AQUIND Limited

AQUIND INTERCONNECTOR

Environmental Statement – Volume 3 – Appendix 14.1 Marine Archaeological Technical Report

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

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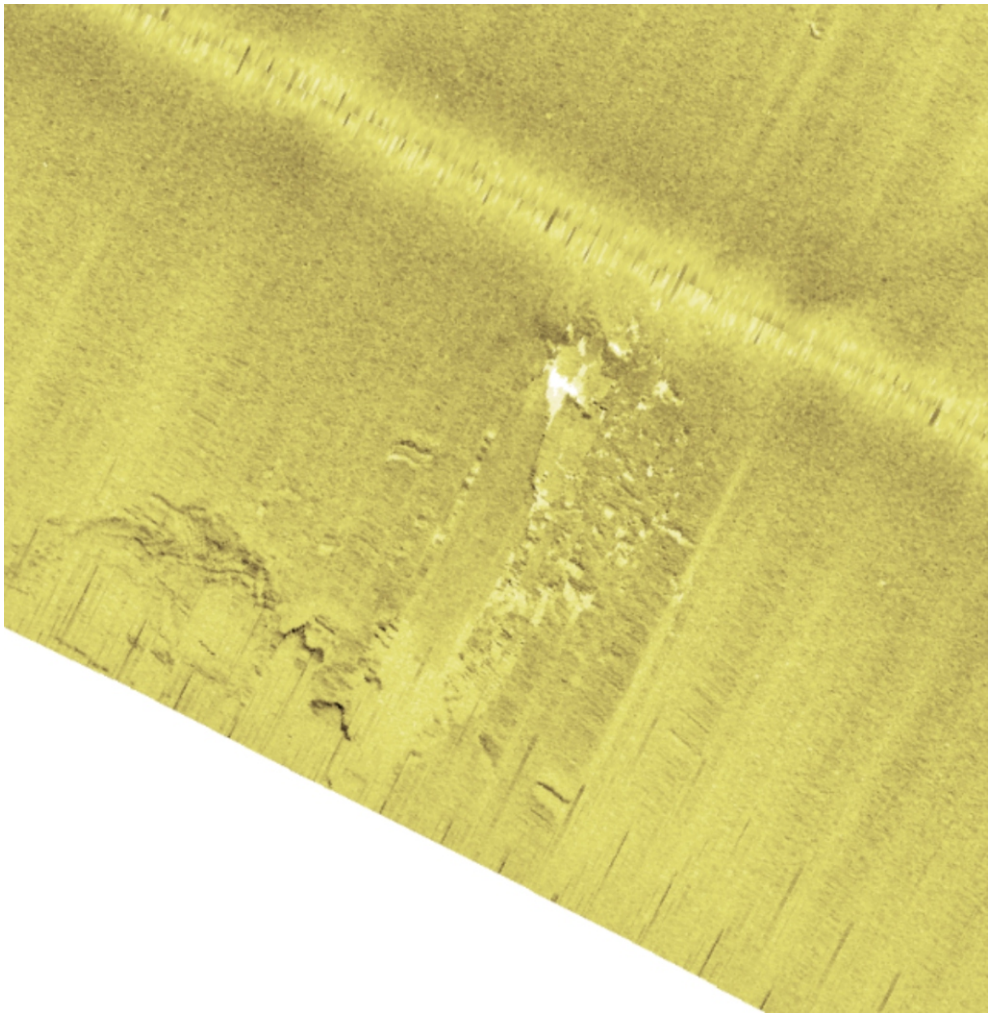
Marine Archaeological Technical Report



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Summary

Wessex Archaeology was commissioned by Natural Power Consultants Ltd to prepare a Marine Archaeological Technical Report including a high-level Environmental Appraisal, that will in turn inform an Environmental Impact Assessment (EIA) and subsequent Environmental Statement (ES), for the United Kingdom marine elements of the proposed AQUIND Interconnector Project.

The AQUIND Interconnector Project runs from Eastney, Portsmouth in the UK to Pourville-Sur-Mer in France. The Entire Marine Cable Corridor would be 180 km long overall, with the UK Marine Cable Corridor section being approximately 109 km long. This document reports on the Landfall and Marine Cable Corridor within the UK marine area only.

The Technical Report comprises:

- Relevant legislation and guidance;
- Methodology;
- An archaeological baseline study informed by an archaeological assessment of geophysical data, geotechnical samples and relevant documentary archives;
- An assessment of value and sensitivity of the assets identified within the assessed Archaeological Study Area (ASA); and
- A high-level Environmental Appraisal.

The archaeological resource within the ASA are summarised as follows:

- A total of 38 features of palaeogeographic potential, including 20 palaeochannels and 18 further palaeogeographic features;
- Potential for discovery of sites and artefacts from the Palaeolithic to the Mesolithic periods across all the project areas;
- A total of 387 individual geophysical anomalies of possible archaeological potential within the Marine Cable Corridor, four of which are considered to be of high archaeological potential (A1). Of these, two were classified as wrecks, one feature was a debris field and the other a very large magnetic anomaly. Wessex Archaeology has recommended a 100 m Archaeological Exclusion Zone to be placed around the extents of these features.
- Potential for the discovery of further shipwreck material from the late Mesolithic to the present;
- No known aircraft crash sites; however, with 21 (poorly located) recorded aircraft losses in the search area there is the potential for the discovery of 20th century aircraft material, particularly from the Second World War;
- A total of two records located within the intertidal zone of the Marine Cable Corridor (at Eastney Beach, Portsmouth); and
- The Historic Seascape Character of the area comprises: cultural topography (including sandbanks and palaeolandcapes), coastal infrastructure (flood and erosion defences), communications (submarine telecommunications cables), fishing (including fishing

grounds and aquaculture), industry (energy supply and extractive industries), military (defences and fortifications), and navigation (maritime safety and navigation routes).

Acknowledgements

This project was commissioned by Natural Power Consultants Ltd, and Wessex Archaeology is grateful to Sarah Lister in this regard.

Wessex Archaeology would like to thank the National Record of the Historic Environment for supplying sites and monuments data, the United Kingdom Hydrographic Office for supplying the known wreck and obstruction data, and the Hampshire and Portsmouth County Council for supplying the corresponding Historic Environment Record data. Geophysical data was provided by MMT Sweden AB who are gratefully acknowledged.

The report was compiled by Stephanie Said and Ben Saunders, with contributions from Megan Metcalfe, David Howell and Claire Mellett. The figures were prepared by Kitty Foster. Dr Andrew Bicket managed the project on behalf of Wessex Archaeology.

AQUIND Interconnector

Marine Archaeological Technical Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Natural Power Consultants Ltd to prepare a marine archaeological Technical Report including a high level Environmental Appraisal for the Landfall and Marine Cable Corridor located in United Kingdom (UK) marine area, between Eastney in Southsea, Portsmouth, UK to the UK/France European Economic Zone (EEZ) boundary line (also known as the Proposed Development for the purposes of assessment). This Technical Report is prepared in support of the proposed AQUIND Interconnector Project.

1.1.2 This report comprises a marine archaeological baseline study of the Proposed Development, based on an archaeological assessment of geophysical and geotechnical data, gathered as part of the cable route surveys, together with a review of records held by national and local inventories and secondary sources relating to the marine and intertidal historic environment of the region. This archaeological baseline also includes an assessment of the value and sensitivity of any identified marine or intertidal archaeological assets within the Marine Cable Corridor and additional 2 km buffer area (known as the Archaeological Study Area). An assessment of the seascape character will also be undertaken.

1.2 Proposed Development

1.2.1 The marine elements of the Project comprise four 320 kV High Voltage Direct Current (HVDC) cables extending from Portsmouth and landing near Pourville, France. The Proposed Development is the UK element of the Marine Cable Corridor which is delimited by the High Water Mark at the landfall in Eastney to the north-west and the boundary of the UK /France EEZ seaward to the south-east (**Figure 1**).

1.3 Scope of document

1.3.1 The purpose of this assessment is to determine, as far as is possible from existing information and bespoke survey data, the nature, extent and significance of the known and potential marine archaeological resource within the boundary of the Proposed Development.

1.4 Aims

1.4.1 The specific aim of this marine archaeological Technical Report is to summarise the known and potential archaeological baseline within the project area to subsequently inform the Environment Impact Assessment (EIA) and production of the Environment Statement (ES).

1.4.2 The objectives of the assessment are as follows:

- To provide details of relevant legislation, national and local planning policy, and best practice guidance;

- To assess the 2017 geophysical survey datasets provided by MMT Sweden AB in order to identify any sites and material of possible archaeological and cultural heritage significance present within the project area;
- To review geotechnical logs (n=94) to identify sediments of potential archaeological interest and assess alongside the sub-bottom profiler (SBP) data;
- To compare the geophysical and geotechnical interpretation with desk-based assessments, historical data, known archaeological sites and previous investigations in the vicinity of the project area to outline the known and potential marine archaeological resource;
- To summarise the Historic Seascape Character for the area that the project truncates;
- To assess the significance of the known and potential marine archaeological resource through weighted consideration of their valued components; and
- To recommend mitigation measures for any potential archaeological or cultural heritage assets newly identified within the project area, including the addition of new Archaeological Exclusion Zones where necessary within the project area.

1.5 Copyright

1.5.1 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey (BGS), Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are 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 the report.

2 LEGISLATION, GUIDANCE AND POLICY

2.1 Marine policy

2.1.1 The UK element of the Marine Cable Corridor extends through English Territorial Waters, up to 12 nautical miles (nm) from the coast, into the UK Exclusive Economic Zone (EEZ).

2.1.2 The archaeological curator responsible for the offshore archaeological resource, from Mean High Water Springs (MHWS) to the 12nm limit are the Historic England Marine Planning Unit, with specialist advice provided by the Historic England South East of England Science Advisor, with regard to activities undertaken as part of the project.

2.1.3 The following section provides a summary of the national, regional and local planning and legislative framework that governs the treatment of the marine historic environment in the planning process. More comprehensive details are provided in **Appendix I**.

2.1.4 Details regarding terrestrial legislation, in particular, the Planning Act 2008, and other relevant onshore guidance and policy are presented in the onshore archaeological desk-based assessment for the project, produced by WSP.

2.2 National Planning Policy Framework (NPPF)

2.2.1 The National Planning Policy Framework (NPPF) was first published by the Department for Communities and Local Government (DCLG) in March 2012, replacing Planning Policy Statement 5. This has been revised in July 2018, implementing around 85 reforms announced previously through the Housing White Paper and other consultations.

2.2.2 Section 16 of the revised NPPF entitled 'Conserving and enhancing the historic environment' sets out the principal national guidance on the importance, management and safeguarding of heritage assets within the planning process. The aim of NPPF Section 16 is to ensure that Regional Planning Bodies and Local Planning Authorities, developers, and owners of heritage assets adopt a consistent and holistic approach to their conservation and to reduce complexity in planning policy relating to proposals that affect them. The government guidance provides a framework that:

- Recognises that heritage assets are an irreplaceable resource;
- Requires applicants to provide proportionate information on the significance of heritage assets affected by the proposals and an impact appraisal of the proposed development on that significance;
- Takes into account the desirability of sustaining and enhancing the significance of heritage assets and their setting;
- Places weight on the conservation of designated heritage assets;
- Requires developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and impact, and to make this evidence (and any archive generated) publicly accessible; and
- Promotes the conservation of heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life for this and future generations.

2.2.3 Furthermore, Section 5.8 of the revised draft Overarching National Policy Statement for Energy (EN-1) (2010) entitled 'Historic Environment', stresses that energy infrastructure has the potential to result in adverse impacts on the historic environment. Guidance is provided on the approach taken by the applicant when carrying out Environment Statements and this is to incorporate both designated and non-designated heritage assets. As part of the decision-making process, the Infrastructure Planning Commission take into consideration the impact of the Proposed Development on the significance of any heritage assets, including the setting of the heritage assets. This is done by considering the following:

- evidence provided with the application;
- any designation records;
- the Historic Environment Record, and similar sources of information;
- the heritage assets themselves;
- the outcome of consultations with interested parties; and
- where appropriate and when the need to understand the significance of the heritage asset demands it, expert advice.

2.3 Marine legislation relating to cultural heritage

2.3.1 The following legislation applies to marine heritage and designations within both the UK EEZ and English Territorial Sea:

- Protection of Wrecks Act 1973: Section One and Two;
- Ancient Monuments and Archaeological Areas Act 1979 (as amended);
- Protection of Military Remains Act 1986; and
- Merchant Shipping Act 1995.

2.3.2 The above legislation provides protection for wrecks of high historical, archaeological or artistic value, as well as allowing military wrecks and aircraft remains to be protected. Ownership of any wreck remains is determined in accordance with the Merchant Shipping Act 1995.

2.3.3 More information regarding the details of each piece of legislation is presented in **Appendix I**.

2.4 International Conventions

2.4.1 The UNESCO Convention on the Protection of Underwater Cultural Heritage was concluded in 2001, and is a comprehensive attempt to codify the law internationally, with regards to underwater cultural heritage. The UK abstained in the vote on the final draft of the Convention, however it has stated that it has adopted the Annex of the Convention, which governs the conduct of archaeological investigations, as best practice for archaeology. Although the UK is not a signatory, the Convention entered into force on 2nd January 2009, having been accepted or ratified by 60 member states (as of 27/04/2018).

2.5 Marine Policy

2.5.1 The Marine and Coastal Access Act 2009 (MCAA) is the primary legislation relevant to marine development plans. Under this legislation, marine plans must be consistent with the Marine Policy Statement (MPS; Department for Environment, Food and Rural Affairs, 2011) and fully reflect the requirements of the MPS at a local level. Marine plans must also be in accordance with other UK national policy, including the National Planning Policy Framework (NPPF; Department for Communities and Local Government, 2012). The MCAA will be incorporated within the requirements of the project's Development Consent Order necessary under the provisions of the Planning Act 2008.

2.5.2 Under the MCAA, the UK was divided into marine planning regions, with an associated authority responsible for preparing a Marine Plan for that area. The MPS sets out the framework for preparing Marine Plans and making decisions affecting the marine environment. The MPS also states that Marine Plans must ensure a sustainable marine environment that will protect heritage assets.

2.5.3 In England, the MMO have divided the inshore and offshore waters into 11 plan areas for which marine plans are to be produced. The Marine Cable Corridor is within England's South Marine Plan – the South Inshore and South Offshore plan areas, which has been adopted as of July 2018 (https://www.gov.uk/government/news/milestone-for-managing-seas-in-south-of-england-reached, accessed 16/08/2018).

2.6 Marine Guidance

2.6.1 This assessment was carried out in a manner consistent with available guidance as described below in chronological order of issue:

- Identifying and Protecting Palaeolithic Remains: Archaeological Guidance for Planning Authorities and Developers (English Heritage (now Historic England), 1998);
- Managing Lithic Scatters: Archaeological Guidance for planning authorities and developers (English Heritage (now Historic England), 2000);
- Military Aircraft Crash Sites: Guidance on their significance and future management (English Heritage (now Historic England), 2002);
- The Code of Practice for Seabed Developers (Joint Nautical Archaeology Policy Committee and The Crown Estate, 2006);
- Historic Environment Guidance for the Offshore Renewable Energy Sector (COWRIE, 2007);
- Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage (now Historic England), 2008);
- Our Seas – A shared resource: High level marine objectives (DEFRA, 2009);
- Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition) (English Heritage (now Historic England), 2011);

- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector (COWRIE, 2011);
- Ships and Boats: Prehistory to Present: Designation Selection Guide (English Heritage (now Historic England), 2012);
- Standard and Guidance for Historic Environment Desk-based Assessment (Chartered Institute for Archaeologists, 2014, updated 2017).
- Marine Geophysics Data Acquisition, Processing and Interpretation Guidance Notes (Bates, R. Dix, J. K., Plets, R., 2013); and
- Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (English Heritage (now Historic England), 2015).

3 METHODOLOGY

3.1 Archaeological Study Area

Scope

3.1.1 The area assessed in this report is defined by the extent of the Marine Cable Corridor as provided by the Client, which is located within UK marine area. The Marine Cable Corridor is delimited by the High Water Mark at the landfall in Eastney to the north-west and the boundary of the UK EEZ / Median Line seaward to the south-east (**Figure 1**).

Search Area

3.1.2 An Archaeological Study Area (ASA) consisting of the Marine Cable Corridor and an additional 2 km buffer area around the extent of the Marine Cable Corridor was used as the search area for obtaining records from relevant archive databases. This wider ASA allows for a greater understanding of the wider archaeological baseline environment, with the dual purpose of enabling any archaeological trends within the region to be recognised and to allow any heritage assets identified to be represented in a broader archaeological context. The location of the 2 km ASA is illustrated in **Figure 1**.

3.1.3 All data for heritage assets located within the ASA are stored on the Wessex Archaeology archive network and can be made available on request.

3.2 Archaeological Desk-based Assessment

Key Themes

3.2.1 The methodology follows the best practice professional guidance outlined by the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for Historic Environment Desk-Based Assessment (2014, updated 2017).

3.2.2 The marine themes relevant to marine archaeological baseline as assessed in this report are:

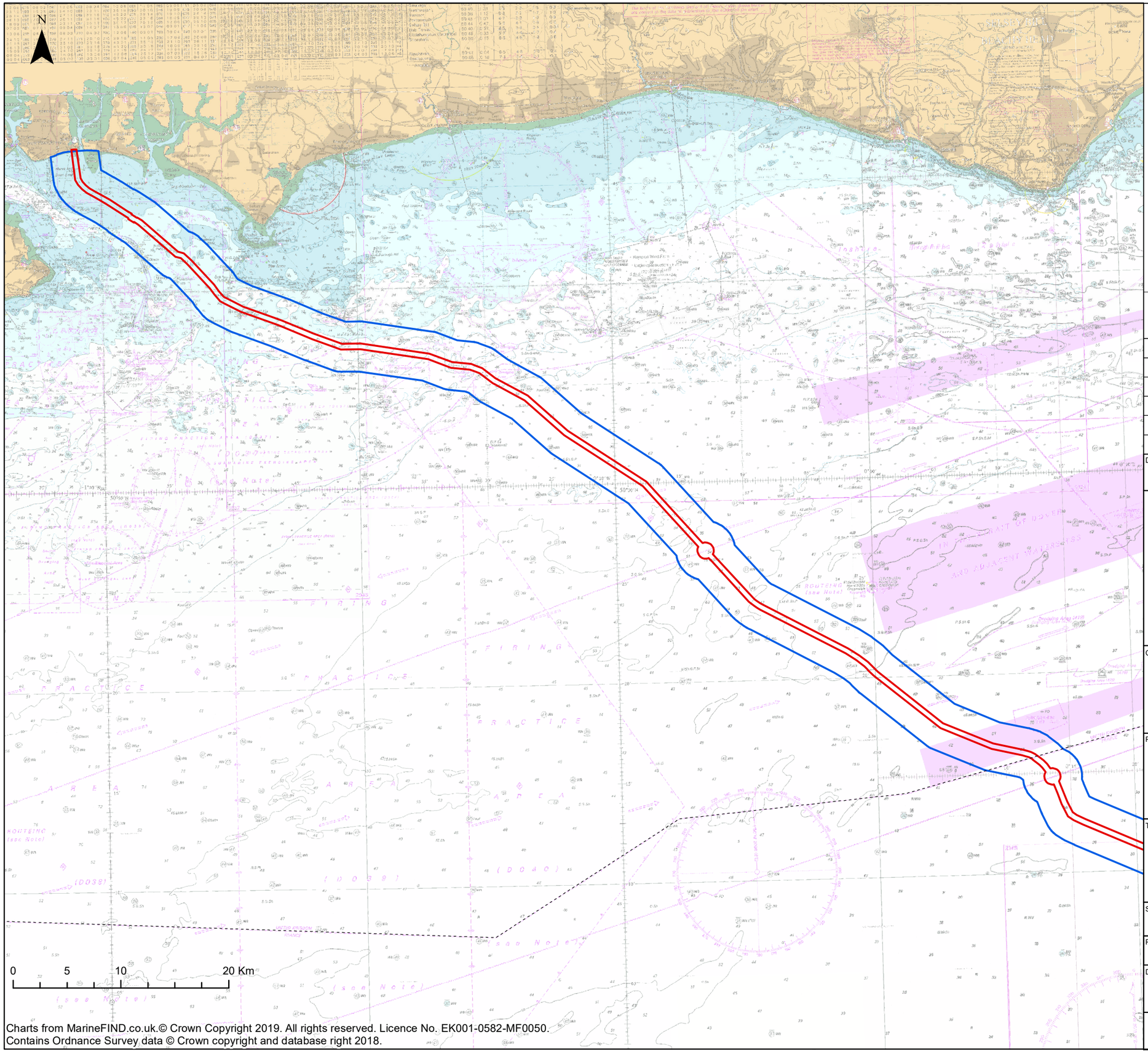
- Seabed prehistory (for example, palaeochannels and other features that contain prehistoric sediment, and derived Palaeolithic artefacts e.g. handaxes);
- Seabed features, including maritime sites (such as shipwrecks and associated material including cargo, obstructions and fishermens' fasteners) and aviation sites (aircraft crash sites and associated debris);
- Intertidal heritage assets; and
- Historic seascape character.

Data Sources

3.2.3 A number of sources of information were consulted in order to compile this Technical Report. Data generated from marine geophysical and geotechnical surveys were also a main component of the data and are discussed further in **Section 3.3**.

3.2.4 The following data sources were consulted in order to compile the desk-based element of the assessment:

- The United Kingdom Hydrographic Office (UKHO) data for charted wrecks and obstructions;



AQUIND Interconnector

Marine Cable Corridor

Archaeological Study Area (ASA) up to MHWS

--- UK European Economic Zone (EEZ)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

REV	DATE	BY	DESCRIPTION	CHK	APP
01	20/08/2019	KF	FINAL	SS	AB

DRAWING STATUS: FINAL

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CLIENT: AQUIND

PROJECT: AQUIND Interconnector

TITLE: Figure 1 Location of Aquind Interconnector Marine Cable Corridor (UK Sector)

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PROJECT NO: EN020022	DESIGNED: KL/KJF	DRAWN: KL/KJF	DATE: 22/08/2019

DRAWING NO: EN 020022 REV.NO. 01

- The National Record of the Historic Environment (NRHE) maintained by Historic England, comprising data for terrestrial and marine archaeological sites, find spots and archaeological events;

- The National Heritage List for England maintained by Historic England, comprising data of designated heritage assets including sites protected under the Protection of Military Remains Act 1986 and the Protection of Wrecks Act 1973;

- The Portsmouth and Hampshire County Council Historic Environment Records (HER), comprising a database of all recorded terrestrial and marine archaeological sites, find spots and archaeological events within the county and offshore;

- The Historic Seascape Characterisation (HSC) report for the Solent and waters off the Isle of Wight (Hampshire and Wight Trust for Maritime Archaeology (HWTMA), Bournemouth University and Southampton University, 2007);

- Relevant mapping including Admiralty Charts, British Geological Survey (BGS), Ordnance Survey and historic maps;

- Relevant documentary sources and grey literature held by Wessex Archaeology, and those available through the Archaeological Data Service and other websites (presented in the 'References').

Data Structure

3.2.5 This report is supported by a Geographic Information System (GIS) using ArcGIS 10.5, incorporating the positional information of the various data sources listed above, allowing the data to be spatially analysed. The data were subsequently compiled into gazetteers of the prehistoric, maritime and aviation, and intertidal resources within the ASA; these were used to inform the assessment of geophysical and geotechnical data.

3.2.6 Within this assessment, the gazetteers for the marine and intertidal datasets are compiled and presented in Universal Transverse Mercator (UTM) Zone 30 North projected from a World Geodetic System (WGS) 1984 datum.

3.2.7 Information relating to the marine heritage that did not include location or positional information were also used to inform the marine archaeological baseline assessment where relevant.

Chronology

3.2.8 Archaeological material is generally studied within a framework of 'periods' or 'ages' that reflect the activities and cultural changes taking place over time. All dates are referred to as BC (before Christ), BP (before present) or AD (anno domini) within the text. By convention, cal. BC refers to calibrated radiocarbon chronology that can be considered equivalent to calendar years. BP or ka (thousand years ago) dates are used for periods of time older than c.10,000 years ago.

3.2.9 A list of the main archaeological periods in Britain referred to in the text, along with their broadly defined dates, are presented in **Appendix II**.

Seabed Prehistory

3.2.10 The baseline summary for Seabed Prehistory was based on a review of geological mapping of seabed sediments, solid geology and bathymetry from published BGS sources. This has

been enhanced by the geoarchaeological review of geotechnical and geophysical datasets gathered for the project to produce a stratigraphic framework for understanding the archaeological potential of the Quaternary geology within the area investigated. This assessment was further supported by the examination of models of past sea level, palaeoshorelines and submerged prehistoric landscapes. This palaeogeographic review, alongside the known archaeological record, formed the basis upon which the potential for submerged prehistory could be developed and discussed in support of the subsequent ES Chapter.

3.2.11 The geophysical data obtained were compiled to form a gazetteer as part of the seabed prehistory baseline. These records were each given a unique identifier beginning with **75000** continuing sequentially (**Appendix III**), and were added to the project GIS. The geotechnical data were reviewed to identify deposits of geoarchaeological interest, assigning high, medium or low priority status according to their potential to represent former terrestrial environments and preserve palaeoenvironmental material (**Appendix IV**).

Maritime and Aviation Archaeology

3.2.12 The sources of data for maritime and aviation history and archaeology listed in section 3.2.4 above have been collated and summarised in order to develop a baseline of marine cultural heritage for the ASA, and the potential for encountering unknown shipwreck and aircraft crash sites (**Section 5**). Sources of data relevant to maritime and aviation archaeology are the UKHO, NRHE and local HERs.

3.2.13 The data obtained were reviewed and those located within the ASA were extracted and compiled to form a gazetteer as part of the known maritime and aviation baseline. These records were each given a unique identifier beginning with **70000** continuing sequentially (**Appendix V**), and were added to the project GIS.

3.2.14 For the purposes of this assessment, records with duplicate positions between datasets were amalgamated and their co-ordinates are taken from the UKHO dataset as the raw data therein is based on hydrographic survey data presented in the WGS84 datum. These coordinates were projected from WGS84 into UTM30N eastings and northings using the Quest Geodetic Calculator version. Furthermore, the NRHE and HER datasets are primary terrestrial datasets expressed in British National Grid and are considered to be less accurate offshore.

3.2.15 The research for maritime and aviation history was then combined with the archaeological assessment of geophysical survey data.

3.2.16 Data relating to Recorded Losses were also extracted from the NRHE, HER and UKHO data sources. Recorded Losses are records for ships or aircraft that are known to have wrecked or crashed offshore, but for which the exact locations are not known. Recorded Losses are often grouped by area into Maritime Named Locations by the NRHE. For example, a Recorded Loss within this dataset may be based on the loss of a vessel ‘off Owers Light Vessel” or associated with a known navigational hazard such as a sand bank (Horse and Dean Sand) or rocks (which may give rise to a falsely precise geographic coordinate for the record). The positional data of these records is unreliable and serves only to provide an indication of the types of vessels that passed through the area and the wrecking incidents that are known to have occurred in the general region. Whilst the remains of these vessels and aircraft are expected to exist somewhere on the seafloor, their location is unknown. As such, they signify the potential maritime and aviation resource.

3.2.17 Details regarding maritime Recorded Losses, whose Named Location happens to be located within the ASA, are presented in a gazetteer format (**Appendix VI**). The same has been compiled for aircraft Recorded Losses (**Appendix VII**). These records have retained their original identification assigned by the UKHO, NRHE or HER for ease of cross-referencing. Where records are duplicated between datasets all corresponding identification numbers have been included but are referred to in the text by the NRHE Monument ID if one exists. The gazetteer does not include positional data due to the inaccuracies therein.

3.2.18 The baseline assessment of maritime and aviation archaeology was further supplemented by a review of relevant primary and secondary source material to provide an indication on the nature of maritime and aviation activity across the region. As well as summarising the known archaeological resource, the baseline assessment underlines the potential for encountering unknown shipwreck and aircraft crash sites within the ASA (English Heritage (now Historic England), 2002; Wessex Archaeology, 2008).

Intertidal Archaeology

3.2.19 Since the assessment of the onshore archaeological elements of the project will cover to the MHWS only, there is no overlap between the onshore assessment and marine assessments with the intertidal area below MHWS and Marine Cable Corridor. All terrestrial receptors which are located above MHWS but are still located within the ASA (**Figure 1**) will not be discussed within this report (see Chapter 20 of the Preliminary Environmental Information Report (PEIR) for onshore heritage and archaeology). Data from the NRHE and HER is provided in two spatial formats, points and polygons. All points and polygons below the MHWS mark that intersect the ASA have been included within the assessment; however, it should be noted that co-ordinates given for the polygon records is the centroid generated using ArcGIS 10.5, which may lie outside the ASA.

3.3 Geophysical and geotechnical methodology

Data sources

3.3.1 A number of data sources were consulted during this assessment, including:

- Geophysical survey datasets acquired by MMT;
- Geotechnical datasets acquired by MMT and In Situ Site Investigation;
- Recorded wreck and obstruction data acquired via the United Kingdom Hydrographic Office (UKHO);
- Relevant background mapping from the area (BGS 1989, admiralty charts received from UKHO);
- Desk-based assessment (DBA) data sets (Wessex Archaeology 2017), and;
- Client supplied survey reports (MMT 2018).

Technical specifications

3.3.2 The geophysical data were acquired by MMT, including sub-bottom profile (SBP), multibeam echosounder (MBES), sidescan sonar (SSS) and magnetometer (Mag.) survey. For the nearshore area, where water depths are less than 10 m Lowest Astronomical Tide (LAT), the M/V *Seabeam* acquired the geophysical data. In the nearshore section, the line spacing was 25 m. For the offshore section, where water depths are greater than 10 m LAT, the M/V *Franklin* acquired the geophysical data. The primary line spacing was 60 m, with

two additional wing lines at +-25 m from the centre line. The geophysical survey was carried out from November 2017 – March 2018. Further details on the equipment used is in **Table 1.**

Table 1 Summary of equipment used to obtain geophysical data

Survey Company	Survey Vessel	Data Type	Equipment	Data Format
MMT	M/V *Franklin (Offshore Survey)*	SBP	Edgetech SB512i Chirp	
			Geo-source 200 sparker	*.sgy*
		MBES	Kongsberg EM710	*.xyz*
		SSS	Edgetech 4200 (300 / 600 kHz, 80m / 100 m range)	*.jsf*
		Mag.	2 X Geometrics G-882	*.txt*
		Positioning	Applanix POS MV 320	N/A
	M/V *Seabeam (Nearshore Survey)*	SBP	Pole mounted Innomar SES-2000 parametric profiler	*.sgy*
			C-Boom surface towed boomer	*.sgy*
		MBES	Kongsberg EM 2040D	*.xyz*
		SSS	Edgetech 4200 (300 / 600 kHz, 50 m range)	*.jsf*
		Mag.	2 x Geometrics G-882	*.txt*
		Positioning	Applanix POS MV 320	N/A

3.3.3 The geotechnical data were acquired by MMT and included vibrocores and Cone Penetration Tests (CPTs). For the nearshore area, the utility vessel M.P.R.3 acquired the geotechnical data. In the offshore area, geotechnical data was acquired using the OSV *Cecilia*. Geotechnical samples recovered using the vibrocorer provided a near-continuous record of the deposits within the shallow sub-surface, to a maximum depth of 6 m below seabed.

