



Preliminary Environmental Information Report Volume 2

Appendix 26.4 Outline Written Scheme of Investigation

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LionLink

Outline Written Scheme of Investigation

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wessexarchaeology



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LionLink

Outline Written Scheme of Investigation

1 INTRODUCTION

1.1 Project and Planning Background

1.1.1 Wessex Archaeology was commissioned by Collaborative Environmental Advisers (CEA), on behalf of National Grid Ventures LionLink (the Applicant) to produce an outline Written Scheme of Investigation (WSI) for the Proposed Offshore Scheme. The Proposed Offshore Scheme (defined as the part of the Project within the British jurisdiction) extends from landfall at Walberswick in Suffolk, across the Southern North Sea to the boundary between the UK and Netherlands Exclusive Economic Zone (EEZ).

1.1.2 A Preliminary Environmental Information Report (PEIR) was undertaken highlighting the potential interaction of the Proposed Offshore Scheme with the known and potential marine archaeology and underwater cultural heritage resource below MHWS (LionLink 2025). This outline WSI has been prepared in support of the PEIR for the Proposed Offshore Scheme. This outline WSI will be finalised for the submission of the Environment Statement (ES), setting out the overarching scope and methodology for implementing the embedded control measures relevant to marine archaeology, in consultation with the relevant Archaeological Curator(s): Historic England and Suffolk Archaeological Services (**See Section 4.6**).

1.1.3 The ES along with the updated WSI will be submitted as part of the Development Consent Order (DCO) application to the Secretary of State. The DCO will include a deemed Marine Licence (DML) covering activities relevant to the Proposed Offshore Scheme.

1.1.4 Consultation responses on the Scoping Opinion were received from Historic England (Archaeological Curator) in April 2024 (Ref EN020033) with the following recommendation for consideration when preparing the DCO application:

We recommend more attention is given to production of a marine archaeological Written Scheme of Investigation (WSI) and to the Protocol for Archaeological Discoveries (PAD) prior to the PEIR publication.

It is essential that the Applicant understands the specific purpose of a WSI is to set out a methodological approach to the acquisition and analysis of all relevant survey data (inclusive of geophysical, geotechnical and visual inspection).

The scheme design should be directly informed in a timely way, by archaeological analysis, to allow for adjustment that supports in-situ avoidance or investigation, excavation, recovery and conservation should archaeological materials require removal from the development corridor.

1.2 Development Description

1.2.1 The Proposed Offshore Scheme comprises the installation of an offshore submarine High Voltage Direct Current (HVDC) cables between landfall at Walberswick in Suffolk and the UK EEZ. The Proposed Offshore Scheme is delimited by the Mean High Water Spring (MHWS) at the landfall and the boundary of the UK EEZ (**Figure 1**).

- 1.2.2 At the proposed Landfall Site, Horizontal Directional Drilling (HDD) will be utilised for landing the submarine cable, with the HDD 'punch-out' (exit the seabed) between the 5m and 9m lowest astronomical tide (LAT) water depth contours.

1.3 Construction Programme

- 1.3.1 The construction programme for both the Proposed Onshore Scheme and Proposed Offshore Scheme is expected to last approximately 36 months. Construction is expected to commence in 2028 with completion due in 2032. There are likely to be a number of pre-installation surveys which will be undertaken in anticipation of the installation of the Proposed Offshore Scheme, such as geophysical, geotechnical and unexploded ordnance (UXO) surveys. If required, as a result of these pre-installation surveys, seabed clearance activities (e.g. boulder clearance, debris removal and UXO identification and clearance) may also be required.

1.4 Scope of Document

- 1.4.1 This outline WSI sets out the aims, the methodologies and standards that will be employed by the Applicant and / or their Contractor(s) and Retained Archaeologist to implement the mitigation strategy set out in the PEIR (LionLink 2025). In format and content, it conforms to current best practice and to the guidance outlined in *Management of Research Projects in the Historic Environment* (MoRPHE, Historic England 2015a), the Joint Nautical Archaeology Policy Committee *Code of Practice for Development* (JNAPC 2006) and the relevant guidance from the Chartered Institute for Archaeologists (CIfA) (CIfA various), as applicable.
- 1.4.2 An updated *outline* WSI will be submitted alongside the ES to the Secretary of State when the DCO application submitted. Post grant of DCO, a final WSI will be produced, which will accord with the updated outline WSI. Works will take place in accordance with the final WSI
- 1.4.3 If elements of the WSI need to be discussed with relevant external stakeholders, including the Receiver of Wreck or Ministry of Defence, then this will also occur prior to the WSI being signed off. This could include methodologies for recovering and reporting material or development works that could impact a protected site under the *Protection of Military Remains Act* 1986.

2 THE ARCHAEOLOGICAL ASSESSMENT AREAS

2.1 Co-ordinate System

- 2.1.1 For all aspects of this report all positions are reported in Universal Transverse Mercator (UTM) Zone 31 North projected from a European Terrestrial Reference System 1989 datum.

2.2 Archaeological Assessment Areas

- 2.2.1 The study area assessed in the PEIR Volume 1, Chapter 26 Marine Archaeology and associated Volume 2, Appendix 26.1 Marine Archaeological Technical Report is defined by the extent of the Proposed Offshore Scheme as provided by the Client, consisting of a 500m wide survey corridor (referred to as the Draft Order Limits), and an additional 1km buffer area around the extents of the Draft Order Limits, which is located within UK waters. At the proposed Landfall, the study area included a 500m buffer inshore of the MHWS mark. The marine study area overlaps with the terrestrial historic environment study area between the MHWS and MLWS marks.

2.3 Ecological and other constraints

- 2.3.1 The Applicant and/or their Contractor(s) will provide information regarding the presence of any ecological, environmental or other constraints (e.g. service locations), in areas where installation works interact with archaeological activities.

3 AIMS AND OBJECTIVES

3.1 Aims

- 3.1.1 The specific aim of this outline WSI is to set out the baseline resource for the known and potential archaeological assets within the study area, and the archaeological mitigation strategies proposed to address the impacts identified set out in the PEIR (LionLink 2025).

3.2 Objectives

- 3.2.1 The objectives of this outline WSI are as follows:

- to fulfil the requirements of the Archaeological Curator(s) in respect of archaeological monitoring and mitigation works associated with the Proposed Offshore Scheme;
- to detail the responsibilities of the licence holder, Retained Archaeologist and other key stakeholders;
- to provide the position and extent of Archaeological Exclusion Zones (AEZs) that may be required, and to establish methods for their monitoring, modification and / or removal in the future;
- to ensure that appropriate archaeological advice is sought on any further geophysical and geotechnical investigations associated with the Proposed Offshore Scheme;
- to ensure that appropriate archaeological advice is sought for any proposed Remotely Operated Vehicle (ROV) and/or diver surveys associated with the Proposed Offshore Scheme and where relevant, data produced is archaeologically assessed;
- to ensure that a full assessment of the known marine heritage receptors is undertaken for the ES, by undertaking further data capture and archaeological assessment pre-EIA, including assessment of MagDrone survey data;
- to propose measures for the mitigation of unexpected archaeological remains encountered during further survey work, construction and maintenance activities, associated with the Proposed Offshore Scheme;
- where appropriate, to set out methodologies for post-construction monitoring; and
- to establish the reporting and archiving requirements for the archaeological works undertaken during construction and post-construction monitoring.

3.3 Addressing Questions from the Research Agendas

- 3.3.1 Research Agendas provide research priorities that should be considered during archaeological research. Research frameworks are designed to be the go-to research resource for archaeology, providing an overview of the subject but also setting out useful and relevant research questions to be applied in any future work, including strategies on how to carry out the research.

- 3.3.2 Frameworks are developed to build current research priorities and normally organised by either geographical areas, periods or themes. In England, regional research frameworks are funded by Historic England.
- 3.3.3 Data gathered during the pre-construction and construction works may have the potential to inform research questions as those laid out in regional Research Agendas (see **Table 1**).

Table 1 Themes/areas for future research from the Research Agenda(s)

Research Agenda	Theme/Question
East of England Research Framework	<p>Palaeolithic to Mesolithic https://researchframeworks.org/eoe/research-agenda/palaeolithic-mesolithic/</p> <p>Neolithic https://researchframeworks.org/eoe/research-agenda/neolithic/</p> <p>Early to Middle Bronze Age https://researchframeworks.org/eoe/research-agenda/early-middle-bronze-age/</p> <p>Late Bronze Age to Middle Iron Age https://researchframeworks.org/eoe/research-agenda/late-bronze-age-to-middle-iron-age/</p> <p>Late Iron Age & Roman https://researchframeworks.org/eoe/research-agenda/late-iron-age-roman/</p> <p>Early Anglo-Saxon https://researchframeworks.org/eoe/research-agenda/early-anglo-saxon/</p> <p>Middle to Late Anglo-Saxon https://researchframeworks.org/eoe/research-agenda/middle-late-anglo-saxon/</p> <p>Medieval (Rural & Urban) https://researchframeworks.org/eoe/research-agenda/medieval-rural/ https://researchframeworks.org/eoe/research-agenda/medieval-urban/</p> <p>Post-medieval https://researchframeworks.org/eoe/research-agenda/post-medieval/</p> <p>Multi-Period https://researchframeworks.org/eoe/research-agenda/multi-period/</p>
A Maritime Archaeological Research Agenda for England	<p>https://researchframeworks.org/maritime/</p> <p>The themes and research questions identified in People and the Sea contributed to the development of the themes in East of England.</p>
North Sea Prehistory Research and Management Framework	<p>The overarching Research Agenda questions can be accessed here: https://researchframeworks.org/nsprmf/research-agenda/</p> <p>The following overarching direct archaeological research questions have been presented in the Research Agenda:</p> <ul style="list-style-type: none"> • What prehistoric human groups were active in the region? • Where was there prehistoric human activity in the region? • What are the chronologies for prehistoric human occupation? • What activities and behaviours are reflected in the prehistoric archaeological records?

Research Agenda	Theme/Question
	<ul style="list-style-type: none"> What was the climatic, landscape and environmental context of prehistoric human activity? <p>Further research questions have been posed to understand impacts to the archaeological resource and the manner in which the resource is interacted with, as follows:</p> <ul style="list-style-type: none"> What are the threats and opportunities facing the sector? How can we improve investigation and understanding of the archaeological resource? How can understanding skills gaps future-proof the sector? How can our understanding of prehistory and past environments deliver benefits to individuals and communities?
Seascape Character Assessment for the East Inshore and Offshore marine plan areas, MMO 2012: Suffolk Coastal Waters	<p>Notes:</p> <ul style="list-style-type: none"> Historically military defence of the coastline, leaving a number of associated structures Important archaeological features present A strong fishing heritage in terms of small fleets
Seascape Character Assessment for the East Inshore and Offshore marine plan areas, MMO 2012: East Anglian Shipping Waters	<p>Notes:</p> <ul style="list-style-type: none"> Important archaeological features present
Historic England Research Agenda	<p>https://researchframeworks.org/hera/</p> <p>Theme: understand – Marine and maritime</p> <ul style="list-style-type: none"> How can we maximise the use of survey and prospection data collected for renewable energy, aggregates and fishery projects to help us better understand our marine heritage? How can we mobilise volunteers and community groups to help assess the significance of identified historic wrecks, and coastal or submerged archaeological sites? How can we develop reliable models for predicting the presence of unrecorded marine heritage assets in advance of development and change? How can we use the distinctive coastal heritage of England to help create vibrant and economically viable coastal communities?

4 ROLES, RESPONSIBILITIES AND COMMUNICATION

4.1 Schedule

- 4.1.1 Mitigation measures required to inform the final engineering design for this project must be undertaken, completed and reported on in time to inform the design.
- 4.1.2 Archaeological method statements produced for archaeological works must be submitted to the relevant Archaeological Curator(s): Historic England's Marine Planning Unit for

marine works and the respective local authority curatorial body that serves Suffolk Council for works in the coastal and intertidal zone.

- 4.1.3 Sufficient time must be provided for the Archaeological Curator(s) to receive and address comments prior to any archaeological works commencing. The required time is to be agreed with the Archaeological Curators and recorded in the updated WSI. Archaeological method statements will be submitted to the relevant Archaeological Curator(s) for comment/agreement prior to the planned commencement of archaeological surveys/works, in order to allow for sufficient time for the reviewed and any amendments to be completed and agreed.

4.2 Applicant

- 4.2.1 The Applicant will be responsible for ensuring compliance with the DML conditions relevant to marine archaeology. Interactions with the Licencing Authority regarding the implementation of the DML will be administered by the Applicant. The Applicant will be responsible for ensuring their Contractor(s) implement the approved WSI and the existing mitigation measures (see **Section 7**), such as AEZs, as proposed in the PEIR (LionLink 2025) and subsequent ES.
- 4.2.2 The Applicant will commission the services of a suitably qualified and experienced archaeological contractor (Retained Archaeologist) to ensure the effective implementation of the WSI and other contractual commitments in relation to archaeology.
- 4.2.3 The Applicant will consult the Retained Archaeologist during the planning stages for any further work that may impact the seabed.
- 4.2.4 The Applicant will commission archaeological method statements as appropriate for works pertaining to specific surveys with the primary objective to investigate archaeological features, prior to works being undertaken.
- 4.2.5 The Applicant, or any archaeological body they may appoint to manage the implementation of the WSI, will seek curatorial advice from the Archaeological Curator(s) as appropriate.
- 4.2.6 Interaction with the Archaeological Curator(s) will be administered by the Applicant with advice through the Retained Archaeologist. If a new site of archaeological importance is discovered during works, the Archaeological Curator(s) will be contacted immediately.
- 4.2.7 The Applicant will be responsible for administering the obligations of reporting objects covered by the *Treasure Act* 1996 (see **Section 11.4**).
- 4.2.8 The Applicant will be responsible for administering the obligations of reporting aircraft material covered by the *Protection of Military Remains Act* 1986 (see **Section 11.5**) and ensure that the appropriate licences are in place to undertake activities on finds that are suspected of being military aircraft.
- 4.2.9 The Applicant will be responsible for administering the obligations of the *Merchant Shipping Act* 1995 with specific regard to reports of wreck and salvage and will ensure that reports are dealt with accordingly (see **Section 11.6**). The Applicant will ensure that recovered material identified as 'wreck' must be reported to the Receiver of Wreck within 28 days of discovery. The Applicant will be responsible for the submission of this report, the legal obligations under the *Merchant Shipping Act* 1995 and all correspondence. If recovered material is held by the Retained Archaeologist, it is essential they are included in all correspondence with the Receiver of Wreck and are aware of any updates or changes to

the reports (commonly known as droits) associated with the material. The Applicant will be responsible for ensuring the legal obligations associated with the droits are undertaken.

- 4.2.10 The Applicant will ensure that the Retained Archaeologist is provided with all relevant project datasets, to ensure that they are in an informed position to advise the Applicant. This is particularly important between the planning and installation phase, and at any stage if the Retained Archaeologist changes, to ensure consistency.
- 4.2.11 The Applicant will ensure that Contractor(s) make project personnel aware of the WSI, active archaeological method statement, any AEZs in force, and the bespoke PAD.

4.3 Retained Archaeologist

- 4.3.1 The Retained Archaeologist will oversee archaeological mitigation to provide consistency throughout the project, as required, and will implement the WSI.
- 4.3.2 The Retained Archaeologist will produce archaeological method statements (see **Section 8**) for applicable works.
- 4.3.3 The Retained Archaeologist will act as the first contact for any unexpected archaeological discoveries. The Retained Archaeologist will cover the administration of the reporting of discoveries made by the Applicant and will provide immediate actions, including recording, handling and storage, and introduction of measures to prevent or reduce damage if the presence of a significant archaeological site is suspected.
- 4.3.4 The Retained Archaeologist will provide training to project staff on the PAD and will ensure any unexpected discoveries of archaeological material are assessed, as per the PAD (see **Section 9.11**), and reported to the relevant curators and stakeholders. Recovered material identified as 'wreck' must be reported to the Receiver of Wreck by the Retained Archaeologist within 28 days of discovery. The Applicant will be involved with the submission of this report and all following correspondence.

4.4 Archaeological Contractor(s)

- 4.4.1 Archaeological Contractor(s) may be appointed to carry out specific packages of work, for example works beyond the in-house capabilities of the Retained Archaeologist, or additional works, as required. The Archaeological Contractor(s) may be appointed by the Applicant. In these instances, the Archaeological Contractor will ensure that works are specified, planned, undertaken and reported in accordance with the approved WSI.

4.5 Contractor(s)

- 4.5.1 The responsibility for implementing the WSI rests with the Applicant and their appointed Contractors.
- 4.5.2 All relevant Contractor(s) engaged in the construction of the Proposed Offshore Scheme shall:
- familiarise themselves with the requirements of the WSI and make them available to all of their staff working on the Proposed Offshore Scheme (e.g. for PAD briefings and archaeological input into archaeological method statements);
 - obey legal obligations in respect of 'wreck' and 'treasure' under the *Merchant Shipping Act 1995* and the *Treasure Act 1996*, respectively;

- obey legal obligations in respect of *Protection of Military Remains Act 1986*;
- respect constraint maps and AEZs;
- assist and afford access to archaeologists employed by the Applicant;
- implement a bespoke PAD (see **Section 9.11**);
- communicate with the Retained Archaeologist in the planning stages of any further survey work, to ensure archaeological objectives are included, as appropriate; and,
- inform the Retained Archaeologist of any environmental constraint or matter relating to health, safety and welfare of which they are aware that is relevant to the archaeologists' activities.

4.5.3 This outline WSI will form an integral part of the Applicant and / or their Contractor(s) environmental management procedures. This will ensure that agreed mitigation is wholly incorporated within all construction, operation (including maintenance and repair), and decommissioning plans and that all staff and their agents and contractors are bound to implementing the terms in this WSI.

4.6 Other Key Stakeholders

Regulators

- 4.6.1 The Planning Inspectorate review DCO applications and issue a recommendation report, with the Secretary of State acting as the consenting authority for granting the deemed DML as part of the DCO.
- 4.6.2 The Marine Management Organisation (MMO) is responsible for enforcing, post-consent monitoring, varying, suspending, and revoking any DML as part of the DCO.
- 4.6.3 The MMO is responsible for licencing, regulating and planning marine activities in English territorial waters and the EEZ to ensure they are carried out in a sustainable way under the Marine and Coastal Access Act 2009.

Archaeological Curator(s)

- 4.6.4 Archaeological method statements for archaeological works will be submitted to the Archaeological Curator(s) for comment/agreement. The time required for review is to be agreed with the Archaeological Curators and recorded in the updated WSI, but must be sufficiently prior to the planned commencement of surveys/works, in order to allow for appropriate time for the review and any amendments to be completed and agreed.
- 4.6.5 Historic England Marine Planning Unit are the Government's advisor on all aspects of the historic environment in, on, or under the seabed within the seaward limits of the UK territorial seas adjacent to England. Historic England also provides advice in recognition of the published English marine plan areas (inshore and offshore), as defined by the Marine and Coastal Access Act 2009 and described within the UK Marine Policy Statement.
- 4.6.6 Suffolk Archaeological Services act as advisor on all aspects of the historic environment for the County Council of Suffolk. The Suffolk County Council Archaeological Services (SCCAS) will be consulted regarding any activities undertaken in the intertidal / foreshore areas (see **Section 4.7**).

- 4.6.7 The Retained Archaeologist may also consult Historic England's Regional Science Advisor for the East of England regarding activities undertaken as part of this WSI.

Receiver of Wreck

- 4.6.8 Material identified as 'wreck' that has either been recovered within UK territorial waters or brought into UK territorial waters must be reported to the Receiver of Wreck under the Merchant Shipping Act 1995. The Receiver of Wreck is located within the Maritime & Coastguard Agency and works with other government departments and heritage organisations.

- 4.6.9 Wreck material is reported to the Receiver of Wreck via their website: <https://www.gov.uk/report-wreck-material>

- 4.6.10 The Receiver of Wreck's contact details are as follows:

- The Receiver of Wreck, Maritime & Coastguard Agency, Spring Place, 105 Commercial Road, Southampton, SO15 1EG. Tel: 0203 817 2575. Email: row@mcga.gov.uk

- 4.6.11 Further details about how to manage discoveries of wreck material can be found in **Section 11.6**.

Ministry of Defence

- 4.6.12 Under the *Protection of Military Remains Act* 1986, any aircraft that crashed while in military service are automatically protected. Therefore, based on the precautionary principal, all finds or sites of aircraft will be reported to the Joint Casualty and Compassionate Centre (JCCC) of the Ministry of Defence (MoD), unless it can be proven without a doubt that the aircraft material is non-military. In any case, all finds of aircraft material should also be reported to the Receiver of Wreck.

- 4.6.13 Further details about how to manage discoveries of aircraft material, including restrictions, licensing, and guidance can be found in **Section 11.5**.

4.7 Stakeholder Liaison

- 4.7.1 The onshore and offshore archaeological resource should be approached seamlessly, particularly in areas of overlap. Therefore, to cover such areas, there should be liaison with stakeholders, including communication between the onshore and offshore Retained Archaeologists, the onshore and offshore Archaeological Curator(s), academics, and other interested parties. This could be particularly important with regards to any issues encountered concerning the intertidal/foreshore landfall areas, to ensure a joined-up approach is consistently applied.

5 ARCHAEOLOGICAL BASELINE SUMMARY

5.1 Introduction

- 5.1.1 The results within the baseline are summarised from the PEIR (LionLink 2025) and associated appendices: PEIR Volume 2, Appendix 26.1 Marine Archaeology Technical Report.

5.2 Previous Archaeological Work

- 5.2.1 The following archaeological work has been undertaken in relation to the Proposed Offshore Scheme:

- a Desk-based Assessment of available information, including data from: the United Kingdom Hydrographic Office (UKHO); the National Record for the Historic Environment (NRHE); the National Heritage List for England; and Suffolk HER.
- an archaeological assessment of marine geophysical survey datasets and associated survey and operations reports acquired for the Proposed Offshore Scheme by Next Geosolutions (hereafter NextGeo) in 2024. Datasets included sidescan sonar (SSS), magnetometer (Mag.), sub-bottom profiler (SBP) and multibeam echosounder (MBES).
- a Stage 1 geoarchaeological assessment of marine geotechnical survey datasets including 224 vibrocores collected by NextGeo in September 2024 (Wessex Archaeology 2025a).
- a Stage 2 geoarchaeological assessment of 41 geotechnical vibrocores based on Stage 1 review (Wessex Archaeology 2025b).

5.3 Further Data Collection

- 5.3.1 Further data will be derived from a MagDrone survey covering the area above MHWS up to the JTB, providing coverage between the offshore and onshore scope of works. The results of these, if commissioned, will be detailed in the Environmental Statement (ES).
- 5.3.2 Further geoarchaeological data will be derived from the geotechnical surveys of the study area. This will be developed from the results of the Stage 2 assessment. The results will be compiled into a standalone document.

