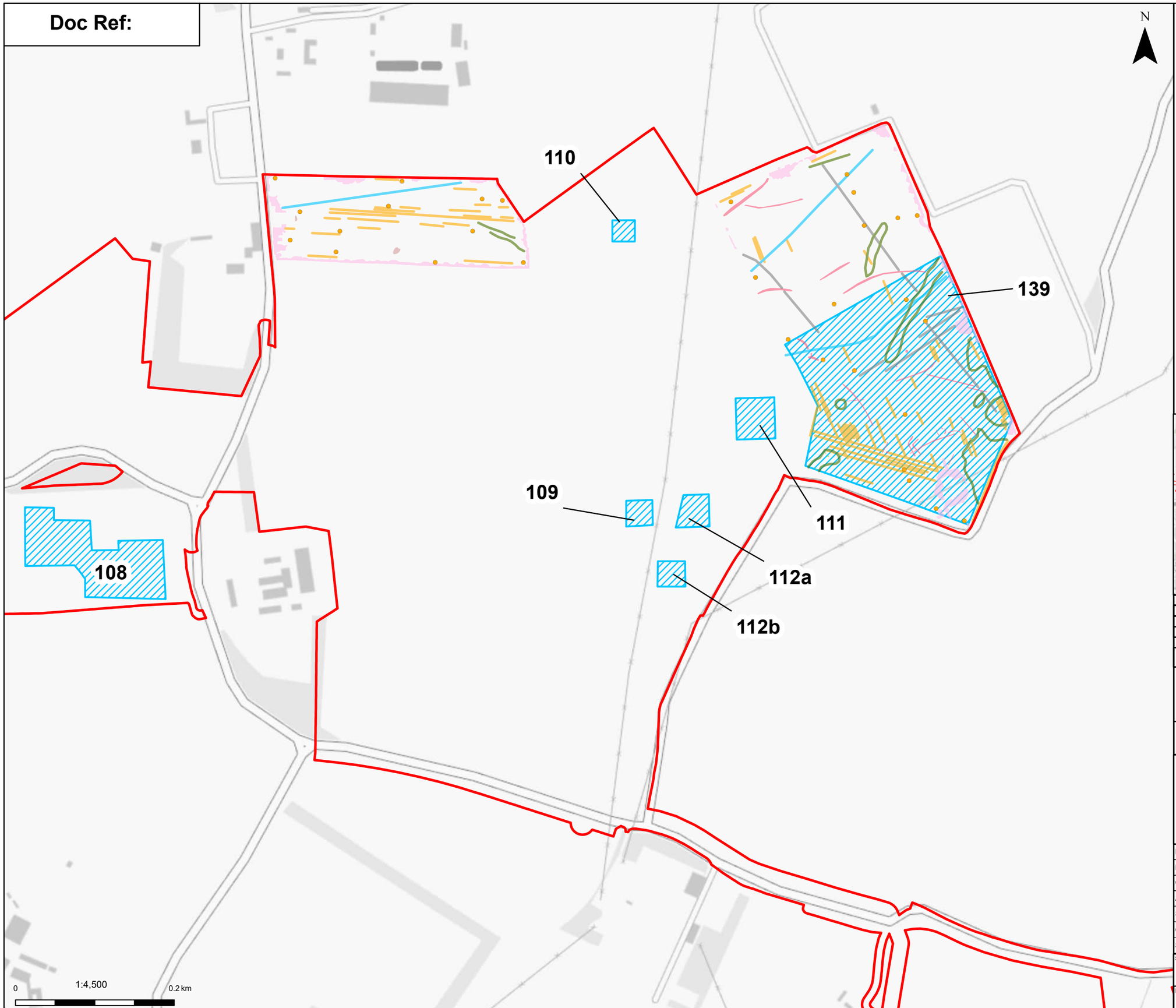
Figure 3: Mitigation Areas 109, 110, 111, 112 a & b, 139 over the Geophysical Interpretation

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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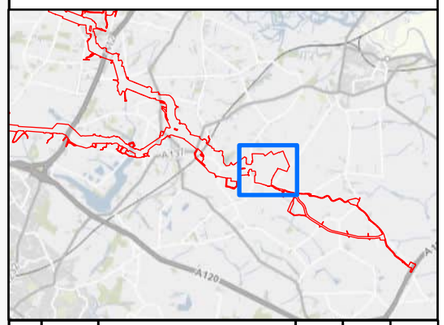

Rev	Date	Description	Drawn	Check	Approv
A	May 2026	DETAILED WSIs FOR DETAILED EXCAVATION	MH	DA	OP

nationalgrid

PROJECT: Norwich to Tilbury

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

Title:

Figure 3 - Figure 3 - Mitigation Areas 109, 110, 111, 112a&b, 139 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:	1:4,500	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