3.3.4 Throughout the duration of the geotechnical surveys, preliminary logs based on through core liner descriptions, were made available to Wessex Archaeology for initial review to identify cores comprising deposits of archaeological interest (Appendix VIII). These cores were retained and later split open and recorded under supervision of a qualified and experienced geoarchaeologist at In Situ Site Investigation in Renishaw, Yorkshire. Sub-samples were taken from any deposits considered to have geoarchaeological potential. The results of geoarchaeological recording are presented in **Appendix IV**.

3.3.5 All cores were split, logged and photographed at In Situ Site Investigation and the final logs provided to Wessex Archaeology for a detailed review. The results of this assessment are presented in **Appendix VIII**.

Data quality

3.3.1 Once processed, the geophysical data sets were individually assessed for quality and their suitability for archaeological purposes and rated using the following criteria (**Table 2**).

Table 2 Criteria for assigning data quality rating

Data quality	Description
Good	Data which are clear and unaffected or only slightly affected by weather conditions, sea state, background noise or data artefacts. Seabed datasets are suitable for the interpretation of upstanding and partially buried wrecks, debris fields, and small individual anomalies. The structure of wrecks is clear, allowing assessments on wreck condition to be made. Subtle reflectors are clear within SBP data. These data provide the highest probability that anomalies of archaeological potential will be identified.
Average	Data which are moderately affected by weather conditions, sea state and noise. These data are not considered to be detrimentally affected to a significant degree. Seabed datasets are suitable for the identification of upstanding and partially buried wrecks, the larger elements of debris fields and dispersed sites, and larger individual anomalies. Dispersed and/or partially buried wrecks may be difficult to identify. Interpretation of continuous reflectors in SBP data is problematic.
Below Average	Data which are affected by weather conditions, sea state and noise to a significant degree. Seabed datasets are suitable for the identification of relatively intact, upstanding wrecks and large individual anomalies. Dispersed and/or partially buried wrecks, or small isolated anomalies may not be clearly resolved. Small palaeogeographic features, or internal structure may not be resolved in SBP data.
Variable	This category contains datasets where the individual lines range in quality. Confidence of interpretation is subsequently likely to vary within the study area.

3.3.2 For this geophysical assessment, it was deemed that the parametric SBP data was most suitable for the archaeological assessment of the nearshore data, and the sparker most suitable for the offshore section. The quality of the SBP data for both sections has been rated as generally 'good' using the above criteria. Some sparker lines in the offshore section were affected by weather and sea state, however they are still considered suitable for archaeological assessment.

3.3.3 The MBES data were rated as 'good' using the above criteria. The data quality and resolution of 0.5 m was found to be of a good standard and suitable for archaeological assessment of objects and debris over 0.5 m in size.

3.3.4 The SSS data have been rated as generally 'good' using the above criteria table. On lines with a 100 m range, data was not always seen to the full extents of the data. Some lines were affected by weather conditions, and strong currents affected the positioning of some of the data (MMT 2018). However, the process of grouping anomalies, as discussed in Section 2.5, largely corrects this and, as such, the data are considered suitable for archaeological assessment.

3.3.5 The magnetometer data have been rated as 'average' using the above criterial table. Occasionally spiking was identified on some lines, and some areas had relatively high background noise which may obscure smaller anomalies. However, the data are still considered suitable for archaeological assessment.

Processing

3.3.6 A number of datasets were assessed over the study area; each dataset was processed separately using the following software (**Table 3**).

Table 3 Software used for geophysical assessment

Dataset	Processing Software	Interpretation and rationalisation
SBP	CodaOctopus Survey Engine v5.5	ArcMap v10.5
MBES	QPS Fledermaus v7.8.1	
SSS	CodaOctopus Survey Engine v5.5	
Mag.	MagPick v3.25	

3.3.7 The SBP and MBES data were used as the primary datasets for the palaeographic assessment and SSS, MBES and magnetometer datasets were used for the seabed features assessment.

3.3.8 The SBP data were processed using CodaOctopus Survey Engine Seismic+ software. This software allows the data to be visualised with user selected filters and gain settings to optimise the appearance of the data for interpretation. The software then allows an interpretation to be applied to the data by identifying and selecting sedimentary boundaries and shallow geological features that might be of archaeological interest.

3.3.9 The SBP data were interpreted with a two-way travel time (TWTT) along the z-axis. In order to convert from TWTT to depth, the velocity of the seismic waves was estimated to be 1,600 ms^{-1}. This is a standard estimate for shallow, unconsolidated sediments.

3.3.10 The SBP data can also be used to record small reflectors which appear to be buried material such as a wreck site covered by sediment. The position and dimensions of any such objects were noted in a gazetteer, and an image of each anomaly acquired. It should be noted that anomalies of this type are rare, as the sensors must pass directly over such an object in order to produce an anomaly.

3.3.11 For the SBP assessment, 25 % of the lines were initially assessed. Where features of interest were identified, additional lines were then interpreted to more accurately map the extents of these features.

3.3.12 The MBES data were analysed to identify any unusual seabed structures that could be shipwrecks or other anthropogenic debris. The data were gridded at 0.5 m and analysed using QPS Fledermaus software, which enables a 3-D visualisation of the acquired data and geo-picking of seabed anomalies. The MBES data were also used in the palaeogeographic assessment.

3.3.13 The SSS data files were processed using CodaOctopus Survey Engine Sidescan+ software. This allowed the data to be replayed with various gain settings to optimise the quality of the images. The data were interpreted for any objects of possible anthropogenic origin. This involves creating a database of anomalies within Coda by tagging individual features of possible archaeological potential, recording their positions and dimensions, and acquiring an image of each anomaly for future reference.

3.3.14 A mosaic of the SSS data is produced during this process to assess the quality of the sonar towfish positioning. This process allows the position of anomalies to be checked between different survey lines, and for the positioning to be further refined if necessary.

3.3.15 The form, size, and/or extent of an anomaly is a guide to its potential to be an anthropogenic feature and therefore of archaeological interest. A single small but prominent anomaly may be part of a much more extensive feature that is largely buried. Similarly, a scatter of minor

anomalies may define the edges of a buried but intact feature, or it may be all that remains as a result of past impacts from, for example, dredging or fishing.

3.3.16 The magnetometer data were processed using Geometrics MagPick software to identify any discrete magnetic contacts which could represent buried metallic debris or structures such as wrecks.

3.3.17 The software enables both the visualisation of individual lines of data and gridding of data to produce a magnetic anomaly map. The data were first smoothed to try and eliminate any spiking. A trend was then fitted to the resulting data, and the trend values subtracted from the smoothed values. This was carried out in an attempt to remove natural variations in the data (such as diurnal variation in magnetic field strength and changes in geology). The processed data were then gridded to produce a map of magnetic anomalies, and individual anomalies tagged based on the grid and individual profile lines. Images are taken in a similar process to that of the SSS data.

3.3.18 For the purposes of this report, identified magnetic anomalies have been classified as small (5 nT to 49 nT), medium (50 nT to 99 nT), and large (greater than 100 nT).

Anomaly grouping and discrimination

3.3.19 The previous section describes the initial interpretation of all available geophysical datasets which were conducted independently of one another. This inevitably leads to the possibility of any one object being the cause of numerous anomalies in different datasets and apparently overstating the number of archaeological features in the exploration area.

3.3.20 To address this fact the anomalies were grouped together; allowing one ID number to be assigned to a single object for which there may be, for example, a UKHO record and multiple SSS anomalies.

3.3.21 Once all the geophysical anomalies and desk-based information have been grouped, a discrimination flag is added to the record to discriminate against those which are not thought to be of an archaeological concern. These flags are ascribed as follows (**Table 4**).

Table 4 Criteria discriminating relevance of identified features to the proposed development

Overview classification	Discrimination	Criteria	Data type
Archaeological	P1	Feature of probable archaeological interest, either because of its palaeogeography or likelihood for producing palaeoenvironmental material	SBP, MBES
Archaeological	P2	Feature of possible archaeological interest	SBP, MBES
Archaeological	A1	Anthropogenic origin of archaeological interest	MBES, SSS, Mag.
Archaeological	A2	Uncertain origin of possible archaeological interest	MBES, SSS, Mag.
Archaeological	A3	Historic record of possible archaeological interest with no corresponding geophysical anomaly	MBES, SSS, Mag.

3.3.22 The grouping and discrimination of information at this stage is based on all available information and is not definitive. It allows for all features of potential archaeological interest

to be highlighted, while retaining all the information produced during the course of the geophysical interpretation and desk-based assessment for further evaluation should more information become available.

3.4 Impact Assessment Criteria

Asset Sensitivity

3.4.1 This Technical Report will ultimately inform an EIA for the project, presented as an appendix within the Preliminary Environmental Information Report (PEIR) and final ES. In order to assess the potential impacts of a development upon the marine environment, EIAs typically adopt the conceptual approach known as the 'source-pathway-receptor' model. This approach is based on the identification of the source (i.e. the origin of a potential impact), the pathway (i.e. the means by which the effect of the activity could impact a receptor) and the receptor that may be impacted (e.g. known/potential heritage assets). For the significance of any given impact to be fully understood, the sensitivity of any receptors that may be impacted need to be considered. This section outlines how the sensitivity of marine heritage assets is ascertained.

3.4.2 The capability of a receptor to accommodate change and its ability to recover if affected is a function of its sensitivity. Receptor sensitivity is typically assessed via the following factors:

- Adaptability – the degree to which a receptor can avoid or adapt to an effect;
- Tolerance – the ability of a receptor to accommodate temporary or permanent change without significant adverse impact;
- Recoverability – the temporal scale over and extent to which a receptor will recover following an effect; and
- Value – a measure of the receptor's importance, rarity and worth.

3.4.3 Archaeological and cultural heritage receptors cannot typically adapt, tolerate or recover from physical impacts resulting in material damage or loss caused by development. Consequently, the sensitivity of each asset is predominantly quantified only by its value.

Value of an Asset

3.4.4 Based on Historic England's Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage (now Historic England), 2008: 21), the significance of a historic asset 'embraces all the diverse cultural and natural heritage values that people associate with it, or which prompt them to respond to it'.

3.4.5 Within this document, significance is weighed by consideration of the potential for the asset to demonstrate the following value criteria:

- Evidential value – deriving from the potential of a place to yield evidence about past human activity;
- Historical value – deriving from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative;

- Aesthetic value – deriving from the ways in which people draw sensory and intellectual stimulation from a place; and

- Communal value – deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values but tend to have additional and specific aspects.

3.4.6 With regards to assessing the value of shipwrecks, the following criteria listed in English Heritage's Ships and Boats: Prehistory to Present – Designation Selection Guide (English Heritage (now Historic England), 2012) can be used to assess an asset in terms of its value:

- Period;

- Rarity;

- Documentation;

- Group value;

- Survival/condition; and

- Potential.

3.4.7 These aspects help to characterise each asset whilst also comparing them to other similar assets. The criteria also enable the potential to contribute to knowledge, understanding and outreach to be assessed.

3.4.8 The value of known archaeological and cultural heritage assets were assessed on a five-point scale using professional judgement informed by criteria provided in **Table 5** below.

Table 5 Criteria to assess the archaeological value of marine assets

Value	Definition
High	• Best known, only example or above average example and / or significant or high potential to contribute to knowledge and understanding and / or outreach. Receptors with a demonstrable international or national dimension to their importance are likely to fall within this category. • Wrecked ships and aircraft that are protected under the Protection of Wrecks Act 1973, Ancient Monuments and Archaeological Areas Act 1979 or Protection of Military Remains Act 1986 with an international dimension to their importance, plus as-yet undesignated sites that are demonstrably of equivalent archaeological value. • Known submerged prehistoric sites and landscapes with the confirmed presence of largely *in situ* artefactual material or palaeogeographic features with demonstrable potential to include artefactual and/or palaeoenvironmental material, possibly as part of a prehistoric site or landscape.
Medium	• Average example and / or moderate potential to contribute to knowledge and understanding and / or outreach. • Includes wrecks of ships and aircraft that do not have statutory protection or equivalent significance, but have moderate potential based on a formal assessment of their importance in terms of build, use, loss, survival and investigation. • Prehistoric deposits with moderate potential to contribute to an understanding of the palaeoenvironment.
Low	• Below average example and / or low potential to contribute to knowledge and understanding and / or outreach. • Includes wrecks of ships and aircraft that do not have statutory protection or equivalent significance, but have low potential based on a formal assessment of their importance in terms of build, use, loss, survival and investigation. • Prehistoric deposits with low potential to contribute to an understanding of the palaeoenvironment.
Negligible	• Poor example and / or little or no potential to contribute to knowledge and understanding and / or outreach. Assets with little or no surviving archaeological interest.

3.4.9 Furthermore, *On the Importance of Shipwrecks* (Wessex Archaeology, 2006) suggests importance can be assessed through the following criteria: build, use, loss, survival and investigation.

3.4.10 To further supplement this approach, the ALSF-funded Marine Class Description and principles of selection for aggregate producing areas project (ALSF 5383), undertaken by Wessex Archaeology (2008), proposed a composite timeline that considers wrecks in five distinct date ranges. The timeline takes into account the broad chronology of shipbuilding, thus drawing out generalisations regarding the age and special value of sites. The timeline is summarised as follows:

- Pre- 1508 AD: this covers the period from the earliest Prehistoric evidence for human maritime activity to the end of the medieval period, c. 1508. Little is known of watercraft or vessels from this period and archaeological evidence of them is so rare that all examples of craft are likely to be of special value;

- 1509 to 1815: this encompasses the Tudor and Stuart periods, the English Civil War, the Anglo-Dutch Wars and later the American Independence and French Revolutionary Wars. Wrecks and vessel remains from this date are also quite rare, and can be expected to be of special value;

- 1816 to 1913: this period witnessed great changes in the way in which vessels were built and used, corresponding with the introduction of metal to shipbuilding, and steam to propulsion technology. Examples of watercraft from this period are more numerous and as such, it is those that specifically contribute to an understanding of these changes that should be regarded as having special value;

- 1914 to 1945: this period encompasses the World War I (WWI), the Interwar years and the World War II (WWII). This date range contains Britain's highest volume of recorded boat and ships losses. Those which might be regarded as having special interest are likely to relate to technological changes and to local and global activities during this period; and

- Post 1945: the final period extends from 1946 through the post-war years to the present day. Vessels from this date range would have to present a strong case if they are to be considered of special interest.

3.4.11 The perceived value of each marine archaeological asset is generally assessed and assigned on a site-by-site basis, depending on the criteria listed in **Table 5**. The UK Marine Policy Statement (Department for Environment, Food and Rural Affairs, 2011: 90) describes a heritage asset as holding a degree of significance. Significance relates to the heritage interest of an asset that may be archaeological, architectural, artistic or historic.

3.5 Assessment of Historic Seascape Character (HSC)

3.5.1 In accordance with the European Landscape Convention, 'landscape' can be defined as 'an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors' (Council of Europe, 2000: Article 1). The term 'seascape' can be defined as a subset of 'landscape', and has 'an area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land and sea, by natural and / or human factors' (ibid.).

3.5.2 Seascape assessment reflects the holistic approach to landscape of the European Landscape Convention, extending it to the sea. Seascape Character Areas include coastal land, intertidal and marine environments and cover the offshore environment to the territorial limit (12nm). HSC assessment is the identification and interpretation of the historic dimension of the present day coastal and marine environment (Natural England, 2012: 33).

3.6 Assumptions and Limitations

Archaeological data

3.6.1 Data used to compile this report consists of primary geophysical and geotechnical survey data and secondary information derived from a variety of sources, only some of which have been directly examined for the purposes of this assessment. The assumption is made that the secondary data, as well as that derived from other secondary sources, is reasonably accurate.

3.6.2 The records held by the UKHO, NRHE, HER and the other sources used in this assessment are not a record of all surviving cultural heritage assets, rather a record of the discovery of a wide range of archaeological and historical components of the marine historic environment. The information held within these datasets is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown. In particular, this relates to buried archaeological features.

4 SEABED PREHISTORY BASELINE

4.1 Geological baseline

4.1.1 Dates are expressed with reference to the equivalent Marine Isotope Stages (MIS) (**Figure 2**).

4.1.2 The recent geological history of the English Channel is directly linked to glacial / interglacial cycles experienced by the area during the Pleistocene (c. 2.5 million – 11,700 years ago). Although the study area was not directly affected by glaciation, the associated eustatic sea level changes resulted in large areas of the English Channel being periodically exposed as a terrestrial environment. This is represented in the geological record, with distinct terrestrial landscape features being present, interspersed with marine and estuarine sediments (Cameron *et al*. 1992). Due to these fluctuating glacial conditions, the corresponding rises and falls in eustatic sea level, and major reconfigurations of the landscape during the last million years, the archaeological record is phased between periods of occupation and long periods of hiatus when environmental conditions or high sea levels restricted access to Britain (**Figure 2**).

4.1.3 The Marine Cable Corridor is situated in the Hampshire-Dieppe Basin; a broad, gently dipping geological basin approximately 280 km in length (Hamblin *et al.* 1992*)*. This is located to the south-west of the Weald-Artois high; an area of uplift created during the Tertiary due to forces arising from Africa colliding with Eurasia. The background geology of the area is dominated by chalk bedrock, deposited in a shallow marine environment during the Cretaceous period and subsequently uplifted. Across the ASA, the Cretaceous chalk is overlain by Tertiary (Eocene) clays, deposited in a shallow marine environment (Hamblin *et al.* 1992). Both the chalk and the Tertiary sediments are in turn unconformably overlain by Pleistocene and Holocene deposits.

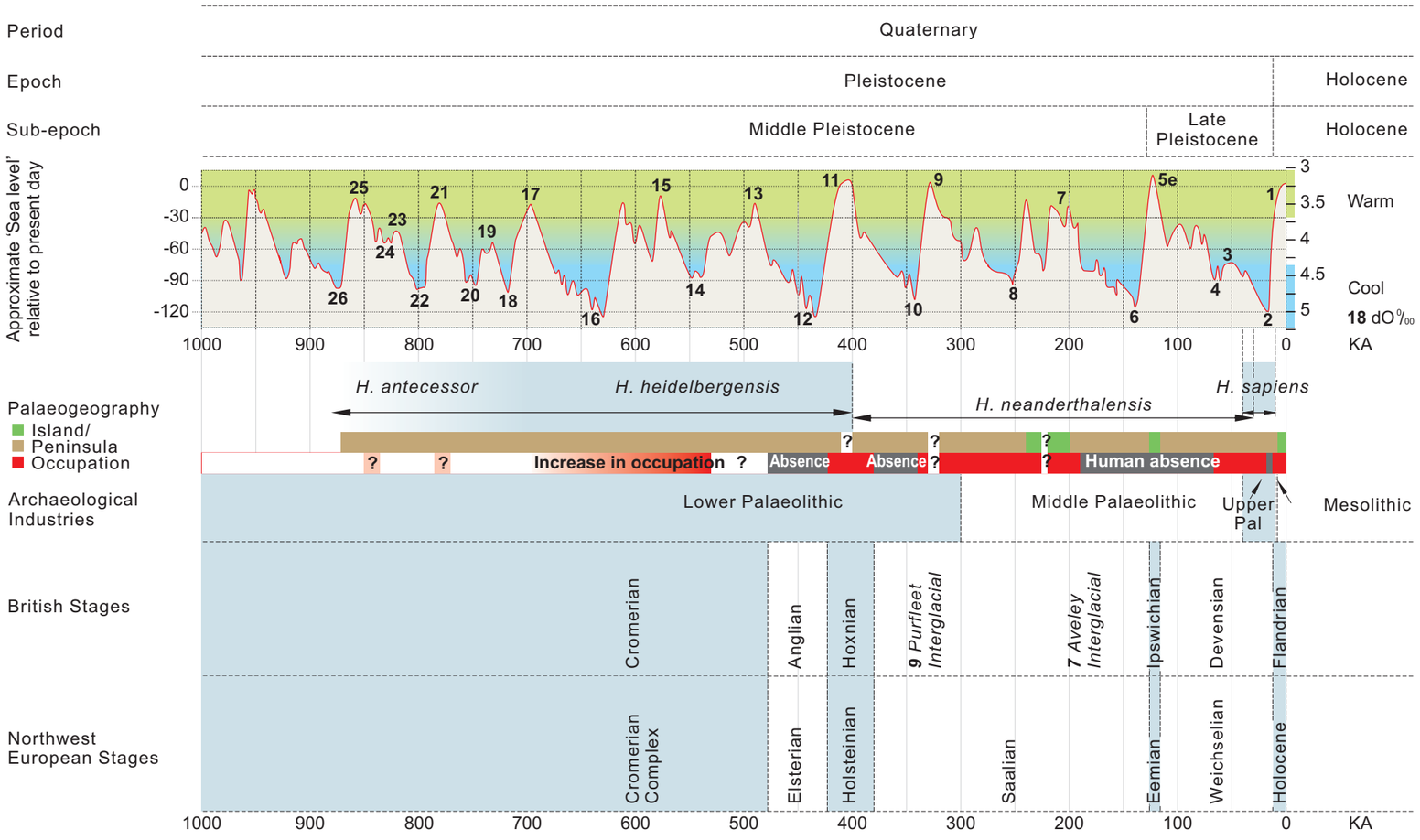
Pre-Anglian (>478 ka; >MIS 12)

4.1.4 Until late Thanatian period (c. 60–54 Ma (million years ago)), the English Channel was most likely a terrestrial land surface. During this time, a marine incursion from the North Sea resulted in much of the English Channel area consisting in swampy lowlands with lush vegetation, draining into a semi-enclosed marine basin (Hamblin *et al.* 1992, Wessex Archaeology 2012).

4.1.5 It was during the early Ypresian transgression (54-52 Ma), that the combination of rising sea level and tectonic subsidence opened a seaway through the English Channel area, which resulted in the deposition of Eocene clays (Hamblin *et al.* 1992). It was during the middle Eocene that the Tertiary sediments predominantly seen in the area, the Bracklesham Group and the Barton Clay Formation, were laid down. Depending on location, these Tertiary deposits can be seen to a depth of more than of 400 metres (Curry and Smith 1975, Hamblin *et al.* 1992).

4.1.6 During the Priabonian (39.4–36 Ma), the connection to the North Sea Basin was severed due to gradual uplift, resulting in the deposition of lacustrine and brackish lagoonal sediments, although it appears a marine inlet remained in the eastern Solent area. By the Oligocene (*c.* 36 Ma), the area appears to have lost its marine connection (Hamblin *et al.* 1992).

4.1.7 There was a long hiatus of over 25 million years between the youngest Tertiary sediments in the area and the oldest Quaternary deposits (James *et al.* 2010). During the Pleistocene, eustatic sea level change resulted in the entire English Channel becoming dry land during



The figure presents information derived from several references: the global sea-level curve is from Lisiecki and Raymo (2005) and Jelgersma (1979). Details on the geology and archaeology were provided by Dix and Westley (2004); Funnel (1995); Gibbard and van Kolfschoten (2004); Kukla *et al.* (2002); Lee *et al.* (2006); Lowe and Walker (1997) and Wymer (1999).

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Sea level curve and chronology of the English Channel landscape

Figure 2

glacial maxima. As such, at various times in the past, the ASA was suitable for hominin exploitation (species regarded as closely related to humans) (Wessex Archaeology 2012).

4.1.8 The Cromerian Complex (MIS 21-13) is the earliest recognised stage in which evidence for hominin activity in the UK has been found. This period is recognised as having at least six temperate phases (Preece 2001), making the area suitable for hominin occupation (Wessex Archaeology 2012). The earliest direct evidence for hominin activity in the UK has been identified at the Lower Palaeolithic sites of Happisburgh, on the Norfolk coast, and Pakefield, on the Suffolk coast, and date from from *c.* 900,000 and 700,000 BP respectively (Parfitt *et al.* 2005; 2010).

4.1.9 Falling sea levels in the latter part on MIS 13 exposed former beach deposits cut into the base of chalk cliffs in what is now West Sussex. These sand and silt deposits, which currently lie some 12 km inland, exhibit signs of nearshore, subtidal and intertidal deposition. A series of Palaeolithic sites have been identified at the base of these cliffs, the most famous of which is Boxgrove, where stratified sediments preserved *in situ* artefacts such as knapping debris and the hominin remains of *Homo Heidelbergensis*. The evidence found here suggests that the same hominin groups were operating over a wide area and period of time (James *et al*. 2010). As sea level continued to fall, a palaeo-land surface developed on which an extensive vertebrate assemblage was preserved. Raised beach deposits with associated handaxes thought be of a similar date were also found at Benmbridge on the Isle of Wight (Preece *et al.* 1990).

4.1.10 These finds in the current terrestrial zone have implications as to the possibility of finding similar material of this date in the current marine zone as, with sea levels at *c.*40 m below current levels, significant amounts of the area would have been a terrestrial landscape. As such, there are areas of the seabed which have the potential for being favoured locations for occupation for around 500, 000 BP (James *et al*. 2010). At Boxgrove, there is evidence of large vertebrates, waterfowl and sea fish, indicating that it was an attractive landscape for hominins to exploit (James *et al.* 2010). Evidence was also found of predators large enough to be capable of taking hominins, which may have resulted in hominin groups seeking shelter in rock shelters and fissures.

Anglian to Ipswichian (c. 478 ka–115 ka; MIS 12–5e)

4.1.11 Prior to the Anglian, the English Channel was separated from the North Sea by a chalk ridge along the Weald-Artois high, located between Dover and Calais in what is now the Dover Straits. The current prevailing theory is that, during deglaciation of the Anglian ice sheet, the emptying of an ice-dammed lake ponded within the North Sea created a volume of water large enough to breach this high ground and connect the two areas, incising the Lobourg Channel off the Kent coast and some of the English Channel palaeovalleys, most notably the Northern Palaeovalley, in the process (Smith 1985, Gupta *et al.* 2017, Hamblin *et al.* 1992). This initial catastrophic breaching of Weald-Artois ridge is thought to have been followed by further erosive events leading to the permanent breaching of the English Channel approximately 150 ka (Hijma *et al.* 2012). However, the precise timing and mechanism of breaching is still under debate.

4.1.12 This breaching had a major effect on the development of the palaeolandscape and topography of the English Channel. This large river is likely to have had a marked influence hominin and later human access to the UK (James *et al.* 2010).

4.1.13 One of the main influences on the seabed development during the Pleistocene were the fluvial processes. Many small, relict river systems have been identified to the east of the Isle of Wight (Wessex Archaeology 2008). The courses of the rivers flowing within the ASA

shifted and fluctuated during the various glacial and interglacial periods, however some, such as the Solent, formed a major estuary over many millennia (James *et al.* 2010). These watercourses of the Hampshire Basin are often flanked by gravel terraces, which were deposited during periods of sea level high stand. Typically, the sequence histories are complex, and may also have been subjected to marine erosion during periods of transgression, however their significance in relation to Palaeolithic archaeology is well known (James *et al.* 2010).

4.1.14 During the Anglian Glaciation (*c.* 500,000–400,000 BP) an ice sheet, the most extensive known to have covered Britain, extended as far south as the Thames Valley. It is thought that throughout most of this period, Britain would have been uninhabited. In the following Hoxnian interglacial (*c.* 400,000 BP), evidence of hominin activity can be seen in sites such as Hoxne, East Anglia, Swanscombe in Kent, and the lower Thames Valley (James *et al.* 2010). During this time sea level is thought to have been between *c.* 10-15 m below current levels and, although our understanding of hominin movement is limited, it is possible that the coastal plain was used for forays into intertidal marshes and lower portions of river valleys for fishing and fowling. Hand axes from the gravel terraces along the Solent appear to correlate with this period (James *et al*. 2010).

Devensian to Late Glacial Maximum (c. 115 ka–18 ka; MIS 5d–2)

4.1.15 *Homo sapiens* are thought to have been present in the area during the Upton Warren stage of the late Devensian (MIS 3; Upper Palaeolithic), with a possible overlap with *Homo neanderthalensis* during the previous 10,000 years. During this period, there are clear changes in lithic technology, providing chronological indicators (James *et al*. 2010). A specific flint technology, known as the Mousterian, is synonymous with the MIS 5a Middle Palaeolithic; however, the rivers of the Solent and Avon have produced very few Middle Palaeolithic artefacts (James *et al.* 2010). During this period, the climate was generally seen to be getting colder and the sea level fell rapidly. As a result, there may have been significant erosion of lower river terraces and the subsequent loss of archaeological material in high-energy environments.

4.1.16 The Devensian glaciation (110,000-13,500 BP) was the last glacial stage to occur before our current, Holocene climate (Wessex Archaeology 2012). During the Devensian glacial maximum (approximately 22,000 BP), ice sheets extended as far south as Norfolk, and sea levels had dropped to approximately 120 m below current levels, exposing much of the North Sea basin and the English Channel (Shennan 1989). This allowed the present form of the Northern Palaeovalley to develop, as the rivers Rhine, Meuse and Thames flowed through the area, eventually joined by the Palaeosolent and Palaeoarun rivers, which extended well offshore of the present southern coastline of England (Hamblin *et al.* 1992).

4.1.17 Although the ice sheet came no further south than the Bristol Channel, its proximity would have introduced periglacial conditions across the south of Britain. During this period, the area is thought to have been largely uninhabited by any human populations due to the intense cold and dry conditions, although there is likely to have been an intermittent population, with anatomically modern humans being active around 38,000 BP (e.g. Kent's Cavern, Devon). However, it is thought that human populations were forced to retreat to a few key areas due to intense cold before the Last Glacial Maximum (James *et al.* 2010, Wessex archaeology 2012). It should be noted that the solifluction deposits formed in these periglacial conditions have the potential to contain and preserve archaeological material (James *et al*. 2010).

Post-Late Glacial Maximum and early Holocene (18,000–6,000 BP; MIS 2–1)

4.1.18 At the start of this period, the sea level stood at approximately 65 m below Ordnance Datum (OD) (Hamblin *et al.* 1992).

4.1.19 After 15,000 BP, there was increasing human exploitation of the landscape. Humans at this time were hunting game, such as mammoth and deer, and evidence of these animals has been reported through marine aggregate dredging, and the associated reporting requirements (Bicket and Tizzard 2015). An increasing number of open air hunting camps, dating from the Upper Palaeolithic, are recorded in Southern Britain, giving the impression of a highly mobile, very adaptable population with skilled hunters (James *et al*. 2010).

4.1.20 As the climate warmed, the area is likely to have presented a very favourable habitat and, as such, almost anywhere within the marine zone with buried sediments has the potential to produce Upper Palaeolithic material (James *et al*. 2010). Former shorelines, lakefronts and riverbanks would have been particularly attractive occupation locations due the relative ease of fishing from these positions, and therefore are likely to have had the greatest concentrations of populations (Fischer 1995). As such, their associated slump deposits, sand accumulations and peat deposits have a high potential for the preservation of archaeological material (James *et al.* 2010).

4.1.21 The Mesolithic period began in the early Holocene. Around 10,000 BP, sea levels were still more than 60 m below current levels, resulting in an extremely large area of the southern North Sea and English Channel to be dry land and suitable for human occupation. Evidence of this environment has been identified from the foreshore at Jaywick (Essex), where layers of peat dating from the Early Holocene are present along with a preserved land surface from which Mesolithic artefacts have been recovered (Wessex Archaeology 2011).