5.4 Future Baseline

- 5.4.1 The future baseline describes the likely evolution of the environment in the absence of the Proposed Offshore Scheme as far as natural changes from the current baseline can be assessed on the basis of the availability of archive datasets, environmental information and scientific knowledge.
- 5.4.2 The baseline environment is not static and will exhibit some degree of change over time, with or without the Proposed Offshore Scheme in place. Therefore, when undertaking impact assessments, it will be necessary to place any potential impacts in the context of the envelope of change that might occur naturally over the lifetime of the Proposed Offshore Scheme.

5.5 Summary of Known and Potential Archaeological Assets

Palaeogeographic Assessment

- 5.5.1 There are no designated or known prehistoric sites within the study area, however, there is potential for archaeological material of this date to exist within the study area.
- 5.5.2 The identified geology of the study area has been divided into distinct units, summarised as follows:
- Unit 1: This Unit is interpreted to be undifferentiated Crag formations. There are multiple such formations (e.g. Red Crag, Coralline Crag, Norwich Crag) known to be present within the study area. The archaeological potential of Unit 1 depends on which Crag Formations are represented and therefore can have archaeological potential;
 - Unit 2: This Unit is visible in a relatively short section of the cable route, and is characterised by multiple well defined, sub-parallel internal reflectors. This has been

interpreted as being the Westkapelle Ground Formation and are considered to be of no archaeological potential;

- Unit 3: Sediments interpreted to be the Yarmouth Roads Formation, which is of variable archaeological potential. However, the bulk of Unit 3 is not considered to be of archaeological potential.
- Unit 4: This Unit is a dominant shallow geological unit at the north-eastern end of the study area and interpreted as the Ipswichian age Eem Formation. As a fully marine deposit, this is not considered to be of archaeological potential.
- Unit 5: This Unit is interpreted as the Brown Bank Formation comprising shallow water deposits ranging from shallow marine through estuarine to restricted embayment/lagoon deposits, ranging in age from the Early to Mid-Devensian. Based on this, it is interpreted that the blanket deposits represent a more open marine environment, and so is of relatively low archaeological potential, whilst the more restricted channel-like deposits represent a more land-proximal environment and therefore may be of both archaeological and palaeoenvironmental interest (medium to high archaeological potential);
- Unit 6: This Unit represents the remnant sediments that record the terrestrial environment present prior to the Holocene marine transgression and have been sub-divided into four sub-units:
 - Unit 6a: Channel features interpreted to be of high archaeological potential;
 - Unit 6b: Interpreted as remnants of past land surfaces, and as likely preserving organic and palaeoenvironmental material, considered to be of high archaeological potential and have the potential to contain both *in-situ* and derived archaeological and palaeoenvironmental material;
 - Unit 6c: These sediments are potentially of estuarine and/or intertidal origin, deposited on top of previous land surfaces (i.e. the basal organic layer) during sea level rise in the Holocene. Due to this potential coastal environment, and due to the likelihood of organic material preservation, these features are considered to be of high archaeological potential;
 - Unit 6d: Interpreted as a terrestrial head deposit and considered to be of low archaeological potential;
- Unit 7: Interpreted as possible buried and preserved bank and/or dune features created during the Holocene marine transgression. Considered to be of medium to high archaeological potential; and
- Unit 8: Seabed sediments that have the potential to contain re-worked artefacts and may cover wreck sites and other cultural heritage in areas of sufficient thickness.

5.5.3 Wessex Archaeology undertook Stage 1 review of 224 geotechnical logs (located within the Proposed Offshore Scheme) and integrated core photographs with the aim of identifying deposits of potential geoarchaeological interest along with recommendations for further geoarchaeological work, if necessary. The results of the Stage 1 review revealed that peat and organic interbedded clay and silt was recovered in ten vibrocores (mostly located nearshore) and were assigned a high priority status due to their archaeological potential to preserve palaeoenvironmental and dating material. A total of 154 cores were given a medium priority status including several containing alluvium (organic and minerogenic) due to their potential to preserve organic and inorganic microfossils. The remaining 60 cores were given a low priority status.

- 5.5.4 In summary, the palaeogeographic assessment, supported by the geotechnical review, identified 66 features of archaeological potential located within the Unit 3, Unit 4, Unit 5, Unit 6 and Unit 7 sediments (**Figure 2a-n**).
- 5.5.5 These features comprise:
- Thirteen channels: two channel features, **75027** and **75033**, contain a fill of soft to firm clay and clayey silt (as corroborated by VC_068). These channel features are considered of the highest archaeological potential of the Unit 5 features. Channel feature **75020** correlates with the southern extent of an interpreted Early Holocene channel identified during regional work associated with the Palaeo-Yare catchment and Aggregate Area 240 archaeological finds, considered to be of high archaeological potential. In the nearshore, channel features **75000** and **75006** potentially represent the remnants of the offshore course of the River Blyth. Channel **75000** contains areas of acoustic blanking, suggesting the presence of preserved organic material, considered to be of high archaeological potential;
 - Three fine grained deposits: within the nearshore area, this is represented by feature **75015** (organic layer) - a distinct reflector found by coring (VC_005 and VC_006) to comprise peat and organic clay. Two extensive features - **75008** and **75010** - have been found by multiple vibrocores (e.g. VC_177 and VC_180) to represent fine grained deposits, generally soft clays, silts, and sands with organic material. Due to the likelihood of organic material preservation, these features are considered to be of high archaeological potential;
 - Eighteen complex and simple cut and fill feature that are considered to be of lower archaeological potential since the origin of the feature cannot be confirmed without further investigation;
 - Eleven high amplitude reflectors: located further offshore, features **75047**, **75048**, **75050**, **75051**, **75052**, **75054**, **75057**, **75058**, **75060**, and **75061** represent deposits of organic clay and peat, corroborated from VC_111 and VC_128, and considered of high archaeological potential;
 - Seven bank and / or dune features with one erosion surface: created during the Holocene marine transgression with features **75016**, **75017** and **75063** considered to be of high archaeological potential;
 - Twelve areas of acoustic blanking that have the potential to be shallow gas which may have been caused by microbial breakdown of organic matter and therefore may contain sediments of palaeoenvironmental interest.
- 5.5.6 Full details can be found in Section 4.4 and 4.5 of the PEIR Volume 2, Appendix 26.1 Marine Archaeological Technical Report.
- 5.5.7 A Stage 2 geoarchaeological assessment of selected geotechnical vibrocores followed on from the above Stage 1 geoarchaeological review, undertaken in March 2025. The results have been presented in a standalone report (Wessex Archaeology 2025b). A total of 41 vibrocores were recommended for Stage 2 geoarchaeological recording, which contained units of archaeological potential, including fluvial deposits of the Yarmouth Roads Formation, upper organic bedded sediments of the Eem Formation, possible estuarine to intertidal sands of the Upper Brown Bank Formation, fluvial sands and gravels and alluvial sands, and peat and organic interbedded deposits.
- 5.5.8 Within the nearshore deposits, sediments representing the Undifferentiated Crag Formations and the Westkapelle Ground Formation, may contain terrestrial sediments

equivalent to the Cromer Forest Bed Formation, which could contain internationally significant archaeological and palaeoenvironmental records.

- 5.5.9 Furthermore, in the nearshore, grey sands with clay beds and peats may correlate to the Yarmouth Roads Formation, which is thought to contain units that are broadly contemporary with terrestrial deposits of the Cromer Forest Bed Formation. Peat deposits of Cromerian age are rare and are therefore assigned a high priority status.
- 5.5.10 Further offshore, deposits of grey sands with laminae and shells reflect deposition in a shallow marine setting with low archaeological and geoarchaeological potential; however, shell-free sands with organic laminae are present, and may represent floodplain deposits. Floodplain environments are rich ecological settings favoured by early human hunter-gatherers.
- 5.5.11 Peat was recovered in the nearshore and offshore areas of the Proposed Offshore Scheme. Nearshore, peats possibly within the Yarmouth Roads Formation were identified which may contain a significant palaeoenvironmental record of Cromerian age. Peat deposits formed in terrestrial wetland environments are assigned a high priority status due to their potential to preserve palaeoenvironmental material. The offshore peat deposits were located stratigraphically above possible estuarine to intertidal deposits of the Upper Brown Bank and are therefore likely to date from the Late Glacial to Early Holocene.
- 5.5.12 Based on the results of the Stage 2 assessment further work including the radiocarbon and luminescence dating of the Peat and Upper Brown Bank deposits will be undertaken at Stage 3.

Seabed Features

- 5.5.13 There are currently no sites within the study area that are subject to statutory protection from the *Protection of Wrecks Act 1973*, the *Protection of Military Remains Act 1986* or the *Ancient Monuments and Archaeological Areas Act 1979*; the three legislative acts that are used to protect marine archaeological sites.
- 5.5.14 A total of 289 features have been identified from geophysical survey datasets as being of possible archaeological potential within the Draft Order Limits, discriminated as follows:
- 26 A2_h anomalies (anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature);
 - 260 A2_l anomalies (anomaly of possible anthropogenic origin but interpretation is uncertain; may be anthropogenic or a natural feature); and
 - three (3) A3 anomalies (historic record of possible archaeological interest with no corresponding geophysical anomaly).
- 5.5.15 Full details can be found in Section 5.4, Figure 9a-t and Figure 10 of the PEIR Volume 2, Appendix 26.1 Marine Archaeological Technical Report.
- 5.5.16 An additional 36 seabed features located within the study area, beyond the boundary of the Draft Order Limits, were identified in UKHO, NMHR and HER datasets. These consist of the following:
- 1 aircraft;
 - 3 fishermen's fasteners;

- 3 foul ground;
 - 4 obstructions;
 - 1 wellhead; and
 - 24 wrecks.
- 5.5.17 There is one UKHO record of an aircraft crash site (WA ID **2035**), that was located at a general depth of 38m. However, its identification is unknown, and the record shows that it was salvaged and lifted in 1983. This was not located in a survey carried out in 1988 and therefore listed as 'dead' by the UKHO, i.e. not detected by repeated surveys, therefore considered to not exist. However fragmentary or isolated material could still be present at this location. An obstruction (WA ID **2034**) is located approximately 300m due north of the UKHO position for 2035; this could possibly pertain to the same site.
- 5.5.18 Full details can be found in Section 5.3 and illustrated in Figure 9a-t of the PEIR Volume 2, Appendix 26.1 Marine Archaeological Technical Report.

Maritime potential

- 5.5.19 There is potential for discoveries of maritime craft from the Mesolithic to the modern period, including new sites that were not recorded in the current baseline and subsequent identification of the geophysical anomalies where an identification was not possible.
- 5.5.20 Post-medieval and modern wrecks, as they were generally made of more substantial material, are more likely to have been discovered through surveys undertaken by the UKHO and others and thus recorded in the archaeological record. However, there is still potential for the discovery of previously unrecorded wreck sites, particularly of wooden wrecks, broken up wrecks or partially buried wrecks that are more difficult to detect through geophysical survey. Many vessels were lost without a record being made, and sometimes even the records that were created have since been lost (Cant 2013). Examining the recorded losses provides an indication to the potential for further discoveries.

Aviation potential

- 5.5.21 There is potential for 20th century aircraft, particularly in relation to the Second World War, including new sites that were not recorded in the current baseline, potentially as one of the 289 A2 anomalies.
- 5.5.22 Aircraft crash sites are also difficult to identify through archaeological assessments of geophysical survey, although experience indicates material from the site, such as engines or other material may be recorded as small obstructions or anomalies.

Intertidal/Terrestrial

- 5.5.23 There are currently no intertidal sites within the study area that are subject to statutory protection. Within the study area there are a total of 15 records relating to archaeological (and potential archaeological) features, structures, obstructions, and findspots dating from the Palaeolithic to the modern period, with several records dating the Second World War.
- 5.5.24 There are four Grade II listed buildings within the 500 m buffer above the MHWS mark. These are primarily listed as residential domiciles and farmhouses originating from the 17th-18th century, including The Bell Hotel (HER_285564/DFS10270), Valley Farmhouse (HER_285565/DFS10271), Bell Cottage (HER_285566/DFS10743) and The Potter's Wheel (HER_285567/DFS11437).

- 5.5.25 Several records relating to archaeological features, structures, findspots and magnetic anomalies have been recorded onshore in the area south of Walberswick, highlighting the potential for the discovery of remains dating from the Mesolithic to the modern periods.

Historic Seascape Characterisation

- 5.5.26 According to LUC's 2107 Historic Seascape Characterisation (HSC): Consolidating the National HSC Database (Land Use Consultants 2017), which consolidated the eight existing HSC implementation projects (undertaken between 2008 and 2015) into a single national database, the study area has been characterised as having the following elements:

- cultural topography (palaeochannel);
- cultural topography landward (wetland);
- cultural topography marine (coarse sediment plains; sand banks with sand waves);
- fishing (bottom trawling, drift netting, potting);
- maritime safety (buoyage, safety area);
- navigation (wreck hazard, hazardous water, navigation route, navigation activity, shoals and flats);
- recreation (leisure beach, leisure sailing, wildlife watching);
- industry (commercial shipping route);
- energy industry (submarine power cable, renewable energy installation (wind)); and
- telecommunications (submarine telecommunications cable).

6 POTENTIAL IMPACTS

- 6.1.1 The PEIR (LionLink 2025) has identified the potential effects on marine archaeology, which might occur from the construction, operation (including maintenance and repair), and decommissioning of the Proposed Offshore Scheme.

6.2 Direct

- 6.2.1 The direct impacts resulting in potential adverse effects upon marine archaeological receptors as part of the construction, operation (including maintenance and repair), and decommissioning works are those involving contact with the seabed or the removal of seabed sediments. Marine archaeological receptors with height, such as shipwrecks, may also be impacted by activities that occur within the water column.
- 6.2.2 There could be permanent physical loss or disturbance of potential seabed receptors in shallow sediments from seabed preparation, other construction activities, operation (including maintenance and repair), and decommissioning works. These receptors could include shallowly buried shipwrecks or aircraft crash sites. Areas of particular concern include areas of concentration of A2 anomalies (particularly buried magnetic anomalies with no surface expression).
- 6.2.3 There could also be permanent physical loss or disturbance of known and potential palaeogeographic features from the construction, operation (including maintenance and repair), and decommissioning works where activities penetrate the surface.

- 6.2.4 Permanent physical loss or disturbance of known and potential seabed prehistory receptors, and marine and aviation receptors can also occur from the use of jack-ups or mooring system anchors used by vessels during construction, operation (including maintenance and repair), and decommissioning activities. The use of HDD to install marine cables under the intertidal area may require the use of vessels using mooring systems or spud leg barges/jack-up barges at the HDD exit locations. Therefore, there is the potential for direct impact on A2 anomalies if they are present within the nearshore area.
- 6.2.5 As part of the PEIR, an appraisal of the potential interaction of the Proposed Offshore Scheme with the known and potential marine archaeology and underwater cultural heritage resource was undertaken (LionLink 2025); with the implementation embedded mitigation and control measures, no significant effects are expected, and therefore there was no need for residual effect assessment.

6.3 Indirect

- 6.3.1 Indirect impacts occur as a result of changes to sedimentation and erosion patterns during construction, operation (including maintenance and repair), and decommissioning, associated with dredging and disposal works, and the placement of external cable protection. The physical assessment undertaken and presented in Volume 1, Chapter 18 Marine Physical Environment of the PEIR (LionLink 2025) indicates that no significant effects are anticipated.

7 MITIGATION

7.1 Introduction

- 7.1.1 This section provides a brief overview of the mitigation from the PEIR (LionLink 2025) for each of the receptor types. More detailed information about the types of mitigation and the way they will be implemented can be found in the Scheme of Investigations section (**Section 9**). Should further data for the Proposed Offshore Scheme be obtained as a result of updated reports or surveys, the mitigation measures detailed below may be subject to change.

7.2 A1s

- 7.2.1 The primary mitigation for the protection of known archaeological assets is avoidance. This is achieved through the implementation and monitoring of Archaeological Exclusion Zones (AEZs), which are proposed for identified high value seabed features of anthropogenic origin (i.e. A1 classified geophysical anomalies).
- 7.2.2 For the Proposed Offshore Scheme, no A1 geophysical anomalies were identified. However, AEZs of 100 m around the recorded position of two historic records of possible archaeological interest with no corresponding geophysical anomaly (A3 classified records) were assigned (see **Section 9.3**).
- 7.2.3 Impact to any future identified A1 geophysical anomalies will be avoided through the implementation of AEZs. All development and related activities that could impact the seabed are prohibited within the boundaries of an AEZ, however, AEZs do not restrict remote survey work (e.g. vessels entering the zone to acquire geophysical datasets).
- 7.2.4 If impacts to A1 geophysical anomalies cannot be avoided, measures to reduce, remedy or offset disturbance will be agreed with the relevant Archaeological Curator and Regulator but could include further survey through to complete excavation, noting that excavation would require appropriate licences to be in place.

7.3 A2 Geophysical Anomalies

- 7.3.1 For features assigned A2 archaeological discrimination rating, no AEZs have been provided. However, avoidance of these features by micro-routing has been committed to (Commitment Reference Code OC36). If the features may be directly impacted by the construction, operation (including maintenance and repair), and decommissioning of the Proposed Offshore Scheme, further investigation would be required (Commitment Reference Code OC33, OC37). This is discussed in more detail in the Scheme of Investigation **Section 9.4**.

7.4 Unexpected Discoveries

- 7.4.1 If previously unknown sites or material are encountered during the different phases of the Proposed Offshore Scheme, measures will be taken to reduce the level of impact. In order to provide for these unexpected discoveries, as per the WSI, a PAD, similar to the established *Protocol for Archaeological Discoveries: Offshore Renewables Project* (The Crown Estate 2014) and the *Marine Aggregate Industry Protocol for the Reporting of Finds of Archaeological Interest* (BMAPA and English Heritage (now Historic England) 2005) will be established for the Proposed Offshore Scheme (see **Section 9.11**).
- 7.4.2 The PAD provides a system for reporting and investigating unexpected archaeological discoveries encountered during pre-installation, construction and post-construction activities of the Proposed Offshore Scheme. The aim of the PAD is to reduce any adverse effects of the Proposed Offshore Scheme upon the underwater historic environment by enabling project staff, contractors, and sub-contractors to report finds in a manner that is both convenient to their everyday work and effective with regard to curatorial requirements. Archaeological discoveries reported via the PAD may include submerged prehistoric material, shipwreck material or aviation material.
- 7.4.3 The PAD will also make provision for the institution of Temporary Exclusion Zones around areas of possible archaeological interest, prompt archaeological advice and, if necessary, archaeological inspection of important features prior to further works being conducted in the area. If any new features are identified which are of "high archaeological potential", consultations with Archaeological Curators will be sought, and new AEZs may be required. The PAD provides a mechanism to comply with the Merchant Shipping Act 1995, including notification of the Receiver of Wreck, and accords with the Code of Practice for Seabed Developers (JNAPC 2006).
- 7.4.4 More details about the implementation of the PAD can be found in the Scheme of Investigations (**Section 9.11**) and in **Appendix 1** and **Appendix 2**.

7.5 Palaeogeographic Assessment

- 7.5.1 The appraisal of marine geophysical data within the Proposed Offshore Scheme resulted in the identification of a total of 66 features of palaeogeographic interest. These are summarised as follows and presented in **Figure 2a-n** and **Table 2** and **Table 3**:
- a total of 27 features, mainly buried palaeochannels, high amplitude reflectors/organic layers, and banks, were assigned a P1 archaeological rating;
 - a total of 39 features, mainly cut and fills and areas of acoustic blanking, were assigned a P2 archaeological rating.

Table 2 Palaeogeographic features of assigned P1 archaeological rating

WA ID	Classification	Depth Ranges (mBSB)		Unit
		From	To	
75000	Channel	0.1	4.4	Unit 6a
75006	Channel	0.2	7.6	Unit 6a
75008	Fine grained deposit	0.2	3.7	Unit 6b / Unit 6c
75010	Fine grained deposit	0.2	6.5	Unit 6b / Unit 6c
75015	Organic layer	0.5	4.2	Unit 6b
75016	Bank	0.1	2.7	Unit 7
75017	Bank	0.4	3.2	Unit 7
75020	Channel	0.2	5.9	Unit 6a
75021	Channel	0.4	8.4	Unit 5 / Unit 6a
75022	Channel	0.3	12.1	Unit 5 / Unit 6a
75023	Channel	1.1	7.5	Unit 5 / Unit 6a
75027	Channel	0.3	11.2	Unit 5
75029	Channel	0.2	5.9	Unit 5 / Unit 6a
75030	Channel	1.3	16.1	Unit 5 / Unit 6a
75033	Channel	0.2	8.7	Unit 5
75039	Channel	2.3	15.3	Unit 5
75047	High amplitude reflector	2.2	3.7	Unit 6b
75050	High amplitude reflector	1.1	3	Unit 6b
75051	High amplitude reflector	0.3	1.9	Unit 6b
75054	High amplitude reflector	0.2	1.6	Unit 6b
75055	Channel	1.2	5.1	Unit 6a
75057	High amplitude reflector	1.5	2.2	Unit 6b
75058	High amplitude reflector	0.8	1.8	Unit 6b
75059	Channel	1.3	3.8	Unit 6a
75060	High amplitude reflector	0.9	1.4	Unit 6b
75061	High amplitude reflector	1.1	1.6	Unit 6b
75063	Erosion surface	0.4	1.2	Unit 7

Table 3 Palaeogeographic features of assigned P2 archaeological rating

WA ID	Classification	Depth Ranges (mBSB)		Unit
		From	To	
75001	Acoustic blanking	1.1	1.9	Unit 6a
75002	Acoustic blanking	1.7	2.1	Unit 6a
75003	Acoustic blanking	2	2.8	Unit 6a
75004	Acoustic blanking	2.4	2.8	Unit 6a
75005	Acoustic blanking	1.2	2.1	Unit 6a
75007	Simple cut and fill	0.4	2.8	Unit 6a
75009	Acoustic blanking	0.9	2	Unit 6c
75011	Acoustic blanking	1.1	1.6	Unit 6c
75012	Acoustic blanking	1.8	1.9	Unit 6c
75013	Acoustic blanking	1.8	2.4	Unit 6c
75014	Acoustic blanking	0.9	1.7	Unit 6c
75018	Simple cut and fill	1.4	6.1	Unit 6a
75019	Bank	0.4	1.4	Unit 7
75024	Simple cut and fill	1.4	3.7	Unit 3 / Unit 5 / Unit 6a
75025	Bank	0.8	1.9	Unit 7
75026	Bank	2.2	3.4	Unit 7
75028	Bank	0.1	9.3	Unit 5
75031	Simple cut and fill	0.4	6.3	Unit 5
75032	Simple cut and fill	1.1	7.8	Unit 5
75034	Simple cut and fill	0.4	4.4	Unit 3 / Unit 5 / Unit 6a

WA ID	Classification	Depth Ranges (mBSB)		Unit
		From	To	
75036	Complex cut and fill	0.5	2.7	Unit 5
75035	Simple cut and fill	0.6	5.2	Unit 5
75037	Simple cut and fill	2.1	3.1	Unit 5
75038	Simple cut and fill	4.2	8.2	Unit 5
75040	Simple cut and fill	5.5	8.2	Unit 3 / Unit 6a
75041	Simple cut and fill	2.5	6.1	Unit 5a
75042	Acoustic blanking	0.7	0.9	Unit 5
75043	Simple cut and fill	0.9	2	Unit 6a
75044	Simple cut and fill	0.5	1.7	Unit 6a
75045	Simple cut and fill	2.9	3.5	Unit 6a
75046	Acoustic blanking	1.5	2.2	Unit 5
75048	High amplitude reflector	0.6	4.6	Unit 6b
75049	Simple cut and fill	2.3	3.7	Unit 5 / Unit 6a
75052	High amplitude reflector	1.5	1.9	Unit 6b
75053	Fine grained deposit	1.9	3.7	Unit 5 / Unit 6a
75056	Simple cut and fill	1.9	4.1	Unit 6a
75062	Simple cut and fill	0.7	1.6	Unit 6a
75064	Bank	1.4	2.8	Unit 7
75065	High amplitude reflector	5.6	6.5	Unit 4

7.5.2 As terrestrial features interpreted as being deposited during periods of likely human occupation, those features given a P1 archaeological rating are considered of high archaeological potential. Those features with a P2 discrimination are considered of medium archaeological potential, partly due to the uncertainty of features formation and fill.