Print Date: 09-06-26 15:54:15

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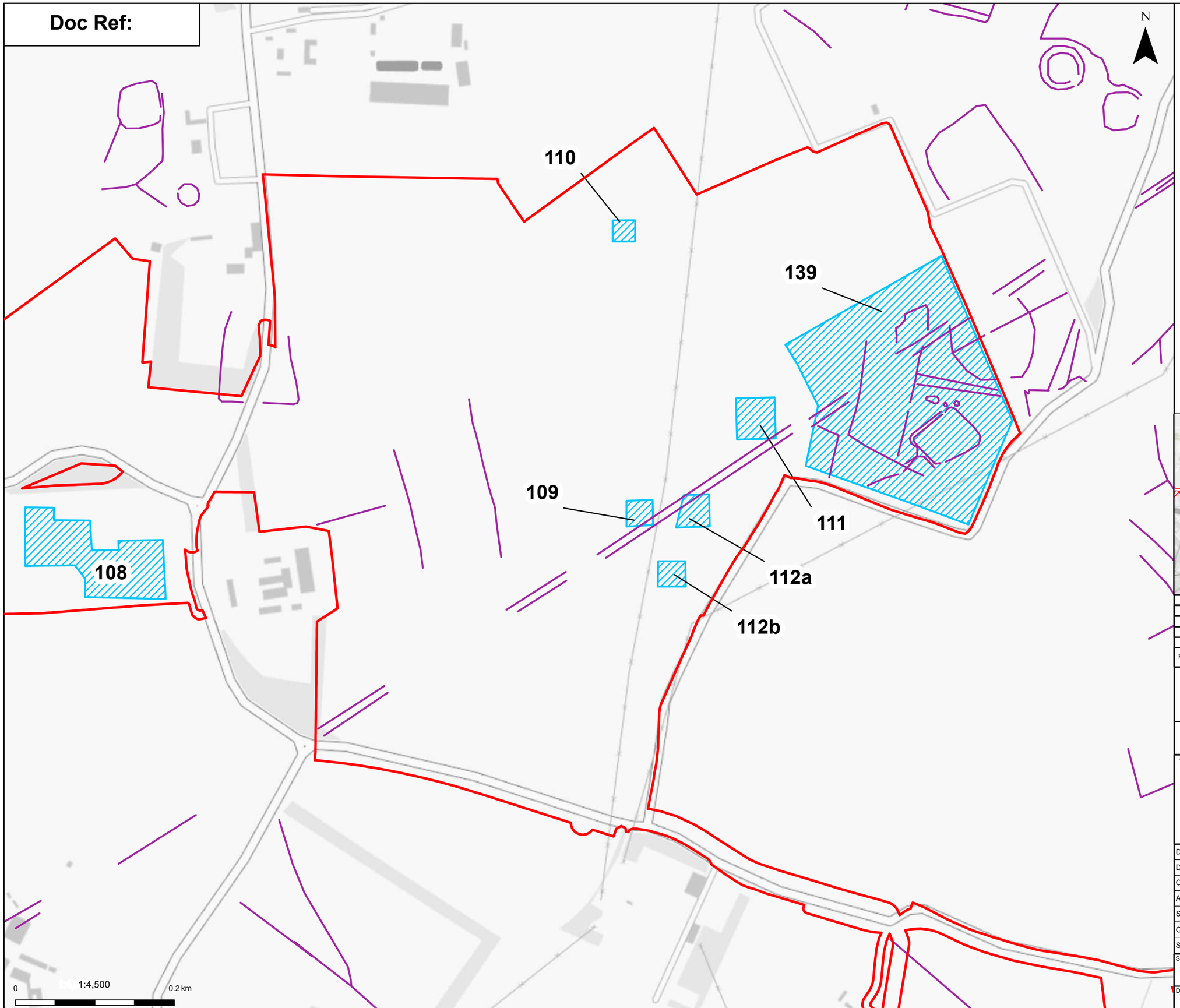
Figure 4: Mitigation Areas 109, 110, 111, 112a&b, 139 over Cropmark Data

Doc Ref:



Legend

- Site Boundary
- Mitigation Areas
- National Mapping Programme (Lines)

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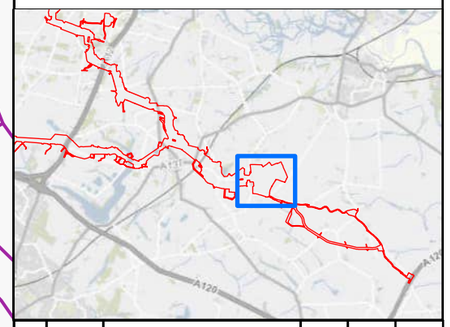

Rev	Date	Description	Drawn	Check	Approv
A	May 2026	DETAILED WSIs FOR DETAILED EXCAVATION	MH	DA	OP

nationalgrid

PROJECT: Norwich to Tilbury

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

Title:

Figure 4 - Mitigation Areas 109, 110, 111, 112a&b, 139 over Cropmark Data

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:	1:4,500	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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