4.1.22 During the Early Holocene period (*c.* 8,900 BP) the rising sea level started to gradually submerge the southern half of the ASA. The Solent River valley mouth drowned first, after which the river valley was gradually disrupted, eventually creating the West Solent, Christchurch Bay and Poole Harbour (Wessex Archaeology 2012). Between 7,000 and 5,000 BP, much of the land was inundated by eustatically driven sea level change (Bicket and Tizzard 2015). The rapid changes in sea level and climate had profound effects on the lower reaches of rivers in the region, resulting in complex depositional sequences. Downcutting due to increased run-off in the face of ice-melt was gradually replaced by the net accumulation of sediments, leading to ponding and overbank flooding and the development of marshland (James *et al.* 2010). During the Late Devensian and Early Holocene periods, the palaeovalleys became infilled by estuarine deposits by rising sea levels, with eventual inundation of marine sediments as the transgression proceeded (Hamblin *et al.* 1992).

4.1.23 By around 6,000 BP, sea level was only approximately 7 m below the present level (Cameron *et al.* 1992). Around this time, Britain became an island again (Coles 1998). Seasonally mobile groups exploited an even more diverse range of resources and, in turn, left behind many thousands of assemblages of artefacts (James *et al*, 2010). Mesolithic flintwork has been identified in areas adjacent to the Solent in the terrestrial zone. It is thought that these distributions extend into and beyond the intertidal zone. At Bouldnor Cliff on the Isle of Wight, a Mesolithic site, thought to be a summer encampment, has been identified at the base of the cliff, *c.*12 m below current sea level, which is thought to have been the position of a river bar associated with a channel. Vibrocore data from the Palaeoarun revealed peat deposits indicative of varied sub-aerial environments. Evidence such as this indicates that there is a clear potential for the recovery of archaeological

material from Holocene land surfaces, including Mesolithic artefacts, within the palaeovalleys of the shelf area (James *et al*. 2010).

4.1.24 Post the Holocene marine transgression, the archaeological potential of the English Channel, including the ASA, shifts to the maritime history of the UK which is presented in **Section 5**.

4.2 Geophysical and Geotechnical Palaeogeographic Assessment

4.2.1 A number of palaeogeographic features of archaeological potential have been identified within the ASA. These features are discussed below, individually described in gazetteer format in **Appendix III**, and their distribution is illustrated in **Figure 3a – 3i**.

4.2.2 The identified geology within the Marine Cable Corridor has been divided into three phases, which are characterised by three Units as described in **Table 6** and **Table 7**):

Table 6 Shallow stratigraphy of the Marine Cable Corridor based on geophysical data

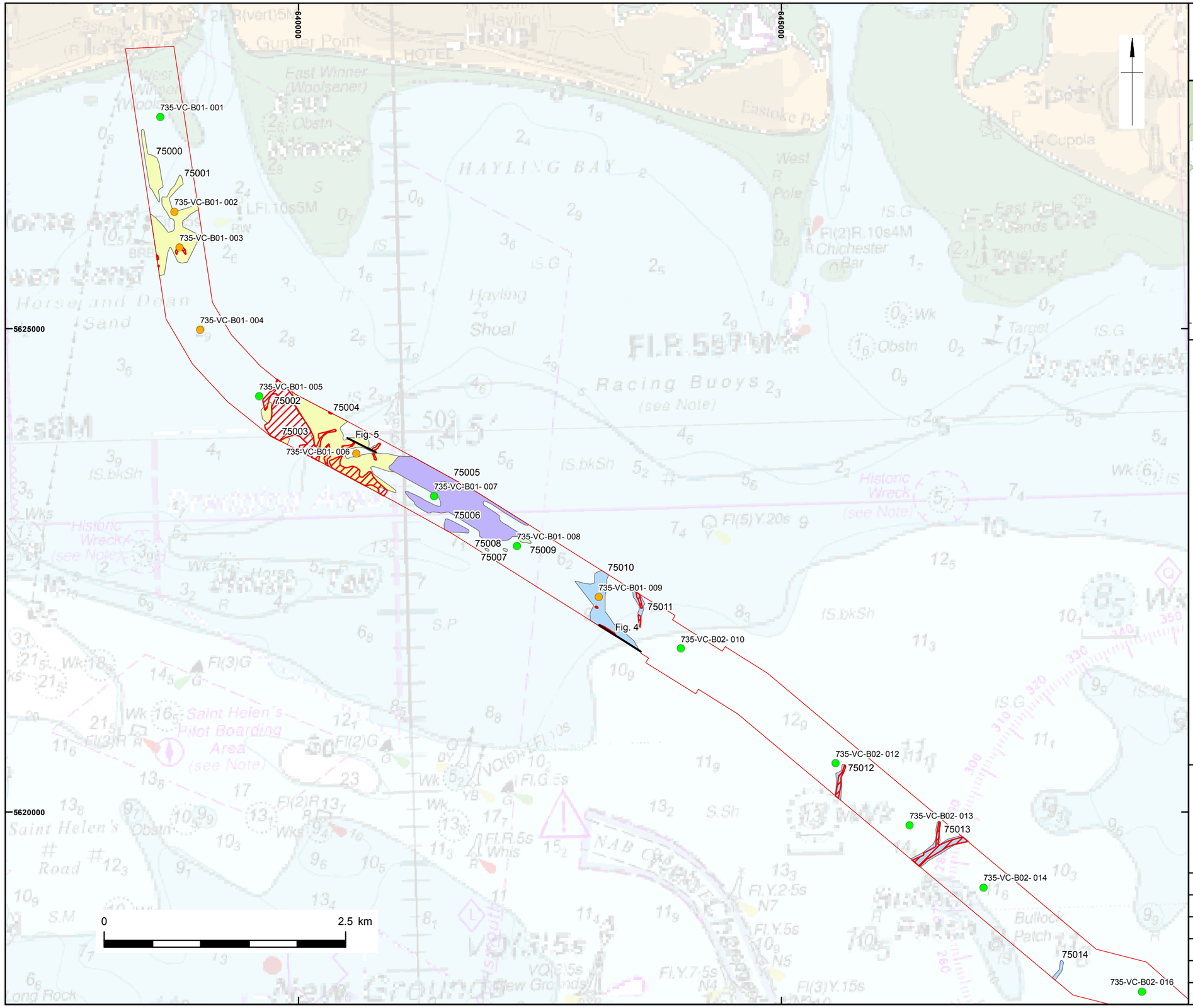
Unit	Unit Name	Geophysical Characteristics (1)	Archaeological Potential
3	Holocene Seabed Sediments (post-transgression) (Marine Isotope Stage (MIS) 1)	Generally observed as an occasionally well-layered unit with distinct basal reflector. Occasionally a veneer thickening into large sand waves and bank features up to 10m thick.	Considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites and other cultural heritage.
2	Pleistocene/early Holocene Sediments (Pre-transgression) (MIS 12 to 1)	Small shallow infilled channels with either acoustically chaotic fill, acoustically quiet fill, or fill characterised by sub-parallel internal reflectors.	Potential to contain *in situ* and derived archaeological material, and palaeoenvironmental material.
1	Tertiary sediments (Eocene)	Observed as a blanket deposit across much of the area, either acoustically chaotic or characterised by sub-horizontal layered reflectors.	Not of archaeological potential – Predates earliest occupation of the UK.

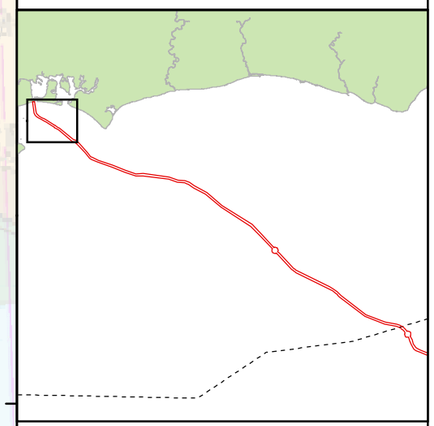
4.2.3 The assessment of the SBP data shows that the shallow geology within the UK sector of the Marine Cable Corridor can largely be described as predominantly clay bedrock with localised channel systems and palaeovalleys cut into its surface.

4.2.4 The lower (oldest) identified unit (**Unit 1**) is expected to be present, either directly below the seabed (BSB) or beneath a unit of modern marine sediments, throughout the entire UK sector of the Marine Cable Corridor. This unit is thought to comprise Eocene clays, predominantly thought to be the Bracklesham Group and the Barton Group.

4.2.5 In vibrocores, **Unit 1** is characterised by bluish-grey high to medium strength sandy silty clay that can be clearly distinguished from overlying Pleistocene and Holocene deposits. **Unit 1** was identified at 56 vibrocore locations and is occasionally present at seabed, but more typically at shallow depths (<6 m).

4.2.6 **Unit 1** pre-dates the earliest occupation of the UK and, as such, is unlikely to contain any archaeological artefacts or palaeoenvironmental material archaeological interest.





Marine Cable Corridor

Data example location

Possible gas

Channel

Complex channel

Fine-grained deposit

Simple cut and fill

Geoarchaeology Priority

- High
- Medium
- Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
Illustrator:	KL/KJF
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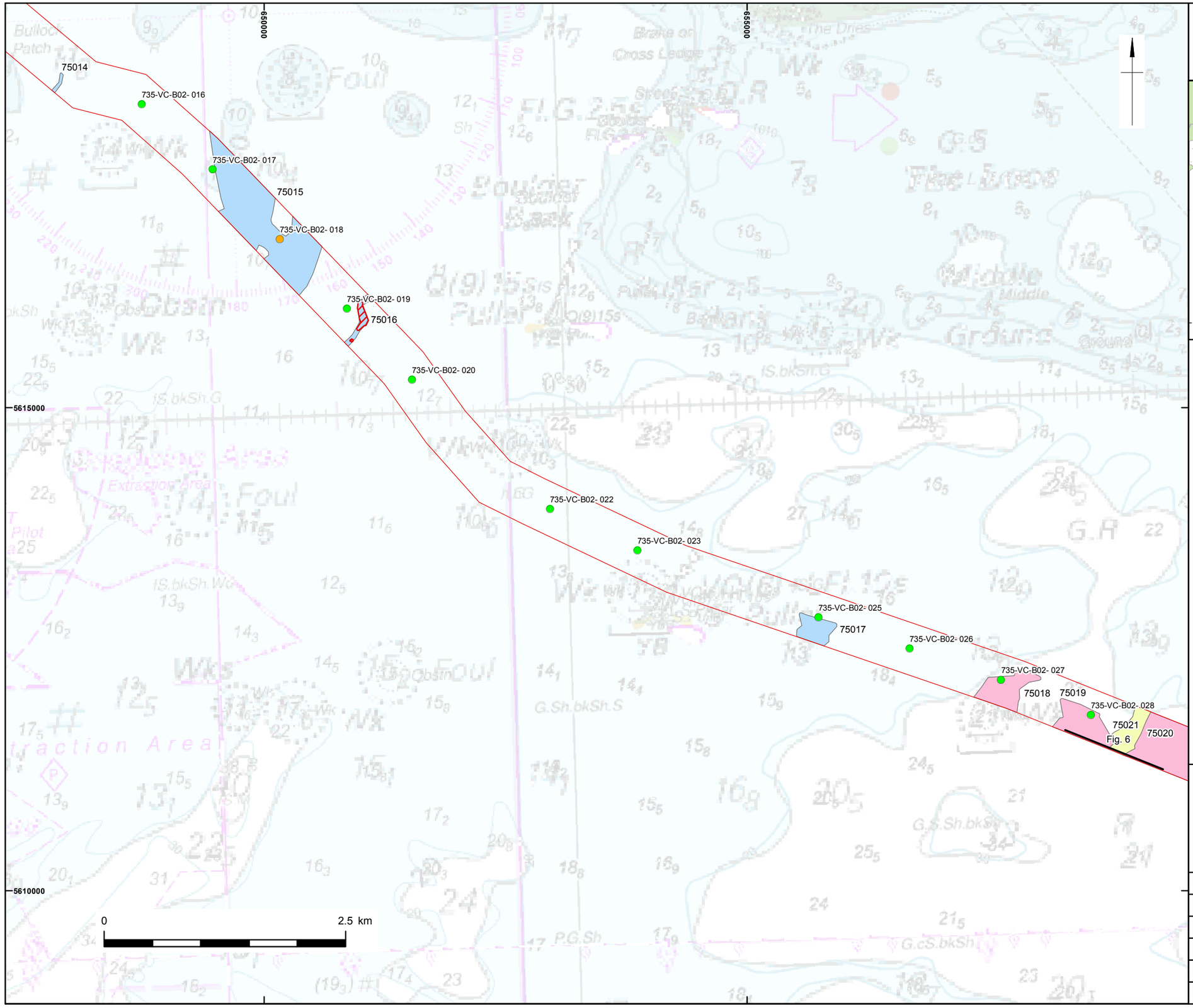
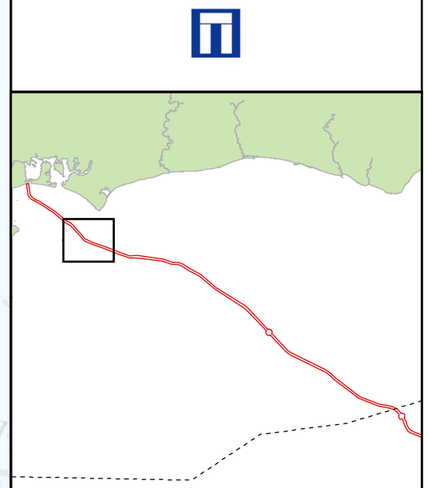
Palaeogeographic features of archaeological potential

Figure 3a





Marine Cable Corridor

Data example location

Possible gas

Channel

Complex channel

Erosion surface

Geoarchaeology Priority

High

Medium

Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
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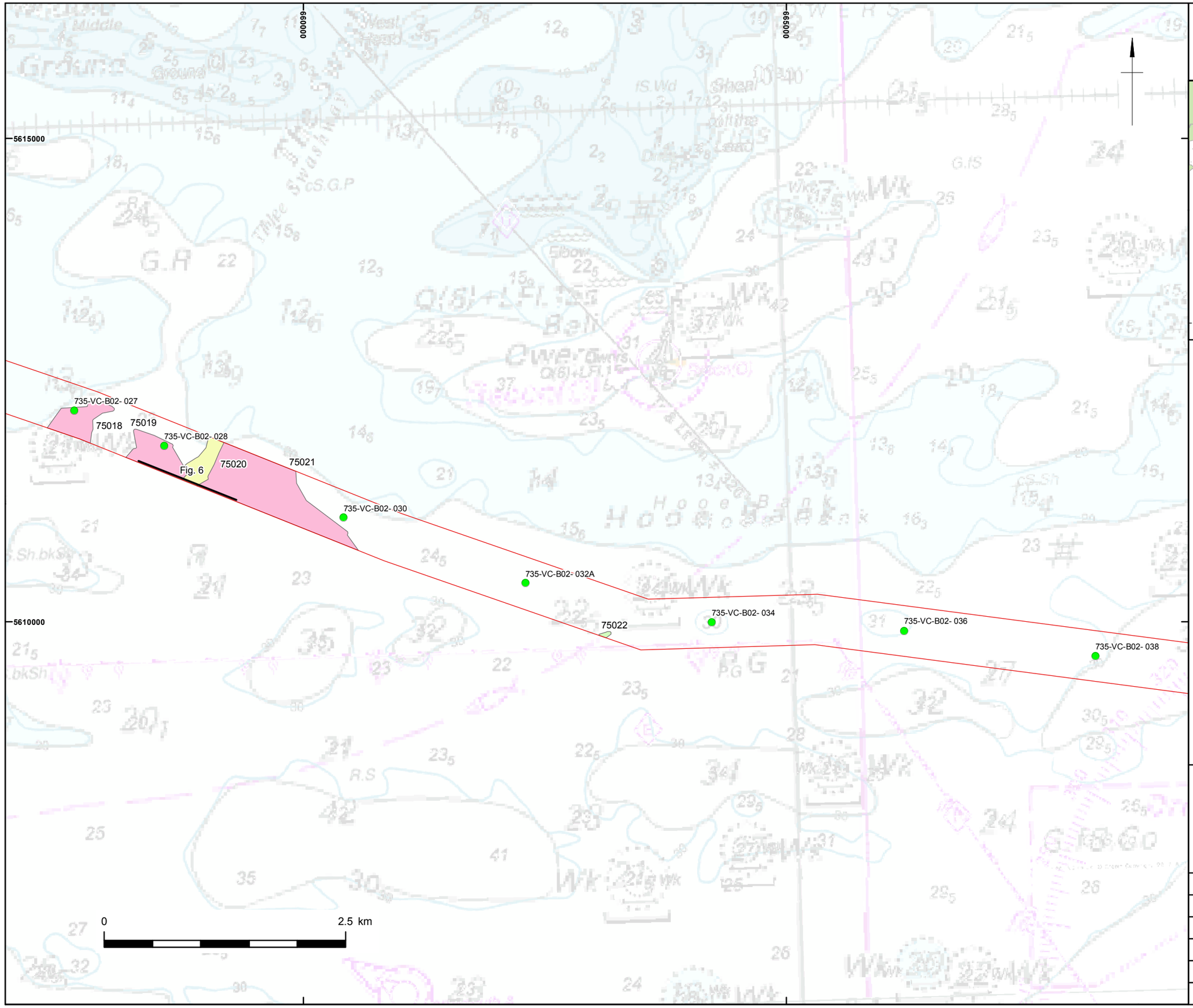
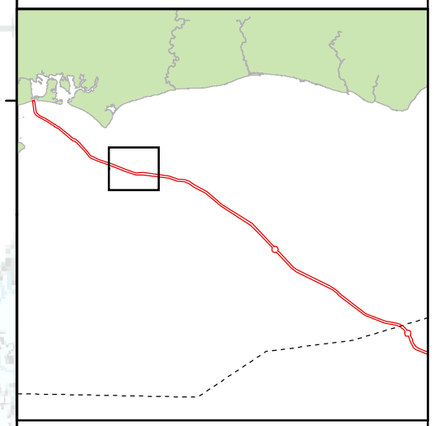
Palaeogeographic features of archaeological potential

Figure 3b





Marine Cable Corridor

Data example location

Complex channel

Erosion surface

Simple cut and fill

Geoarchaeology Priority

High

Medium

Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
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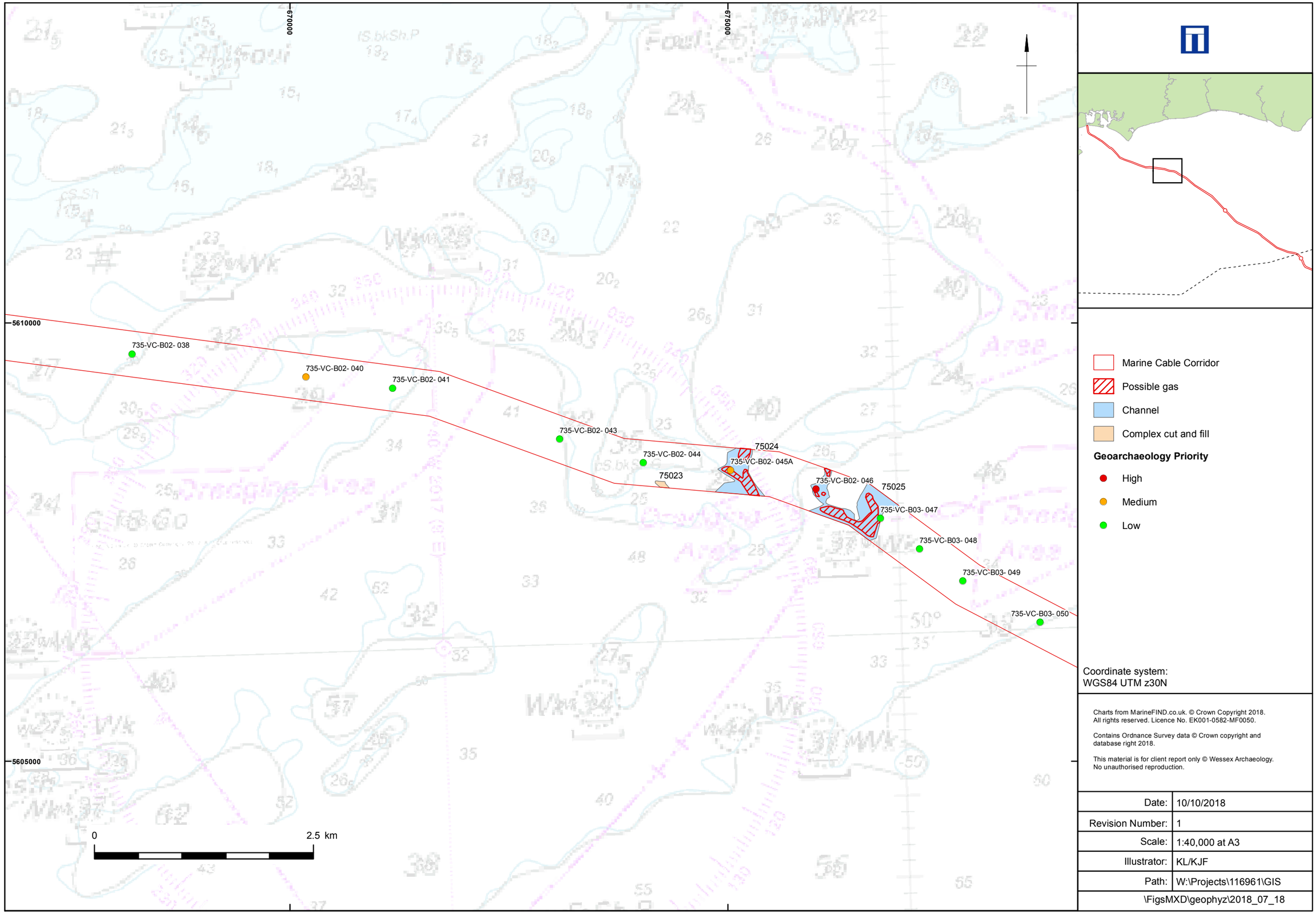
Palaeogeographic features of archaeological potential

Figure 3c



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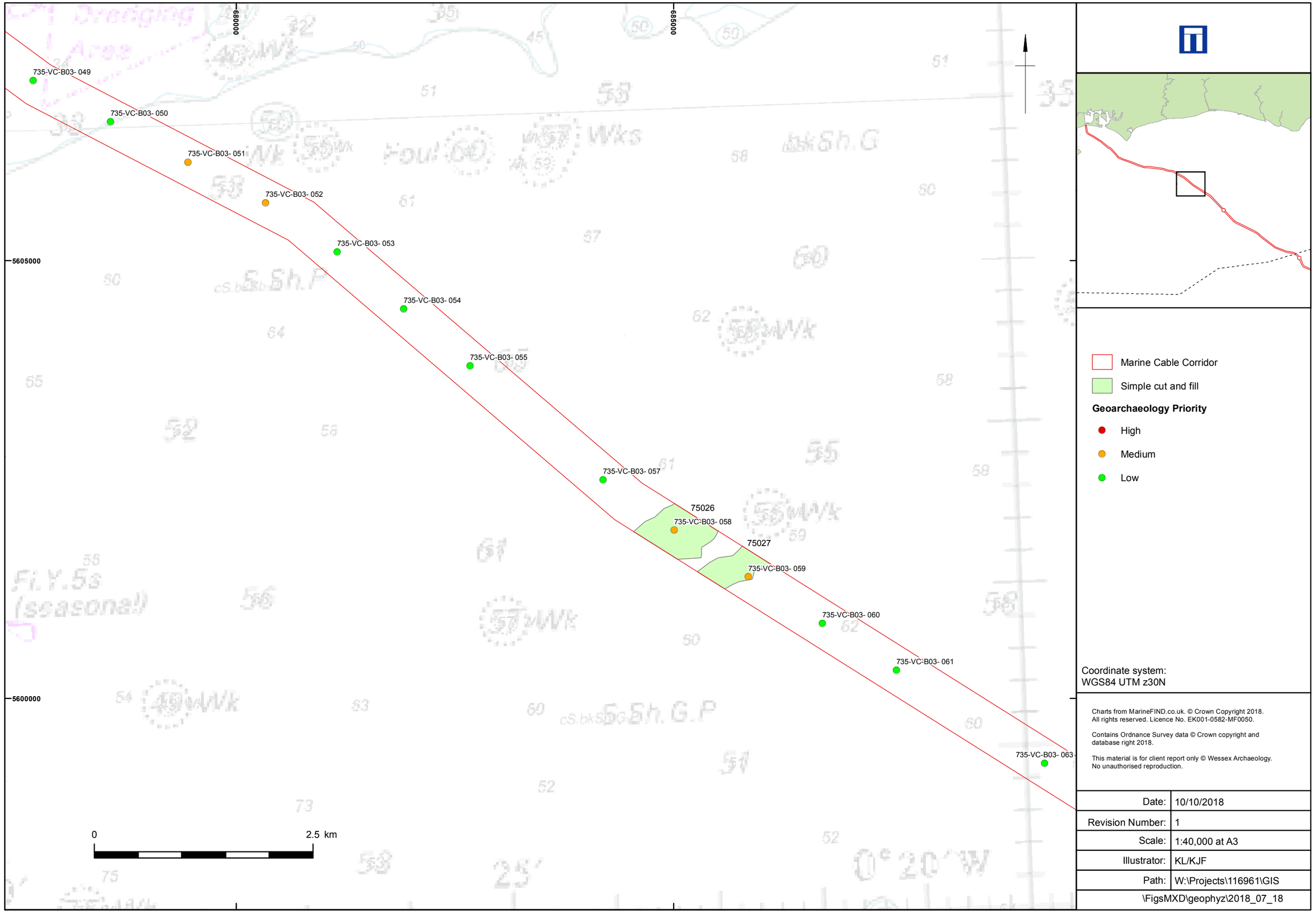
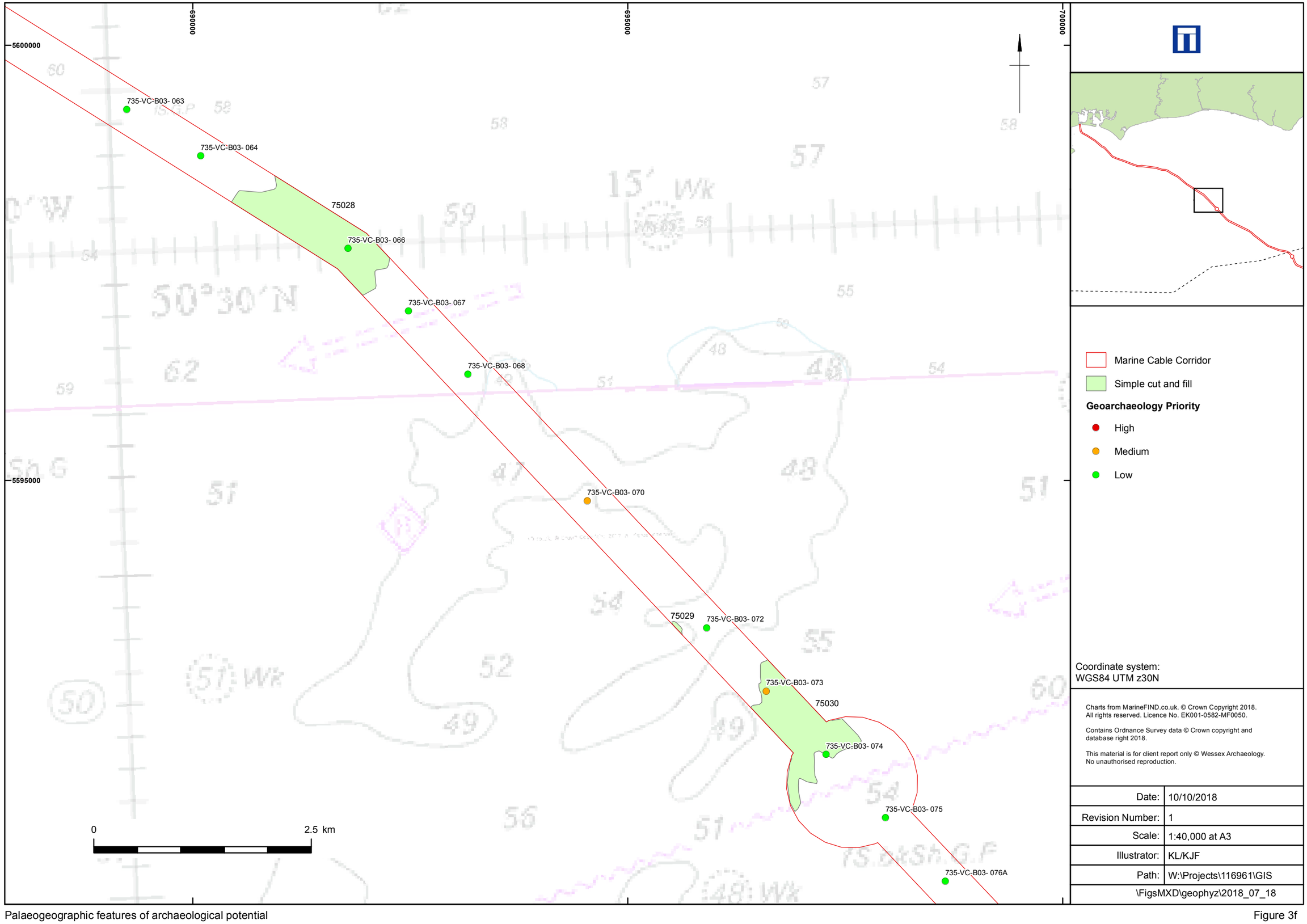
Palaeogeographic features of archaeological potential