7.5.3 Of particular interest within the Draft Order Limits is the palaeochannel associated with the Palaeo-Yare catchment area (**75020**), the identified high amplitude reflectors and fine grained/organic deposits, and the potential coastal bank (**75016**). These, plus other identified channel features, are all preserved terrestrial features that have the potential to contain both *in-situ* and derived archaeological artefacts and preserved palaeoenvironmental material.

7.5.4 Further work is needed to fully understand the identified features and their chronology, particularly bank feature **75016**. It is recommended that, should any further sampling (e.g. coring) be undertaken from within any of the identified features, that the logs be made available for geoarchaeological assessment.

7.5.5 Stage 2 assessment has now been undertaken.

7.6 Areas Not Yet Covered by Survey Data

7.6.1 One borehole was collected for the area between the HDD compound to the offshore exit point (between 3 m and 10 m LAT). However, in general, there is a data gap between the onshore and offshore archaeology assessments, and this gap will be covered by a MagDrone survey that covers the onshore area above MHWS. The results of these will be detailed in the ES.

7.6.2 Furthermore, there are three locations where the geophysical data do not cover the full extents of the study area as provided to Wessex Archaeology. One area is in Block 9 (KP55-63), where there is an alternative cable route option. The second area is in Block 18 (KP 155-168), where there is an alternative cable route option. The third area is in Block 19 (KP 178-180), towards the edge of the UK Territorial Waters, where the study area flares. Any features present within these three areas will not have been detected. No SBP data was

provided for the eastern alternative cable route option within Block 9 and the western alternative cable route option within Block 18 (**Figure 1**), and so a palaeolandscape assessment for these sections was not undertaken.

- 7.6.3 The gaps are due to alternatives being considered for project design. For more details, refer to Chapter 2 of the PEIR.

8 ARCHAEOLOGICAL METHOD STATEMENTS

- 8.1.1 This outline WSI provides a framework for further archaeological investigations for the Proposed Offshore Scheme, such as those identified in the Scheme of Investigations (**Section 9**), below. All works will be undertaken in accordance with the methodology set out within this WSI and in compliance with the standards outlined by the ClfA (ClfA 2014, 2017, 2023), excepting where they are superseded by statements made below.
- 8.1.2 Where required, detailed archaeological method statements will be produced, as required, by the Retained Archaeologist or by Archaeological Contractors. Archaeological method statements will correspond to a defined package of works with archaeological relevance, for example, archaeological assessment of ROV data from the UXO survey (see **Section 9.7**)
- 8.1.3 Archaeological method statements will provide details about:
- form of commission and contractual relationship with the Applicant and / or their Contractor(s);
 - relation between the archaeological method statement, the WSI and the license condition(s);
 - context in terms of relevant installation works;
 - specific objectives of archaeological works;
 - extent of investigation;
 - investigation methodology
 - anticipated post-investigation actions, including processing, assessment, and analysis of finds and samples;
 - reporting;
 - timetable;
 - monitoring arrangements; and
 - health, safety, and welfare.
- 8.1.4 Archaeological method statements will be provided to the Applicant and / or their Contractor(s) for comment. On receipt of comments from the Applicant and / or their Contractor(s), the Retained Archaeologist will produce a final archaeological method statement addressing these comments. The relevant Archaeological Curator(s) will be consulted on the final archaeological method statement to secure agreement on the methodology. The archaeological method statement will be submitted to the Regulator for agreement.

- 8.1.5 Archaeological method statements could include provision for the relevant Archaeological Curator(s), where appropriate, to monitor the progress of the archaeological works, as appropriate to that element, be that through site visits or meetings with the Applicant, the Contractor(s), and the Retained Archaeologist.

9 SCHEME OF INVESTIGATIONS

9.1 Introduction

- 9.1.1 The mitigation section (**Section 7**) above provided details of known mitigation requirements for archaeological receptors, as set out in Chapter 26 of the PEIR (LionLink 2025), and established as commitments. This Scheme of Investigations section sets out how these mitigation measures will be undertaken and implemented.
- 9.1.2 Where relevant, the Retained Archaeologist will provide input advice into on other Contractors' proposed survey method statements to ensure data collection is optimised so that it can be used to identify and characterise features of archaeological importance that could be impacted by development works and inform mitigation proposals such as avoidance of wrecks and wreck debris.

9.2 Standards and Guidance

- 9.2.1 The Archaeological method statements and specifications in this document are based on archaeological best practice and guidance for offshore development. Guidance relating specifically to subsea cable projects does not currently exist, however, since cable routes are in integral part of offshore wind development, the guidance below relating to renewable energy and offshore wind farm projects will be utilised for the purposes of this WSI. The principal sources are:
- *Standard and guidance for nautical archaeological recording and reconstruction* (ClfA 2014d, updated 2020);
 - *Universal guidance for archaeological monitoring and recording* (ClfA 2023c);
 - *Protocol for Archaeological Discoveries: Offshore Renewable Projects* (The Crown Estate 2014);
 - *Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects* (The Crown Estate 2021);
 - *Our Seas - A Shared Resource: High Level Marine Objectives* (Department for Environment, Food and Rural Affairs 2009);
 - *Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector* (Gribble and Leather 2011);
 - *Military Aircraft Crash Sites: Guidance on their Significance and Future Management* (English Heritage (now Historic England) 2002);
 - *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* (English Heritage (now Historic England) 2008);
 - *Marine Geophysics: Data Acquisition, Processing and Interpretation Guidance Notes (2nd Edition)* (Historic England) 2025);
 - *Management of Research Projects in the Historic Environment: the MoRPHE project manager's guide* (English Heritage (now Historic England) 2015a);

- *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage (now Historic England) 2011);
- *Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record* (Historic England 2015b);
- *Managing Significance in Decision-Taking in the Historic Environment; Historic Environment Good Practice Advice in Planning:2* (Historic England 2015c);
- *Preserving Archaeological Remains: Decision-taking for Sites under Development* (Historic England 2016);
- *Ships and Boats: Prehistory to Present - Selection Guide* (Historic England 2017a);
- *The Setting of Heritage Assets - Historic Environment Good Practice Advice in Planning 3* (Historic England 2017b);
- *Deposit Modelling and Archaeology. Guidance for Mapping Buried Deposits* (Historic England 2020);
- *Curating the Palaeolithic* (Historic England 2023);
- *Managing Lithic Sites: Archaeological guidance for commercial and research projects, planning authorities, land management agencies and developers* (Historic England 2024);
- *Code for Practice for Seabed Development* (Joint Nautical Archaeology Policy Committee (JNAPC 2006); and,
- *Historic Environment Guidance for the Offshore Renewable Energy Sector* (Wessex Archaeology 2007).

9.3 Archaeological Exclusion Zones (AEZs)

- 9.3.1 *In situ* preservation is favoured by government policy and international best practice (The Crown Estate 2021). The principle means used to preserve *in situ* any features or deposits of potential or known archaeological interest are through implementation of AEZs. AEZs are placed around discrete sites, or more extensive areas identified by the impact assessment, and prohibit intrusive development related activities within their extents, however they do not restrict remote survey work or other activities that do not impact the seabed. The *Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects* (The Crown Estate 2021) states that AEZs are formed by establishing a buffer around the known extents of sites for which the available evidence suggests that there could be archaeological material present on the seabed.
- 9.3.2 The final cable route within the Order Limits will take into account the locations of all AEZs. All AEZs will be marked on the final Order Limits. The Applicant will require its Contractor(s) to conduct all construction activity in such a way as to prevent any impacts by construction or related works within any AEZs, and keep records that this can be evidenced, if required.
- 9.3.3 The establishment of appropriate AEZs depends on sufficient geophysical data of good enough quality having been acquired to enable the identification of assets and delineation of appropriate AEZs around the buffered extents of these anomalies. The establishment of additional AEZs may also occur following the archaeological assessment of further geophysical data acquired for the Proposed Offshore Scheme as detailed in project-related archaeological method statements should they be required under this WSI.

- 9.3.4 Once established, AEZs may be altered (enlarged, reduced, moved, or removed) as a result of potential further archaeological assessment of data or field evaluation, however, the alteration of AEZs will only be undertaken with the agreement of the relevant stakeholders and the Archaeological Curator(s). Further surveys could include geophysical, ROV or diver surveys. To maximise the archaeological benefits of these surveys, any surveys covering AEZs should include archaeological advice in the planning stages. Following any alteration to an AEZ, a new plan giving details of the current AEZs will be drawn up and issued to relevant project Contractor(s) that will require this information for adhering to constraints maps, along with the Archaeological Curator(s) and other relevant stakeholders.
- 9.3.5 If it becomes apparent that activities have taken place within any AEZ without prior consent, the Archaeological Curator must be notified by the Applicant. The party responsible will obtain advice from the Retained Archaeologist in accordance with their obligations with respect to the approved WSI, and the AEZ may require monitoring to determine the level and extent of potential impact.

Location and Extent of AEZs

- 9.3.6 The AEZs designed for sites located within the Draft Order Limits or whose buffer overlaps with the Draft Order Limits are summarised in **Table 4 (Figure 3)**.
- 9.3.7 Two charted wreck positions (**70090**, **70098**) are located just beyond the Draft Order Limits. As these are beyond the limits of the geophysical data coverage, no comment can be made on their presence and current condition. However, as records of potential archaeological interest, they have been retained and recommended precautionary archaeological exclusion zone of 100m.

Table 4 AEZs

ID Number	Classification	Position (ETRS89 UTM31N)		Exclusion Zone	Location in Study Area
		Easting	Northing		
70090	A3 – Recorded dangerous wreck – <i>Rochester City</i>	416561.8	5799582	100m radius buffer around recorded position	Buffer partially overlaps Draft Order Limits
70098	A3 – Recorded dangerous wreck - <i>Sunniside</i>	417006.5	5800718	100m radius buffer around recorded position	Buffer partially overlaps Draft Order Limits

Monitoring of AEZs

- 9.3.8 The effectiveness of the AEZs will be periodically monitored by the Retained Archaeologist in consultation with the Applicant, and details and frequency of such will be specified in an archaeological method statement, if a relevant programme of works is established. If required, this will be prepared in discussion with the Applicant and the Archaeological Curator(s). Monitoring may occur following construction and decommissioning, with occasional monitoring during the operations phase where required.
- 9.3.9 Monitoring of AEZs may be undertaken as required, dependant on whether there is clear impact to an AEZ, or where seabed activity is occurring within the vicinity of an AEZ. This would be informed by archaeological assessment of post-installation geophysical survey data and review of the final locations of the cables, associated external protection, and

positioning records of spud leg barge locations and / or mooring anchors (The Crown Estate 2021, p. 29).

- 9.3.10 Periodic archaeological reports may be prepared to review whether there have been any incursions into each AEZ and whether there are still archaeological grounds for maintaining each AEZ. Archaeological reports on AEZs will include recommendations regarding amendment of the extent, removal and/or creation of new AEZs.

Temporary Exclusion Zones

- 9.3.11 The WSI and the PAD provide for Temporary Exclusion Zones (TEZs) to be introduced when discoveries of archaeological material or sites are made (see **Section 9.11**). These operate in a similar way to the fixed AEZs but may be lifted once further mitigation has been completed, with the agreement of the Archaeological Curator(s).

9.4 Avoidance and Micro-Routing

- 9.4.1 For features of archaeological potential (A2 geophysical anomalies, along with AEZs), avoidance should be the preferred option. Where possible, A2 geophysical anomalies should be avoided through micro-routing. Where avoidance is not possible (for example if they are proposed to be directly impacted by associated infrastructure, cables, jack-up legs on vessels and / or anchors of other vessels), targets will be proposed for further investigation to confirm their nature. These will be selected based on a number of criteria and experience, and the rationale for selection will be set out in a method statement for further investigation. For example, A2 h would require assessments or A2 L which could be mitigated through a protocol, their investigation could be undertaken as part of the contractor's detailed geophysical survey, and if required the UXO ID survey, or though bespoke archaeological assessment.
- 9.4.2 It is possible that these anomalies / features could represent material from wreck sites of considerable age and be of higher archaeological value and importance than those already suggested for AEZs, and therefore further AEZs could be instituted if required. However, it is also possible that these anomalies could comprise modern debris of no archaeological significance. The provision of archaeological advice is particularly important in areas of high potential for seabed prehistory, or anomalies with a high magnetic amplitude reading.
- 9.4.3 Where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the Applicant will inform the Regulator(s), as advised by the Archaeological Curator(s), and will agree a solution that protects the significance of the new discovery, so far as is practicable, within the project parameters.
- 9.4.4 If there is potential for these anomalies / features to be impacted by the Proposed Offshore Scheme, they will need to be assessed on a case-by-case basis, in order to accurately position the site and effectively confirm its character. This will allow an assessment of the anomaly's relative value. The methodologies for assessing the features could include further geophysical survey, ROV survey, for example in combination with a UXO survey, or diver survey. Should any further surveys be planned regarding archaeological features, archaeological advice should be included at the planning stage, to maximise results for archaeological assessment.
- 9.4.5 Information gathered through further survey or other archaeological works must be disseminated, for example through reporting (as discussed in **Section 13.7**).

Preservation by Record

- 9.4.6 If it is not possible to preserve *in situ* A2 geophysical anomalies, disturbance will be offset by appropriate and satisfactory measures, also known as 'preservation by record'. In these circumstances, the extent of the further surveys required will be determined based on the assessed value or importance of the feature, and through discussions with the Archaeological Curator(s). Further works could include survey, recording and / or excavation, to any depth likely to be impacted, prior to the impact occurring (Wessex Archaeology 2007), and will be detailed in a specific archaeological method statement.
- 9.4.7 The impact of the Proposed Offshore Scheme, if and where appropriate, may also be remedied by restabilising sites that have already been destabilised but not destroyed, or by offsetting damage to a site by detailed analysis and safeguarding of otherwise comparable sites elsewhere. Again, such work will be detailed in a specific archaeological method statement, and methodology reviewed by the Archaeological Curator(s).

9.5 Marine Geophysical Investigations

- 9.5.1 No marine geophysical surveys solely for archaeological purposes are currently planned. Where practical, the Applicant will allow for archaeological involvement in the planning, acquisition and review of any further geophysical investigations, should they be undertaken.
- 9.5.2 In the event that further work is recommended by the Retained Archaeologist, the Archaeological Curator(s) must be contacted to discuss the scope and evidential value of such works. This is to ensure that the extent, coverage and line spacing of geophysical survey data, and its associated capabilities and limitations, can be weighed against the potential for archaeological remains.
- 9.5.3 For all aspects of marine geophysical investigations that are to include archaeological objectives, the Applicant and / or their Contractor(s) will adhere to applicable standards and guidance. For example, geophysical surveys will be undertaken in line with *Marine Geophysics Data Acquisition, Processing and Interpretation* (English Heritage (now Historic England) 2013) and the *Archaeological Written Schemes of Investigation for Offshore Windfarm Projects* (The Crown Estate 2021) as appropriate.
- 9.5.4 The Crown Estate's *Archaeological Written Schemes of Investigation for Offshore Windfarm Projects* (2021) details the specifications for archaeological marine geophysical investigations with regards to:
- sidescan sonar survey;
 - magnetometer survey;
 - sub-bottom profiler survey; and
 - multibeam bathymetry survey.
- 9.5.5 For any potential future marine geophysical survey whose primary aim is non-archaeological (i.e. engineering or environmental), the Applicant and/or their Contractor(s) should seek archaeological advice from the Retained Archaeologist to support with the wider archaeological considerations (e.g. provide supporting information in the event of an unexpected archaeological discovery), without compromising the primary objective of the survey. Archaeological input from an appropriately qualified marine archaeological geophysicist may include advice on the following points:

- whether these datasets would enhance existing details of sites and / or anomalies identified in the desk-based technical report and archaeological assessment of geophysical survey data (LionLink 2025);
 - whether these datasets would enhance understanding of the archaeological potential of areas where no existing sites and / or anomalies are yet known;
 - to what extent methodologies, including geophysical survey equipment specifications and proposed acquisition settings, survey line spacing, and orientation of lines and cross lines would support wider archaeological objectives;
 - requirements for processing, interpreting, and archiving resulting data, in the specific event that these datasets are archaeologically assessed (relating to the points above).
- 9.5.6 Where archaeological objectives have been added to a survey whose primary objectives are non-archaeological, it is recommended that the Retained Archaeologist be consulted to include archaeological advice in the planning stages. The Retained Archaeologist will advise on the suitability for archaeological purposes of the data being acquired in order to optimise archaeological results.
- 9.5.7 Should any surveys be carried out primarily for archaeological purposes, the specification should be prepared by a suitably qualified archaeologist or marine geophysicist. This will be covered by a specific archaeological method statement, and methodology reviewed by the Archaeological Curator(s). In addition, the survey should be carried out by a survey company with appropriate archaeological expertise and including geophysicists with appropriate archaeological expertise on board, if required.
- 9.5.8 The results of any archaeological assessment of geophysical survey data will be compiled as an archaeological report by the Retained Archaeologist, consistent with the provisions on reporting within this WSI (**Section 13.7**).
- 9.6 Geoarchaeological Involvement in Marine Geotechnical Investigations**
- 9.6.1 Stage 2 geoarchaeological work has been undertaken on existing geotechnical data, following the Stage 1 assessment.
- 9.6.2 No additional geoarchaeological investigations solely for archaeological purposes are currently planned. However, should geotechnical surveys be undertaken, the Applicant and/or their Contractor(s) should seek archaeological advice from the Retained Archaeologist to enable archaeological considerations without compromising the primary objective of the survey.
- 9.6.3 The scope and methodology of any geoarchaeological works will be set out in a separate archaeological method statement, prepared by the Retained Archaeologist and agreed with the Archaeological Curator(s). Archaeological advice will be compliant with recommendations set out in the *Archaeological Written Schemes of Investigation for Offshore Windfarm Projects* document (The Crown Estate 2021) and *Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector* (Gribble & Leather 2011). The advice will specifically include identification of sample locations of particularly high archaeological potential, for example areas of Holocene archaeological potential, as well as providing a methodology for opportunistic archaeological assessment of core and core logs, following the completion of the geotechnical analyses.

- 9.6.4 A Stage 1 review of 224 vibrocore logs has been undertaken as part of the PEIR assessment (Wessex Archaeology 2025). This review identified deposits of potential geoarchaeological interest with recommendations made for further geoarchaeological work (Stage 2 geoarchaeological recording and deposit modelling), considering the regional research agendas (see **Error! Reference source not found.**).
- 9.6.5 Archaeological method statements will include clear provisions for the development of a collection, retention, and storage strategy for cores, to allow for analysis to take place. Material needs to be retrieved in a manner so that the whole sequence can be sampled and reviewed, in the most continuous sequence possible.
- 9.6.6 To frame potential geoarchaeological investigations, Wessex Archaeology has developed a five-stage approach, encompassing different levels of investigation appropriate to the results obtained, accompanied by formal reporting of the results. The stages are summarised below (**Table 5**).

Table 5 Staged approach to geoarchaeological investigations

Stage	Description
Stage 1: Geoarchaeological review	Desk-based review of geotechnical and geological data. Establish likely presence/ absence/ distribution of archaeologically relevant deposits. Identify deposits or samples for Stage 2 works.
Stage 2: Geoarchaeological description and interpretation	Target deposits or samples identified in Stage 1. Describe the sequences recovered and undertake deposit modelling (if suitable). Interpret depositional environment (if possible). Identify if suitable deposits are present for Stage 3 works.
Stage 3: Palaeoenvironmental assessment	Sub-sample deposits of archaeological interest for palaeoenvironmental assessment (e.g. pollen, plant macrofossils, foraminifera, ostracod, and diatoms) and associated scientific dating. Provide an outline interpretation of the archaeological and palaeoenvironmental context. Any recommendations for Stage 4 works will depend on the potential for further analysis and the project research objectives.
Stage 4: Palaeoenvironmental analysis	Full analysis of samples and additional scientific dating as specified in Stage 3, together with a detailed synthesis of the results, in their local, regional, or wider archaeological and palaeoenvironmental context. Publication would usually follow from a Stage 4 report.
Stage 5: Publication	Publication of the results of Stage 1-4 works for submission in a peer reviewed journal, book, or monograph, depending on the archaeological significance of the work. The scope and location of the final publication will be agreed in consultation with the EPC Contractor and regulatory bodies where appropriate.

9.7 Archaeological Assessment of UXO ROV Survey Data

- 9.7.1 As part of the UXO assessment and detailed route engineering, pre-installation UXO specific geophysical surveys will be undertaken to characterise and investigate any

anomalies that may be UXO in more detail, as detailed in the Volume 1, Chapter 2 Description of the Proposed Scheme of the PEIR.

- 9.7.2 Archaeological advice should be sought at the planning stages for any ROV and/or diver surveys, to ascertain whether the surveys are likely to cover any areas of archaeological interest, such as newly established AEZs, A2s and areas of archaeological potential. Consideration should be given for an archaeologist to be on-board during the ROV survey, particularly where targets of archaeological interest are likely to be encountered. This would be undertaken as an archaeological watching brief (see **Section 9.9**). However, where not possible, data from the survey can be archaeologically assessed. Where relevant, a separate archaeological method statement (see **Section 8**) will be produced, in order to maximise the survey results for archaeological assessment.
- 9.7.3 These surveys could be used to validate, alter, or remove existing AEZs, in conjunction with discussions with the Archaeological Curator(s), or to identify and characterise material on the seabed, for example A2 geophysical anomalies or unexpected discoveries. Should any wreck or aircraft material be discovered, the Receiver of Wreck and Ministry of Defence will be contacted respectively.
- 9.7.4 Relevant data collected should be reviewed by an appropriately qualified and experienced archaeologist. The assessment will include any target lists, target investigation reports, archaeological relevant video stills, archaeological relevant video data, archaeological relevant blue view sonar or other archaeological relevant geophysical data, and the location and nature of any obstructions encountered. Provision will be made by the Applicant and/or their Contractor(s) for daily reports and target investigation reports to be provided regularly during the survey operations, to ensure timely archaeological advice. Targets identified as non-UXO could be of archaeological interest, therefore, regular review of data will facilitate the possibility of the diver / ROV survey team returning to the site for further survey, without need for remobilisation.
- 9.7.5 Should any sensitive archaeological sites become known, management plans will be put in place, through consultation with the Archaeological Curator(s), as additional information is gathered as required.
- 9.7.6 The results of the archaeological assessment need to be disseminated as per Reporting (**Section 13.7**). The reporting will include the investigative and visual outcomes, which can provide insightful and significant information.