Figure 3d



Palaeogeographic features of archaeological potential

Figure 3e



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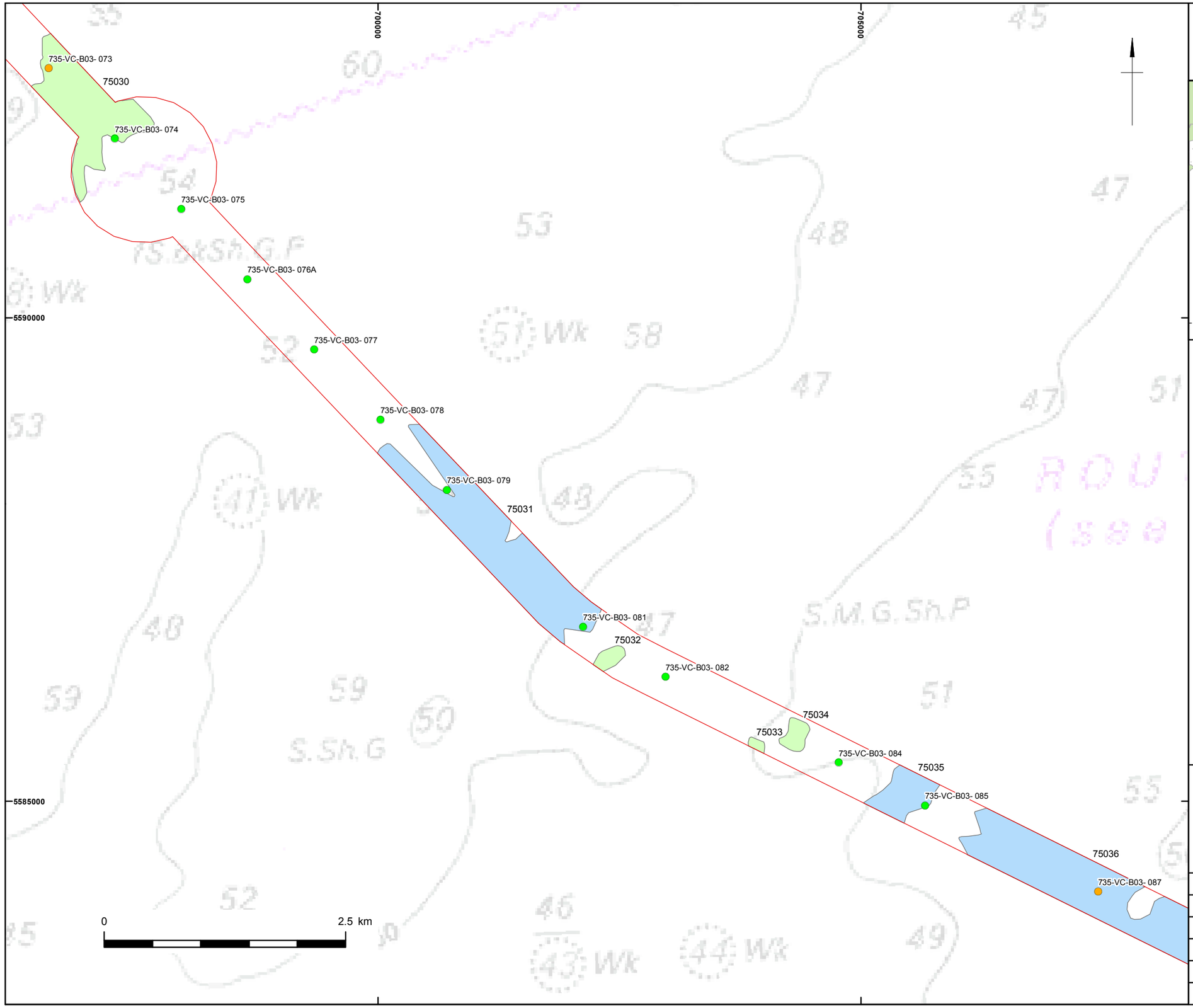
Palaeogeographic features of archaeological potential

Figure 3f



Marine Cable Corridor

Channel

Simple cut and fill

Geoarchaeology Priority

- High
- Medium
- Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
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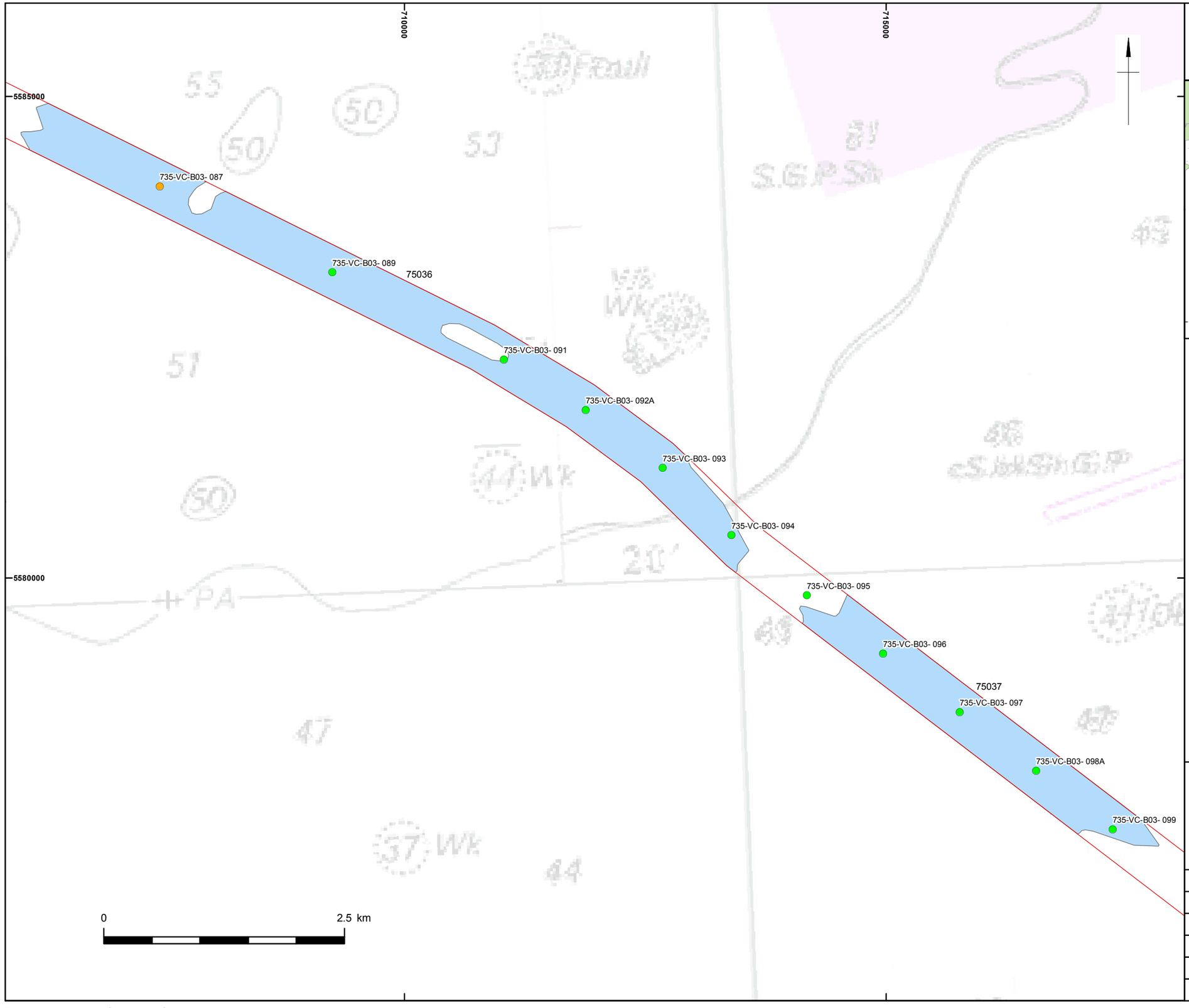
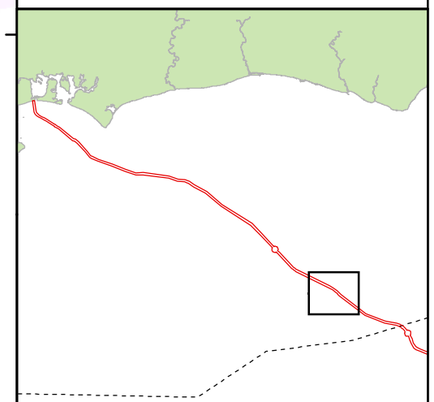
Palaeogeographic features of archaeological potential

Figure 3g





Marine Cable Corridor

Channel

Geoarchaeology Priority

High

Medium

Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
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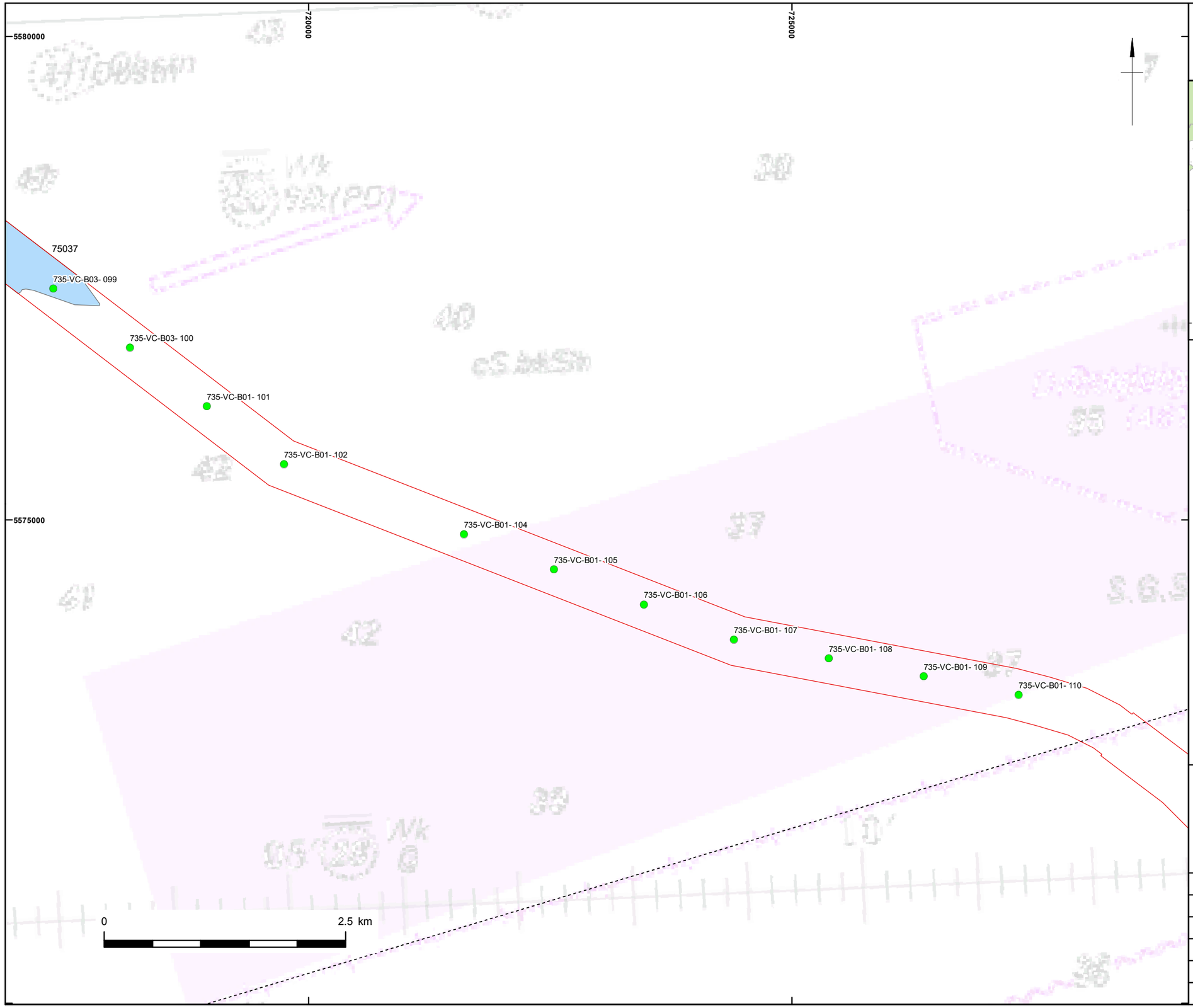
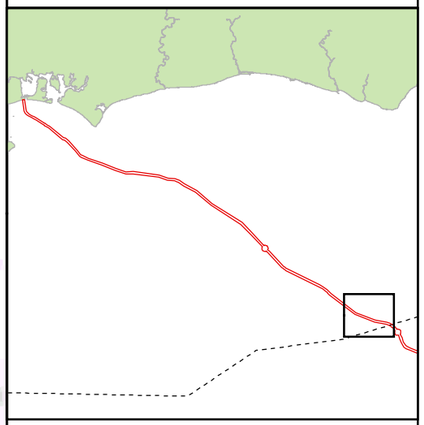
Palaeogeographic features of archaeological potential

Figure 3h





Marine Cable Corridor

UK European Economic Zone (EEZ)

Channel

Geoarchaeology Priority

High

Medium

Low

Coordinate system:
WGS84 UTM z30N

Date:	10/10/2018
Revision Number:	1
Scale:	1:40,000 at A3
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Palaeogeographic features of archaeological potential

Figure 3i

4.2.7 The features of potential archaeological interest are largely channel deposits (**Unit 2**), stratigraphically situated directly above, and cutting into, the top of **Unit 1**. As mentioned in **Section 4.1**, these would have formed during periods of low sea level, when the area would have been exposed as a terrestrial landscape.

4.2.8 A total of 20 channel or channel complex features have been identified within the Marine Cable Corridor (see **Appendix III** for full list). Eleven of these have acoustically quiet or well layered fill (features **75001-4**, **75010**, **75011**, **75013-6** and **75020**) (**Figures 4** and **5**), which may indicate that the sediments are fine-grained or deposited in a low energy environment. Vibrocores located within features **75001**, **75010** and **75015** recovered soft sandy clay that was interpreted as alluvium which are fine-grained deposits laid down by water in and along the margins of river channels. These deposits have the potential to preserve non-organic microfossils such as foraminifera, ostracods and diatoms (**Table 7**).

4.2.9 The remaining nine channel features appear to have acoustically chaotic, occasionally cross-cutting fill (features **75000**, **75012**, **75017**, **75024**, **75025**, **75031** and **75035-7**), which may suggest a coarser, possibly gravelly fill, deposited in a higher energy environment. Deposits recovered from features **75017**, **75031**, **75035** and **75036** support this interpretation as clayey sandy gravels with occasional cobbles, typical of high-energy fluvial environments, were identified. The cross-cutting nature of seismic reflectors, coarse-grained nature of deposits and broad channel width suggest these channels were part of an extensive braided channel network that most likely existed during colder phases during the Pleistocene.

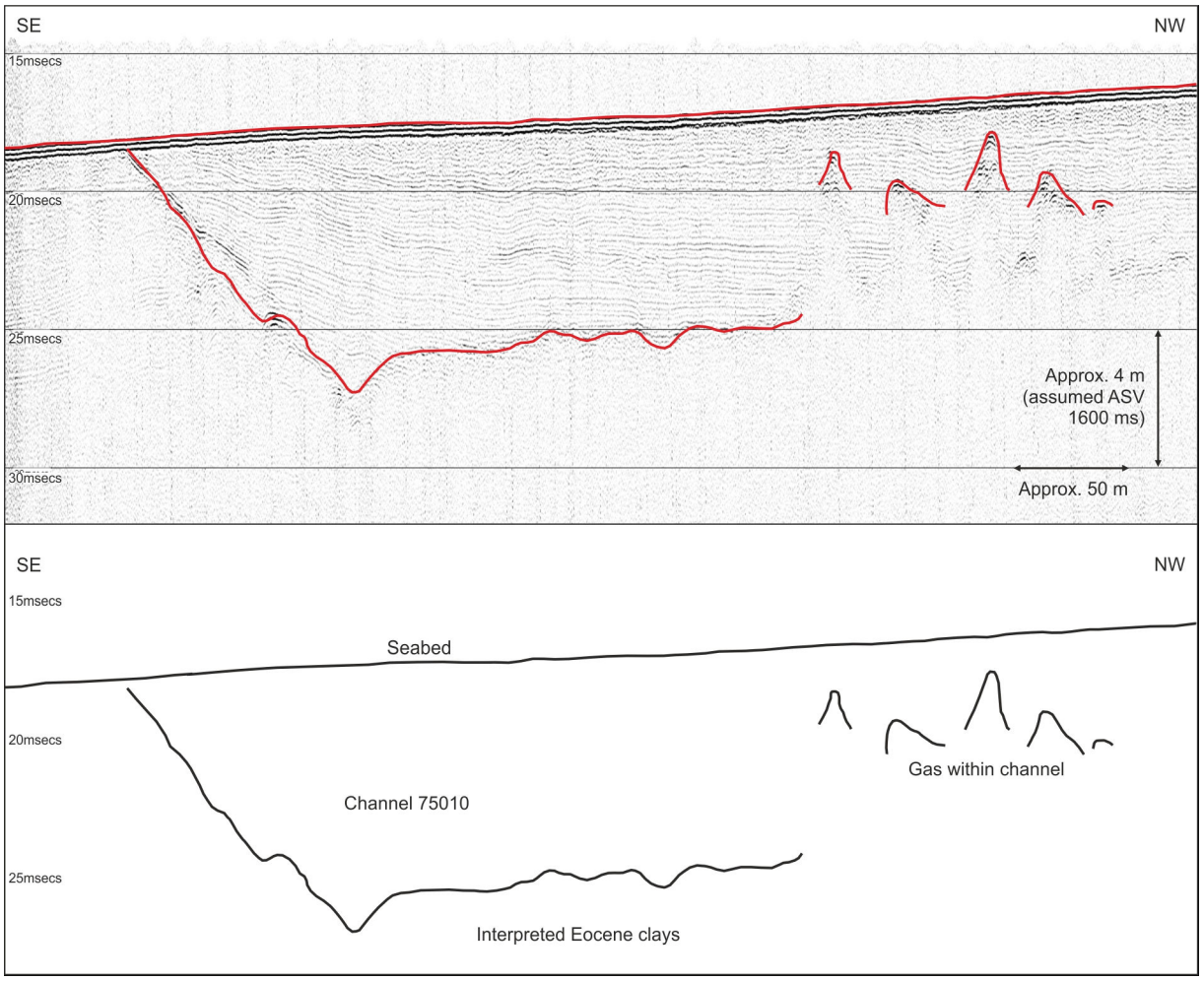
4.2.10 Within the nearshore section, the channelling appears to be more complex (features **75000-4**), with numerous dipping and cross cutting horizons. This is possibly due to the fact that the nearshore section would have been exposed as a terrestrial environment for a longer period of time than offshore but could also reflect a coastal environment dissected by tidal creeks. The fine-grained nature of deposits recovered in vibrocores 735-VC-B01-002 and 735-VC-B01-003 within feature **75001** are more indicative of a tidal environment.

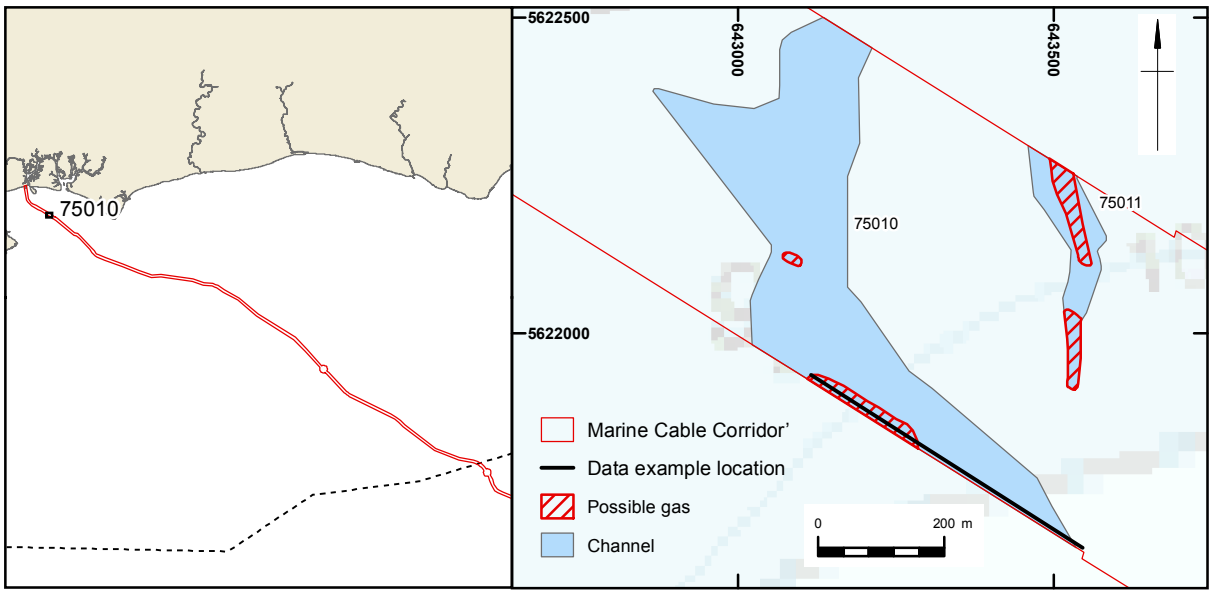
4.2.11 Several features appear to have multiple phases of fill (**75003**, **75004**, **75015**, **75020**, **75031**, **75036** and **75037**), which may reflect the reactivation of the channels within or during different glacial/interglacial periods or changing depositional environments (fluvial-estuarine-marine) as river valleys flood during sea-level rise. Deposits recovered from features **75036** and **75036** support the former, while deposits from feature **75031** support the latter, suggesting both scenarios are possible.

4.2.12 While paleochannels are a palaeolandscape feature of archaeological interest, understanding the taphonomy of the coarse-grained fluvial deposits within them is challenging using lithology alone and requires dating or biostratigraphic techniques. However, the coarse-grained nature of deposits makes them unsuitable for dating and preservation of palaeoenvironmental material is low. The geoarchaeological potential of these fluvial deposits is therefore considered low (**Table 7**).

4.2.13 Some of the features appear to have high amplitude or chaotic reflectors at the base or within the fill (**75001-4**, **75010-3**, **75016**, **75024**, **75025**), occasionally causing the blanking of lower horizons (**Figure 4**). It is possible that this is indicative of increased gas content caused by the microbial breakdown of organic matter within the channels, although it may also represent coarser sediments at the base of the channel.

4.2.14 Fragments of organic matter within fine-grained laminated sediments were recorded in vibrocore 735-VC-B02-045A which penetrates feature **75024,** and a thin (18 cm) peat along





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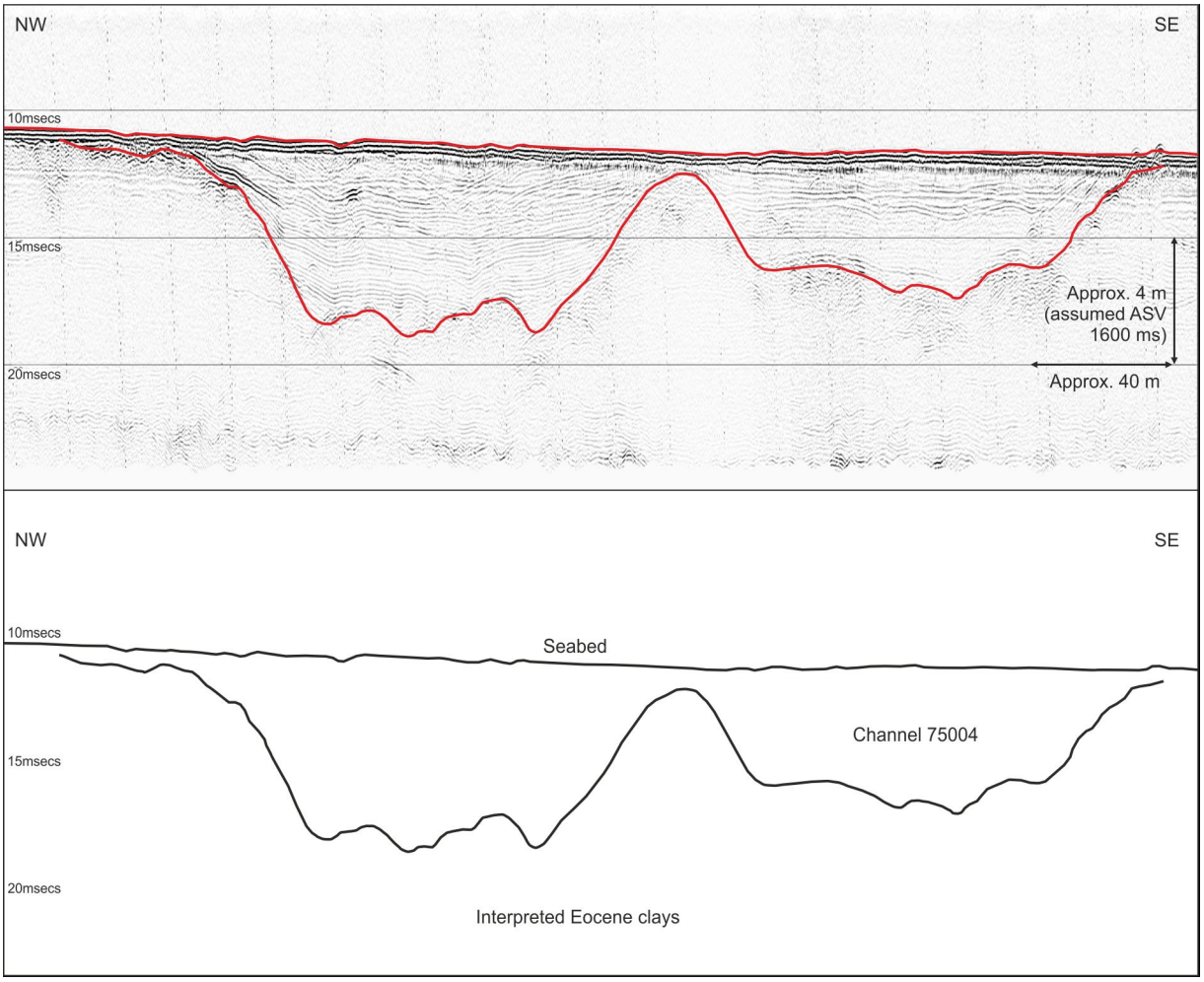
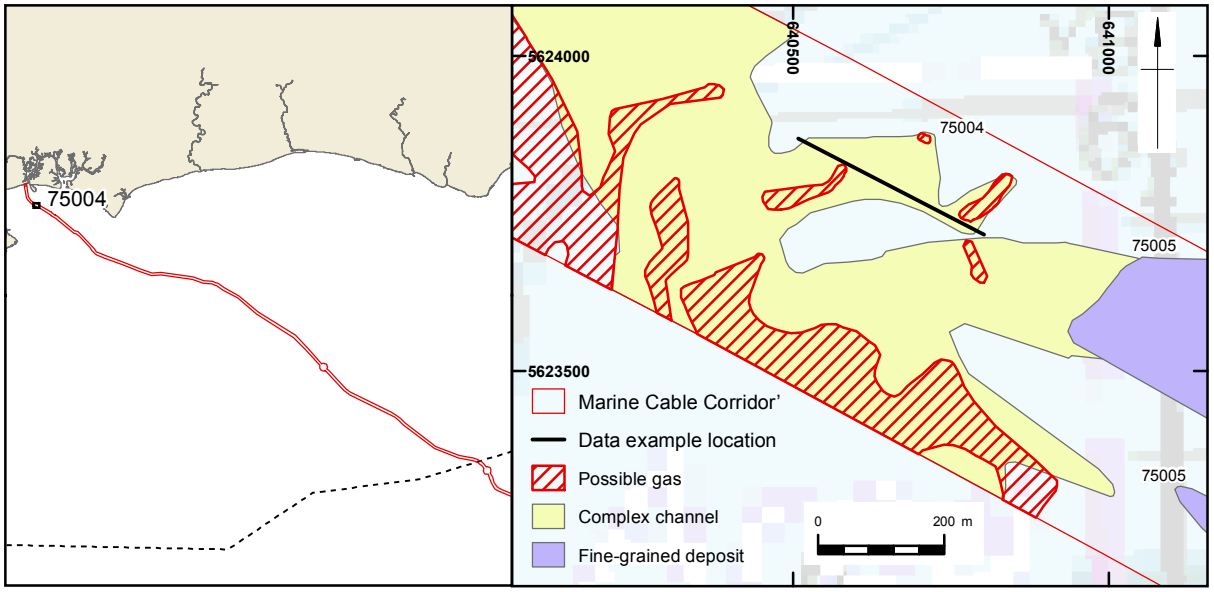
Palaeogeographic feature data example – 75010

Figure 4





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Palaeogeographic feature data example – 75004

Figure 5

with organic-rich fine-grained alluvium deposits, were recovered in 735-VC-B02-046 which intercepts feature **75025**. The presence of organic rich deposits in these cores supports the interpretation of increased gas content from geophysical data.

4.2.15 The sequence of deposits in 735-VC-B02-046 (feature **75025**) is characterised by bedrock (**Unit 1**) overlain by organic alluvium, followed by peat (**Unit 2**), which is buried below modern seabed sediments (**Unit 3**). These deposits likely represent a river channel that became abandoned allowing peat to form before being flooded by the sea. The organic deposits in 735-VC-B02-046 have been assigned high priority status due to their potential to preserve paleoenvironmental material suitable for dating and landscape reconstructions (**Table 7**).

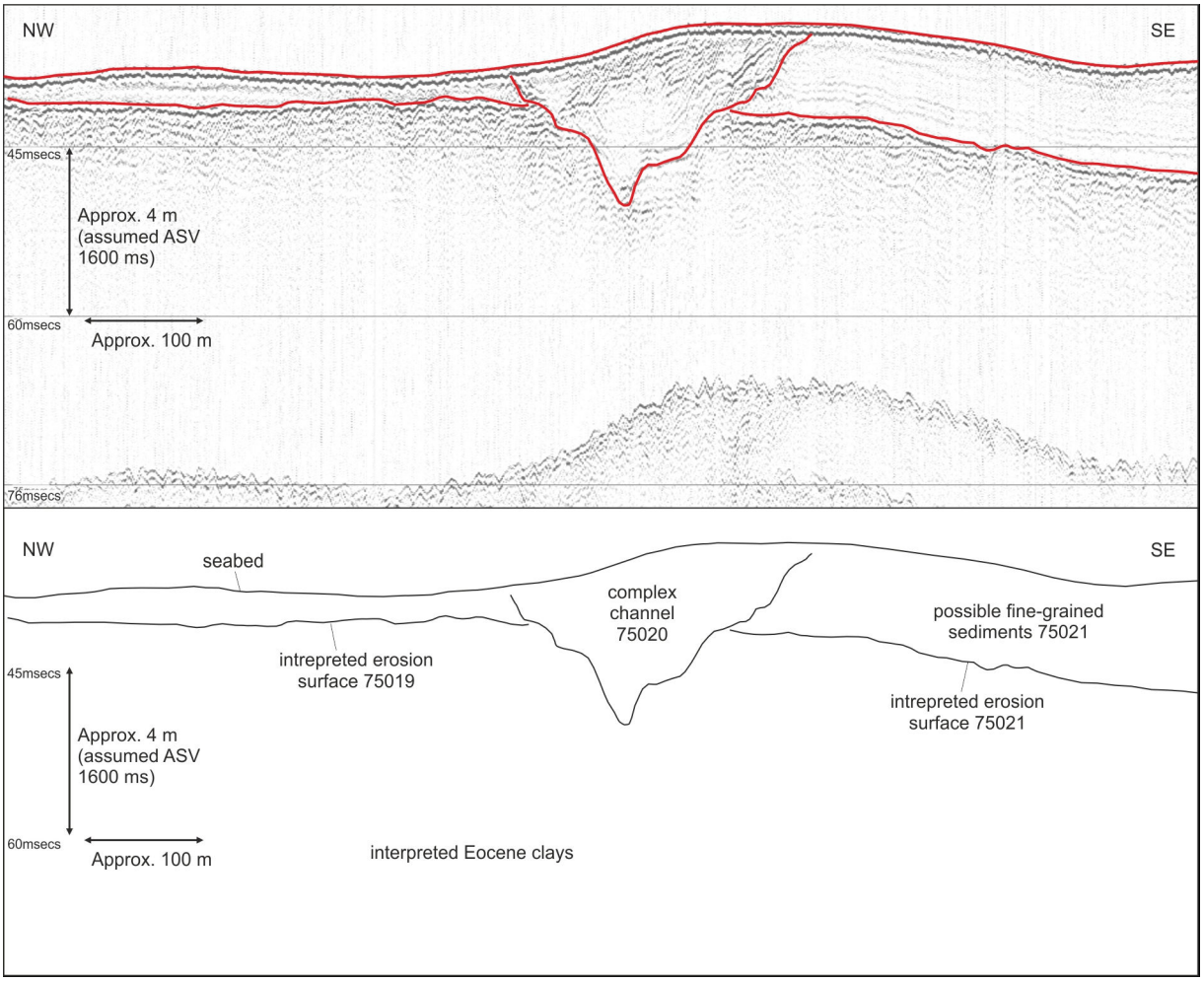
4.2.16 Vibrocore 735-VC-B02-045A is located 1 km west of 735-VC-B02-046 in what appears to be a separate channel feature (feature **75024**). Fragments of organic material are recorded within fine-grained alluvium (**Unit 2**). These deposits have been assigned medium priority status as while they have the potential to preserve palaeoenvironmental material, they are likely reworked (**Table 7**).

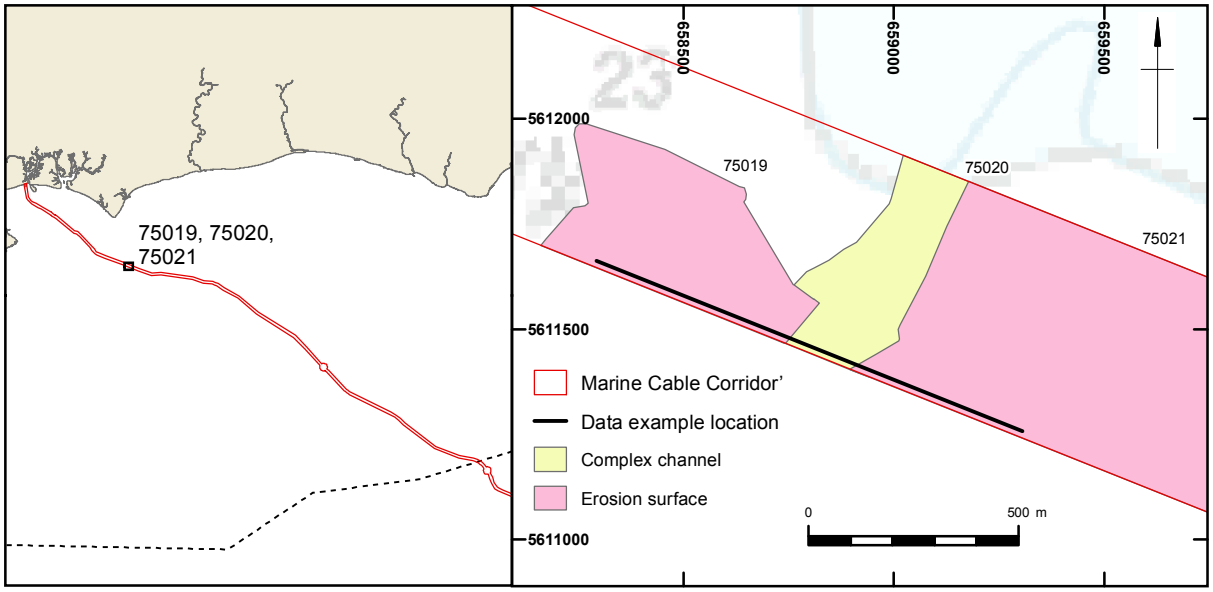
4.2.17 Features **75007-9, 75022, 75029** and **75032-4** are thought to likely be of a similar age as the channels described above, but they are interpreted as simple cut and fill features. These features were only identified along a few survey lines and could not be traced any distance as coherent palaeochannels. It is possible that they are the remnants of eroded palaeochannel systems, but, as their nature is less certain, they are considered of lower archaeological potential. No vibrocores were recovered from these features.

4.2.18 Features **75026-8** and **75030** have also been classified as simple cut and fills. While these features do extend further across the survey lines, they are shallower and less well defined in comparison to most of the channel features, and therefore their formation is less certain. As such, they have been classified as simple cut and fills and considered of lower archaeological potential compared to the other channels identified within the Marine Cable Corridor. Features **75026**, **75027**, **75028** and **75030** have been penetrated by five vibrocores and the deposits comprise sand which is occasionally gravelly or contains clay laminations, collectively interpreted as being deposited in a fluvial environment (**Unit 2**). These smaller cut and fill features may have formed at a different time under lower energy regimes to the more complex channels discussed earlier. These deposits have been assigned low priority status as the potential for preserving palaeoenvionmental material is considered low (**Table 7**).

4.2.19 Feature **75023** is similar to the aforementioned cut and fill features but appears to have more than one phase of fill and has therefore been classified as a complex cut and fill feature. No vibrocores penetrate this feature.

4.2.20 Three features (**75018**, **75019** and **75021**) have been classified as erosion surfaces. These are generally broad scale, regional features associated with erosion during transgression and regression, or during periods of significant subaerial exposure. On the SBP data, these are seen as a distinct basal reflector overlain by an acoustically quiet unit. Although the overlying unit looks similar to modern marine sediments, a complex channel (feature **75020**) can be seen cutting through it and the base of the interpreted erosion surface, indicating that it must have formed prior to the channel feature **75020** (**Figure 6**).This would suggest the erosion surface pre-dates transgression and may reflect a former land surface and thus has the potential to contain archaeological sites in primary and/or secondary contexts within the overlaying sediments.





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Palaeogeographic feature data example – 75019, 75020 and 75021 Figure 6

4.2.21 Vibrocores from features **75018** and **75019** comprise a thin (<1 m) veneer of marine seabed sediments (**Unit 3**) overlying bedrock (**Unit 2**) and there is no evidence of a former land surface. However, vibrocores 735-VC-B02-026A and 735-VC-B02-040 preserve a ~30 cm deposit of gravel with organic material filling its matrix (**Unit 2**), which may be indicative of subaerial exposure of a former land surface, thus creating a palaeosol. The geoarchaeological potential of this deposit is considered medium as it is not known if the organics are in-situ or reworked (**Table 7**).

4.2.22 Two features have been classified as fine-grained deposits (**75005** and **75006**). Both appear to be part of the same feature, possibly indicating that it has been partially eroded. The deposit has a distinct, undulating base and relatively well-layered fill, possibly with more than one phase of deposition. These features are identified close to channel feature **75004**, and therefore it is possible that they may represent an associated feature such as overbank or floodplain deposits. No vibrocores penetrate these features, but 735-VC-B01-007 lies 20 m away and comprises a thin veneer of marine seabed sediment (**Unit 3**) overlying bedrock (**Unit 1**) with no evidence of fin-grained deposits.

4.2.23 Vibrocores 735-VC-B01-001 and 735-VC-B01-004 located in the nearshore area of the Marine Cable Corridor comprise a sequence of well sorted gravel deposits that show characteristics of beach deposits. Given their location, these deposits are likely an extension of the modern gravel beach near Fort Cumberland, Portsmouth. In 735-VC-B01-004 these beach deposits overlie a sequence of laminated clays with organics, which lie on top of sandy gravels interpreted as Pleistocene fluvial deposits. This sequence may document a shift from a fluvial to inter-tidal and then coastal environment in response to rising Holocene sea level.

4.2.24 Vibrocore 735-VC-B06-182, located in the nearshore area, recovered a sequence of fluvial gravels overlain by peat, in turn overlain by organic-rich alluvium. These deposits have high geoarchaeological potential and while they do not correspond to a palaeolandscape feature mapped from geophysics, they may document development of a terrestrial landscape prior to early Holocene sea-level rise.

4.2.25 **Unit 3** is a modern marine sediment deposited since the Holocene marine transgression. The unit is described by BGS as gravelly sands (BGS 1989) and is likely present as a thin veneer across much of the site, although this is not always clearly visible on the SBP data. Within the nearshore section, **Unit 3** is seen in some areas as a blanket deposit with depths up to 7.3 m BSB. Further offshore, **Unit 3** has also been worked into occasional sandwaves.

4.2.26 In vibrocores, **Unit 3** is typically characterised by sandy gravel or gravelly sand, although it is generally a well sorted sand in the nearshore, and it represents modern seabed sediments. In some vibrocores, a slightly sandy gravel deposit lies below the seabed sediments. This deposit is interpreted as a lag deposit which forms during sea-level transgression when marine currents winnow out and remove finer grained material leaving behind a coarse gravel. This deposit has low geoarchaeological potential but is a useful marker for establishing if over/underlying deposits formed before or after Holocene transgression (**Table 7**).

4.2.27 Due to its age and depositional environment, **Unit 3** is not considered of archaeological potential in itself. However, in areas of mobile sediment, **Unit 3** has the potential to periodically bury seabed archaeological sites such as shipwrecks.

Table 7 Shallow stratigraphy of the Marine Cable Corridor based on geotechnical data

Unit	Unit Name	Sediment type and depositional environment	Geoarchaeological Potential
3	Holocene Seabed Sediments (during/post-transgression MIS 1)	Marine – sandy gravel and gravelly sand with high shell content	Low – formed in marine environment
		Lag – well sorted gravel	
2	Holocene (MIS 1)	Beach - well sorted sandy gravel	Low - limited dating and palaeoenvironmental potential
	Pleistocene/early Holocene sediments (Pre-transgression MIS 12 to 1)	Palaeosol - gravel with organic	Medium - comprises organic content but may be reworked
		Peat - decomposed organic matter	High – potential to preserve palaeoenvironmental and dating material
		Organic alluvium - organic silts and clay	Medium – comprises organic content but may be reworked
		Alluvium - sand, silt and clay, occasionally laminated	Medium – potential to preserve non-organic microfossils
	Pleistocene (MIS 12 to 2)	Fluvial – sand gravel	Low – limited dating and palaeoenvironmental potential
1	Tertiary sediments (Eocene)	High to medium strength clays with some interbedded sands and silts.	Low – predates earliest occupation of UK

4.2.28 Overall, geophysical data is in good agreement with geotechnical data. Of the 94 vibrocores assessed, seventy-seven have been assigned low priority status, sixteen medium priority status, and one was assigned high priority status (**Appendix IV**).

4.2.29 Vibrocore 735-VC-B02-046 (high priority) was split open under supervision of a geoarchaeologist at In Situ Site Investigation on 30th August 2018. The core was described in detail and the results are presented in **Appendix VIII**.

4.2.30 The peat deposit between 0.20 m and 0.40 m is described as a highly compacted woody peat that becomes less decomposed towards the top. This peat overlies laminated silty clay that is occasionally organic in places. The presence of shells within the clay suggests deposition in an estuarine environment. It is therefore likely the peat was deposited in a coastal marsh environment and is expected to be mid-Holocene (Mesolithic) in age.

5 MARITIME AND AVIATION ARCHAEOLOGY BASELINE

5.1 Introduction

5.1.1 The following assessment of the maritime resource is based on records of known shipwrecks, aircraft crash sites and obstructions combined with recent archaeological assessment of geophysics data.

5.2 Designated Sites

5.2.1 There are currently no sites within the ASA 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 could be used to protect marine archaeological sites.

5.3 Known Maritime and Aviation Sites

5.3.1 There are two charted wrecks located within the Marine Cable Corridor (**70184**; **70193** described below). There are no known aircraft crash sites located within the Marine Cable Corridor. The potential for the discovery of previously unknown shipwreck sites and aircraft crash sites and material is discusses below.

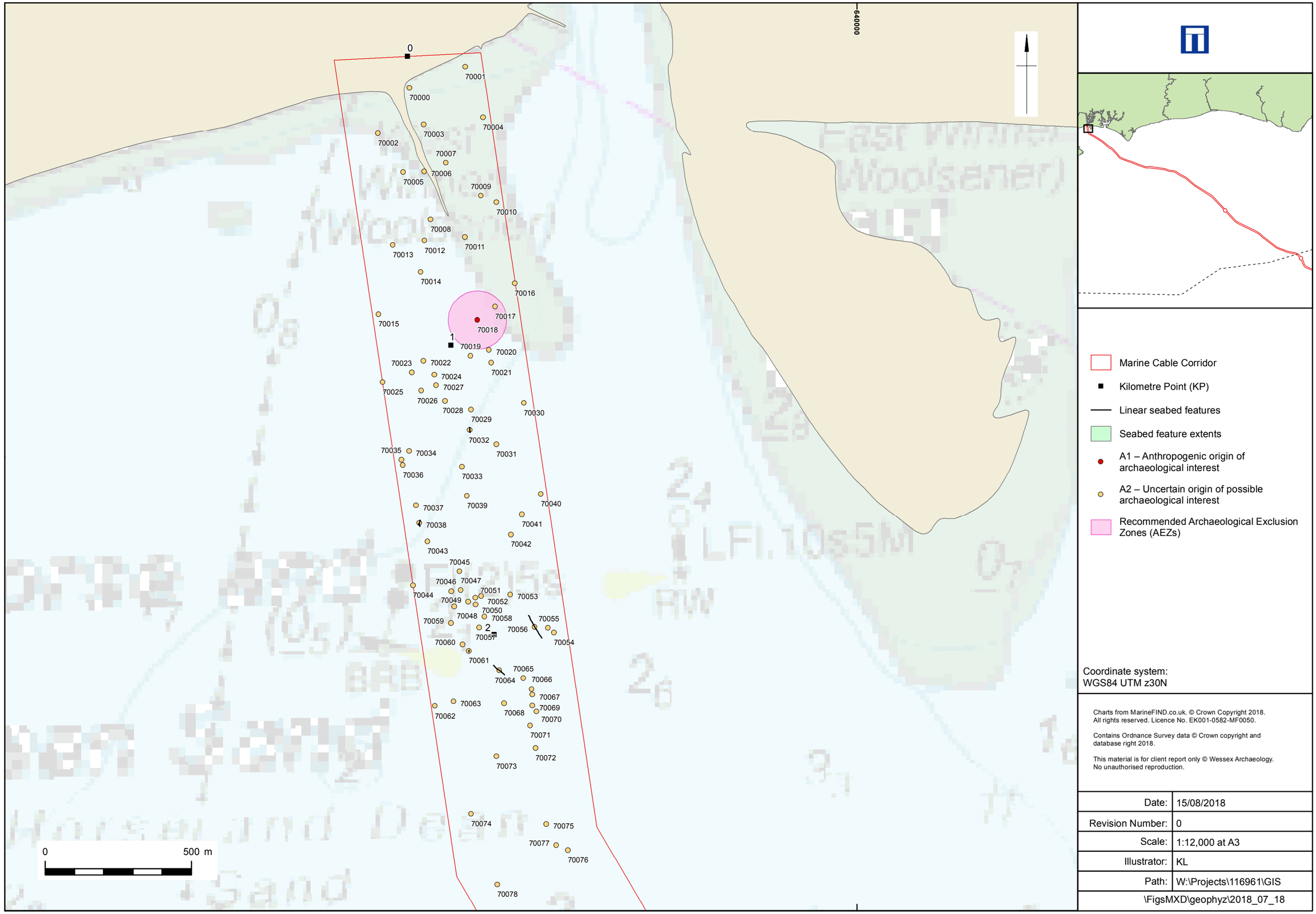
5.4 Geophysical Seabed Features Assessment

5.4.1 An archaeological assessment of the 2017 geophysical survey datasets (MMT Sweden) was undertaken by Wessex Archaeology (**Figures 7a – 7z2**). Within the Marine Cable Corridor, a total of 387 geophysical anomalies were identified within the geophysical data after the grouping and discrimination phase. A full gazetteer of anomalies is presented in **Appendix V**, with the A1 anomalies in bold. These anomalies were discriminated using Table 4 (see **Section 3.3**) as follows (**Table 8**):

Table 8 Features of archaeological potential within the UK section of the Marine Cable Corridor

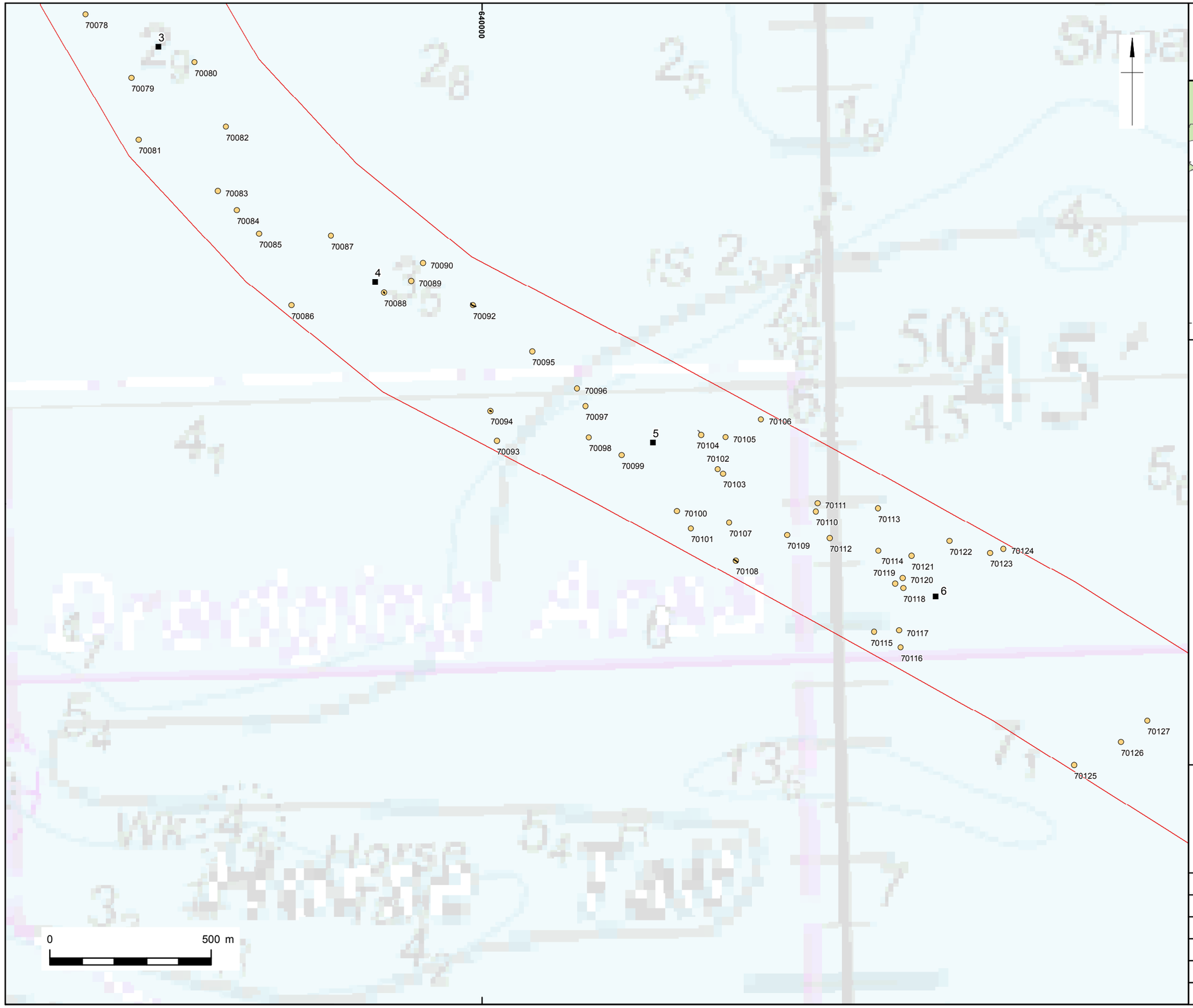
Archaeological Discrimination	Number of Anomalies	Interpretation
A1	4	Anthropogenic origin of archaeological interest
A2	383	Uncertain origin of possible archaeological interest
A3	0	Historic record of possible archaeological interest with no corresponding geophysical anomaly
Total	**387**	

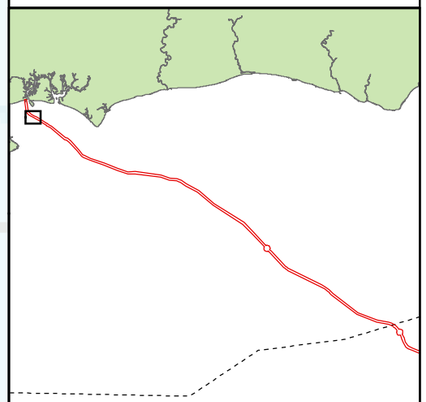
5.4.2 Furthermore, these anomalies can be classified by probable type, which can further aid in the assigning of archaeological potential and importance (**Table 9**).



Seabed Features of Archaeological Potential

Figure 7a





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

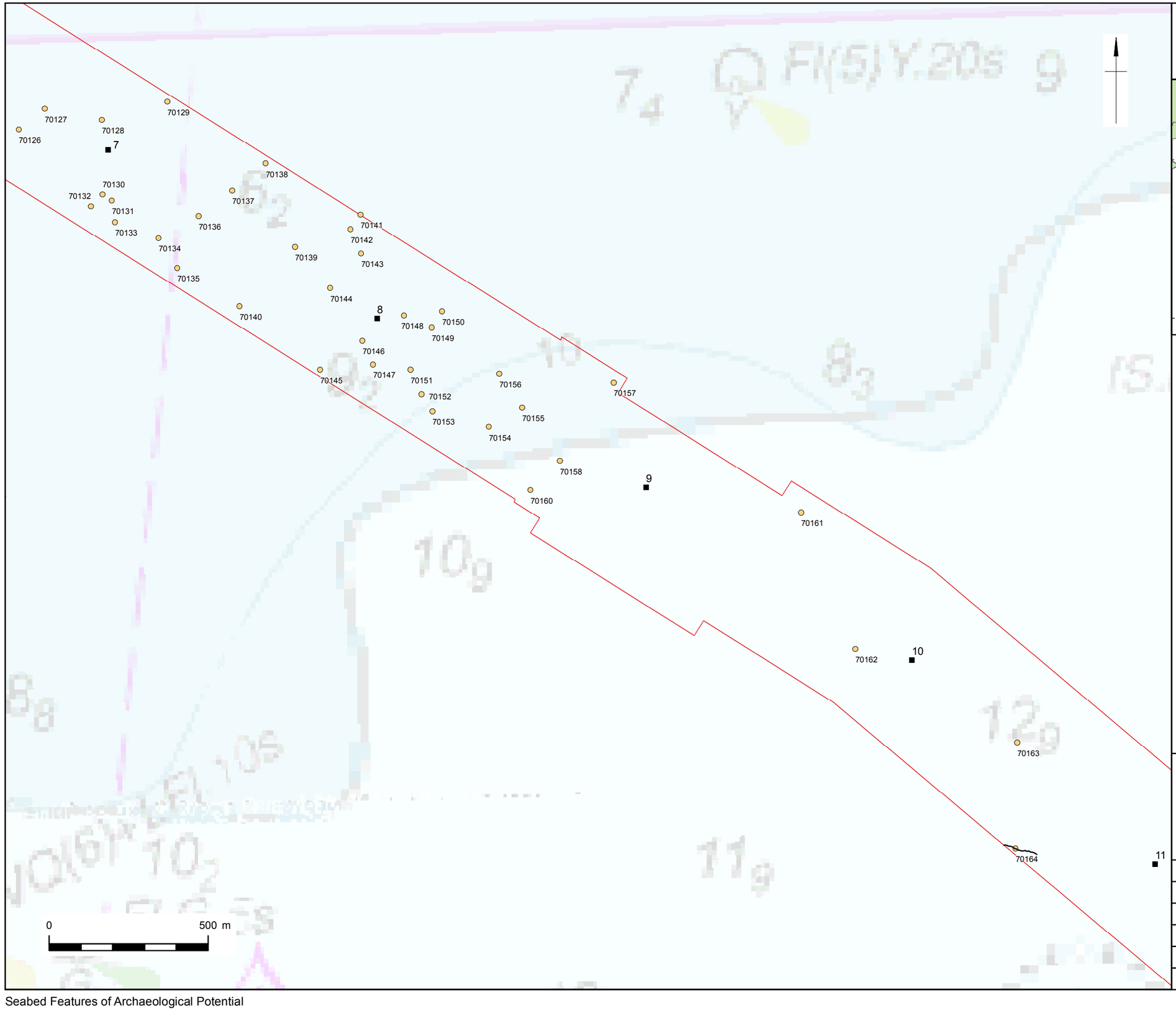
A2 – Uncertain origin of possible archaeological interest

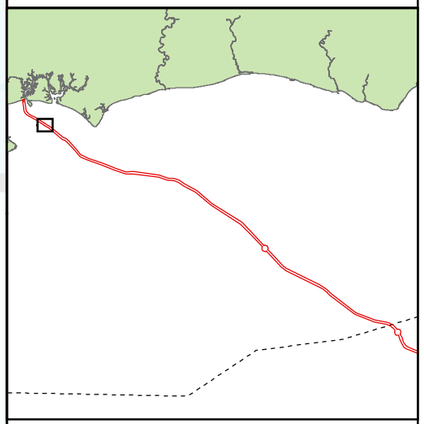
Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7b





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

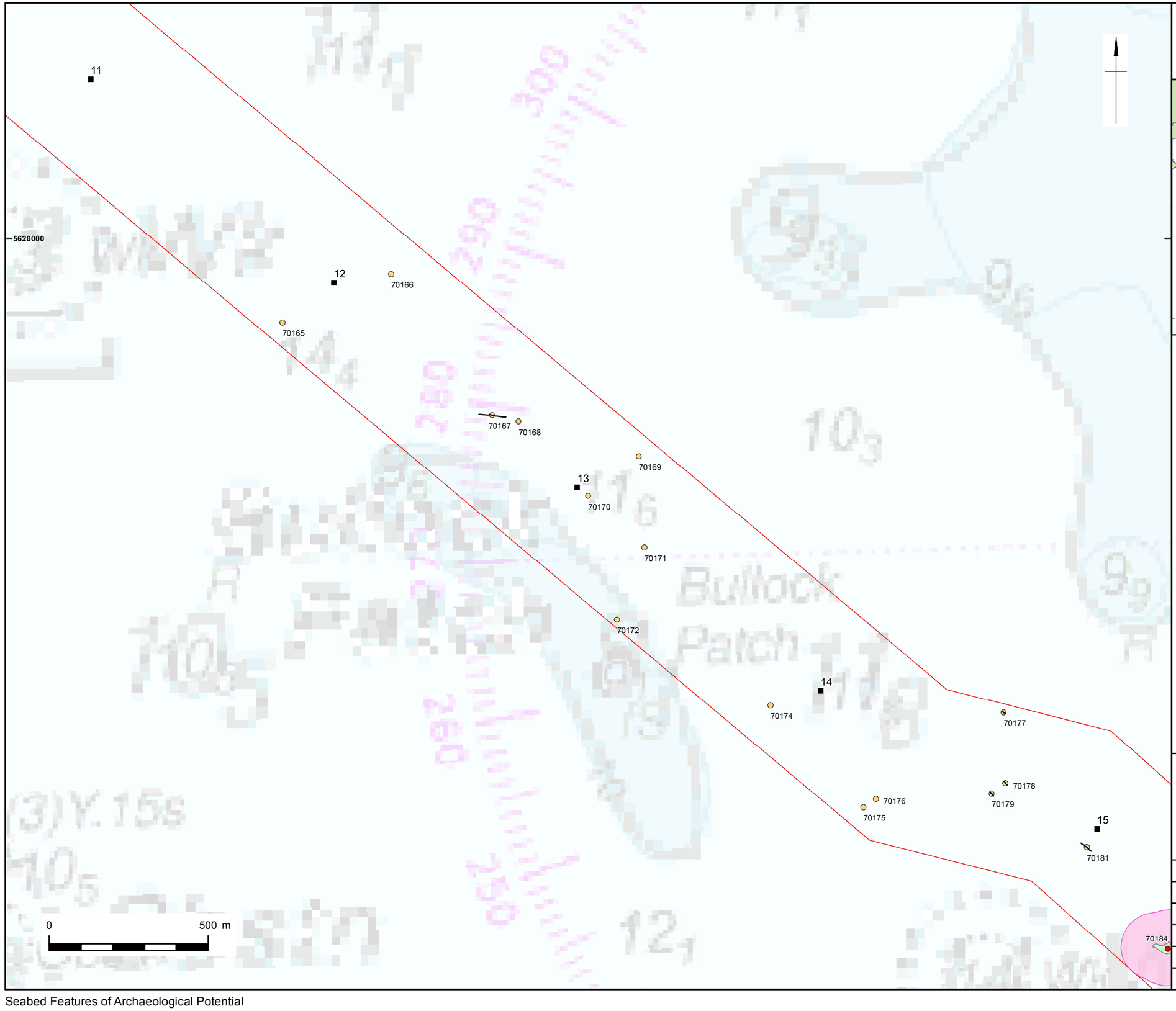
A2 – Uncertain origin of possible archaeological interest

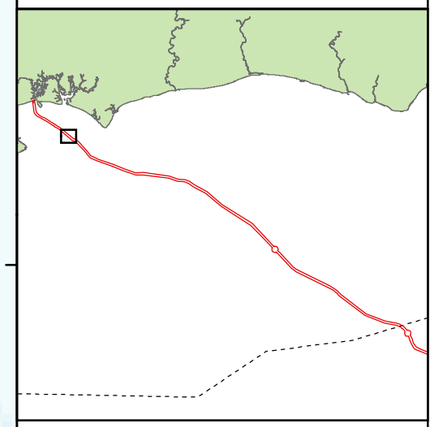
Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7c





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A1 – Anthropogenic origin of archaeological interest

A2 – Uncertain origin of possible archaeological interest

Recommended Archaeological Exclusion Zones (AEZs)

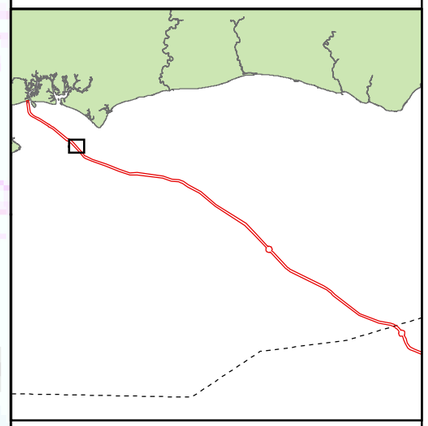
Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7d

15
70183
70181
70185
70184
16
70186
17
18
70189
70188
70187
19
0
500 m



Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A1 – Anthropogenic origin of archaeological interest

A2 – Uncertain origin of possible archaeological interest

Recommended Archaeological Exclusion Zones (AEZs)