9.8 Archaeological Investigations using Divers and/or ROVs

- 9.8.1 Archaeological investigations cover scopes where the primary objectives are archaeological using divers and/or ROVs, and the diving is led by archaeologists. No archaeological investigations are currently planned.
- 9.8.2 Archaeological diver/ROV surveys can be employed in order to gather archaeological data concerning wreck / aircraft sites and geophysical anomalies to safeguard the archaeological record or to alter (enlarge, reduce, move or remove) existing AEZs or TEZs. Specifically, an archaeological diver or ROV-based assessment may be required where it is not possible to protect an archaeological site through the implementation of an AEZ or where visual clarification is sought in order to confirm or amend an AEZ or TEZ.
- 9.8.3 Diver / ROV assessment primarily for archaeological purposes will be undertaken by an Archaeological Contractor with a marine archaeological team with the appropriate expertise and experience of the environment/conditions likely to be encountered.

- 9.8.4 Every dive will be recorded using a digital video system with helmet-mounted camera or the ROV's onboard instrumentation.
- 9.8.5 The position of the diver/ROV will be determined using an acoustic navigation system. The position will be integrated into a diver tracking and recording system where the position of the objects on the seabed can be compared to the geophysical data, and the extent and character of the features recorded.
- 9.8.6 Recording will be conducted to a level whereby a statement can be made as to the date, character, extent, and archaeological importance of the site. Significant diagnostic features will be recorded by photography backed up with written records and measurements. Limited documentary research may also be required to support the assessment of importance.

9.9 Archaeological Watching Briefs

- 9.9.1 A watching brief is a formal programme of archaeological monitoring and will involve attendance by an Archaeological Contractor during groundworks. For the Proposed Offshore Scheme, no archaeological watching briefs are proposed, and a PAD will be used to deal with any finds of unexpected archaeological material that come to light during construction activities.
- 9.9.2 Should archaeological material of high archaeological significance be reported through the PAD, an archaeological watching brief could be instituted, following discussions with the relevant Archaeological Curator(s) and agreement with Regulator(s). The archaeological watching brief would require a works specific archaeological method statement, which would be based on the specifics in the approved WSI and would be undertaken in line with the *Universal guidance for archaeological monitoring and recording* (CIfA 2023c) and should be agreed by the relevant Archaeological Curator(s) prior to works being undertaken.

9.10 MagDrone Survey

- 9.10.1 A MagDrone survey covering the area above MHWS up to the onshore JTB is planned, providing coverage between the offshore and onshore scope of works. The aim of the archaeological assessment of the MagDrone survey data will be to identify any buried material of archaeological potential located at the proposed Landfall Site and allow for up to date information to characterise the archaeological baseline to inform the ES.
- 9.10.2 Mitigation in the form of avoidance (which may be enacted by the implementation of AEZs) shall be prioritised for all material of archaeological potential within this area.

9.11 Protocol for Archaeological Discoveries (PAD)

- 9.11.1 A PAD will be implemented as best practice to ensure that the Proposed Offshore Scheme is prepared for unexpected discoveries of archaeological material - including shipwreck material, aircraft remains, submerged prehistoric material or other archaeological material - and are addressed in a timely and appropriate manner.
- 9.11.2 The PAD is a safety net for any unexpected discoveries made during the course of the scope of works. The impacts on the historic environment should be considered and addressed in the earliest stages of the development process, with a PAD implemented as a last resort.
- 9.11.3 In the instances where the Applicant and / or their Contractor(s) has made provision for other archaeological investigations (for example archaeological assessment of ROV survey data), then the archaeological method statement relating to this provision will take

precedence. However, where no specific archaeological provision has been made, then reporting should be made through the PAD. This PAD has been set out in accordance with The Crown Estate *Protocol for Archaeological Discoveries Offshore Renewables Projects* (2014).

- 9.11.4 The aim of the PAD is to reduce adverse effects of the Proposed Offshore Scheme on the historic environment by enabling people working on the project to report archaeological finds in a manner that is both convenient to their everyday work and effective regarding curatorial requirements.
- 9.11.5 Flow charts of actions / communications and recording sheets associated with the PAD can be found in **Appendix 1** and **Appendix 2**.
- 9.11.6 Archaeological finds made during the different phases of the Proposed Offshore Scheme are important because they can shed light on past human use of the landscape, sea, and seabed. The information that such discoveries bring to light can help archaeologists better understand the human past and should, therefore be conserved to better protect these aspects of our history on behalf of future generations.
- 9.11.7 The PAD will be implemented to ensure that these discoveries are reported and analysed.

Methodology

- 9.11.8 The implementation of the PAD will be initiated by a PAD Awareness Training by the Retained Archaeologist to the relevant vessels to ensure that all Project Staff are aware of what constitutes an appropriate find, understand how to record them, and are aware of the reporting process. Project Staff involved with the following works should undergo PAD Awareness Training: UXO survey(s), pre-lay grapnel runs, clearance works, and any other works with potential for the discovery of material on the seabed and / or recovery of material to the surface. There is the likelihood that Project Staff will work on shifts / rotations, therefore, it is important that PAD Awareness Training is provided to all relevant Project Staff.
- 9.11.9 An internal reporting chain must be in place in order for the PAD to be operationally effective. Therefore, contact details, including those of the Master / Site Champion, Nominated Contact, and the Archaeological Contractor, will be circulated once they have been confirmed.
- 9.11.10 When discoveries are made by Project Staff, either on the seabed or onboard a vessel, they can then be reported to the Site Champion on their vessel. The Site Champion will generally be the vessel Master, or a person nominated by the Master to be the Site Champion, a UXO specialist, a Construction Foreman, or any other person in a position to control the immediate works. The Site Champion then reports to the Nominated Contact, a person who has been formally identified by the Applicant and / or their Contractor(s) to co-ordinate the implementation of the PAD. The Nominated Contact will then report any discoveries to the Retained Archaeologist and the Applicant and / or their Contractor(s) Project Manager(s).
- 9.11.11 Reporting of discoveries should be done immediately for the Retained Archaeologist to provide a quick response and plan of action and minimise disruption to the work programme. The Retained Archaeologist will in turn liaise with the Nominated Contact, the Applicant and / or their Contractor(s), the Archaeological Curator(s) and others, as necessary. Provision will be made by the Applicant and / or their Contractor(s), in accordance with the PAD, for the prompt reporting / recording of archaeological remains encountered or suspected during the works.

- 9.11.12 If the find is a 'wreck' within the meaning of the *Merchant Shipping Act* 1995 then the Applicant and / or their Contractor(s), with advice from the Retained Archaeologist, will also make a report to the Receiver of Wreck within 28 days of recovery. Should a find comprise material suspected to be from an aircraft lost while in military service, both the Receiver of Wreck and the Ministry of Defence will be notified by the Applicant and / or their Contractor(s) as advised by the Retained Archaeologist, as the material will still be considered 'wreck' under the *Merchant Shipping Act* 1995 but could also be protected under the *Protection of Military Remains Act* 1986.
- 9.11.13 With regards recovery of 'wreck', the Applicant and / or their Contractor(s) will be responsible for the legal obligations under the *Merchant Shipping Act* 1995 and all correspondence with the Receiver of Wreck. If recovered material is held by the Retained Archaeologist, it is essential they are included in all correspondence with the Receiver of Wreck and are aware of any updates or changes to the finds reports (commonly known as droits) associated with the material.
- 9.11.14 For discoveries of high archaeological importance, a TEZ can be implemented, all works are to cease within the area, and call-out investigations could be instituted, following discussions with the Archaeological Curator(s).
- 9.11.15 The Retained Archaeologist will produce an archaeological report of the finds at the end of the marine works for comment by the Applicant and / or their Contractor(s) and the Archaeological Curator(s).

Actions by Nominated Contact

- 9.11.16 When contacted by the Nominated Contact and once information has been passed on, the Archaeological Contractor will enter the information in the project database / Geographic Information System (GIS).
- 9.11.17 The Retained Archaeologist will review all information relating to the occurrence in conjunction with geophysical and / or desk-based information.
- 9.11.18 The Retained Archaeologist will advise the Nominated Contact of any further actions that may be required, including:
- advice on immediate actions to be taken in respect of the discovery, including any recovered finds; and,
 - advice on the identification of finds and the character of their seabed locations.
- 9.11.19 When the available information has been reviewed, this may include relevant geophysical, geoarchaeological, desk-based data, and preliminary research, the Retained Archaeologist will assess the archaeological potential and importance of the discovery.

Reporting

- 9.11.20 The Applicant and / or their Contractor(s) will report any discovery of 'wreck' to the Receiver of Wreck, using the Receiver of Wreck website (see **Section 4.6.10**).
- 9.11.21 The Retained Archaeologist will produce an archaeological report of the analysis of any finds or anomalies at the end of the project. The results will be presented in a stand-alone format and will refer to the previous archaeological work.

10 POST CONSTRUCTION

10.1 Post-Construction Monitoring

10.1.1 With the implementation of the mitigation measures (**Section 7**), including AEZs and avoidance of A2 geophysical anomalies, no impact from seabed preparation and construction works are anticipated to occur to known archaeological receptors and / or anomalies of likely / possible anthropogenic origin. As such, post-construction monitoring of archaeological features including AEZs and A2 anomalies, will not be required.

10.1.2 However, in the event of unplanned interactions with features of archaeological potential, occurring during the construction of the Proposed Offshore Scheme, post-construction monitoring (particularly AEZs) may be required to confirm and demonstrate that impacts have been as negligible as anticipated. In the event of unplanned interactions with archaeological features, post-construction monitoring requirements will be confirmed and undertaken in liaison with the Archaeological Curator(s), the Applicant and / or their Contractor(s) and Retained Archaeologist.

10.2 Operation (maintenance and repairs)

10.2.1 Activities undertaken as part of the operation phase have the potential to impact marine archaeological receptors in areas not previously impacted by seabed preparation and construction activities, or changes to the cable route during maintenance and repair. Therefore, in areas not previously impacted by seabed activities and subject to the applicable marine licence, the mitigation implemented during the operation phase, will be in line with the mitigation outlined in this WSI, in particular:

- AEZs will be retained, and no works that impact the seabed will be undertaken within them (**Section 9.3**);
- where possible, A2s will be micro-sited around / avoided subject to additional investigation and appropriate mitigation where avoidance is not possible, including by jack-up legs, anchors, and any operation works on the seabed (**Section 9.4**); and
- a PAD will be implemented for any unexpected discoveries (**Section 9.11**).

10.2.2 Where relevant, archaeological method statement(s) will be produced for operation activities (such as cable replacement or other activities) that may impact marine archaeological receptors in areas not previously impacted and will be reviewed by the Archaeological Curator before those works commence. The archaeological method statement will include details about all AEZs (including any implemented or amended during the pre-construction or construction phases), A2 anomalies, and the PAD.

10.3 Decommissioning

10.3.1 As decommissioning works will be planned at the end of the cable lifecycle, and may come under a new EIA process, it is not possible to provide specific mitigation details at this time. However, mitigation will likely comprise a continuation of that outlined for operation activities, i.e.: retaining AEZs; avoiding A2 anomalies; and a PAD.

11 FINDS RECOVERY

11.1 General

11.1.1 All archaeological finds recovered from marine contexts will be recorded in accordance with ClifA's *Universal guidance for archaeological field evaluation* (2023b) and *Standard and*

guidance for the collection, documentation, conservation and research of archaeological material (ClfA 2014a updated 2020).

- 11.1.2 Although finds of modern date (19th century or later) may be recorded on site and not retained, depending on the research objectives of the Proposed Offshore Scheme, any recovered finds relating to possible aircraft material or classified as 'wreck' under the *Merchant Shipping Act* 1995 must be retained and reported to the Receiver of Wreck within 28 days and the JCCC, if applicable.
- 11.1.3 Any discoveries that are potentially sensitive will be kept confidential between the Applicant and / or their Contractor(s) and Subcontractors, the Retained Archaeologist and the Archaeological Curator(s) as the remains may be targeted for illegal salvage activities if knowledge of such discoveries becomes widespread.
- 11.1.4 Any finds from marine contexts that require conservation or specific storage conditions will be dealt with immediately in line with *First Aid for Finds* (Watkinson & Neal 1998) and *First Aid for Underwater Finds* (Robinson 1998). A full record will be made of any treatment given. Any further conservation beyond first-aid must be agreed by the Archaeological Curator(s) and, where applicable, the Receiver of Wreck prior to commencement. Where appropriate, soil samples may be taken and sieved to aid in finds recovery.
- 11.1.5 Finds and other items of archaeological interest recovered offshore in the course of investigation are the property of The Crown Estate as the landowner, with the exception of any human remains, and 'wreck' as defined by the *Merchant Shipping Act* 1995, material covered by the *Protection of Military Remains Act* 1986 or the *Treasure Act* 1996.

11.2 Ordnance

- 11.2.1 In the event that the Proposed Offshore Scheme has a programme of UXO clearance incorporated into its installation plan, this will be conducted by suitably qualified Explosive Ordnance Disposal (EOD) company.
- 11.2.2 If items of ordnance are discovered, they will be treated with extreme care. Company Health & Safety policies and established operational procedures should always take priority over archaeological reporting of munitions and ordnance.

11.3 Human Remains

- 11.3.1 In the event of discovering human remains (articulated or disarticulated, cremated or unburnt), the activity during which the material was discovered, and that could lead to the further disturbance/removal of remains, will cease and a TEZ will be implemented, preventing any further impact. Where practical, the deposits will be left *in situ*, covered and protected (The Crown Estate 2014, 49)
- 11.3.2 The Retained Archaeologist (or Archaeological Contractor, if applicable) will inform the Applicant who will, in turn, alert the relevant authority. If the authority do not propose to investigate the remains, a Ministry of Justice licence will need to be obtained.
- 11.3.3 Further liaison with the Archaeological Curator(s), Applicant, Retained Archaeologist and Archaeological Contractor (if applicable) will occur to decide next steps including determining the methodology for the excavation, removal or sampling of further material, if appropriate. A Ministry of Justice licence will need to be obtained for works to continue (this includes cases where remains are to be left *in situ*).

11.3.4 Where deemed appropriate, human remains will be fully recorded, excavated and recovered in compliance with the Ministry of Justice licence. Furthermore, all excavation and post-excavation will be in accordance with the Retained Archaeologist's protocols, with any directions which may be given by the Secretary of State, and current guidance documents (e.g. McKinley 2013) and the standards set out in the Institute of Field Archaeologists (IFA, now ClfA) Technical Paper 13 *Excavation and post-excavation treatment of cremated and inhumed remains*. Appropriate specialist osteological guidance and, if required, site visits will be undertaken.

11.3.5 The final deposition of human remains, subsequent to the appropriate level of osteological analysis and other specialist sampling/examinations, will follow the requirements set out in the Ministry of Justice licence.

11.4 Treasure

11.4.1 The Retained Archaeologist will immediately notify the Applicant and / or their Contractor(s), and the Archaeological Curator(s) on discovery of any material covered, or potentially covered, by the *Treasure Act* 1996 (as amended by The Coroners and Justice Act 2009). All information required by the *Treasure Act* (i.e., finder, location, material, date, associated items etc.) will be reported to the Coroner within 14 days. Items falling under the *Treasure Act* will be removed from the site by the Retained Archaeologist and stored in a secure location, pending a decision by the Coroner.

11.5 Aircraft

11.5.1 Under the *Protection of Military Remains Act* 1986, it is an offence to tamper with, damage, move or unearth any items related to a military aircraft crash site, unless the Ministry of Defence has issued a licence authorising such an activity. Consequently, anyone wishing to recover a military aircraft or excavate a military aircraft crash site in the UK is required to obtain a licence from the JCCC. A license is required irrespective of whether the aircraft was in the service of another nation's armed forces.

11.5.2 Application for a licence, and any subsequent work, should be undertaken in line with the Ministry of Defence's *Military Aircraft of Historical Interest: Licensing of Excavations in the UK: Notes for Guidance of Recovery Groups* (Revised 2018)¹. Should human remains be discovered, they should not be touched but must be reported immediately to the Ministry of Defence (as per paragraph 15 of the guidance).

11.5.3 Any finds that are suspected of being military aircraft will be reported immediately to the Retained Archaeologist. In the case of a military aircraft being investigated under licence, any human remains will be reported immediately. Discoveries of aircraft material must be reported to the MoD, JCCC and, if recovered, to the Receiver of Wreck within 28 days of discovery.

11.5.4 For the archaeological assessment of aircraft remains, the Retained Archaeologist will refer to available guidance from Archaeological Curator(s), such as *Military Aircraft Crash Sites: Archaeological Guidance on their significance and Future Management* (English Heritage (now Historic England) 2002).

¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916555/20180514_Licence_NotesforGuidance_2018-3.pdf

11.6 Wreck

- 11.6.1 There is a legal obligation under the *Merchant Shipping Act* 1995 that all material identified as 'wreck' must be reported to the Receiver of Wreck within 28 days of discovery.
- 11.6.2 According to section 255 of the Act, 'wreck' can be defined as 'jetsam, flotsam, lagan and derelict found in or on the shores of the sea or any tidal water' that have come from a ship, aircraft or hovercraft (vessel) and includes cargo and equipment.
- 11.6.3 Not only does the legislation cover wreck material recovered from within UK territorial waters (12 nautical miles (nm)), but also material that has been brought into UK territorial waters from elsewhere. The Receiver of Wreck's remit does not extend to lakes or rivers beyond tidal reach.
- 11.6.4 Wreck material is reported to the Receiver of Wreck by completing a 'Report of wreck and salvage' form (MSF 6200). A droit number will be assigned to each report of wreck, which could include a single or multiple objects from one location / wreck site.
- 11.6.5 The Receiver of Wreck's remit is to research and establish who owns the wreck and to liaise with the finder, owner or other interested parties including archaeologists and museums.
- 11.6.6 All material reported as wreck must be retained and held on indemnity to the Receiver of Wreck's orders whilst the droit remains open, which could extend beyond a year. The location(s) of such storage will be confirmed following discussion between the Applicant and / or their Contractor(s) and the Retained Archaeologist. The Receiver of Wreck must be made aware of these storage locations and any further movement of reported material.
- 11.6.7 If the Receiver of Wreck has not found ownership of any recovered wreck material within one year, the material becomes 'unclaimed' and as such the property of the Crown. The Receiver of Wreck can then dispose of these items on behalf of the Crown. For material that is of historical or archaeological importance, the Receiver of Wreck will try to ensure that it is offered to an appropriate museum. If an appropriate museum or institution is not found, then the Receiver of Wreck may offer the material to the finder *in lieu* of salvage. Due to the longevity of this process, it is essential that the Applicant and / or their Contractor(s) are fully aware of the obligations of the *Merchant Shipping Act* 1995 and frequently liaise with the Receiver of Wreck until a decision on ownership has been made and the droits can be formally closed.
- 11.6.8 If a museum or suitable institution is found by the Retained Archaeologist, this should be confirmed through liaison between the Applicant and / or their Contractor(s) (as the named finder on the Report of Wreck and Salvage) with the Receiver of Wreck. It is furthermore recommended that droits are formally closed by the Receiver of Wreck prior to material being accessioned by a museum.

11.7 Asbestos

- 11.7.1 It is possible that aviation or maritime material from the 20th century could contain asbestos, particularly in relation to insulation, electrical cables, doors, wall and ceiling panels, ropes, gaskets, seals, etc. Asbestos has the potential to cause serious diseases, such as pleural diseases, asbestosis, pulmonary fibrosis, mesothelioma and lung cancer, and therefore the potential for exposure must be considered.
- 11.7.2 The potential risk of asbestos increases if finds are dry, disturbed and / or degrading. Therefore, any material suspected of being asbestos containing material should be kept wet

and undisturbed, and contractor's own specific procedures should be followed to minimise risk.

- 11.7.3 Should further inspection, assessment or sampling need to be carried out, a Risk Assessment will be prepared. Should an object need to undergo further testing, this must be carried out by an accredited / licenced external specialist.

12 ENVIRONMENTAL SAMPLING

12.1 General

- 12.1.1 For each package of archaeological works, sampling strategies and methods, including methods for processing, assessing and / or analysing samples, will be set out in an activity-specific archaeological method statement (see **Section 8**).
- 12.1.2 For geotechnical and geoarchaeological samples derived from non-archaeological sampling programmes, where feasible, samples will be made available for geoarchaeological recording and sub-sampling, in accordance with the archaeological method statement, prior to any processes that may render the sample ineffective.
- 12.1.3 All sampling undertaken for archaeological purposes will be undertaken following the Retained Archaeologist's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage (now Historic England) 2011 & Historic England 2015b). Where applicable, the Archaeological Curator(s) should be included in any discussions.

12.2 Site-Specific Sampling Strategy

- 12.2.1 All contexts suitable for environmental sampling will be considered for sampling. A site-specific sampling strategy (SSSS) may be recommended for the Proposed Offshore Scheme and can be prepared in a separate document to be used alongside this WSI. Initially informed by prior works or predicted conditions, the strategy will be developed and adapted as the excavation continues, with support provided by specialist site visits and/or phone advice as appropriate.
- 12.2.2 The aim of the strategy will be to target archaeological and landscape features to address the aims and objectives of the Proposed Offshore Scheme, with reference to local or regional research agendas if appropriate. The SSSS is intended to guide the retrieval of paleoenvironmental evidence during the site investigations with the purpose of addressing their site-specific objectives.
- 12.2.3 De-selected material from samples will be disposed of after processing and post-excavation recording. All processed material will be adequately recorded to the appropriate level before de-selection.

12.3 Sampling Methods

- 12.3.1 Bulk environmental soil samples, for the recovery of plant macrofossils, wood charcoal, small animal bones and other small artefacts, will be taken as appropriate from well-sealed and dateable contexts or features.
- 12.3.2 If waterlogged or mineralised deposits are encountered, an environmental sampling strategy will be devised and agreed with the Archaeological Curator(s) as appropriate. Specialist guidance will be provided by the Retained Archaeologist, with site visits undertaken if required.

- 12.3.3 Any samples recovered for archaeological purposes will be of an appropriate size - typically 40 litres for the recovery of environmental evidence from dry contexts, and 10 litres from waterlogged deposits.
- 12.3.4 Following specialist advice, other sampling methods such as monolith, Kubiena or contiguous small bulk (column) samples may be employed to enable investigation of deposits with regard to microfossils (e.g., pollen, diatoms) and macrofossils (e.g., molluscs, insects), soil micromorphological or soil chemical analyses.

13 POST-EXCAVATION METHODS AND REPORTING

13.1 Introduction

- 13.1.1 In the event that archaeological material is encountered and recovered the following procedures will be implemented. Recovered archaeological material can occur where targeted archaeological investigation is instigated or in instances where new discoveries reported through the PAD require recovery (as a last resort) to avoid further impact. In such instances, the applied archaeological methodology will be detailed in a specific archaeological method statement (**Section 8**).