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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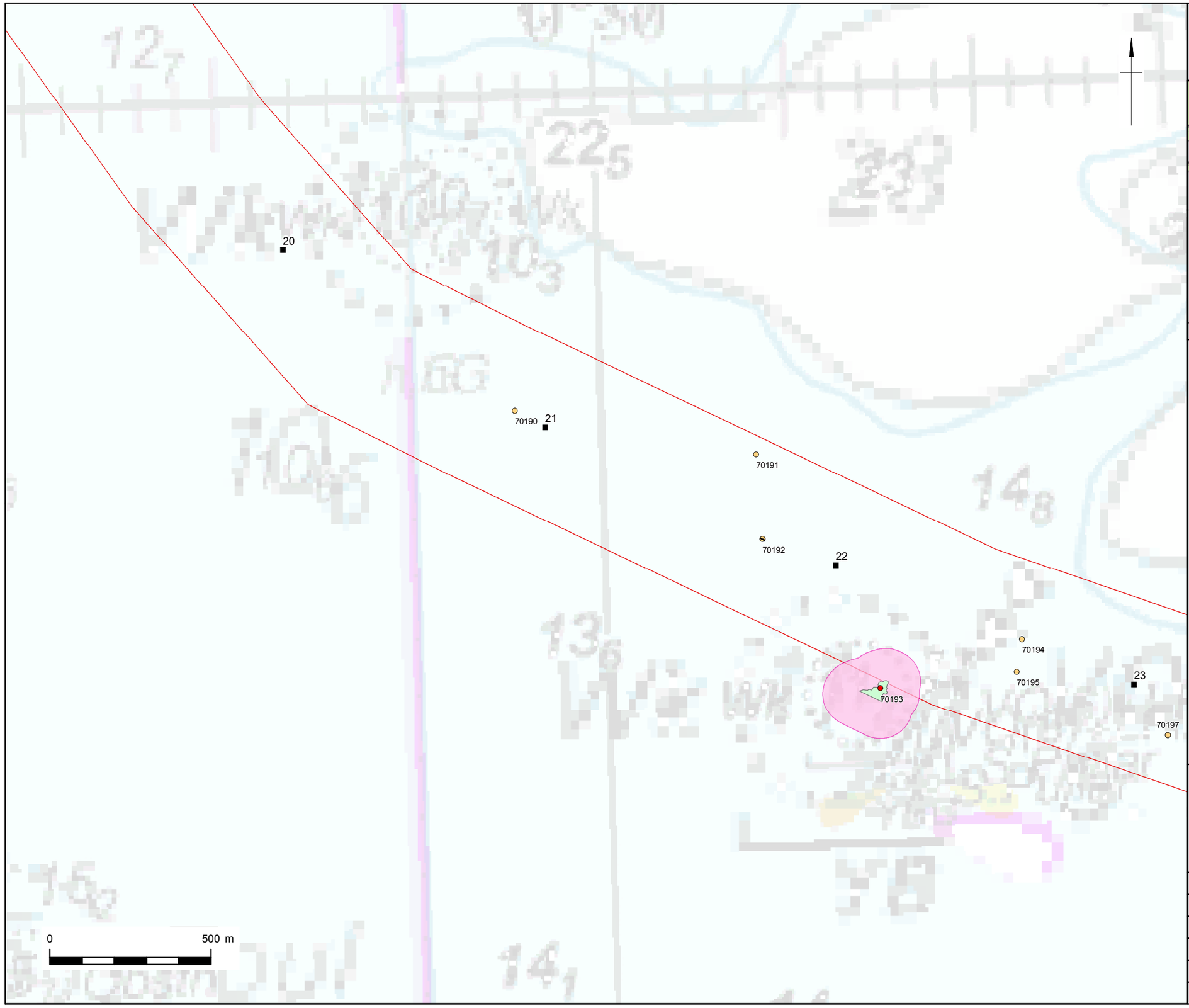
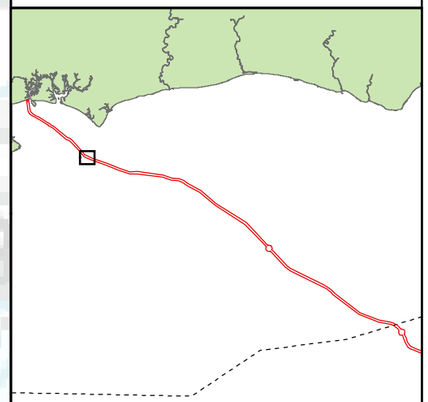
Seabed Features of Archaeological Potential

Figure 7e





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A1 – Anthropogenic origin of archaeological interest

A2 – Uncertain origin of possible archaeological interest

Recommended Archaeological Exclusion Zones (AEZs)

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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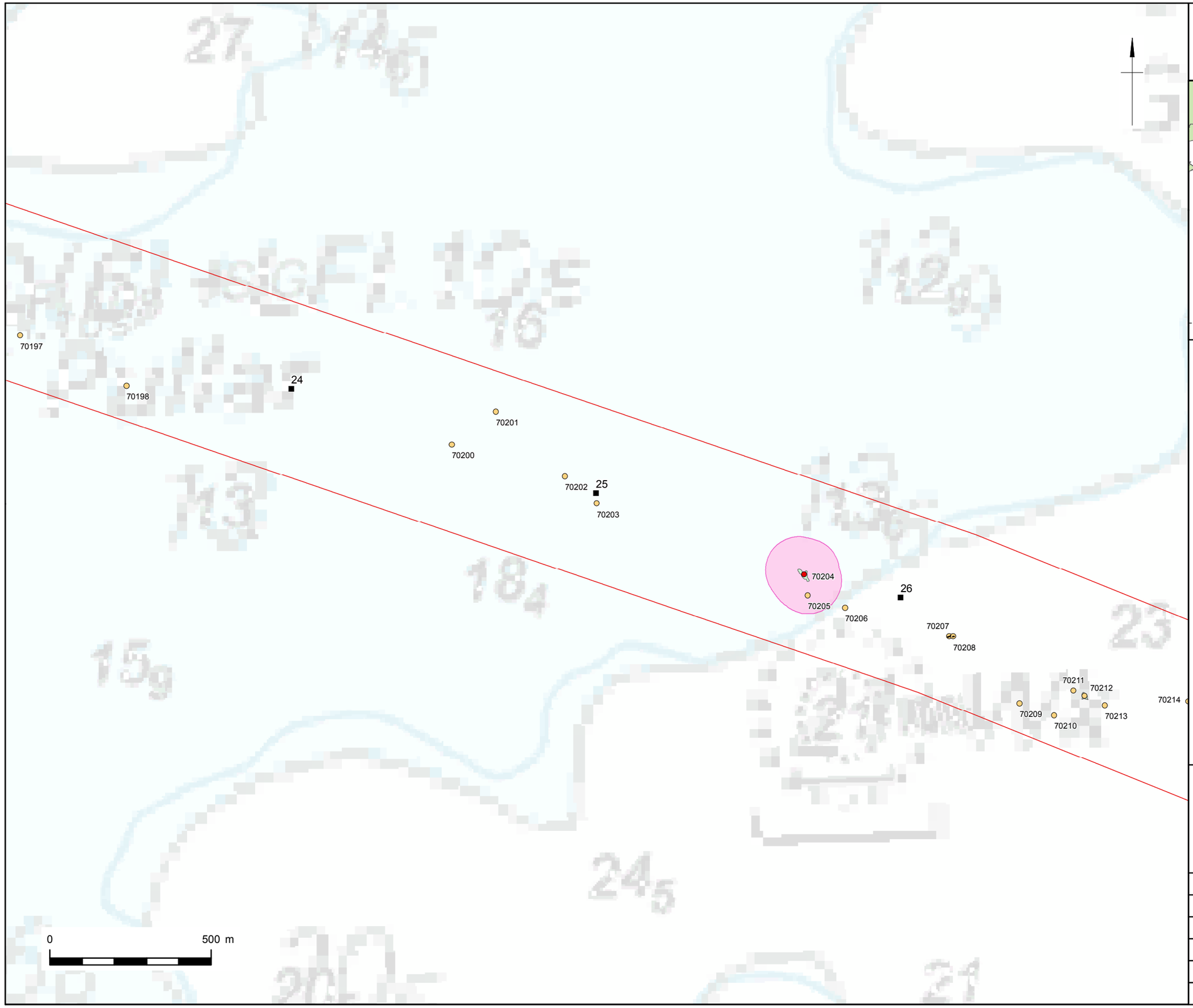
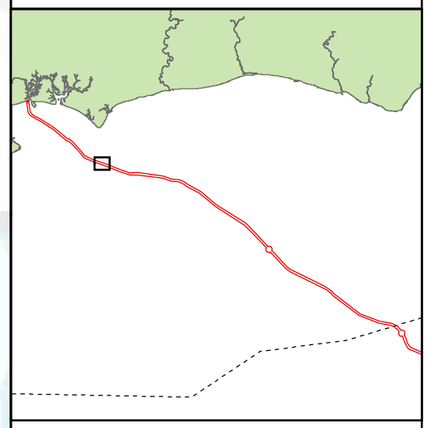
Seabed Features of Archaeological Potential

Figure 7f





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A1 – Anthropogenic origin of archaeological interest

A2 – Uncertain origin of possible archaeological interest

Recommended Archaeological Exclusion Zones (AEZs)

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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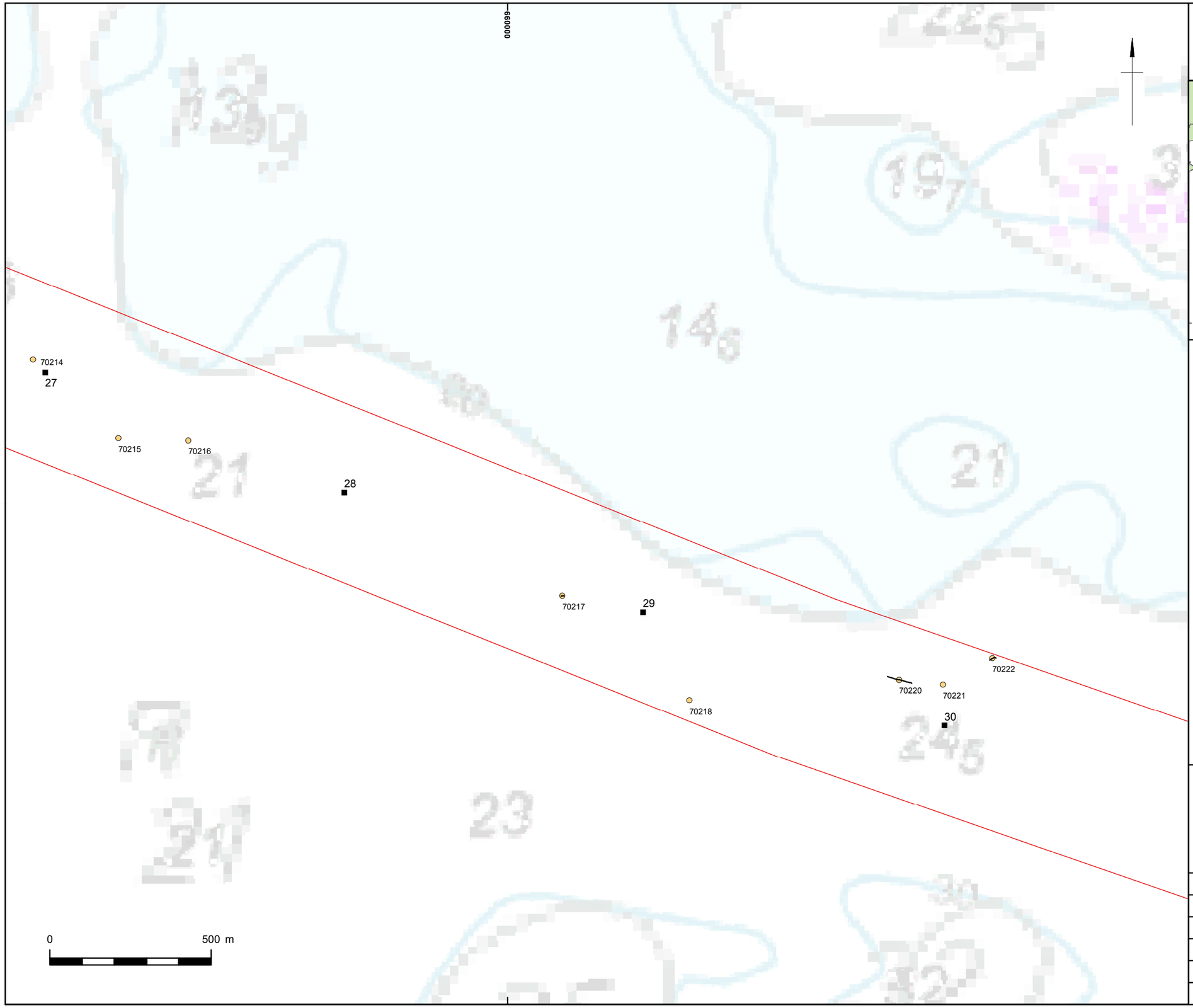
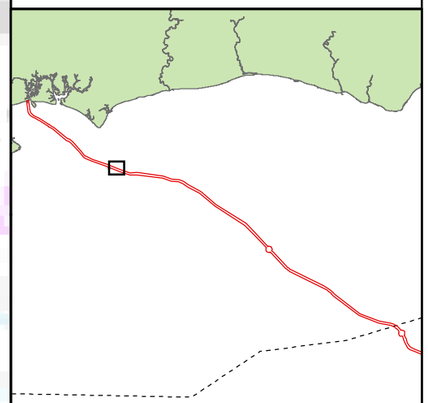
Seabed Features of Archaeological Potential

Figure 7g





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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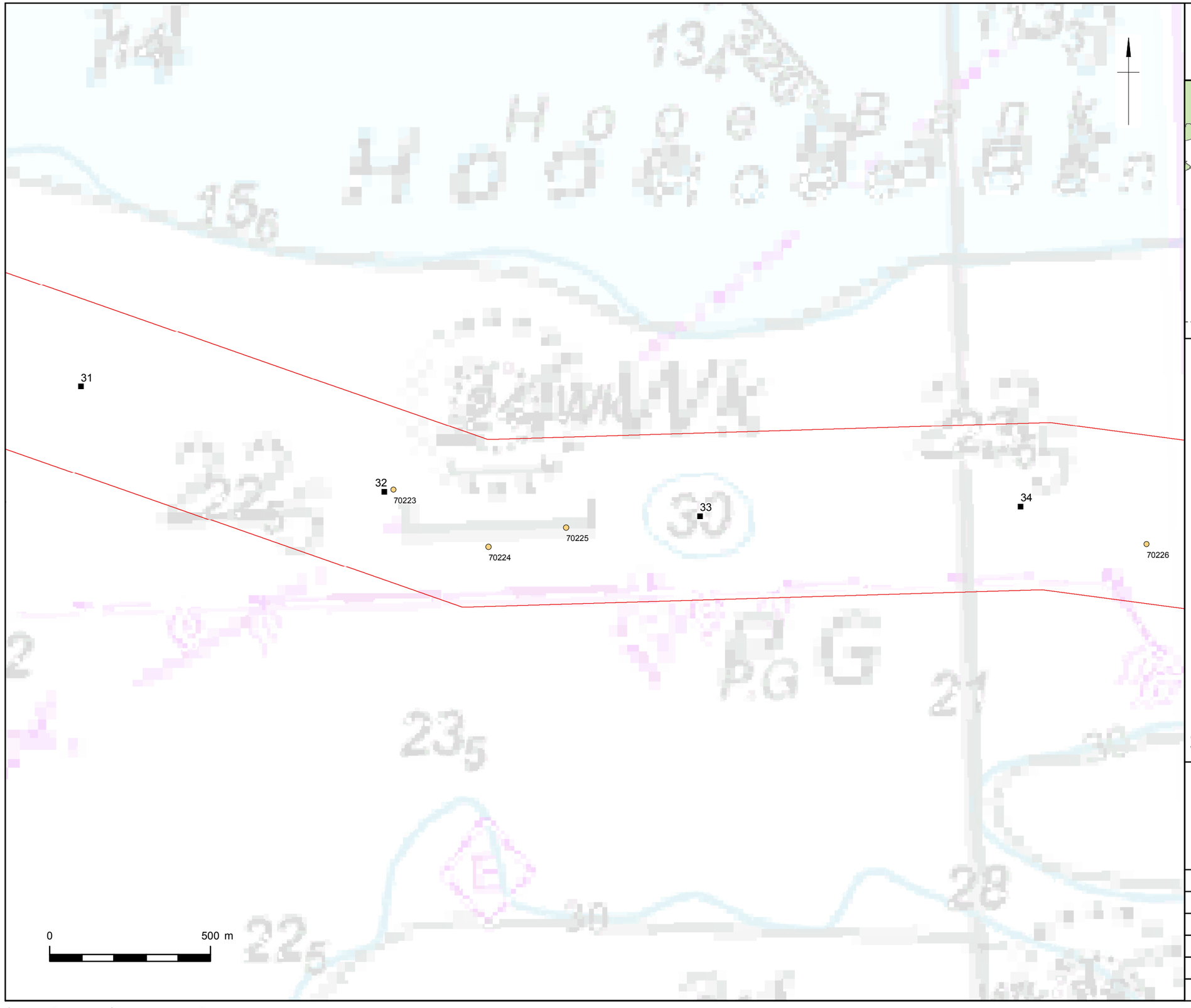
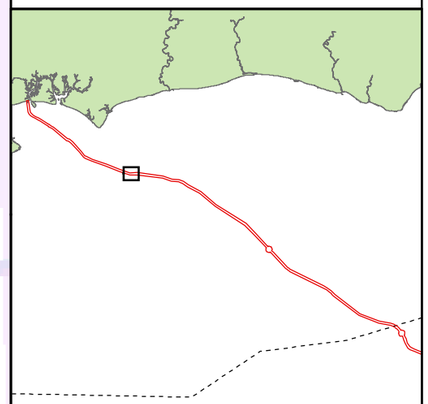
Seabed Features of Archaeological Potential

Figure 7h





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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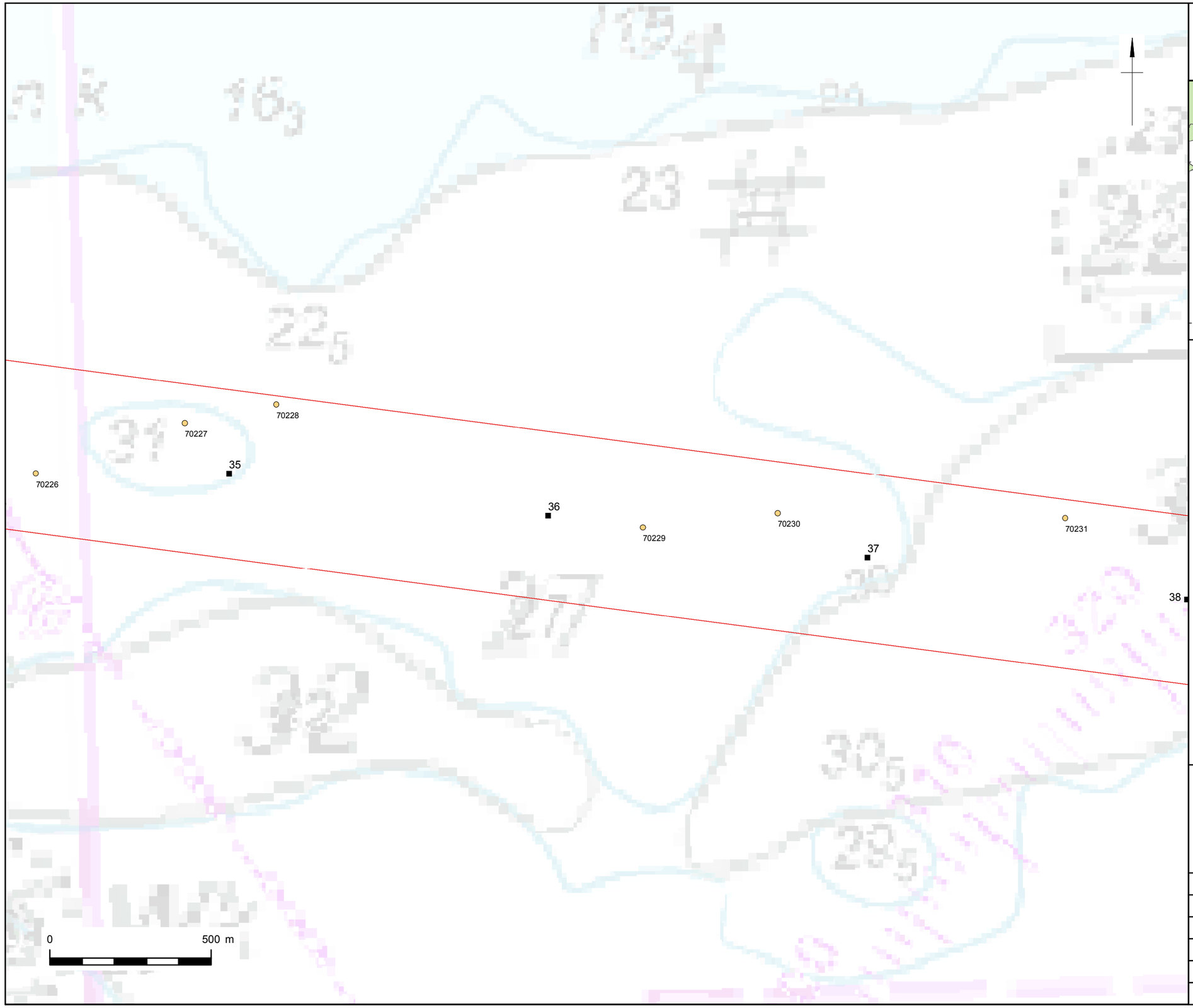
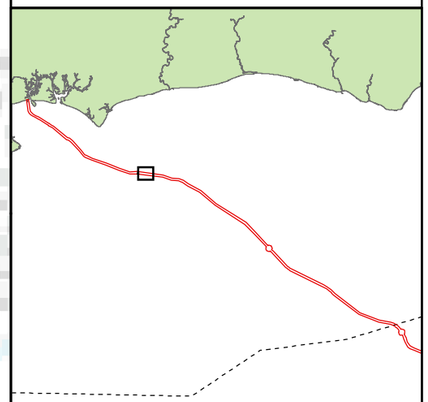
Seabed Features of Archaeological Potential

Figure 7i





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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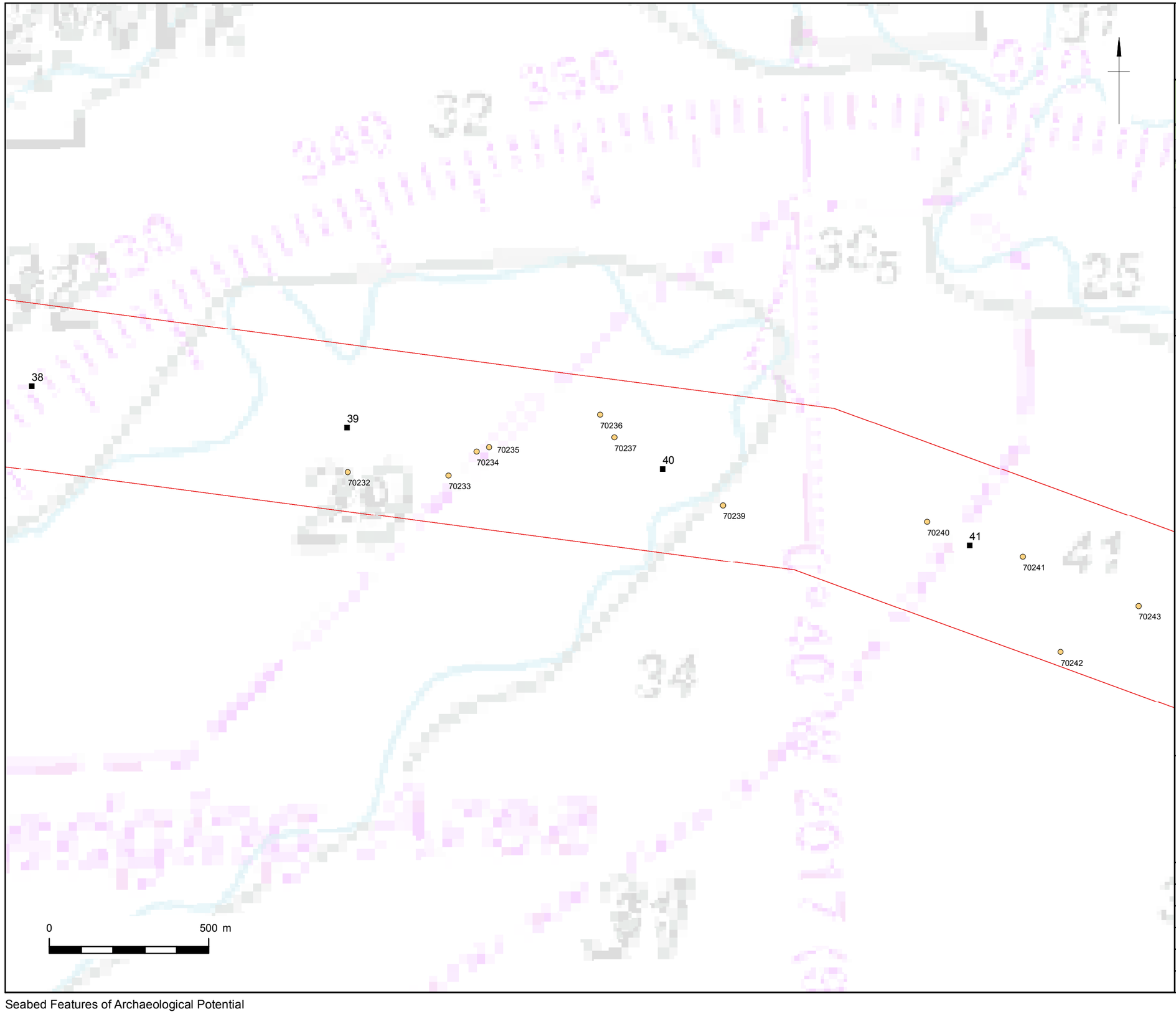
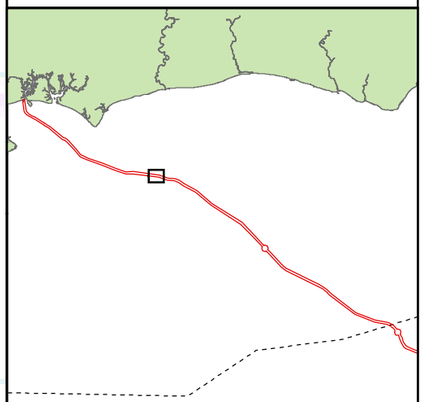
Seabed Features of Archaeological Potential

Figure 7j





Marine Cable Corridor

Kilometre Point (KP)

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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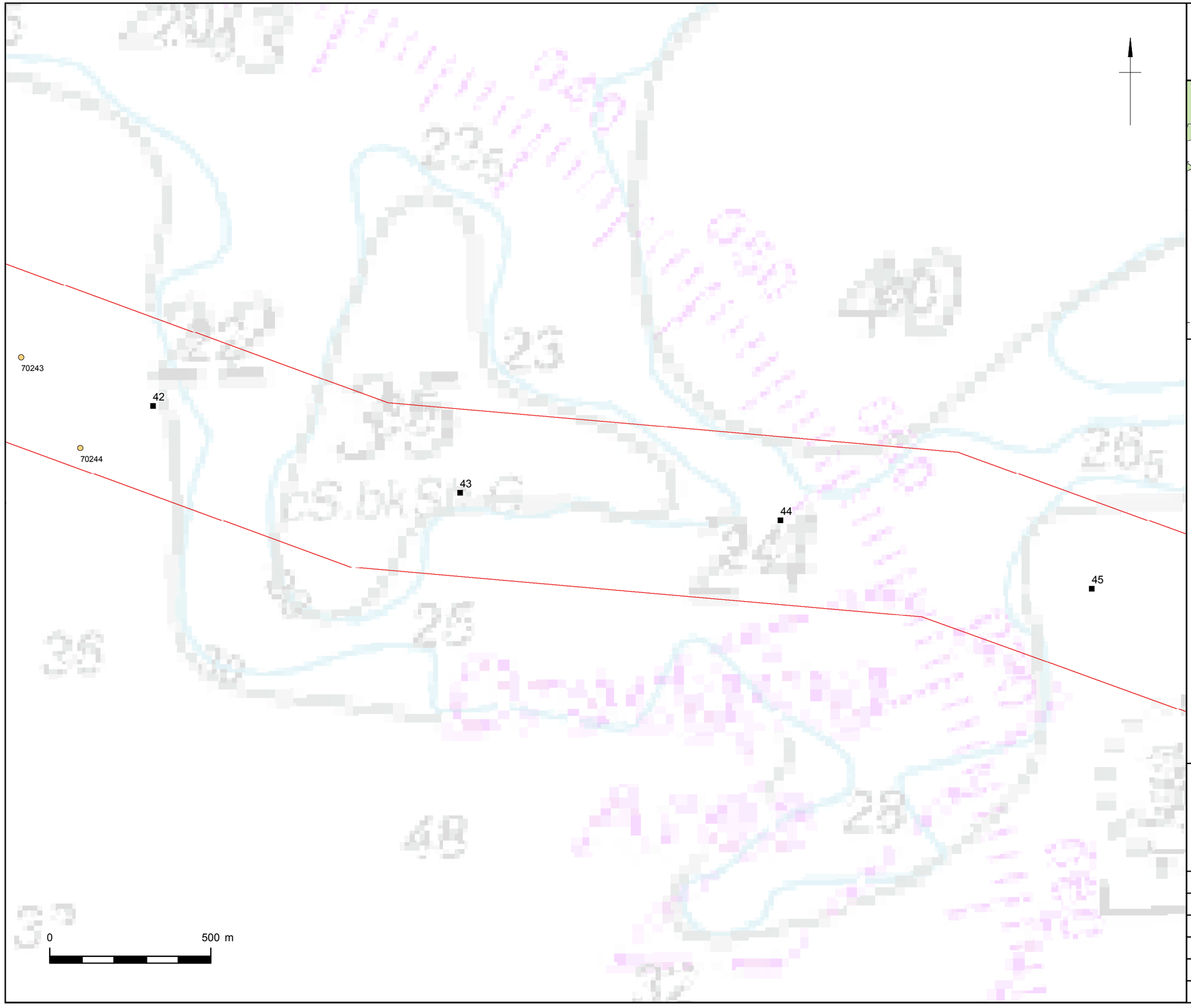
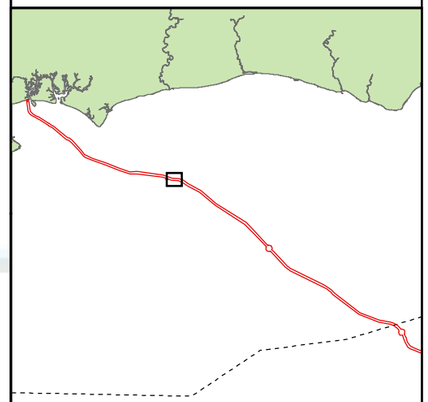
Seabed Features of Archaeological Potential