13.2 Stratigraphic Evidence

- 13.2.1 All written and drawn records, and surveyed data from fieldwork will be collated and checked.
- 13.2.2 Stratigraphic groups will be defined, and preliminary phasing undertaken using stratigraphic relationships, finds spot-dates and any other relevant information. The character, range, date, nature, condition and significance of the stratigraphic evidence will be assessed and reported on. Issues surrounding stratigraphic interpretation (e.g., due to truncation, redeposition, residuality) and phasing (e.g., due to low level of finds) will be identified.

13.3 Finds Evidence

- 13.3.1 All retained archaeological finds will, as a minimum, be weighed (where applicable), identified and given a unique identifier. Samples of surface residues may be retained and assessed, following advice from a conservator and environmental archaeologist. Finds will then be recorded to a level appropriate to the aims and objectives of the investigation. The report will include a table of finds with relevant details and a description. Recording and reporting will conform to the Type 2 (Appraisal) level according to the ClfA's *Toolkit for Specialist Reporting*, to include appropriate quantification, characterisation and assessment of significance and potential.
- 13.3.2 Metalwork, especially from stratified contexts, will be X-rayed and, along with other fragile and delicate materials, stored in a stable environment. The X-raying of objects and other conservation needs will be undertaken by the Retained Archaeologist's in-house conservation staff, or by another approved conservation centre.
- 13.3.3 Finds from a marine context will be placed in containers of tap water and stored out of direct sunlight. Larger items will be kept damp with the use of capillary matting, until a solution on storage or next steps can be ascertained.

- 13.3.4 Artefacts and other finds that do not require specific conservation measures will be suitably bagged and boxed in accordance with the guidance given by the relevant museum and generally in accordance with the standards of the ClfA (ClfA 2014b updated 2020).

13.4 Finds Conservation and Storage

- 13.4.1 All recovered materials of archaeological interest, from land or underwater, will be subject to a Conservation Assessment to gauge whether purposeful measures are required while the material is being held. The Conservation Assessment must be agreed by the relevant Archaeological Curator(s) and, where applicable, the Receiver of Wreck. This Conservation Assessment will be carried out by the Retained Archaeologist or an Archaeological Contractor with an appropriate level of expertise, with advice from appropriate specialists. The Retained Archaeologist or an Archaeological Contractor with appropriate expertise will implement recommendations arising from the assessment. If no purposeful measures are recommended, finds will be conserved, bagged, boxed, and stored in accordance with industry guidelines (ClfA, 2014b updated 2020).
- 13.4.2 If conservation is to be undertaken, Conservation Assessments must be confirmed with the Receiver of Wreck where material has been reported as 'wreck' under the *Merchant Shipping Act 1995*.

13.5 Environmental Evidence

- 13.5.1 Bulk environmental soil samples selected for archaeological purposes will be processed by standard flotation methods. The flot will be retained on a 0.25 mm mesh, with residues fractionated into 5.6/4 mm, 2 mm, 1 mm and 0.5 mm and dried if necessary. The coarse residue fraction (>5.6/4 mm), and the fine fraction when appropriate, will be sorted and discarded, with any finds recovered given to the appropriate specialist. The flot will be retained on a 0.25 mm mesh and scanned to assess the environmental remains present and their preservation. Unsorted fine residues will be retained until after any analyses and discarded following final reporting.
- 13.5.2 Any waterlogged or mineralised samples will be processed by standard waterlogged flotation methods.
- 13.5.3 Recording and reporting will conform to the Type 2 (Appraisal) level according to the ClfA's *Toolkit for Specialist Reporting*, to include appropriate quantification, characterisation and assessment of significance and potential.

13.6 Palaeoenvironmental Assessment and Scientific Dating

- 13.6.1 In accordance with the staged approach outlined in **Table 5**, where appropriate deposits are identified in retained cores at Stage 2, and which have the potential to contribute to the overarching aims and objectives of the geoarchaeological investigations, Stage 3 palaeoenvironmental assessment and dating have been recommended.
- 13.6.2 This assessment may include a suite of complementary techniques comprising targeted and proportionate assessment of pollen, diatom, ostracod, plant macrofossil, molluscan and coleopteran remains, supported by radiocarbon and / or luminescence dating. Multiple techniques are typically assessed in accordance with Historic England guidelines on good practice in environmental archaeology (English Heritage (now Historic England) 2011) and geoarchaeology (Historic England 2015b).
- 13.6.3 The function of each palaeoenvironmental technique within geoarchaeological investigations is provided in **Table 6** below.

Table 6 Palaeoenvironmental techniques

Technique	Deposit required	Sample size/volume	Purpose
Plant microfossils	Peat and organic-rich sediment	2 cm slice 50% cross section, retaining sufficient material in core for other techniques if required	Investigate past local vegetation and environments. Derive suitable material for radiocarbon dating
Pollen	Peat and organic-rich sediment	1cm ³	Investigate past local vegetation and environments and the impact of human communities on the landscape.
Microscopic charcoal	Utilises pollen samples	-	Investigate natural and anthropogenic fire incidence
Foraminifera Ostracod Diatom	Freshwater and marine minerogenic deposits	~50 g	Investigate past coastal and riverine environments, enabling to distinguish evidence for sea level, coastal and riverine changes.
Radiocarbon dating	Peat and organic-rich sediment	Short-lived terrestrial plant remains (for example, seeds and twigs)	Establish chronological framework by dating a range of organic materials recovered from peat deposits, providing a secure chronological context for these deposits.
Optically Stimulated Luminescence (OSL)	Minerogenic deposits with sand content	Requires min 10 cm sections through entire core, contained in opaque core-liner	Establish chronological framework by determining the burial age of sediments and provide a chronology for deposits that lack organic material.

13.6.4 Should the Stage 3 assessment demonstrate sufficient potential, then full analysis of selected micro- and macro-fossils will be undertaken. Stage 4 may be supported by additional scientific dating (e.g. radiocarbon or luminescence) if required and will result in an account of the successive environments within the coring area, a model of environmental change over time, and an outline of the archaeological implications of the analysis.

13.6.5 The results of analysis may lead where appropriate to publication of the results in a suitable journal.

13.7 Reporting

General

13.7.1 Following completion of archaeological fieldwork (e.g. diving surveys, watching briefs etc.) and / or the assessment of the data (e.g. geotechnical survey datasets, review of UXO survey data etc.), draft report(s) will be submitted for review to the Applicant and / or their Contractor(s) and the Archaeological Curator(s), within 3 months of the completion of

fieldwork or assessment, for comment. Reports may be issued for individual fieldwork or assessment packages with a final close-out report, or the work summarised in a single final report. Once agreed, a final version will be submitted.

13.7.2 The report will typically include the following elements:

- a non-technical summary;
- the aims and methods of the work;
- the results of the work undertaken, for instance a discussion on the finds and environmental remains or the investigative and visual outcomes of a diver / ROV survey including an overall gazetteer;
- a statement of the potential of the results;
- proposals for further assessment, analysis, and publication;
- archive preparation and deposition arrangements;
- appendices;
- illustrations; and
- references

13.7.3 A copy of the report(s) will be deposited with the National Marine Heritage Dataset (Mariner) and / or the relevant Historic Environment Record (HER), along with surveyed spatial digital data (.dxf or shapefile format) relating to the evaluation.

Publication

13.7.4 Information from the Proposed Offshore Scheme should be made publicly available, as this will lead to beneficial effects. The information can then support appreciation and enjoyment of the historic environment on local, regional, and national levels, and also enable further academic research and inform marine plans. In addition, dissemination can bring about greater awareness of the historic environment, which can in turn engender local pride.

13.7.5 If no further mitigation works are undertaken, a short report on the results of the evaluation will be prepared for publication in a suitable journal, if considered appropriate and agreed with the Licencee and / or their Contractor(s) and the relevant Archaeological Curator(s). There may be confidentiality issues that could delay or prevent publication, which must be taken into consideration.

OASIS

13.7.6 An OASIS (Online Access to the Index of archaeological investigationS) online record will be created, with key fields completed, and a .pdf version of relevant reports submitted. Subject to any contractual requirements on confidentiality or containing information regarding the discovery of vulnerable sites, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service (ADS) ArchSearch catalogue.

13.7.7 Projects subject to any contractual requirements on confidentiality, or with the discovery of vulnerable sites, will only be uploaded to OASIS following confirmation from the Licencee and / or their Contractor(s) and the Archaeological Curator(s).

14 ARCHIVE STORAGE AND CURATION

14.1 Museum

14.1.1 Every effort will be made to identify a suitable repository for archaeological finds or information which may result from the installation of the Proposed Offshore Scheme. If no suitable repository is identified, the Retained Archaeologist or suitable Archaeological Contractor will continue to store the archive, including any finds, but may institute a charge to the Applicant and / or their Contractor(s) for ongoing storage beyond a set period.

14.1.2 For material reported as 'wreck' under the *Merchant Shipping Act 1995*, the Receiver of Wreck, as per their guidance, will research and offer material to an appropriate museum. It should be confirmed as early as possible who will undertake this research, the Receiver of Wreck, or the Retained Archaeologist. Deposition of any finds with a museum will only be carried out with the full agreement of the Receiver of Wreck (on behalf of the Crown or grantee of the Crown) or the owner (as confirmed by the Receiver of Wreck). If the Retained Archaeologist is responsible for finding a suitable museum, any associated droits should be closed by the Receiver of Wreck prior to material being accessioned.

14.2 Transfer of Title

14.2.1 On completion of an archaeological investigation (or extended fieldwork programme), if required, the legal owner of any recovered finds will be encouraged to transfer their ownership to a museum or accredited organisation in a written agreement, with the exception of:

- human remains, which will follow the requirements set out by the Ministry of Justice licence, as applicable;
- objects covered by the *Treasure Act 1996*;
- aircraft material covered by the *Protection of Military Remains Act 1986* and will therefore be under the ownership of the JCCC of the Ministry of Defence, to transfer their ownership to the museum in a written agreement and in liaison with the Receiver of Wreck; and
- recovered wreck material covered by the *Merchant Shipping Act 1995* as administered by the Receiver of Wreck. Ownership of material will be sought by the Receiver of Wreck for any reported material. Droit reports associated with recovered material should be formally closed prior to material being accessioned by a museum, however the Receiver of Wreck may allow material to be accessioned prior to the closure of the droit(s) if, following discussion, the museum formally agrees to accept title of the material following accessioning.

14.3 Preparation of Archive

Physical Archive

14.3.1 The physical archive, which may include paper records, graphics, artefacts and ecofacts will be prepared following the standard conditions for the acceptance of excavated archaeological material by the receiving museum / accepting institution, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014b; Brown 2011; ADS 2013).

14.3.2 The physical archive will usually be deposited within one year of the completion of the Proposed Offshore Scheme, with the agreement of the Applicant and / or their Contractor(s). Where artefacts have been recovered and reported to the Receiver of Wreck,

deposition may take longer than a year and only after any droit reports have been closed. Liaison with the Receiver of Wreck and the receiving museum throughout the project will allow discussions to occur to arrange for any required accessioning prior to the droits being officially closed.

Digital archive

- 14.3.3 All digital data produced for the archaeological assessment will be considered part of the primary archive and will accord with the procedures recommended by The Crown Estate, Marine Environment Data and Information Network (MEDIN), Archaeological Data Service (ADS), Dig Digital (DigVentures 2019), and the accepting institution.
- 14.3.4 Data will be compiled in a format suitable for submission of Monument, Event and Source records for entry into the NMHR dataset (Mariner) and / or the HER for Suffolk (terrestrial and inshore).
- 14.3.5 If required by the receiving museum / accepting institution following agreement with the Applicant and / or their Contractor(s), the digital data, or selected digital data, will be deposited with a Trusted Digital Repository, in this instance the ADS, to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance), supported by Dig Digital guidance (DigVentures 2019), and accompanied by metadata.
- 14.3.6 Full details of the collection, documentation, storage and selection of digital data will be included in the project data management plan (DMP), that will be appended to the final agreed WSI or relevant archaeological method statement.

14.4 Selection Strategy

- 14.4.1 It is widely accepted that not all the records and materials (artefacts and ecofacts) collected or created during the course of the various activities undertaken during the different phases of the Proposed Offshore Scheme require preservation in perpetuity. These records and materials will be subject to selection in order to establish what will be retained for long-term curation, with the aim of ensuring that all elements selected to be retained are appropriate to establish the significance of the project and support future research, outreach, engagement, display and learning activities, i.e., the retained archive should fulfil the requirements of both future researchers and the receiving institution.
- 14.4.2 The relevant Archaeological Curator(s) and the Retained Archaeologist will seek agreement from relevant stakeholders (Retained Archaeologist's specialists, other external specialists, the accepting museum and the Archaeological Curator(s)) and agree a policy for the selection, retention and disposal of recovered material, and confirm requirements in respect of the format, presentation and packaging of archive records and materials. This will be underpinned by national guidelines on selection and retention (Brown 2011) and generic selection policies (SMA 1995) and follows the ClfA's *Toolkit for Selecting Archaeological Archives*. Legislative requirements of the *Merchant Shipping Act 1995* and *Protection of Military Remains Act 1986* must also be taken into account.
- 14.4.3 Ideally, in the event that a targeted marine archaeological investigation is proposed, the receiving institution will be notified in advance. However, due to the nature of marine investigations whereby it is often unknown what finds could be recovered, these discussions may need to take place during or even after investigation has ended.
- 14.4.4 A general project-specific selection strategy is presented below. Further modifications are expected to be made to the selection strategy as the project progresses; specific review

points will be at assessment stage and on project completion prior to final archive preparation.

- 14.4.5 Consultation with all stakeholders regarding project-specific selection decisions will be undertaken throughout the project as necessary, however at a minimum of three project review points:

- data gathering: if any unforeseen discovery on site necessitates an amendment to the proposed collection strategy, or if adjustments are made to any sampling strategy;
- end of data gathering (assessment stage); and
- archive compilation.

Finds and Environmental Material

- 14.4.6 Selection, retention and disposal of recovered or excavated material should only occur if the legislative requirements of the *Merchant Shipping Act 1995* and *Protection of Military Remains Act 1986* are fully undertaken and the Receiver of Wreck, Ministry of Defence and other relevant stakeholders including the Archaeological Curator(s) are involved in any such decisions. Ownership of material must be confirmed prior to any decisions being made on their selection, retention and disposal, which will be undertaken in line with guidance from Brown (2011).

- 14.4.7 If material is not accepted by a museum or other organisation and all legislative requirements are fully undertaken, then consideration will be given to the suitability for their use within handling or teaching collections by the museum or the Retained Archaeologist's associated company, or whether they are of particular interest to the local community. Remaining de-selected material will be disposed of. All such material will be adequately recorded to the appropriate level before de-selection.

- 14.4.8 Brown (2011) states that retention is the action of recording all that has been found as well as all decisions that are taken, their justifications and considerations that may lead to any disposal. A key part of selection and retention is ensuring that the assemblage is fully recorded in the site digital archive prior to any disposal being actioned.

Documentary and Digital Records

- 14.4.9 Any sensitive data is to be handled according to the Applicant's/Retained Archaeologist's data policy to ensure it is stored and transferred securely. The identity of individuals will be protected in line with GDPR. If required, data will be anonymised and redacted. Selection and retention of sensitive data for archival purposes will occur in consultation with the Applicant and relevant stakeholders. Confidential data will not be selected for archiving and will be handled as per contractual obligation. De-selected data will be stored on the Retained Archaeologist's secured servers on offsite storage locations.

14.5 Security Copy

- 14.5.1 In line with current best practice (e.g., Brown 2011), on completion of the project a security copy of the written records will be prepared in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

COPYRIGHT

14.6 Archive and Report Copyright

- 14.6.1 The full copyright of the written/illustrative/digital archive relating to archaeological activities undertaken as part of the project will be retained by the Retained Archaeologist under the *Copyright, Designs and Patents Act 1988* with all rights reserved. An exclusive licence will be provided to the Applicant, or their appointed representative, for use of all records and reports in all matters relating to the Proposed Offshore Scheme. The Retained Archaeologist retains the right to be identified as the author of all documentation and reports. Third Party Data Copyright
- 14.6.2 This document, the evaluation report and the project archive may contain material that is non-Wessex Archaeology copyright (e.g., Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which the Retained Archaeologist will be able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of such material.

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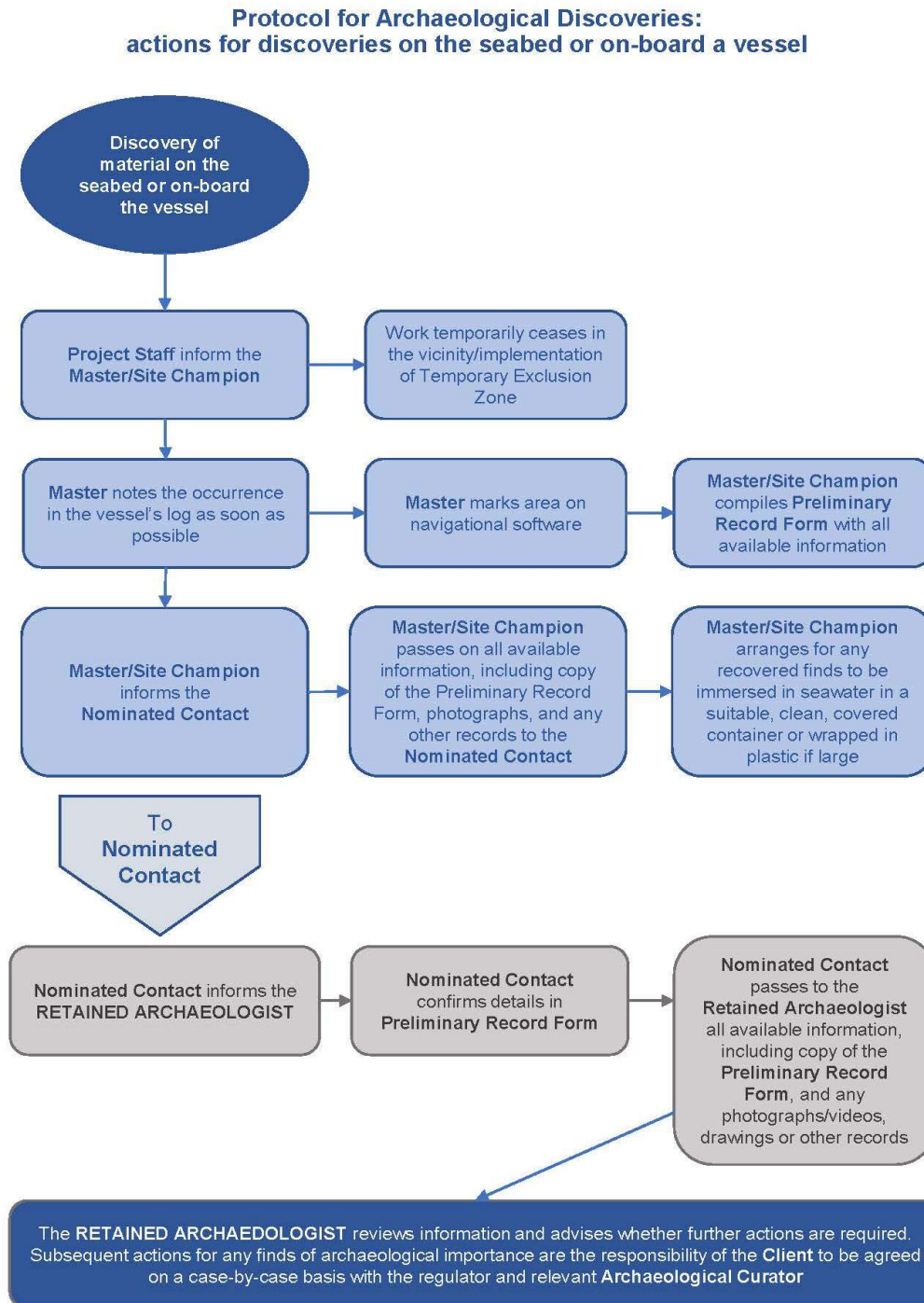
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APPENDICES

Appendix 1: Protocol for Archaeological Discoveries: actions for discoveries on the seabed and on-board a vessel

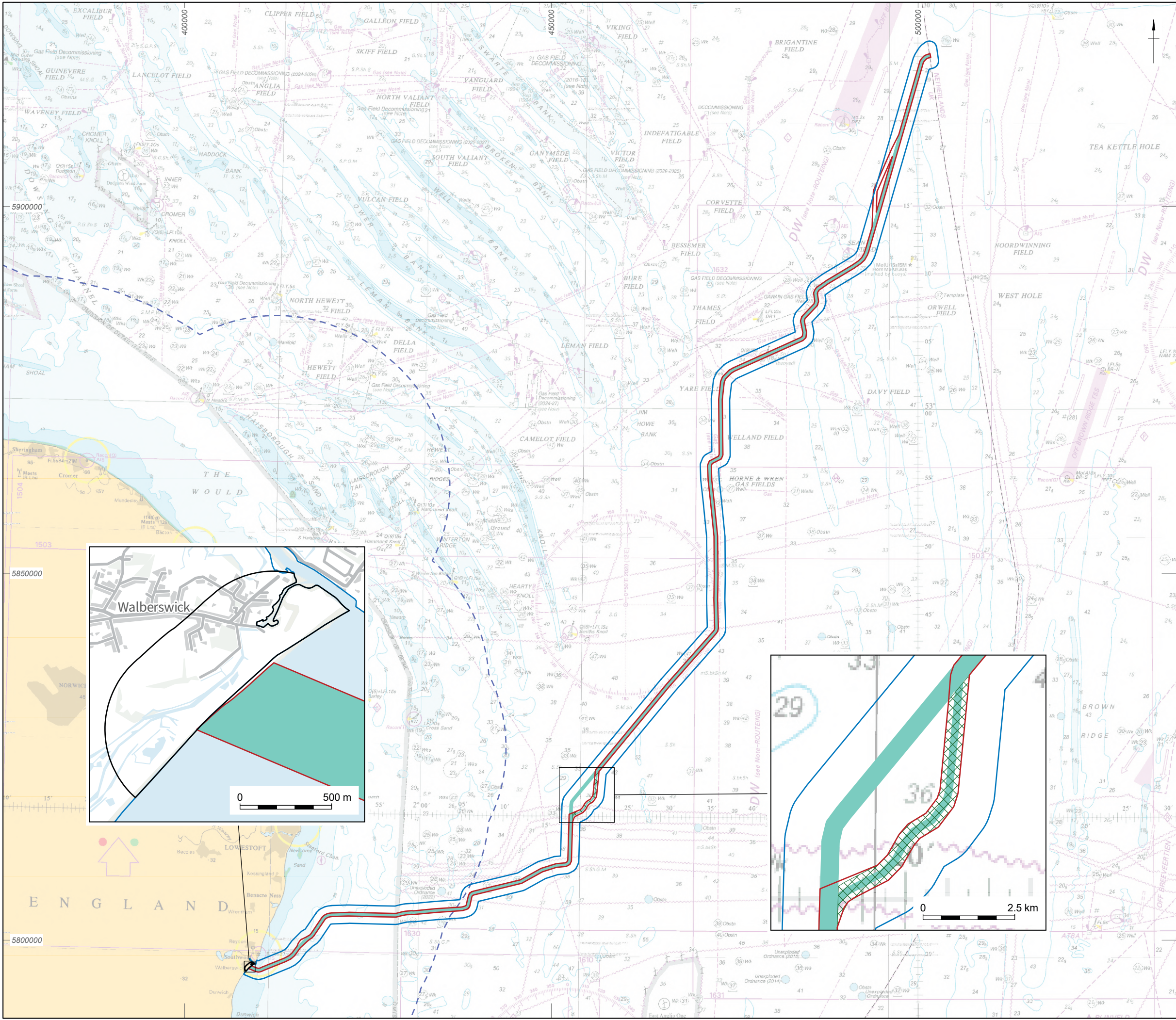




Appendix 2: Preliminary Record Form

Discoveries: Preliminary Record Form	
When and Where?	
Where Found: Wharf <input type="checkbox"/> Vessel <input type="checkbox"/> Seabed (e.g. anomaly) <input type="checkbox"/>	
Name of Finder:	Date Found:
Seabed Development Area:	
Track plot of vessel provided? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Position (if possible):	
Datum:	
Accuracy:	
<input type="checkbox"/> GPS Fix	<input type="checkbox"/> Approximate
<input type="checkbox"/> Centre point	<input type="checkbox"/> Estimated from Sources
What is it?	
Description of the find(s):	
What Next?	
Photographs taken <input type="checkbox"/>	
Treatment Given: Kept Wet <input type="checkbox"/> Kept Dry <input type="checkbox"/>	
Current Location:	
<input type="checkbox"/> Wharf: _____	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Vessel: _____	<input type="checkbox"/> Seabed (for anomalies encountered)
Any other notes:	
Form Complete	
Name of compiler:	
<input type="checkbox"/> Site Champion	<input type="checkbox"/> Vessel Master <input type="checkbox"/> Other _____
Signed:	Date:

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- Proposed Offshore Scheme
- Draft Order Limits
- Marine archaeology study area
- Proposed Landfall study area
- Geophysical survey area
- Area without supplied SBP data
- English Territorial Waters
- EEZ limit

0 25 km

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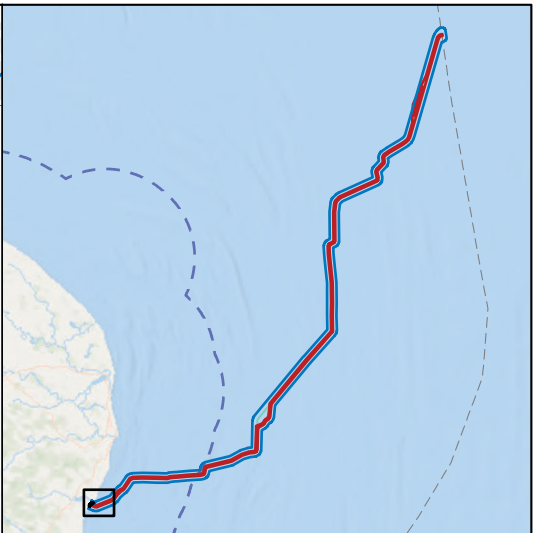
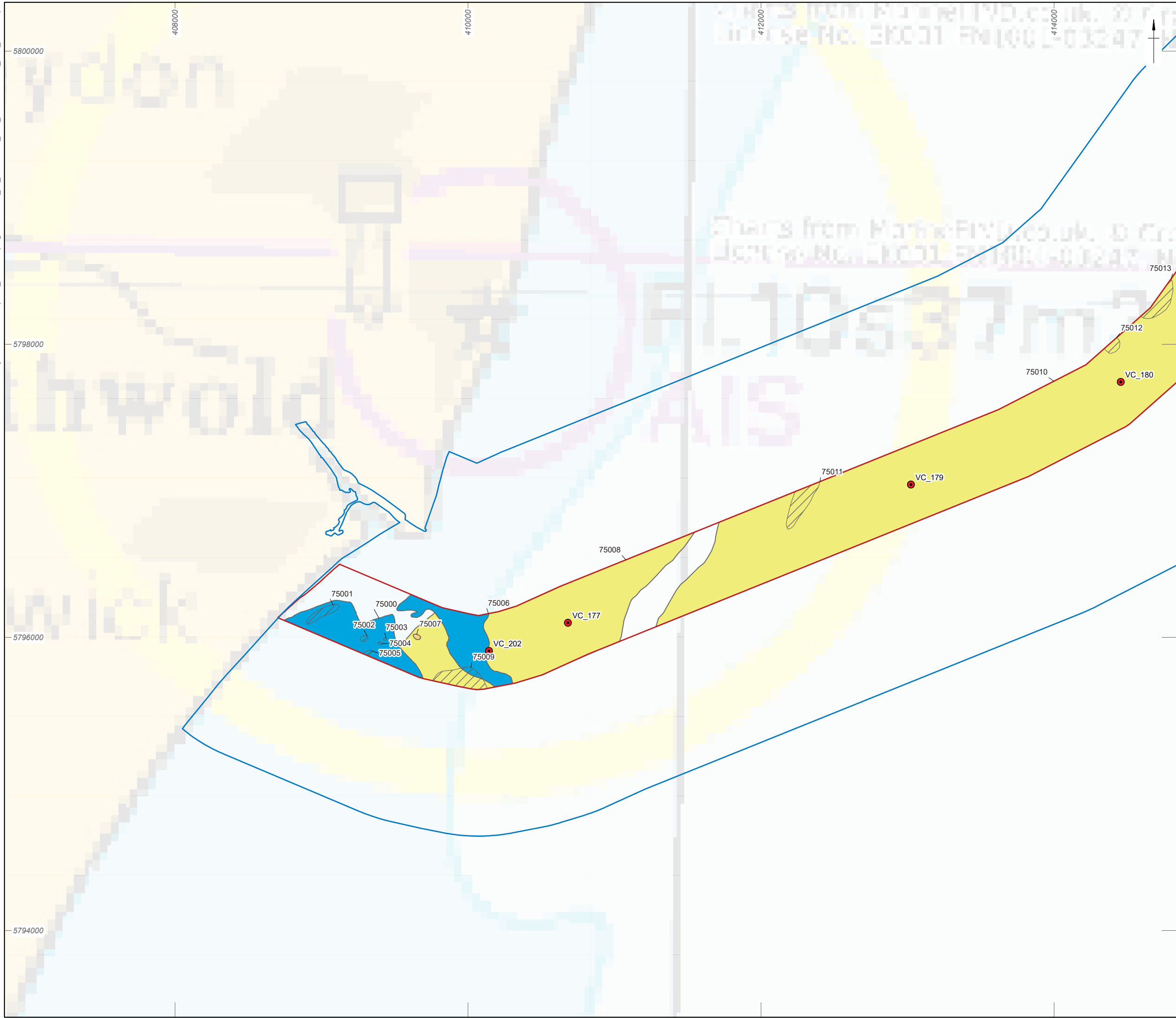
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Figure 1: Location of proposed Offshore Scheme and study areas

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- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- English Territorial Waters
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Simple cut and fill
 - Fine grained deposit
 - Acoustic blanking

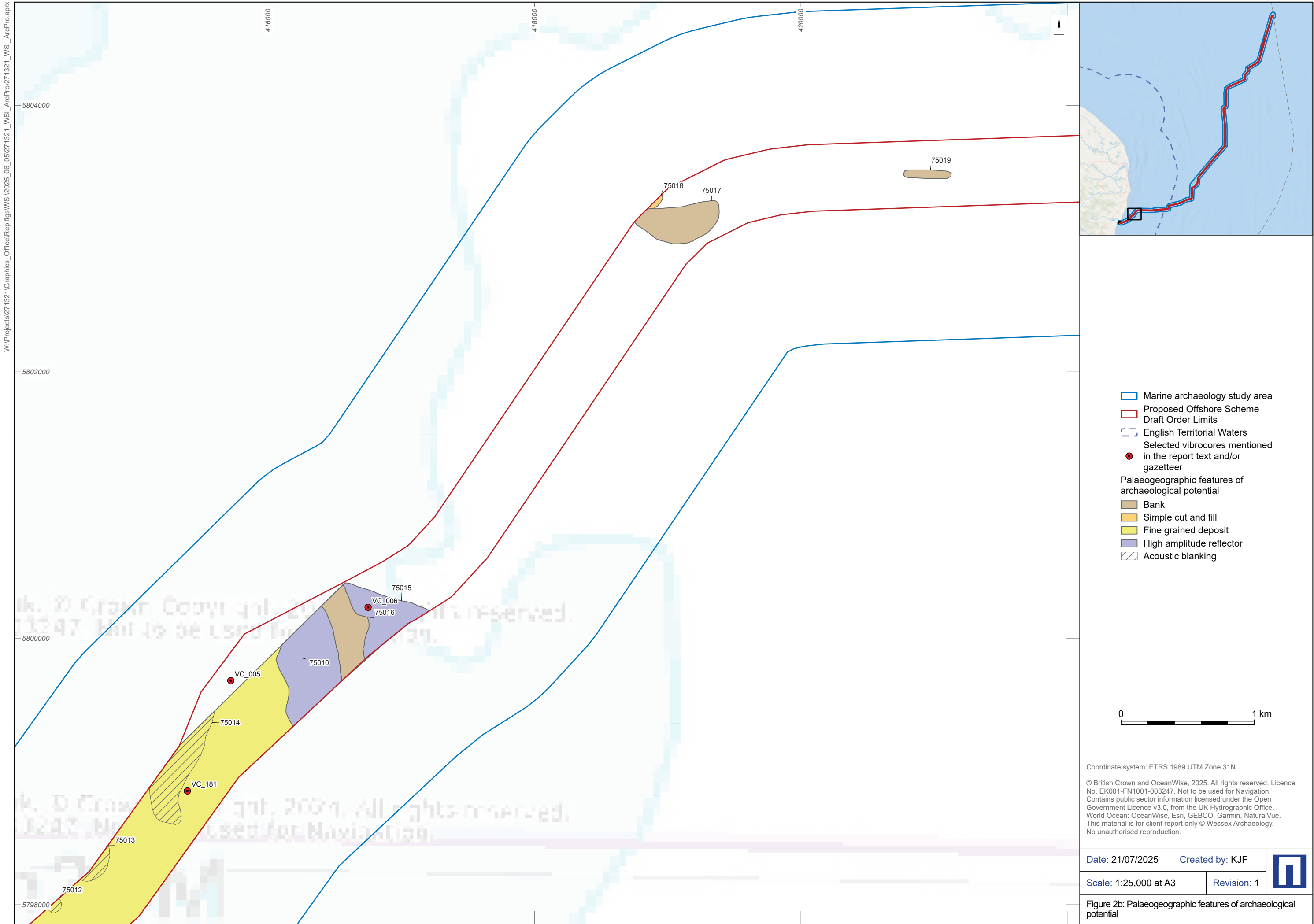
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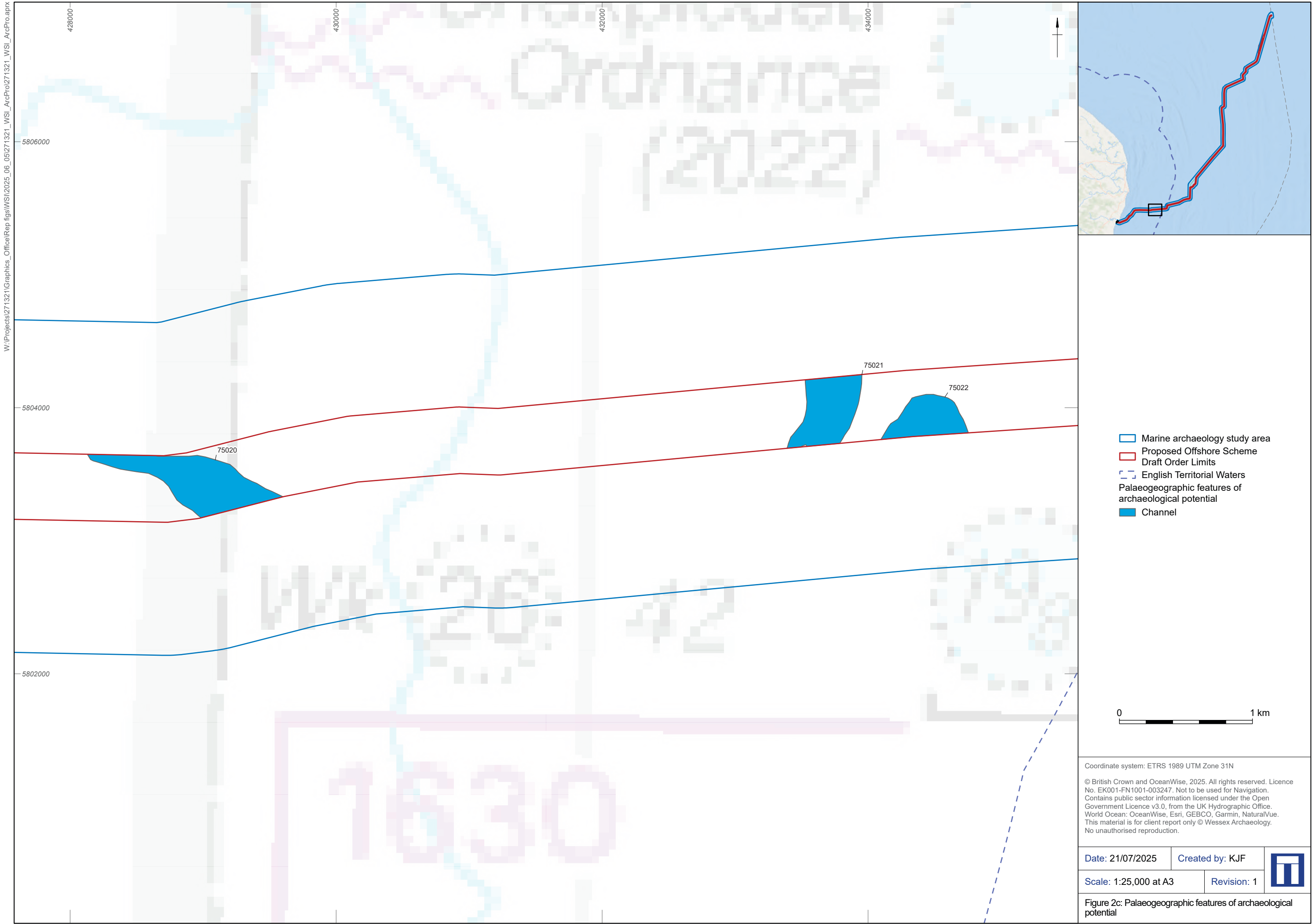
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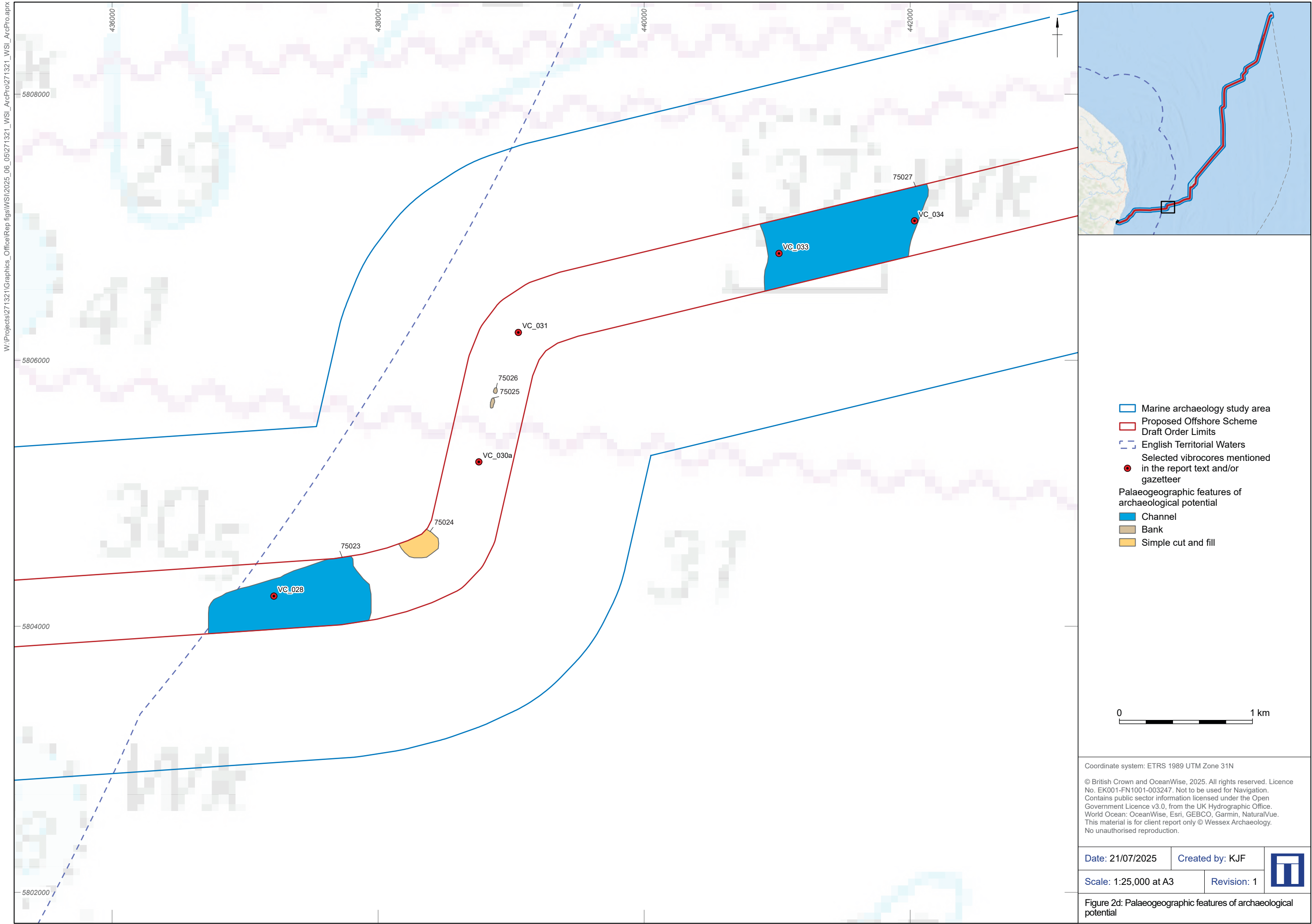
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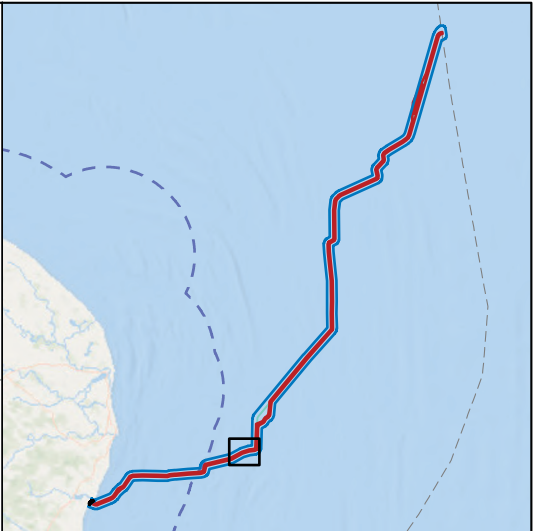
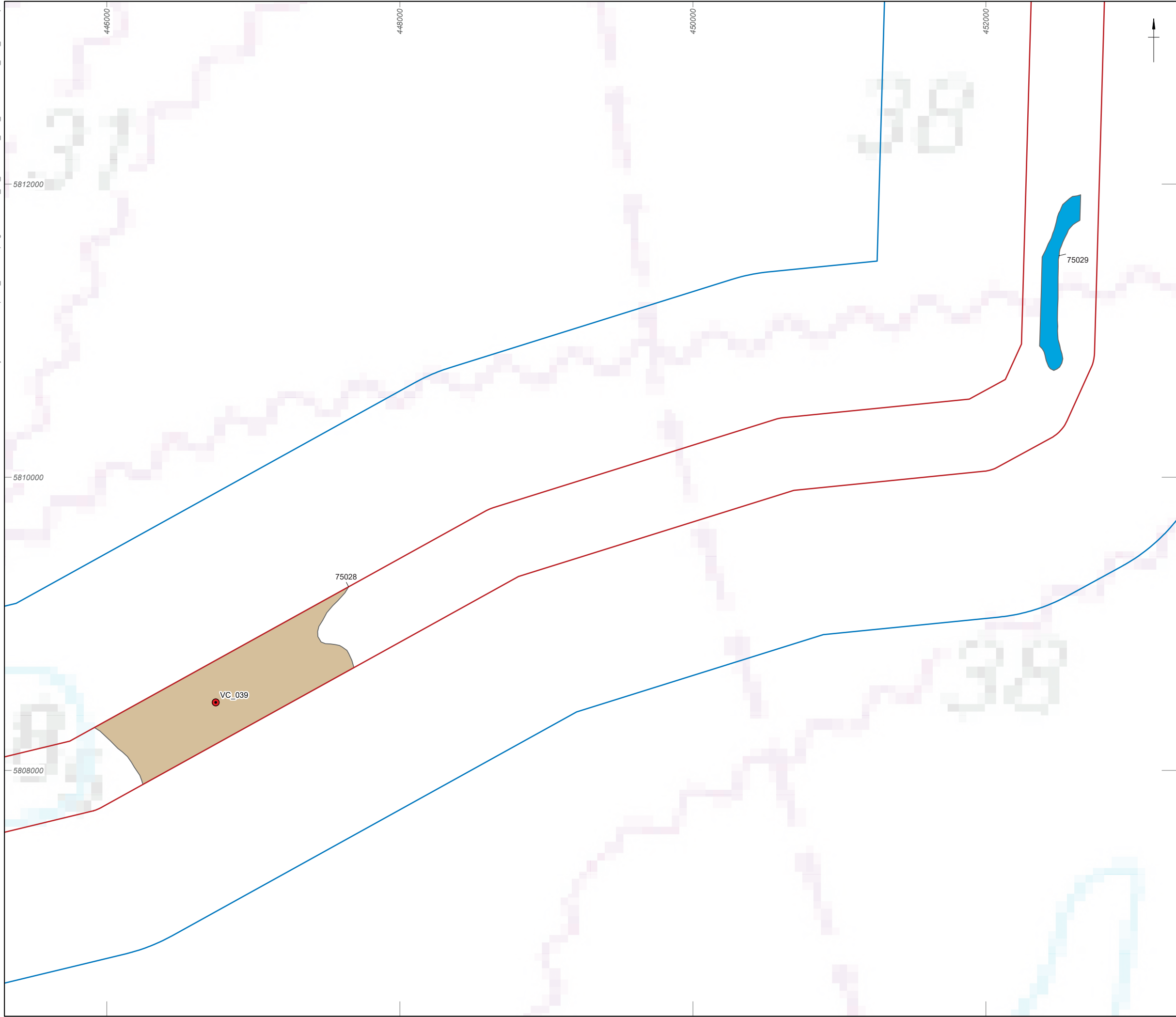
Figure 2a: Palaeogeographic features of archaeological potential