Figure 7k





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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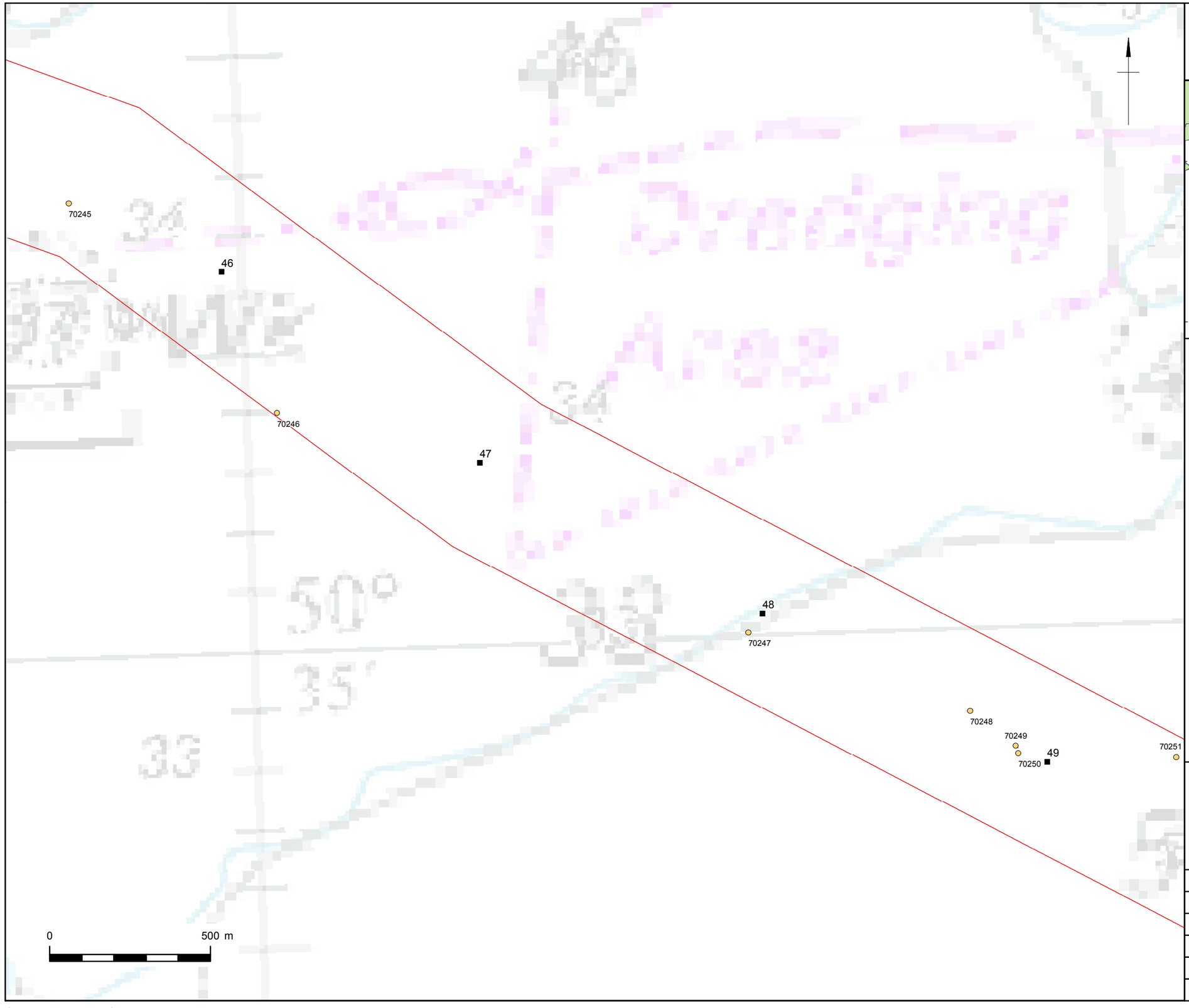
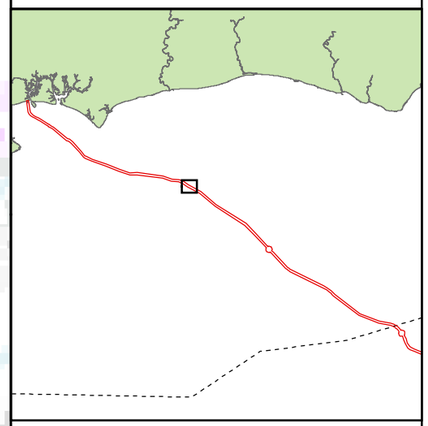
Seabed Features of Archaeological Potential

Figure 7I





Marine Cable Corridor

Kilometre Point (KP)

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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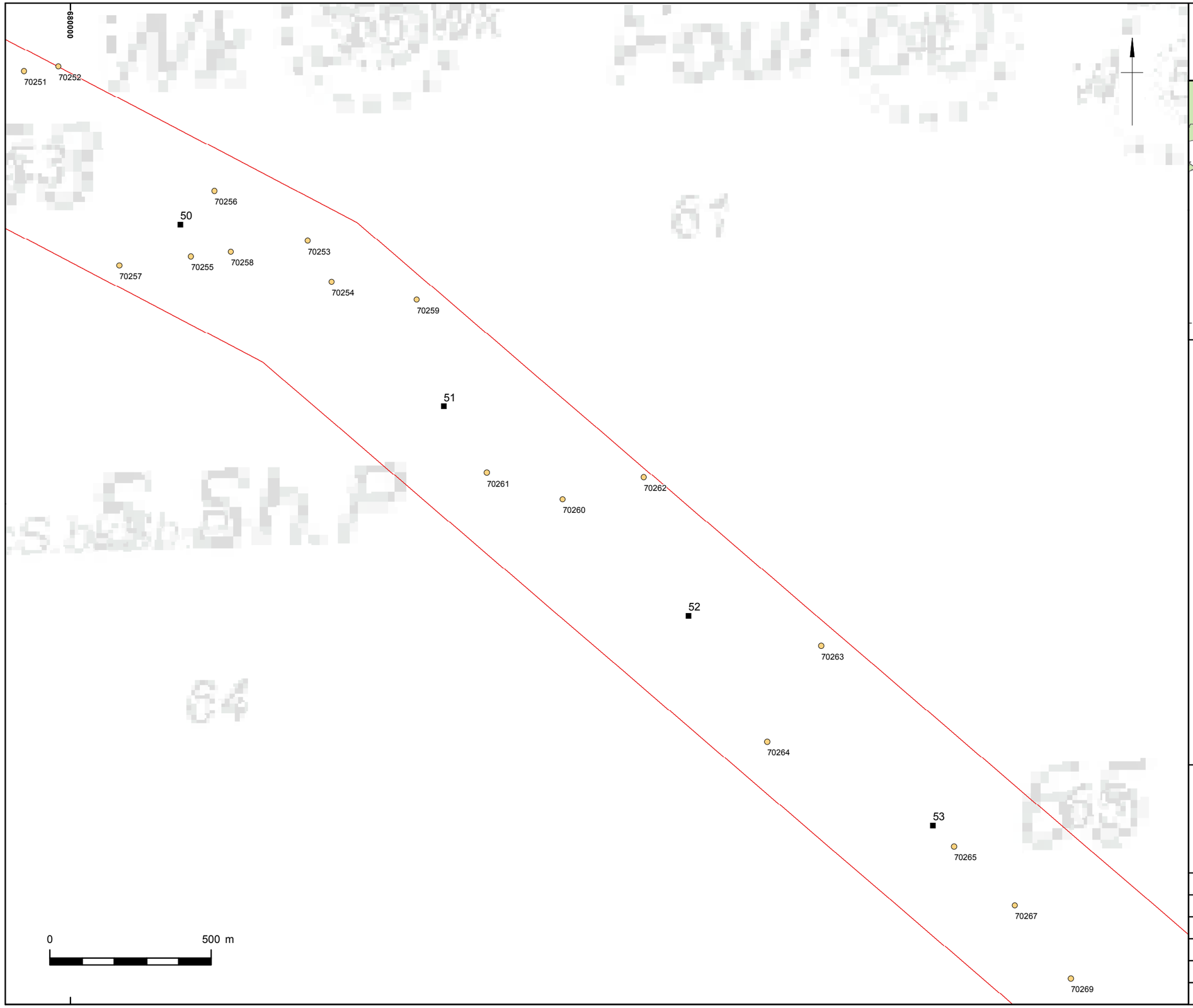
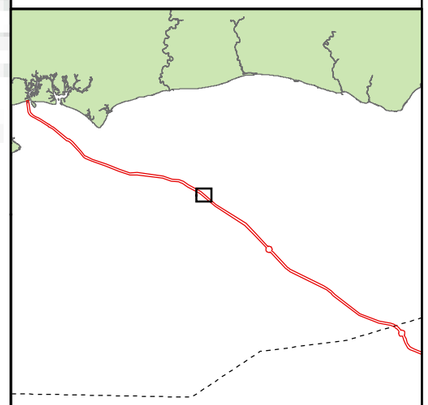
Seabed Features of Archaeological Potential

Figure 7m





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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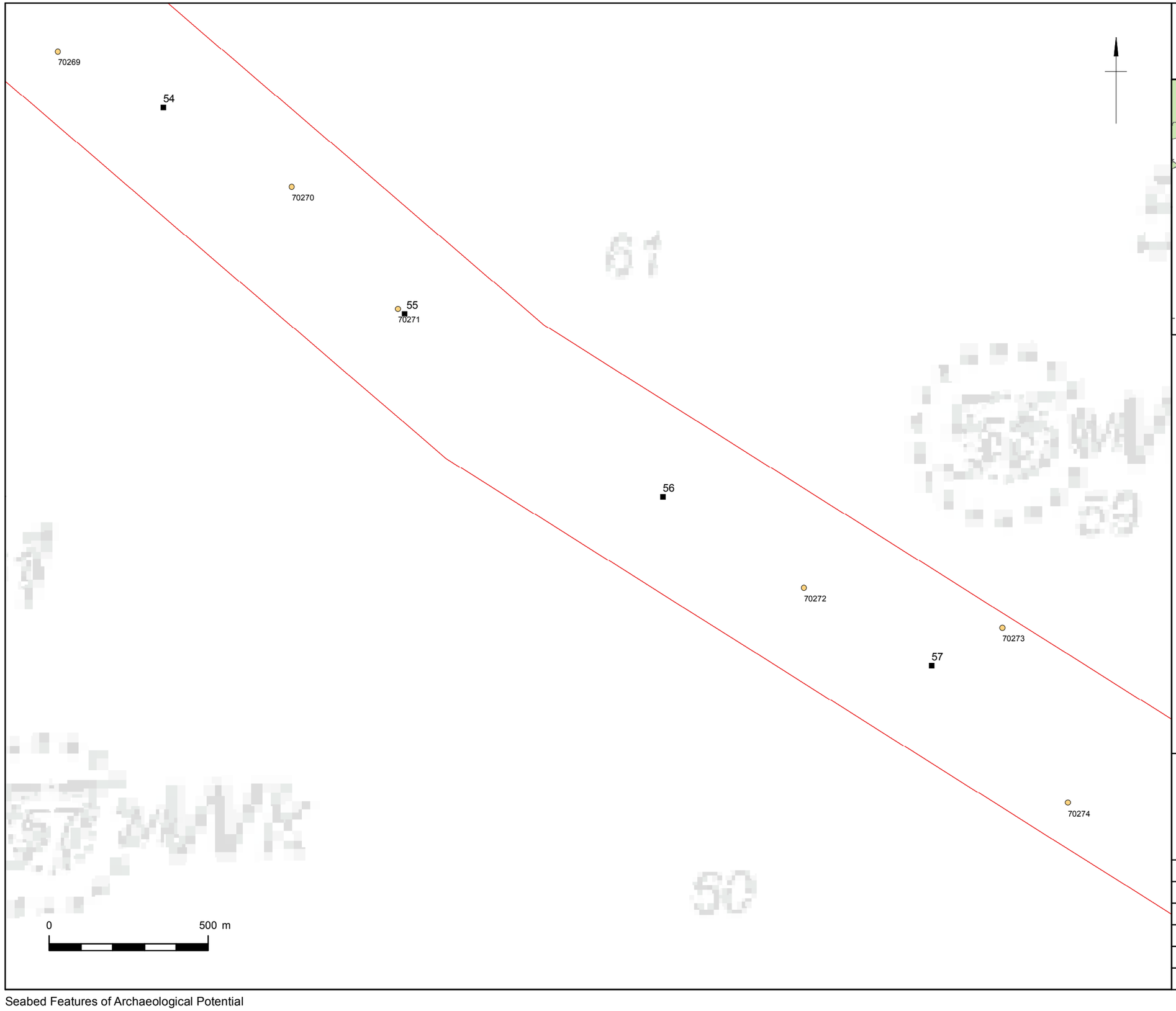
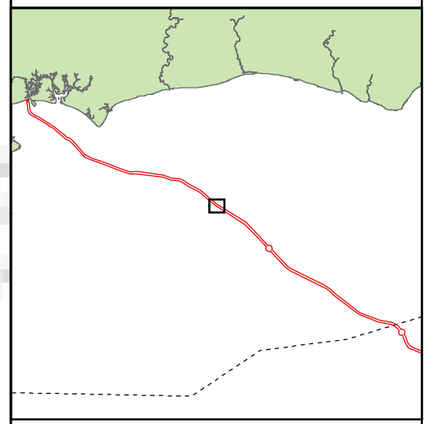
Seabed Features of Archaeological Potential

Figure 7n





Marine Cable Corridor

Kilometre Point (KP)

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
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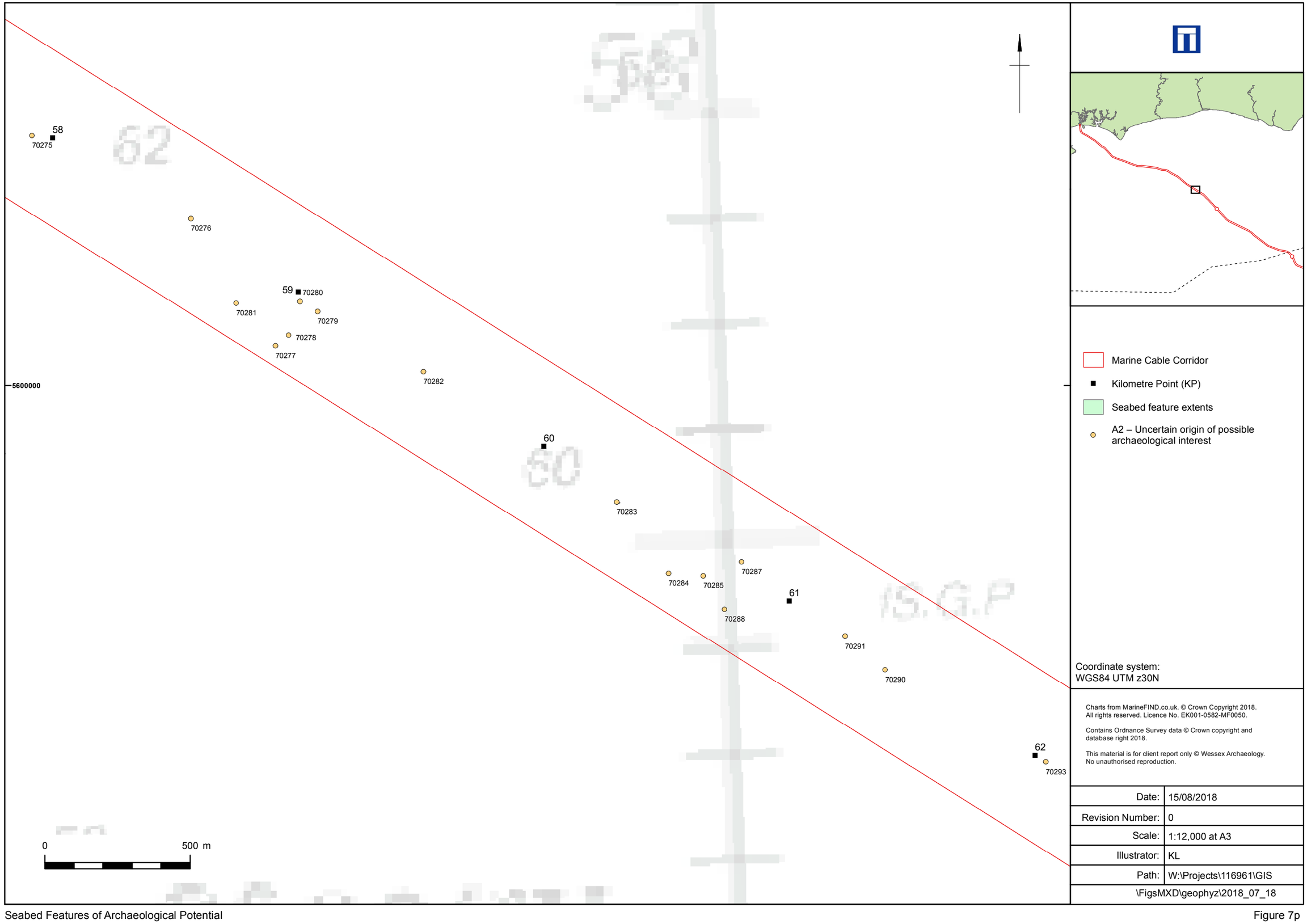
Seabed Features of Archaeological Potential

Figure 7o



Marine Cable Corridor

Kilometre Point (KP)

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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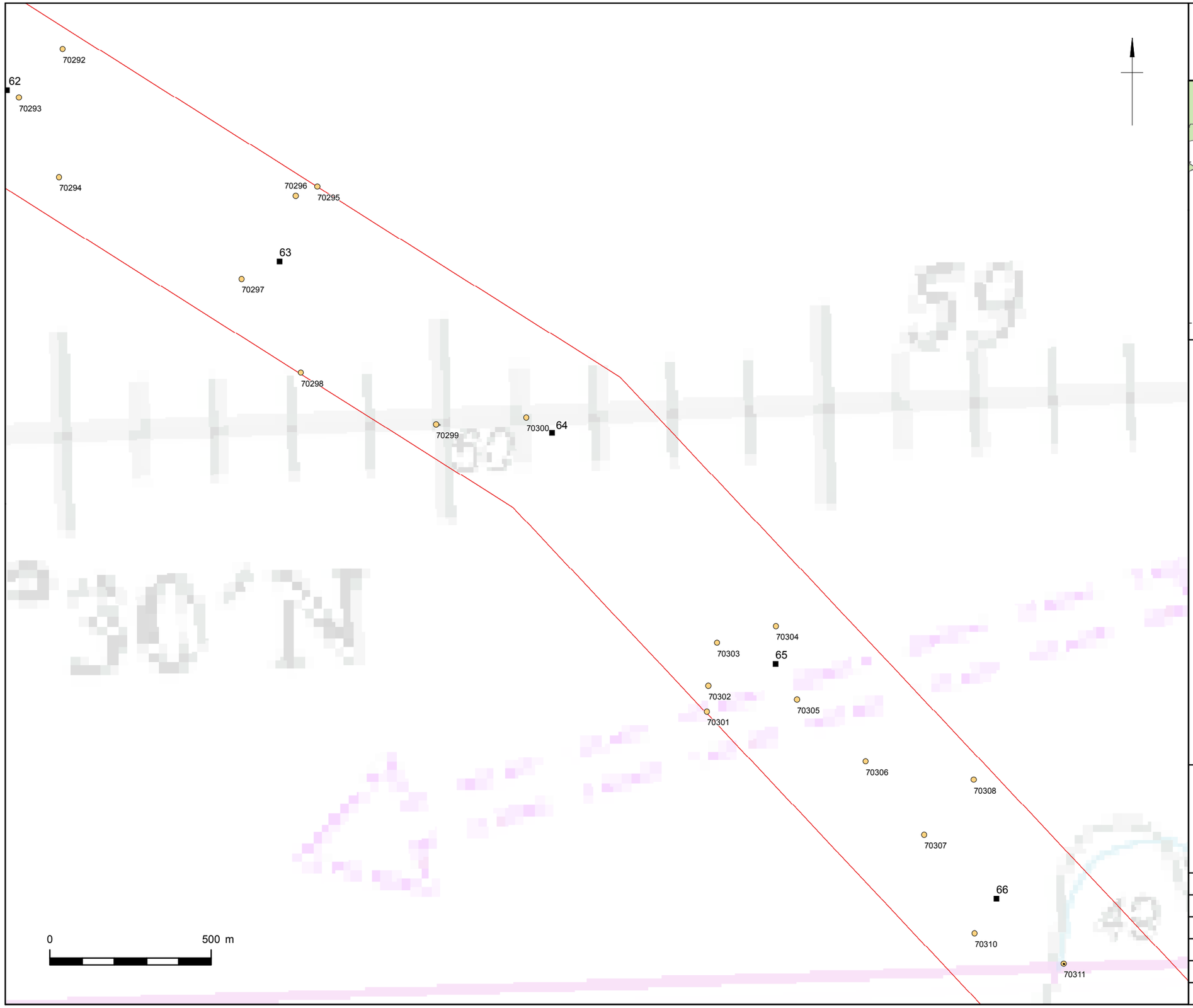
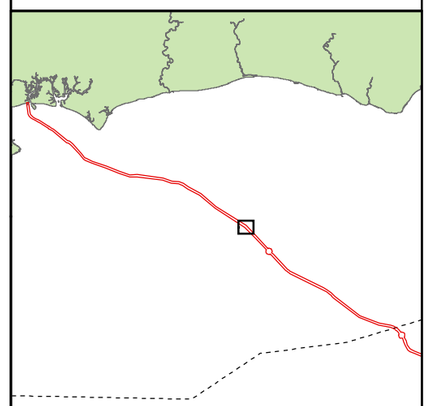
Seabed Features of Archaeological Potential

Figure 7p





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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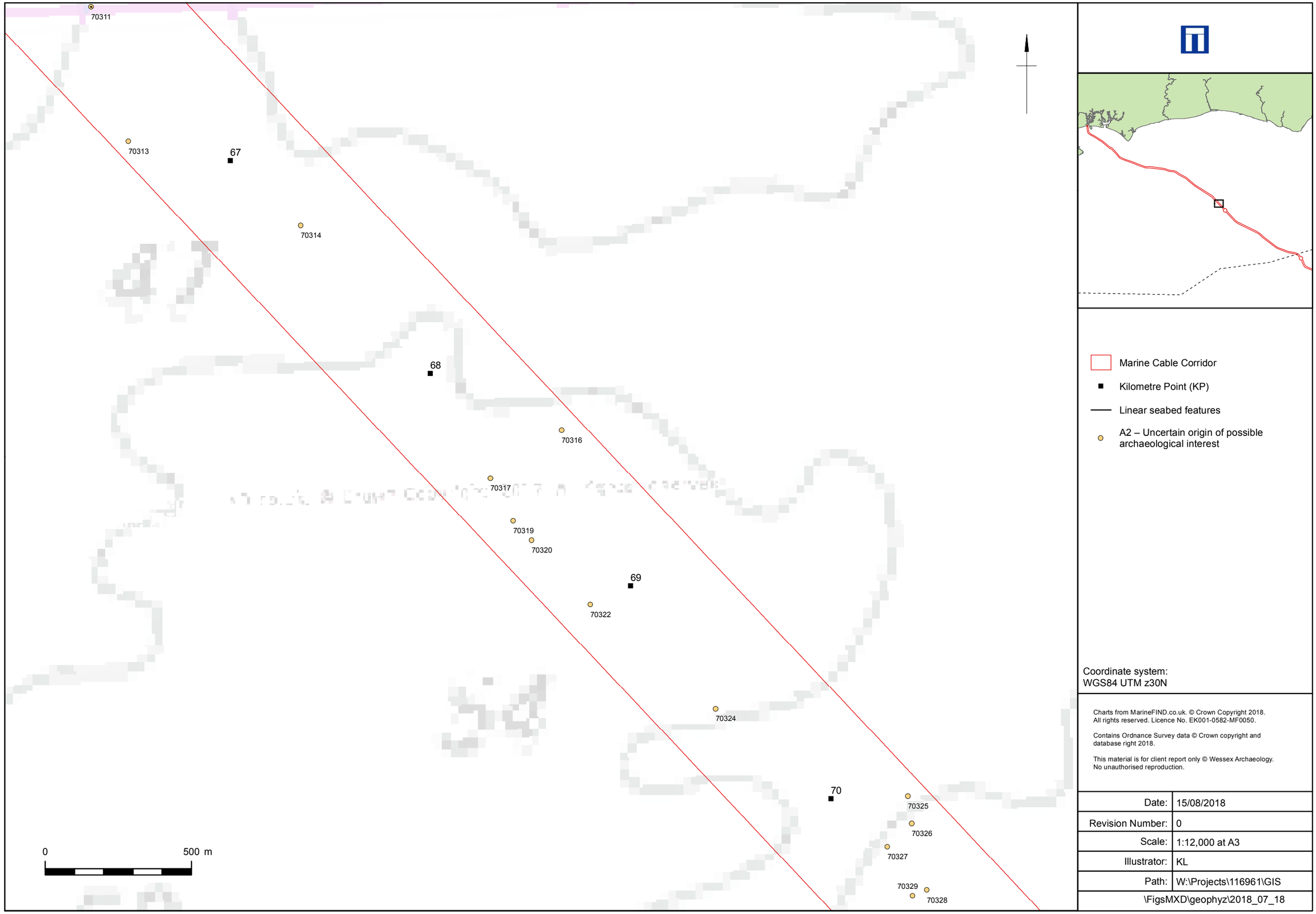
Seabed Features of Archaeological Potential

Figure 7q



Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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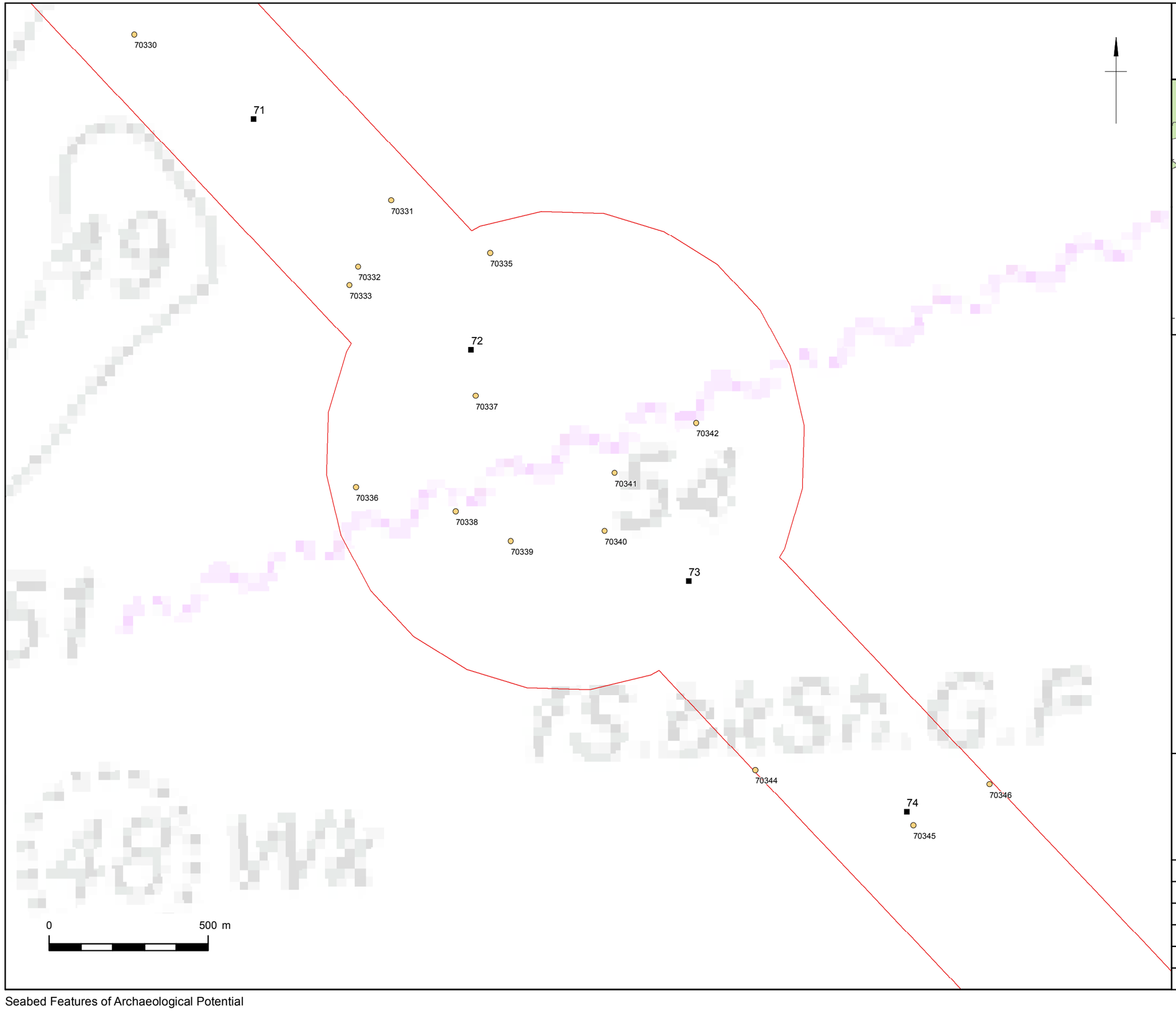
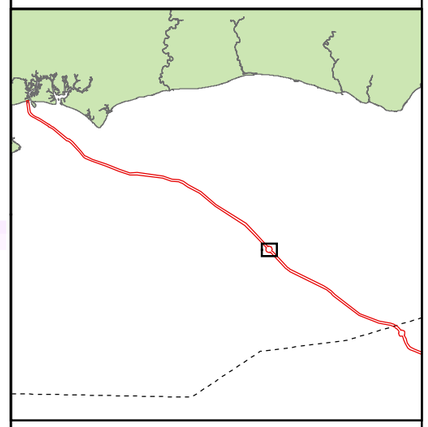
Seabed Features of Archaeological Potential

Figure 7r





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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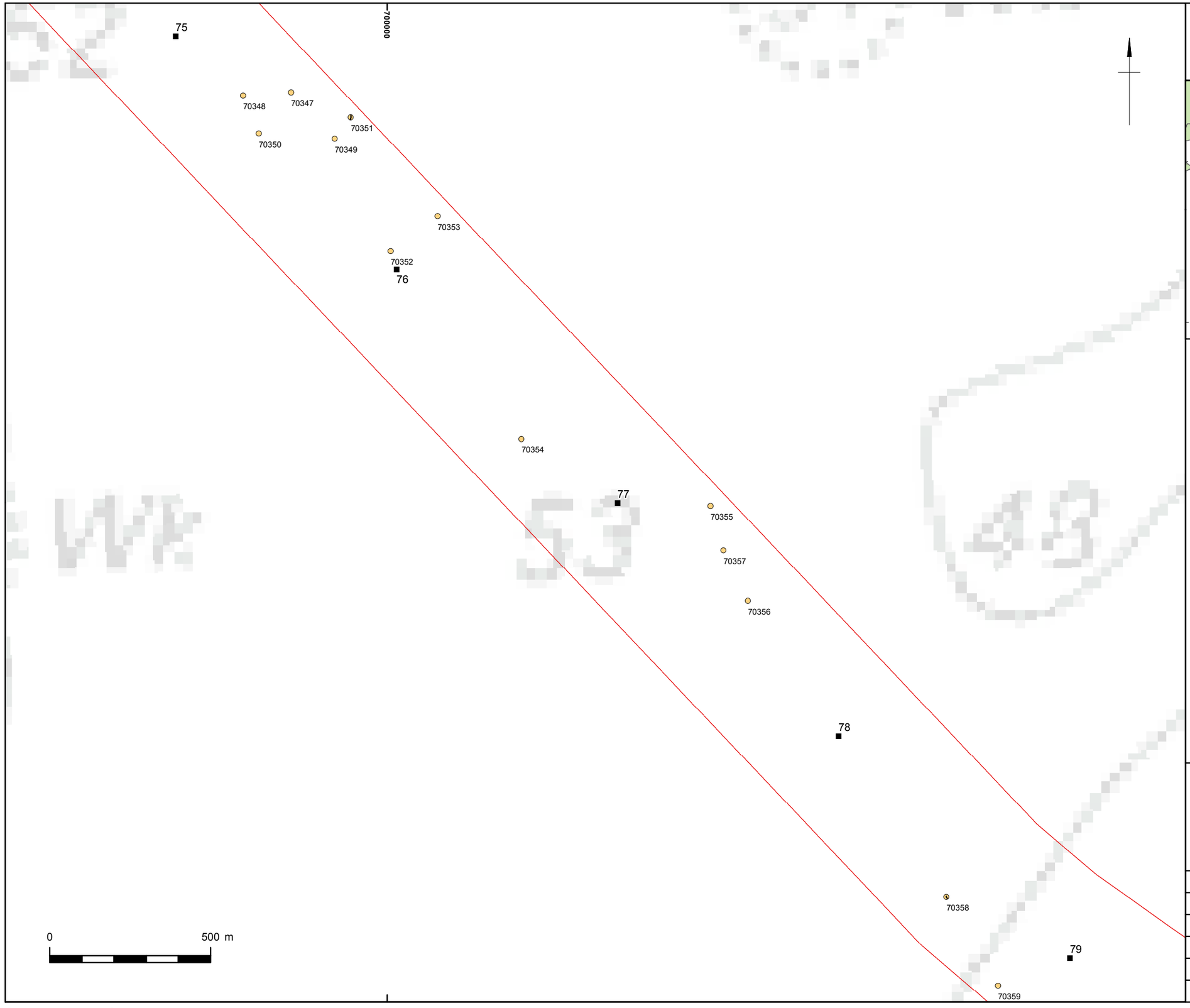
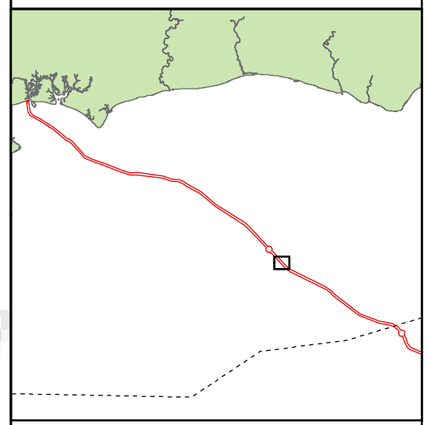
Seabed Features of Archaeological Potential