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- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Bank

0 1 km

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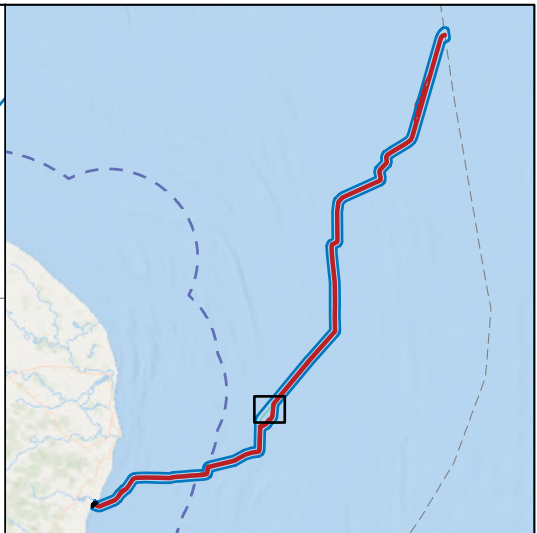
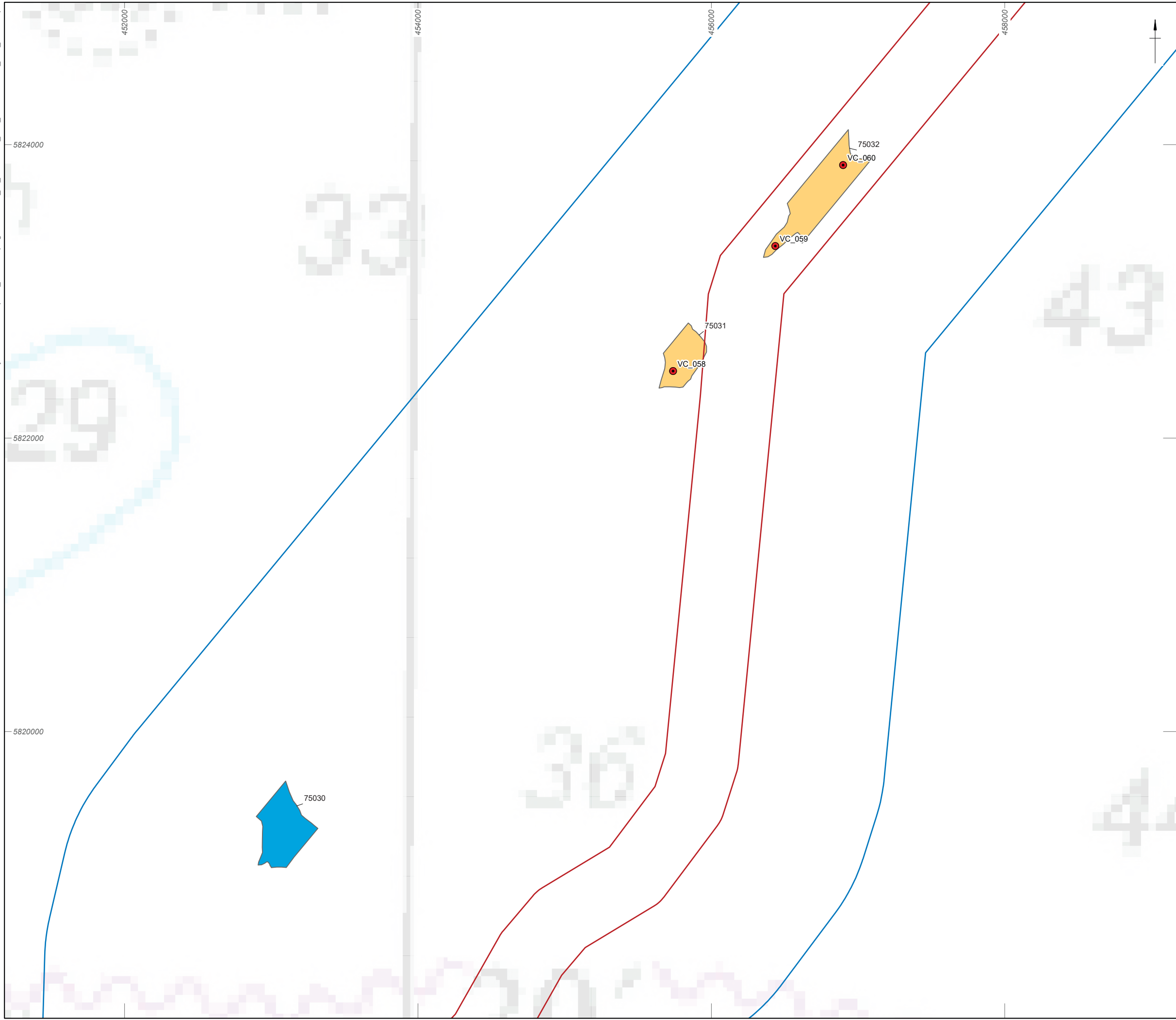
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Figure 2e: Palaeogeographic features of archaeological potential

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- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Simple cut and fill

0 1 km

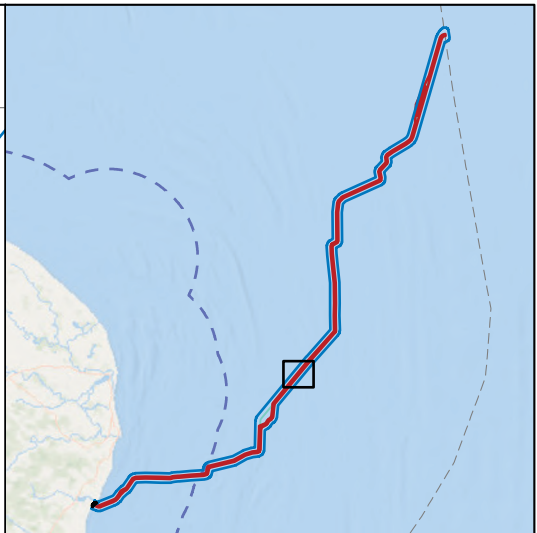
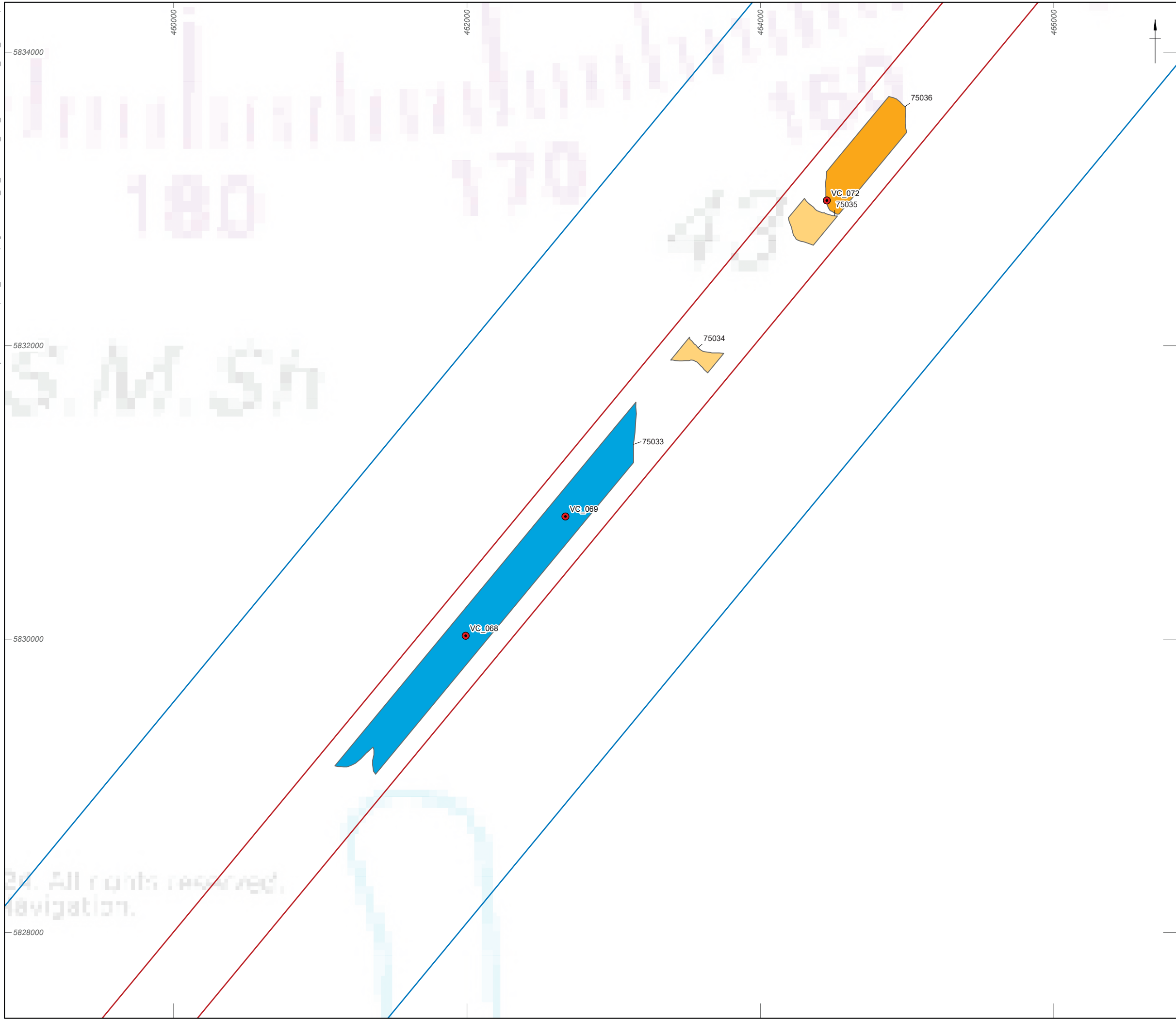
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Figure 2f: Palaeogeographic features of archaeological potential

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- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Complex cut and fill
 - Simple cut and fill

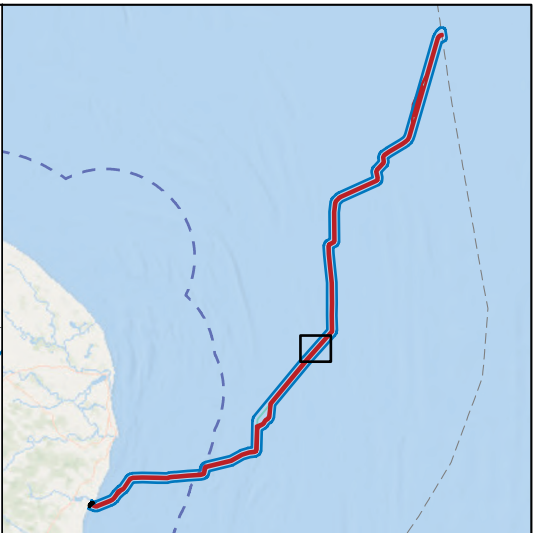
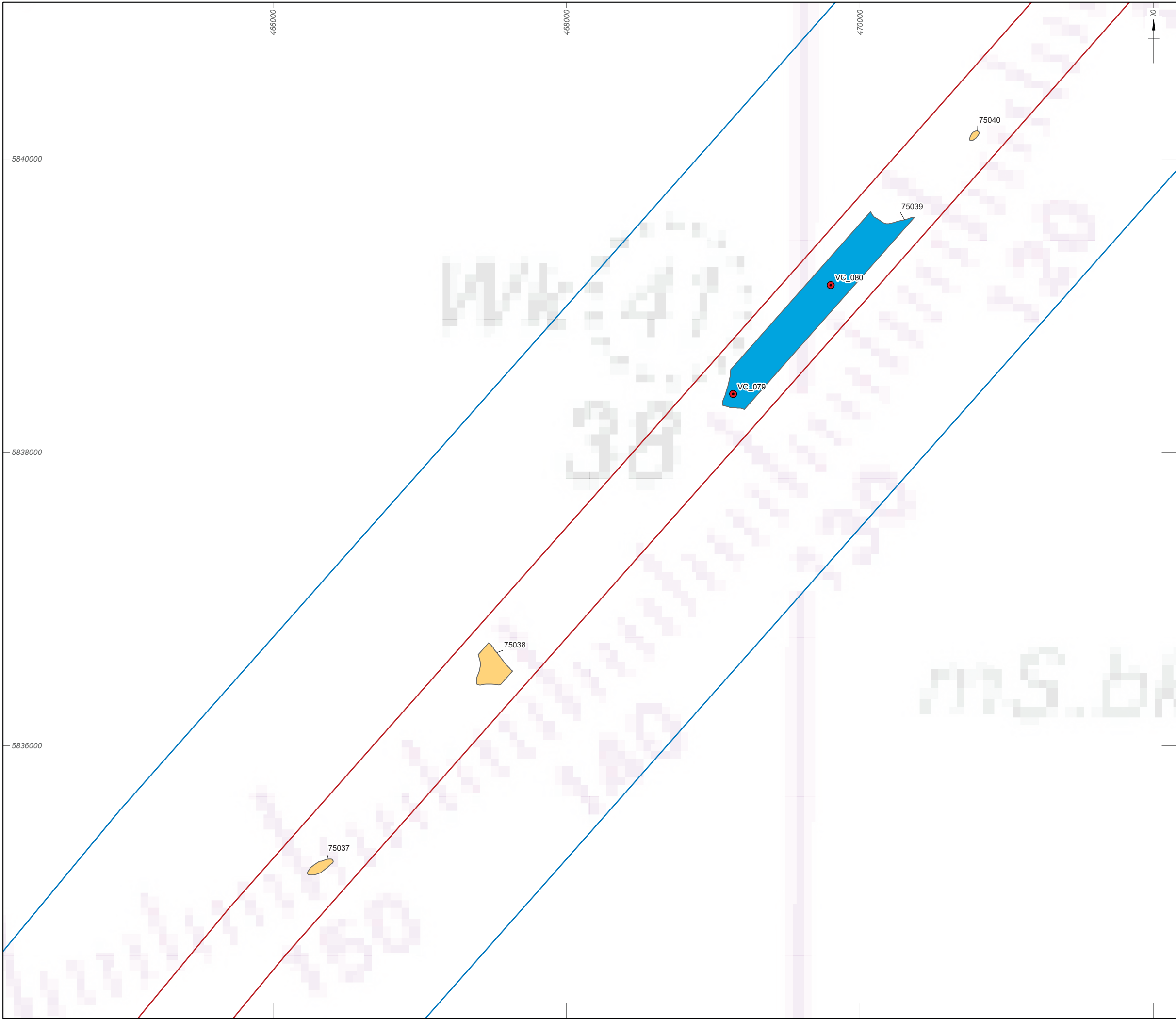


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Figure 2g: Palaeogeographic features of archaeological potential



- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Simple cut and fill

0 1 km

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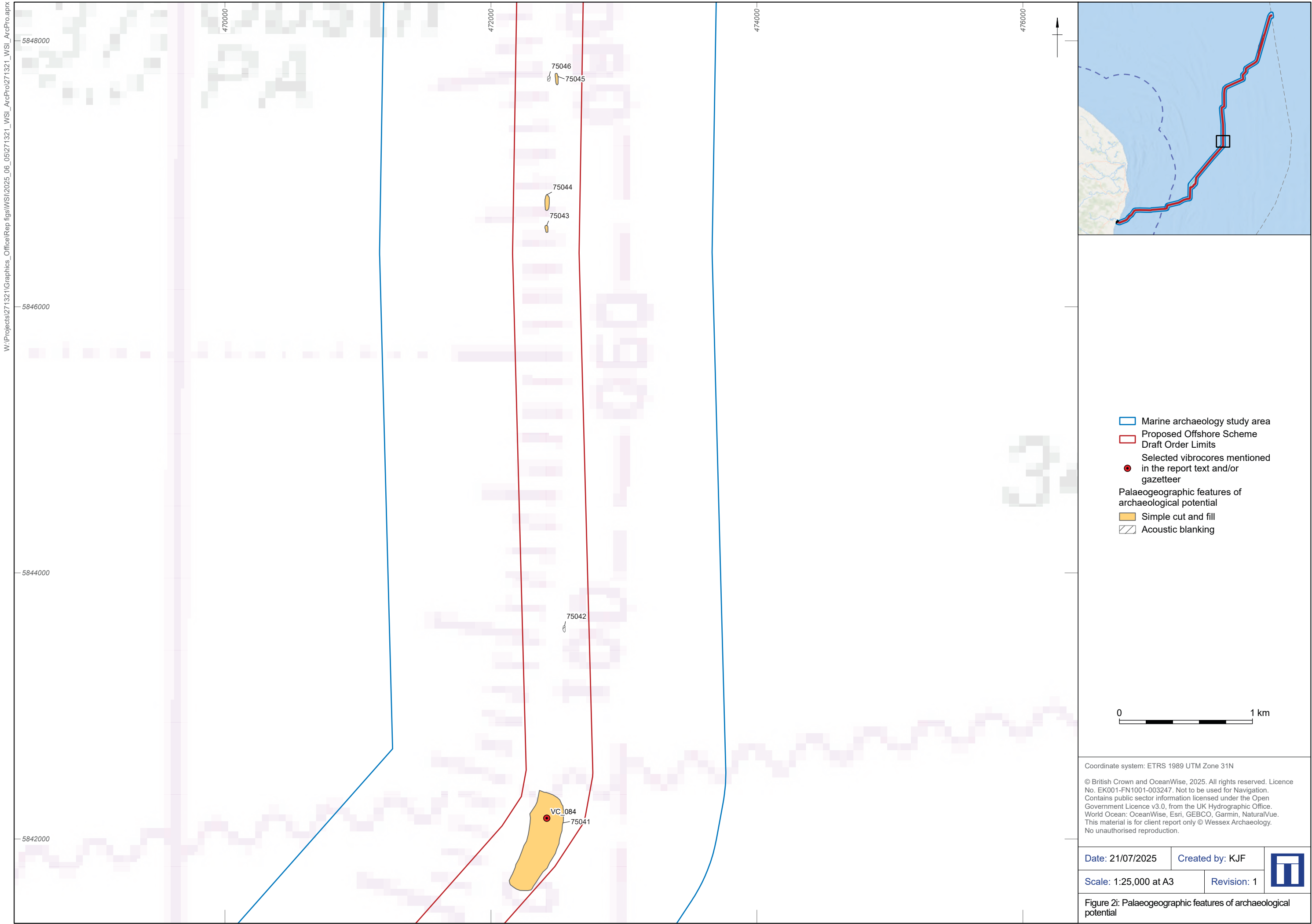
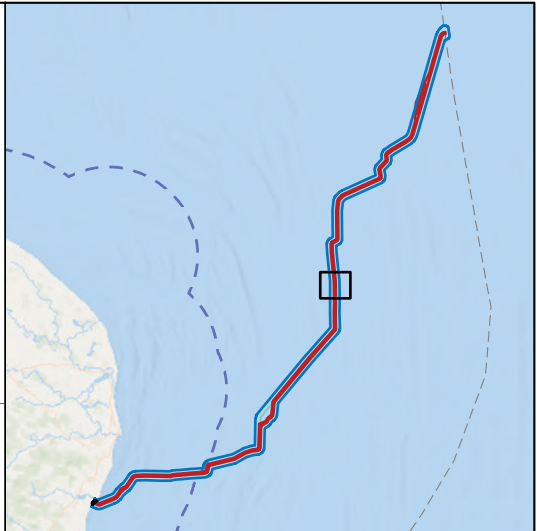
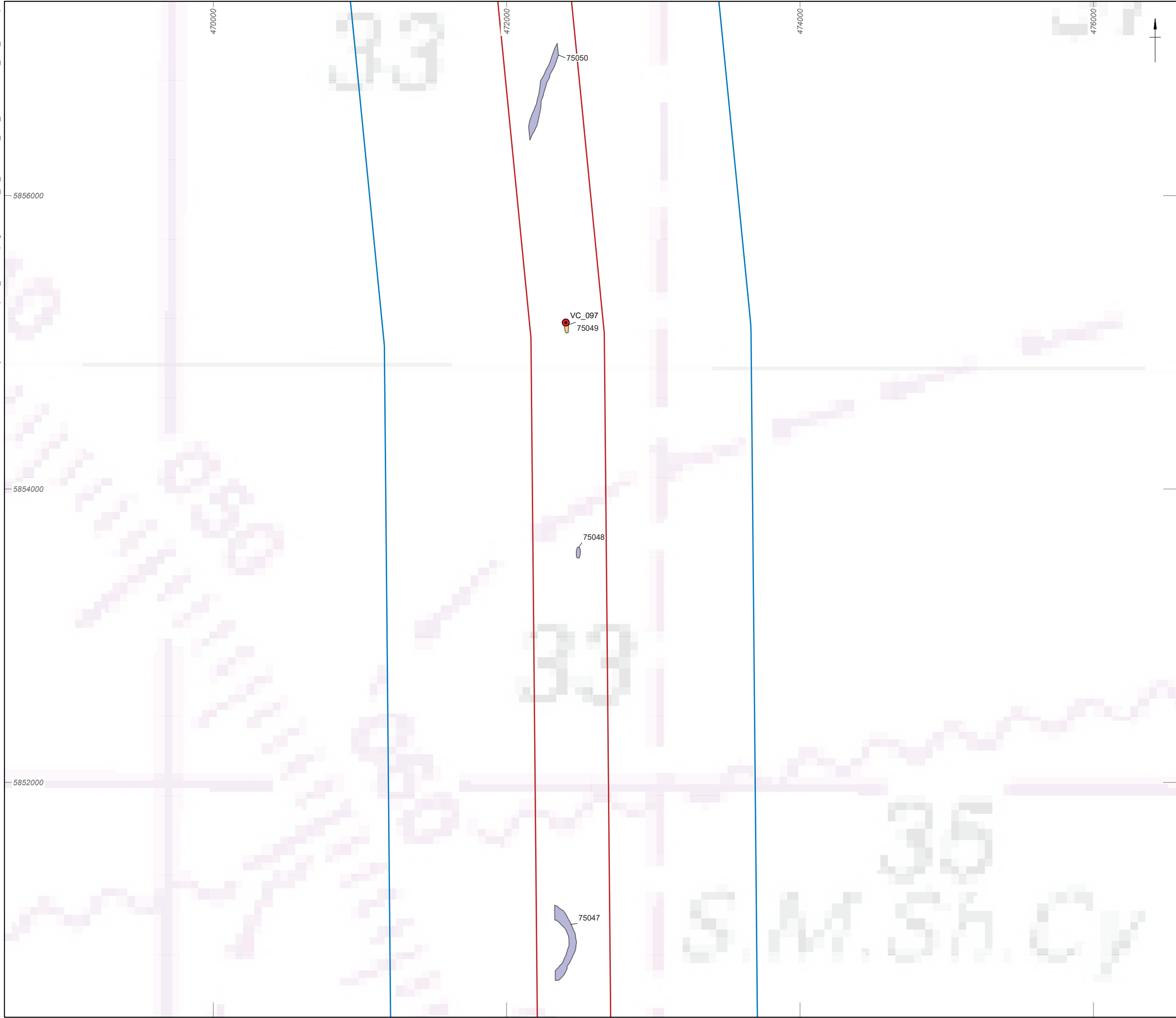
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Figure 2h: Palaeogeographic features of archaeological potential



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- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Simple cut and fill
 - High amplitude reflector

0 1 km

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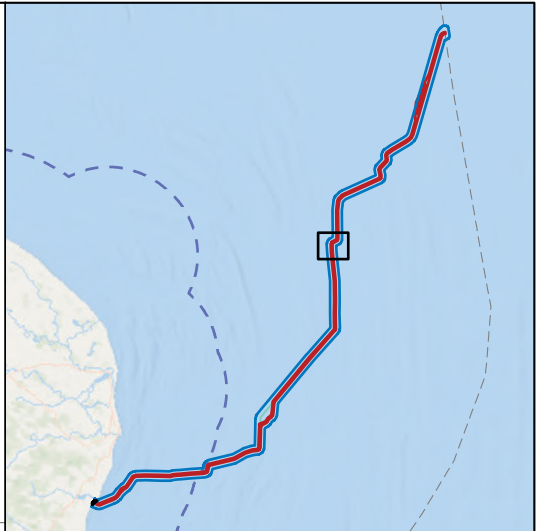
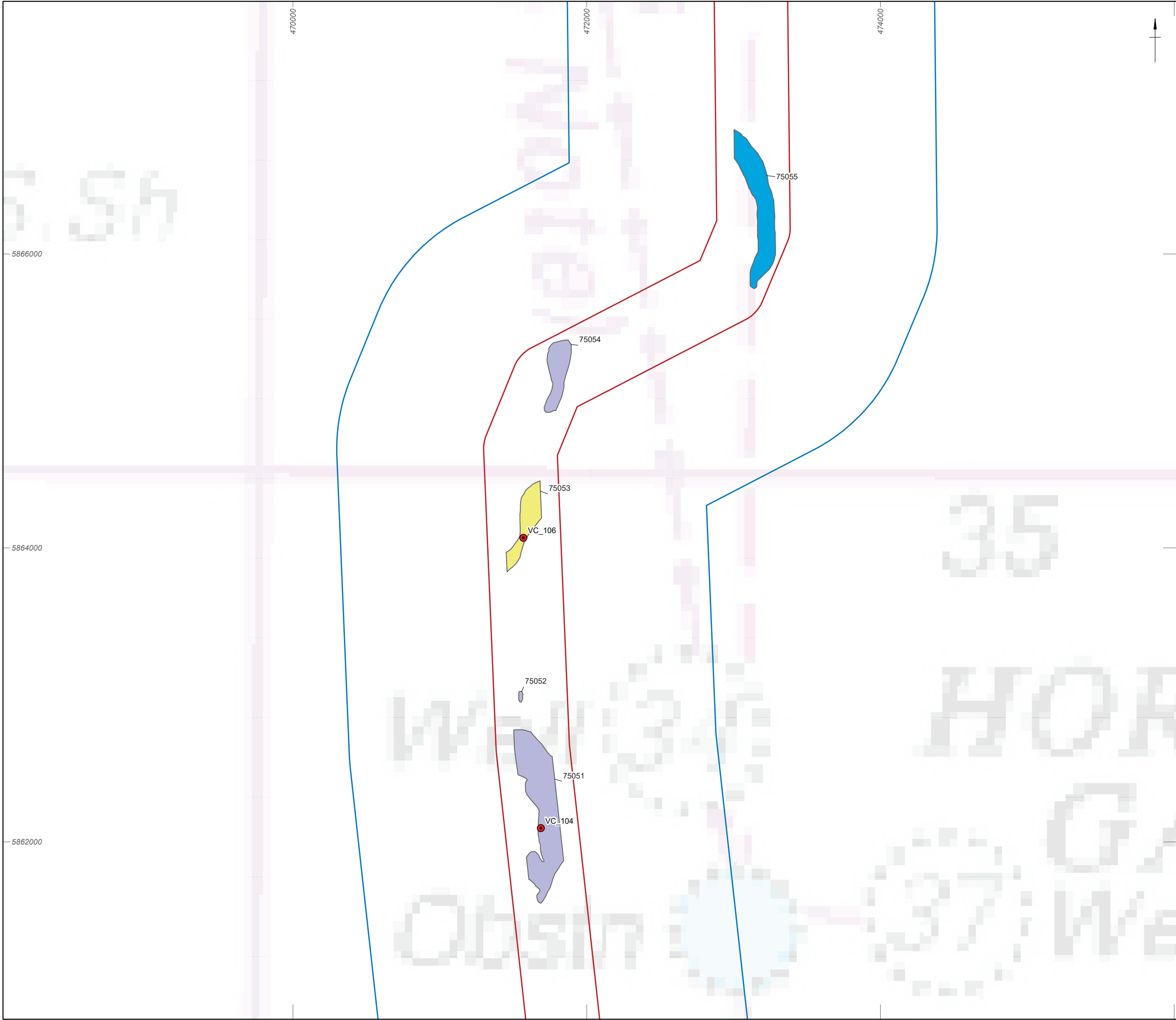
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Figure 2j: Palaeogeographic features of archaeological potential

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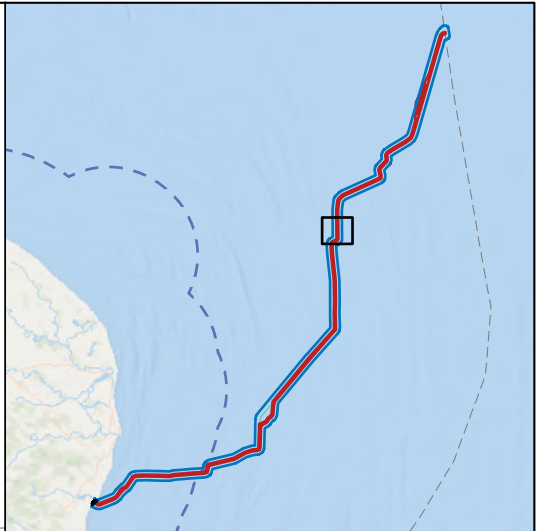
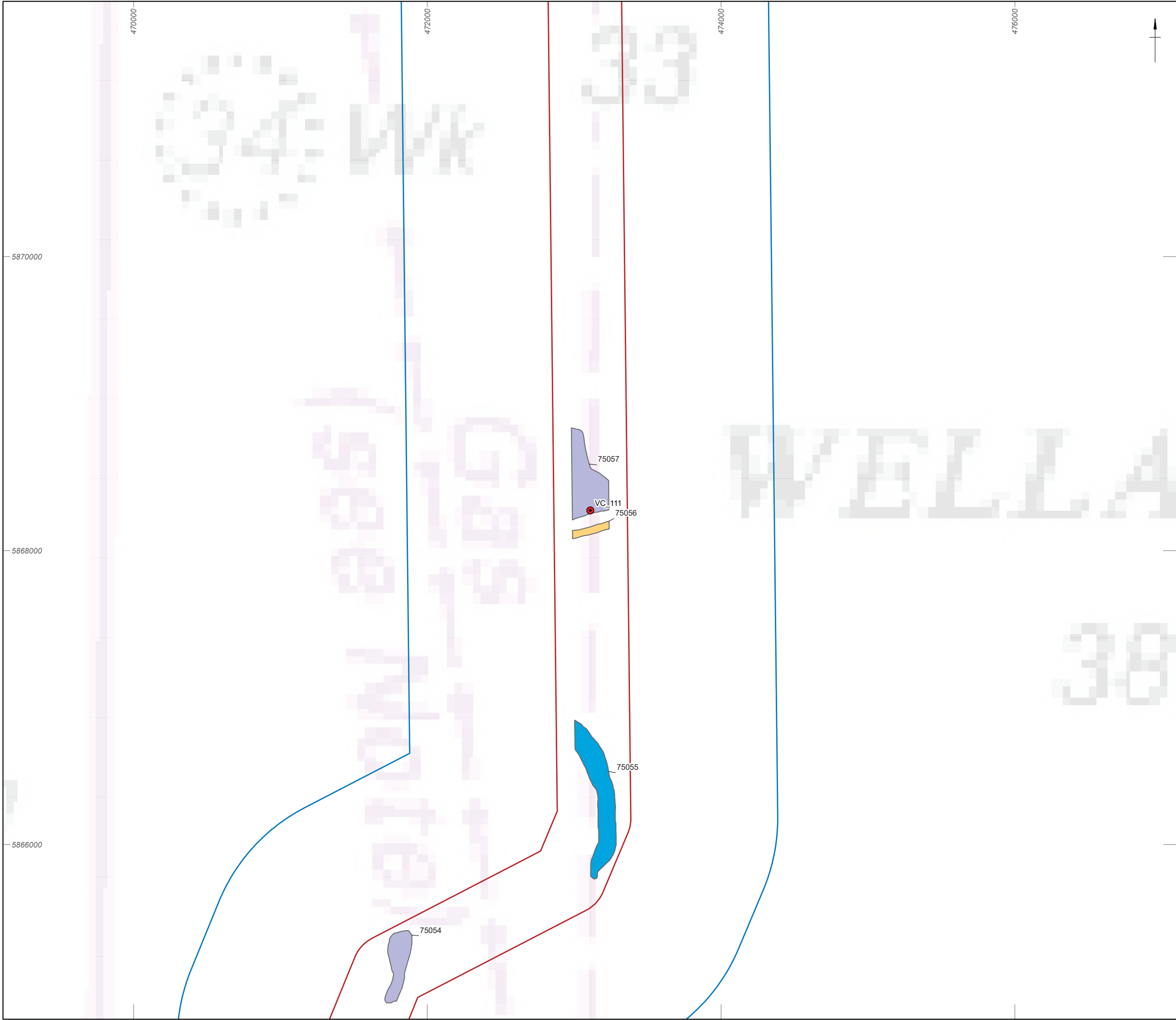
- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Fine grained deposit
 - High amplitude reflector

0 1 km

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Figure 2k: Palaeogeographic features of archaeological potential			



- Marine archaeology study area
- Proposed Offshore Scheme Draft Order Limits
- Selected vibrocores mentioned in the report text and/or gazetteer
- Palaeogeographic features of archaeological potential
 - Channel
 - Simple cut and fill
 - High amplitude reflector

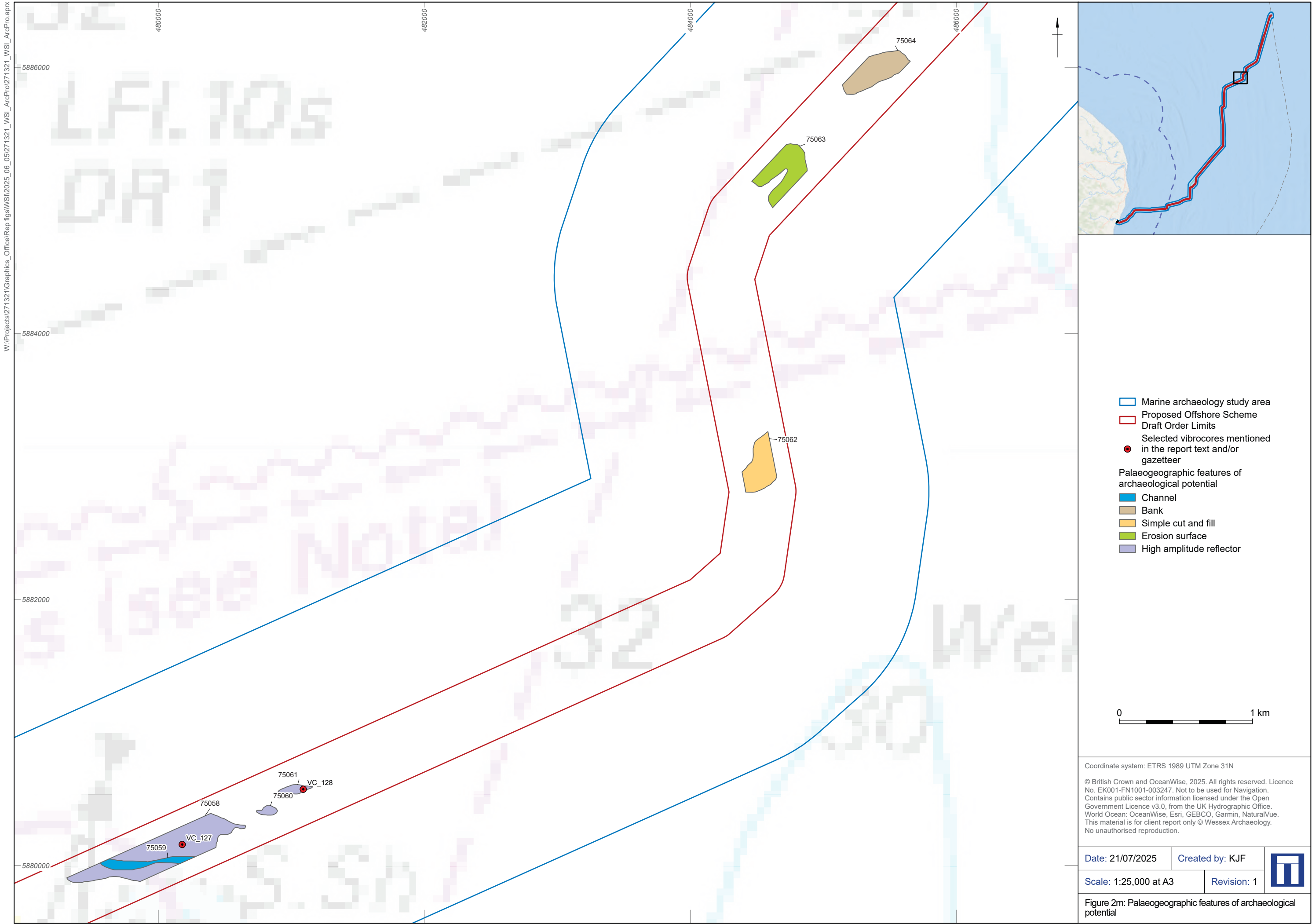


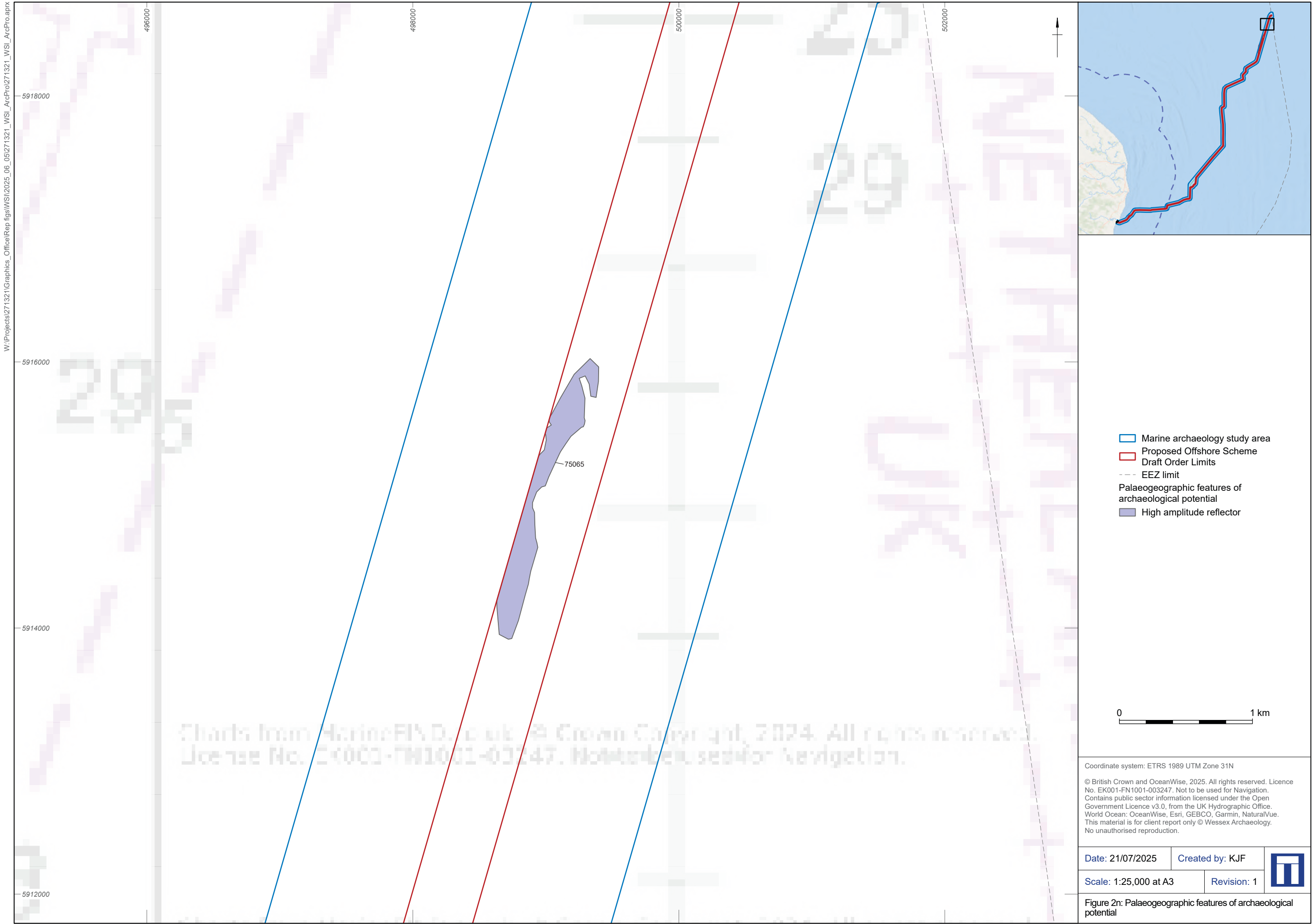
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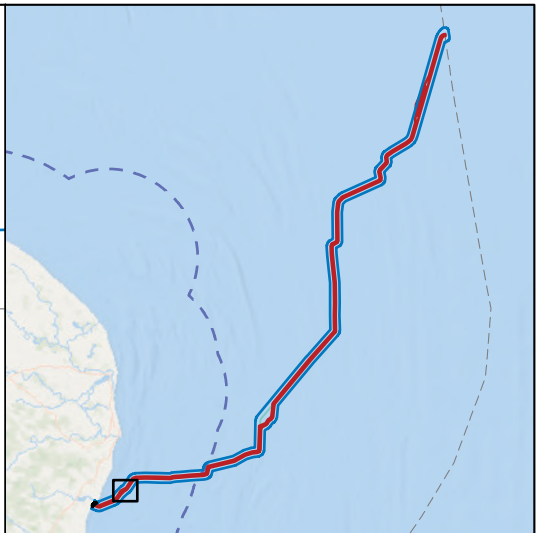
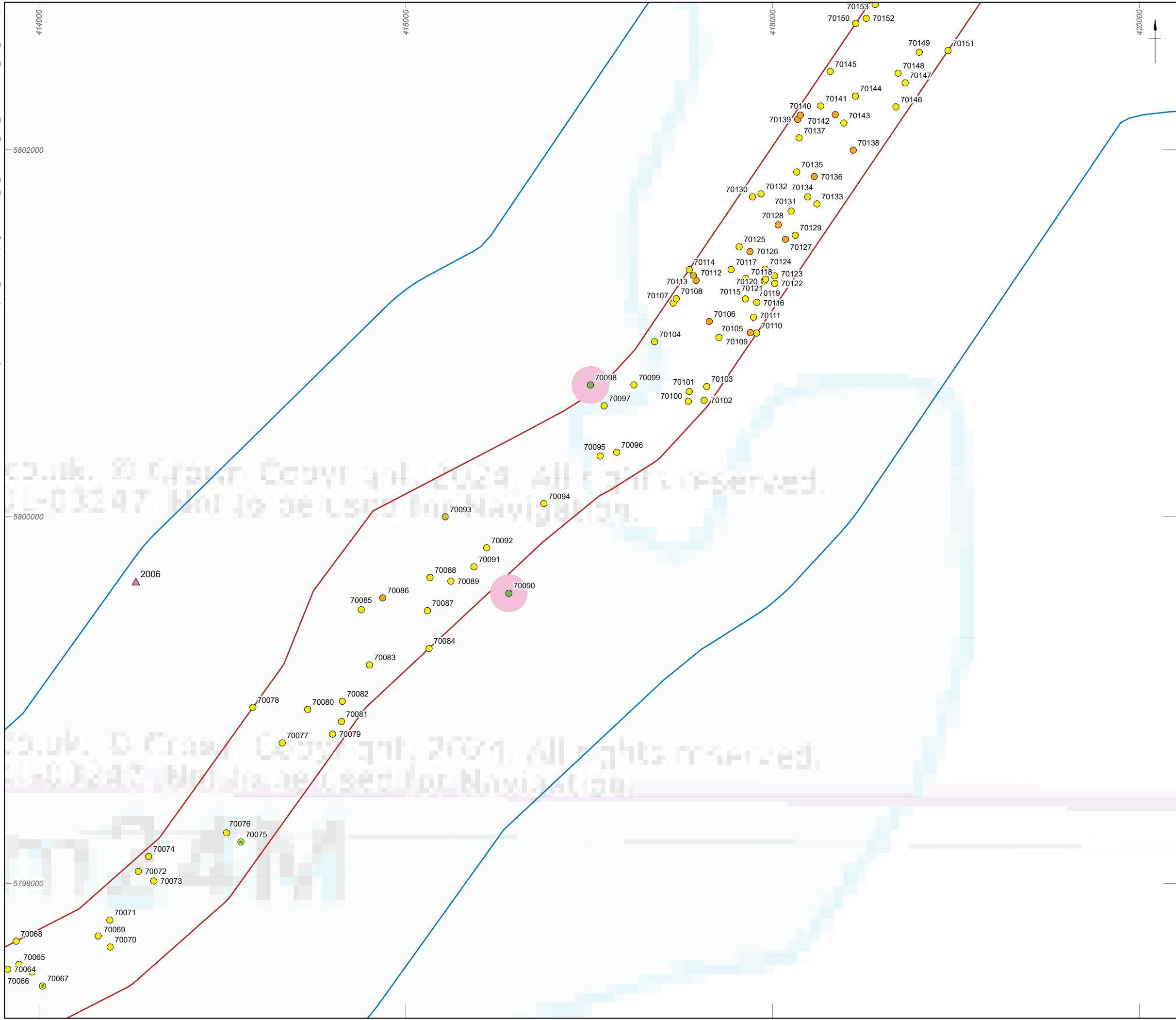
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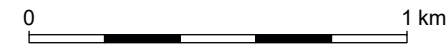
Figure 2f: Palaeogeographic features of archaeological potential







- Proposed Offshore Scheme Draft Order Limits
- Marine archaeology study area
- English Territorial Waters
- EEZ limit
- Charted Wrecks and Obstructions
- Anomalies of archaeological potential
 - A2_h - Anomaly of likely anthropogenic origin but of unknown date
 - A2_l - Anomaly of possible anthropogenic origin but the interpretation is uncertain
 - A3 - Historic record of possible archaeological interest with no corresponding geophysical anomaly
- Recommended Archaeological Exclusion Zones (AEZs) 100 m
- Seabed feature boundary extents
 - Dark reflector
- Linear seabed features
 - Dark reflector
 - Linear debris



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Figure 3: Recommended AEZs located within the study area



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