Figure 7s





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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Path:	W:\Projects\116961\GIS
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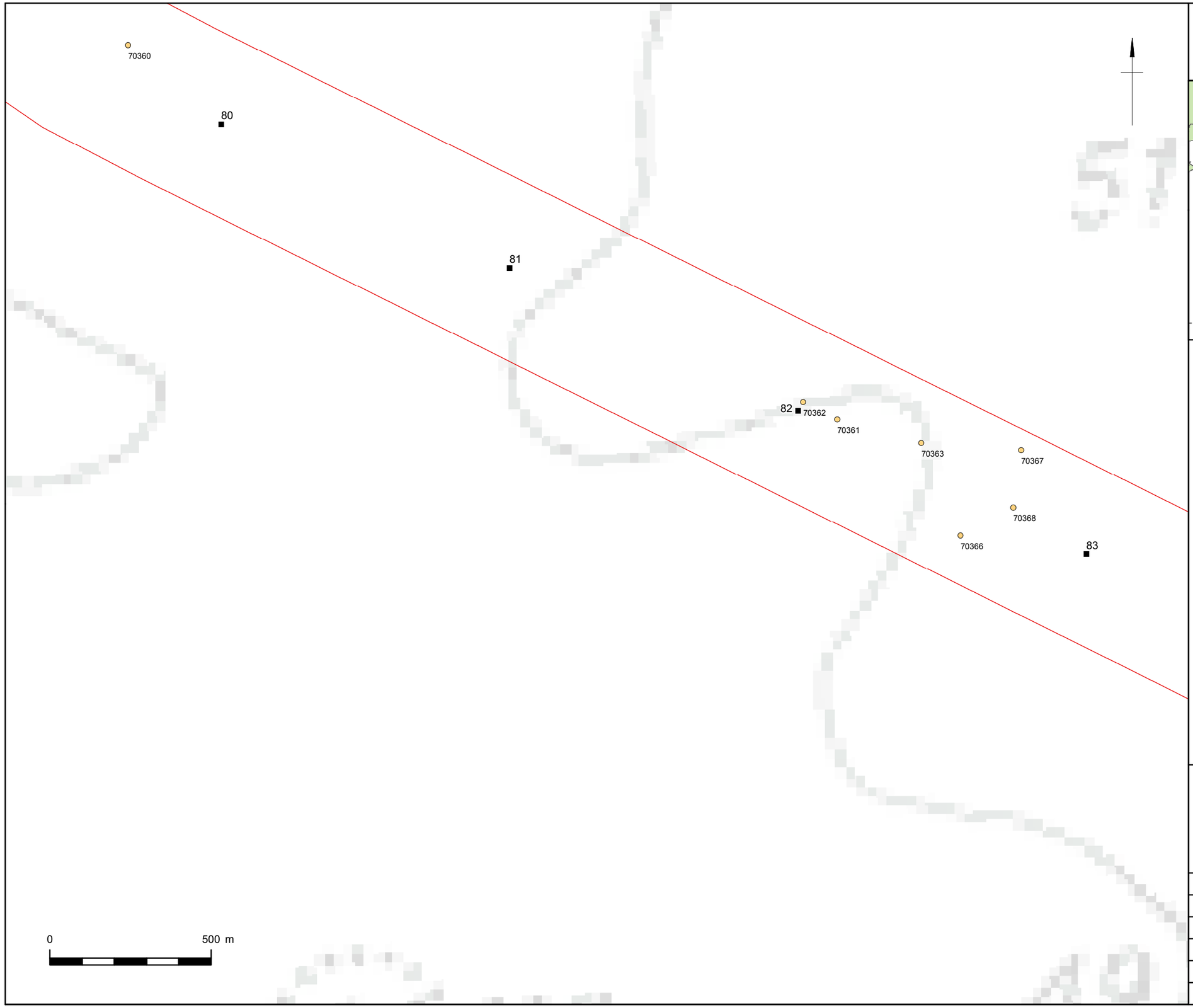
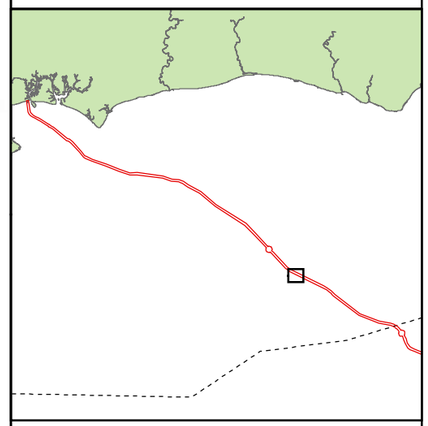
Seabed Features of Archaeological Potential

Figure 7t





Marine Cable Corridor

Kilometre Point (KP)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7u

70370

84

70371

70372

70373

70374

85

70376

70375

86

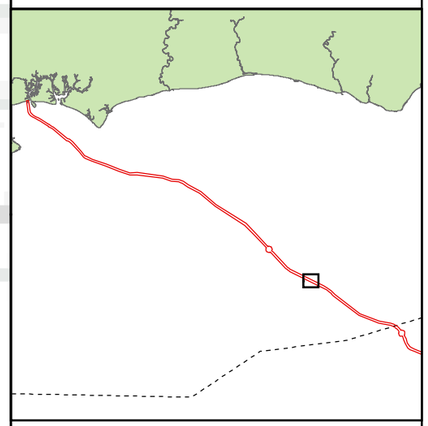
70377

70378

87

0

500 m



Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

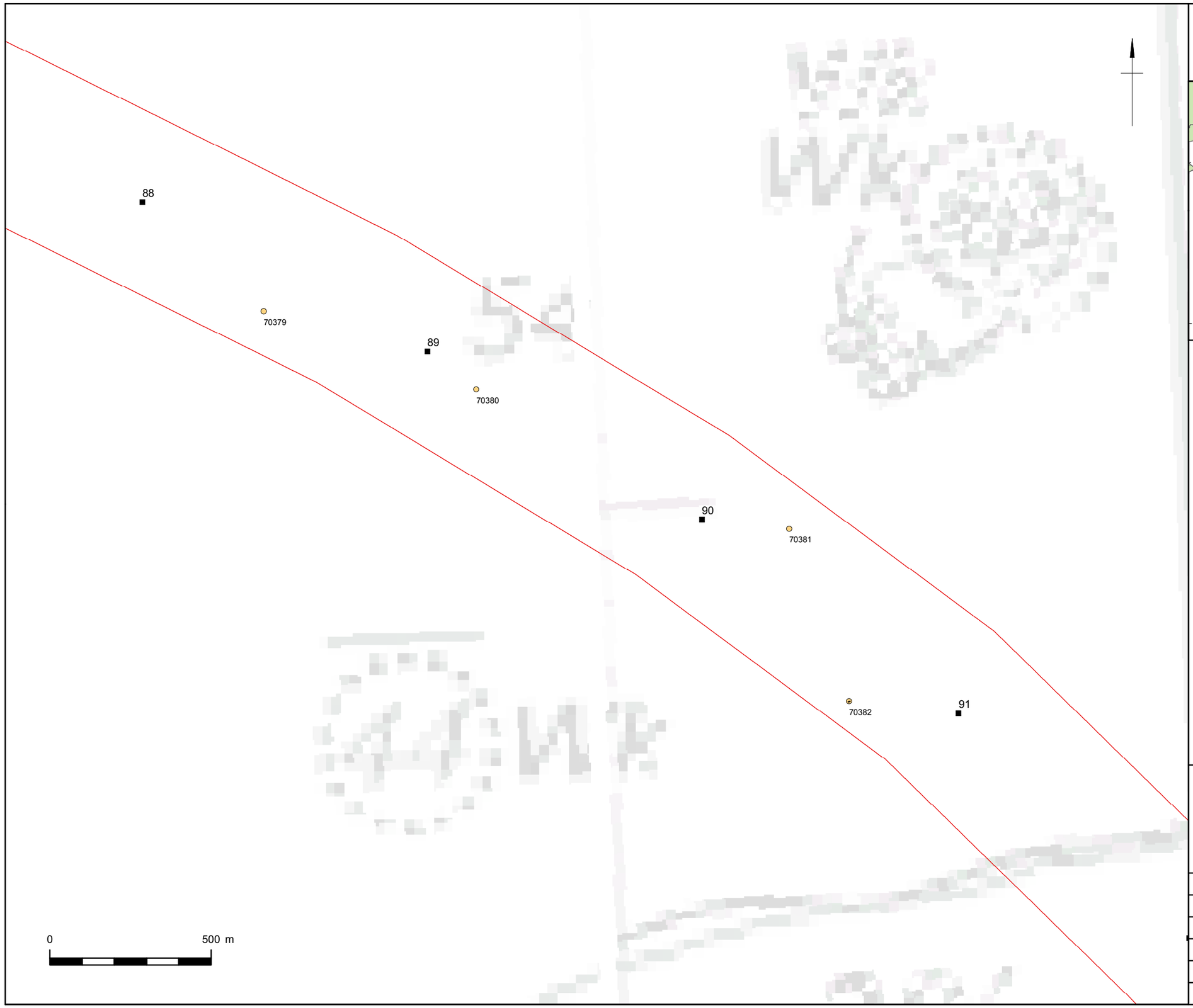
A2 – Uncertain origin of possible archaeological interest

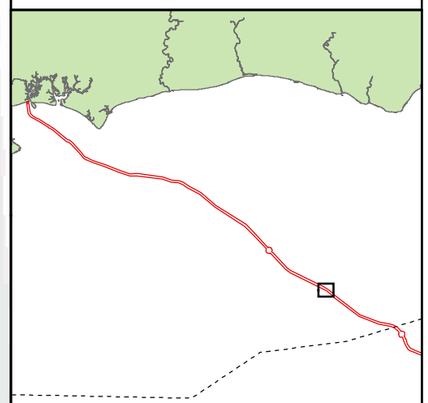
Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7v





Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
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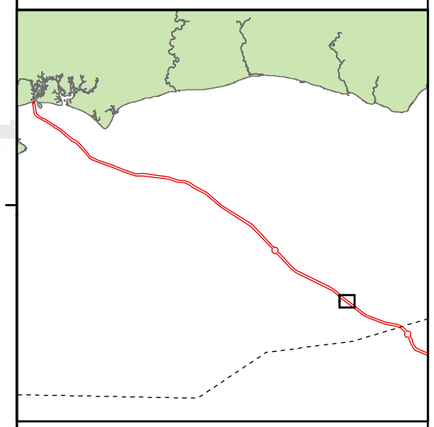
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7w



Marine Cable Corridor

Kilometre Point (KP)

Seabed feature extents

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7x

720000

97

98

99

100

101

70391

70392

70393

70394

70395

70396

70397

70398

70399

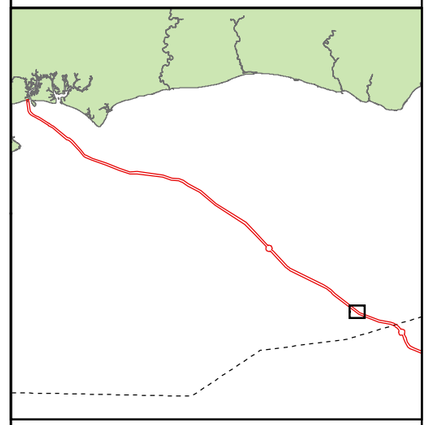
70400

70401

70403

70402

0 500 m



Marine Cable Corridor

Kilometre Point (KP)

Linear seabed features

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
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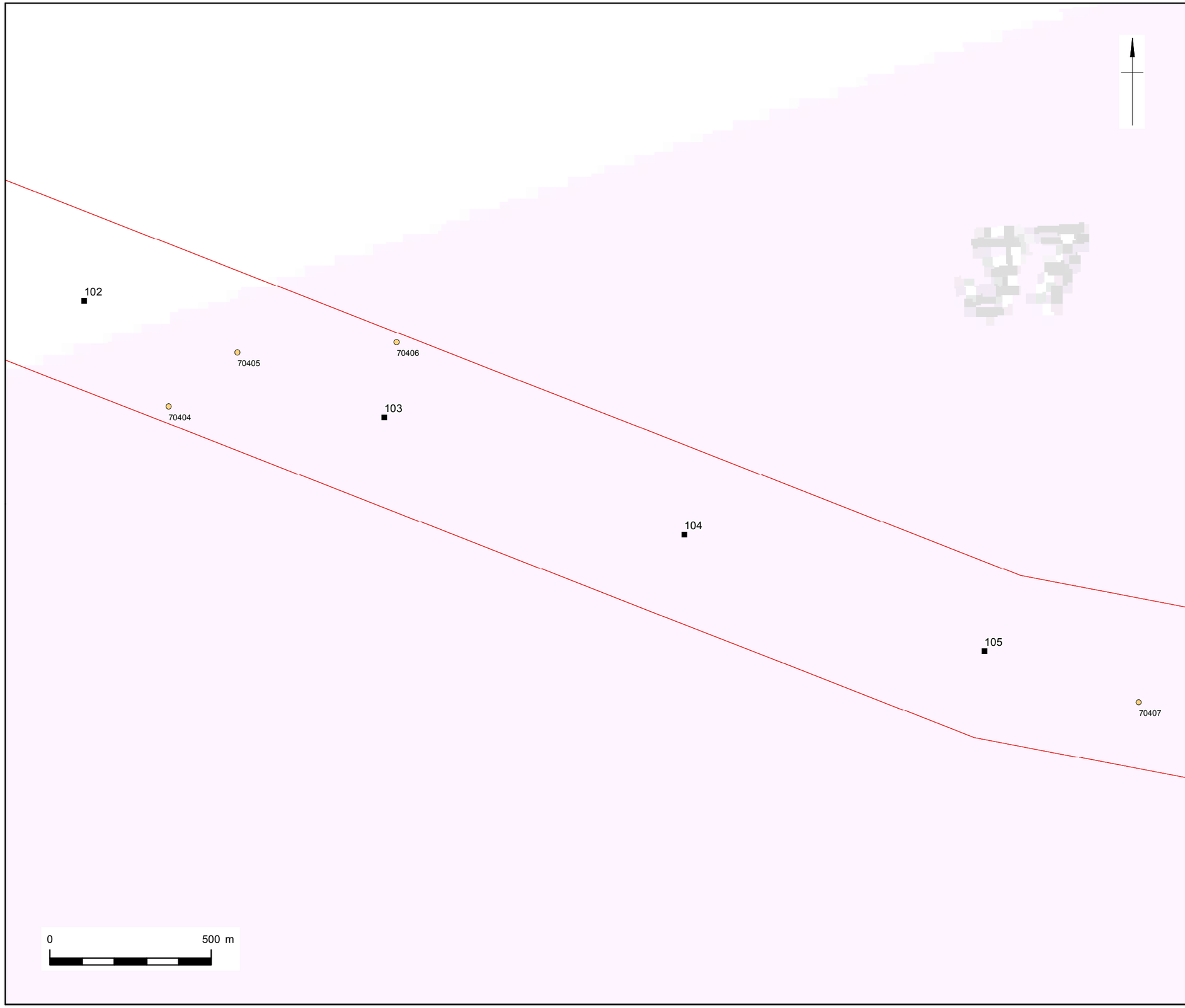
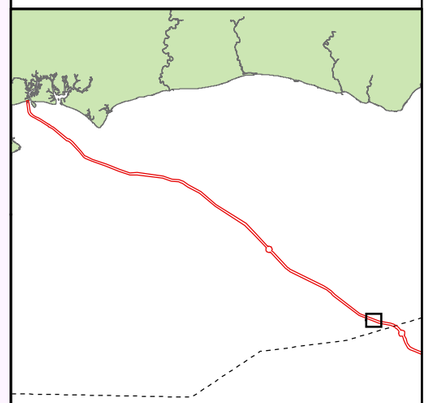
Seabed Features of Archaeological Potential

Figure 7y





Marine Cable Corridor

Kilometre Point (KP)

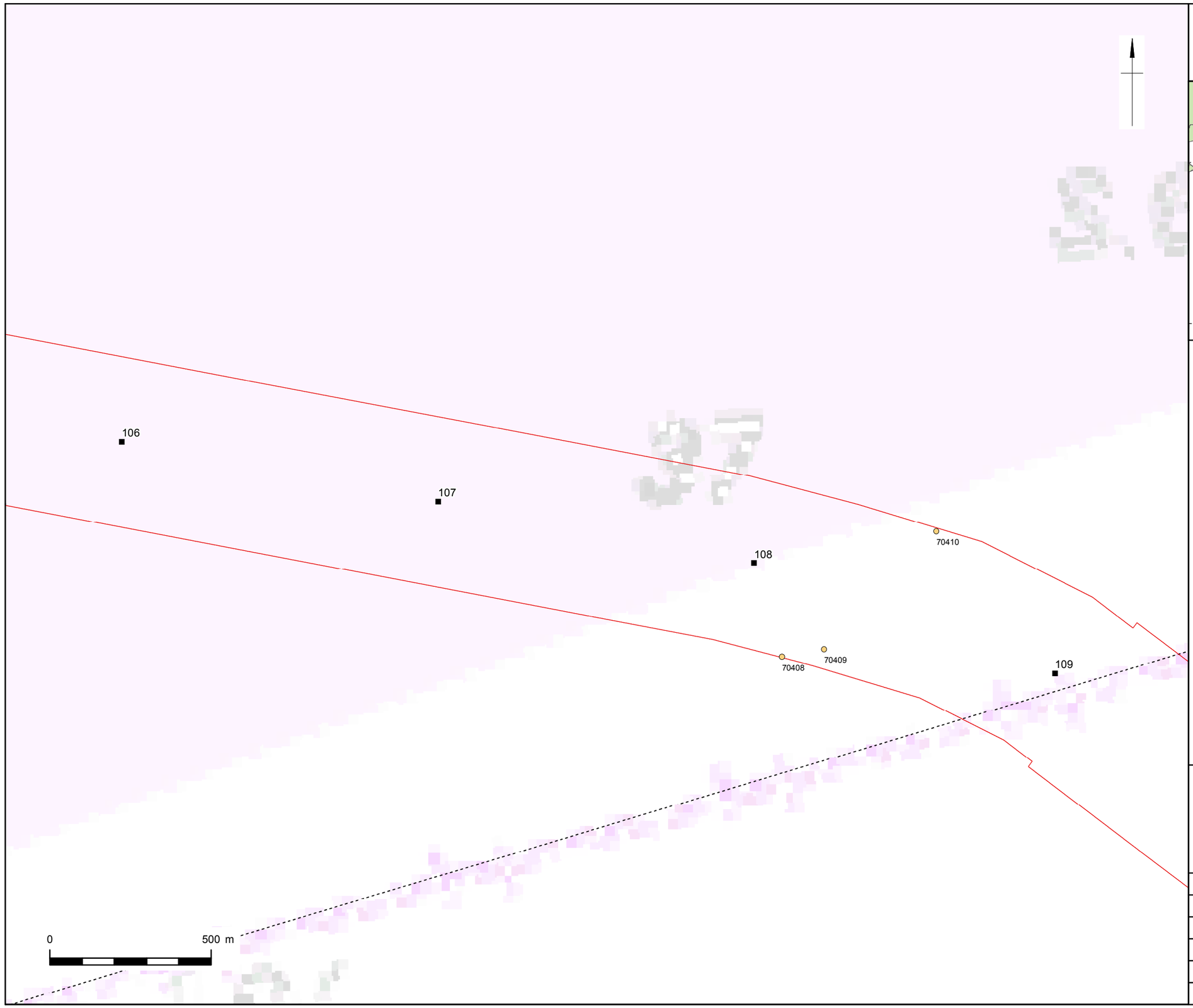
A2 – Uncertain origin of possible archaeological interest

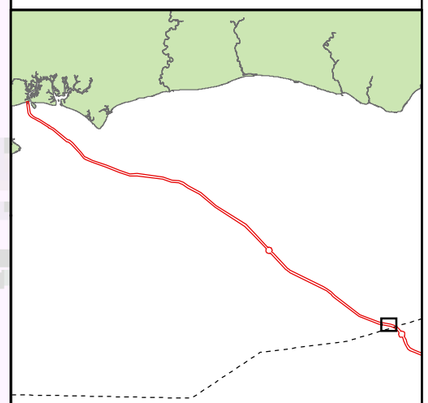
Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7z1





Marine Cable Corridor

Kilometre Point (KP)

UK European Economic Zone (EEZ)

A2 – Uncertain origin of possible archaeological interest

Coordinate system:
WGS84 UTM z30N

Date:	15/08/2018
Revision Number:	0
Scale:	1:12,000 at A3
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Seabed Features of Archaeological Potential

Figure 7z2

Table 9 Types of features identified within the UK section of the Marine Cable Corridor

Anomaly classification	Definition	Number of anomalies
Wreck	Areas of coherent structure including wrecks of ships, submarines and some aircraft (where coherent structure survives)	2
Debris field	A discrete area containing numerous individual debris items that are potentially anthropogenic, and can include dispersed wreck sites for which no coherent structure remains	11
Debris	Distinct objects on the seabed, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin	47
Seabed disturbance	An area of disturbance without individual, distinct objects. Potentially indicates wreck debris or other anthropogenic features buried just below the seabed.	5
Rope/chain	Curvilinear dark reflectors, often with a small amount of height, indicating rope or chain (if ferrous)	7
Bright reflector	Individual objects or areas of low reflectivity, characteristic of materials that absorb acoustic energy, such as waterlogged wood or synthetic materials. Precise nature is uncertain	4
Dark reflector	Individual objects or areas of high reflectivity, displaying some anthropogenic characteristics. Precise nature is uncertain	44
Magnetic	No associated seabed surface expression, and have the potential to represent possible buried ferrous debris or buried wreck sites	267
Total		**387**

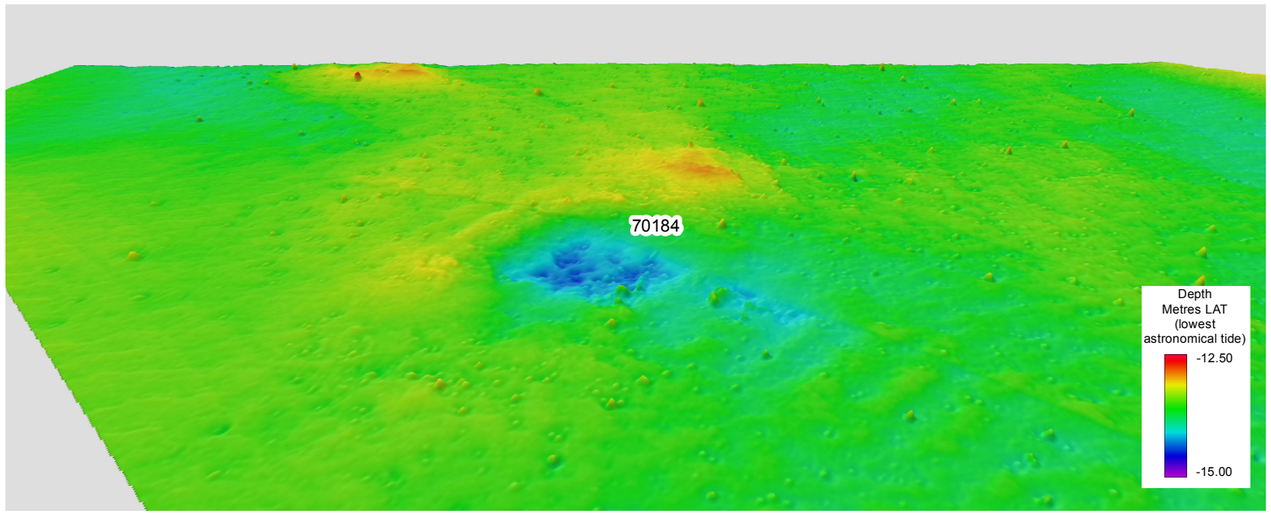
5.4.3 Within the Marine Cable Corridor, a total of four anomalies have been given an A1 archaeological discrimination, which are defined as features of anthropogenic origin of archaeological interest. Of these four A1 anomalies, two have been classified as wrecks.

5.4.4 Anomaly **70184** is an area of wreckage measuring 103.4 x 40.1 x 0.8 m, associated with UKHO record 20073 of the steamship *Corbet Woodall*, which sank while *en route* from South Shields to Poole on 30th May 1917 after detonating a mine laid by the German submarine *UC 36*. The wreck has been identified on the MBES data as an irregular area of numerous mounds within a slight depression (**Wreck Sheet 1**). On the SSS data, the feature appears to comprise numerous dark reflectors with height and some linear features. A larger, more coherent slatted structure, measuring approximately 8.2 x 2.5 m, is identified within the area of debris. The wreck is located within a boulder field and, as such, the exact boundaries of the area of dispersed debris are hard to discern. The wreckage has a very large associated magnetic anomaly of 11,450 nT, indicating significant amounts of ferrous material.

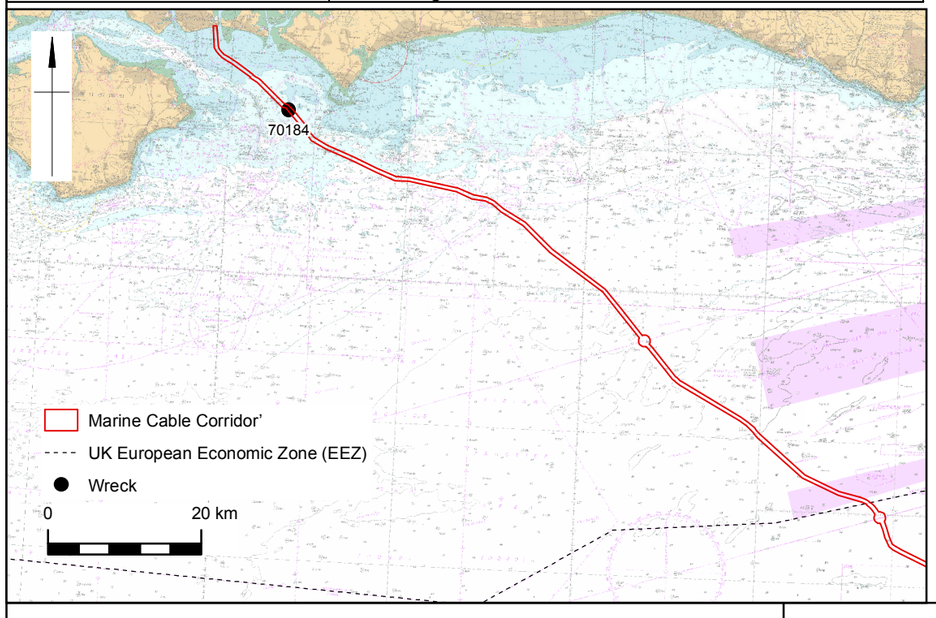
5.4.5 This wreck is charted and included in the UKHO database (ID 20073) as the dispersed wreck of the steamship *Corbet Woodall*. During the last recorded survey of the wreck, the wreckage was only identified on the magnetometer data and therefore considered to be buried. This indicates periodic burial and exposure of the wreck due to seabed processes. The remains of this vessel are classed as a dangerous wreck, now amended to 'dead' (with referencing to whether the wreck is considered to be a navigational hazard, rather than the presence of the wreck).

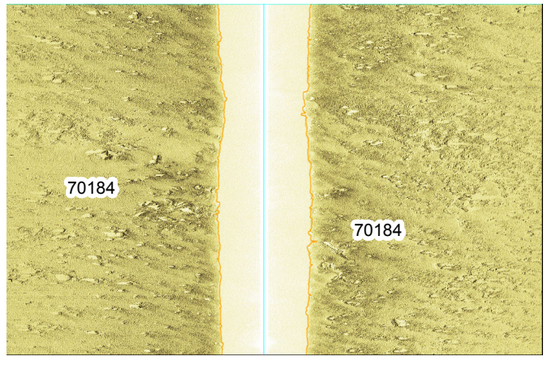
ID **70184** – *Corbet Woodall*

Location		648958E, 5617761N	**Area**	Aquind UK Sector
Archaeological Importance		High		
Geophysical survey dimensions and notes		Wreck 70184 is seen in the sidescan sonar data as a large area of dark reflectors with height, and some linear features. The overall dimensions of the spread of debris is 103.4 x 40.1 x 0.8 m, however the exact extents of the feature are hard to discern due to dispersed nature of the feature, as well as its position within a boulder field. A larger, more coherent slatted structure, measuring approximately 8.2 x 2.5 m, is identified within the area of debris. On the MBES data, the wreck is identified as numerous small mounds within a slight depression. The feature also corresponds with a very large magnetic anomaly, measuring 11,450 nT, suggesting a significant amount of ferrous debris. In the UKHO record, the wreck is identified as being that of the steamship *Corbet Woodall* (ID 20073), which sank while *en route* from South Shields to Poole on 30th May 1917 after detonating a mine laid by the German submarine UC 36. During the last recorded survey of the wreck, the wreckage was only identified on the magnetometer data and therefore considered to be buried. The remains of this vessel are classed as a dangerous wreck, now amended to 'dead'.		
Build	**Type**	Steamship		
	Construction	Unknown		
	Dimensions	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Mined		
Extent of Survival		In the geophysical data sets, the wreck appears to be well broken up and dispersed, however one slightly more coherent structure (measuring approximately 8.2 x 2.5 m) was identified on the sonar data. The full extent of the feature is difficult to discern due to the surrounding boulders.		

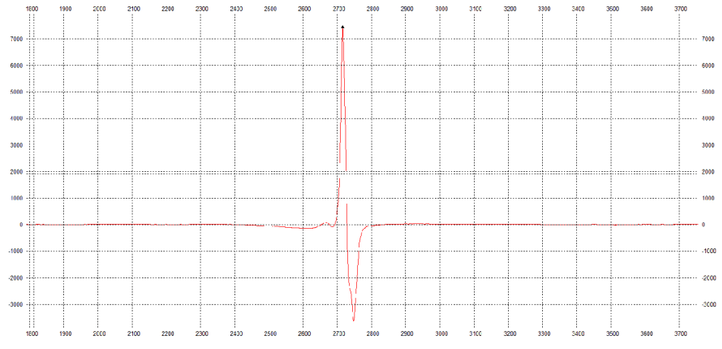


Multibeam bathymetry image of 70184 looking north (x6 vertical exaggeration)





Sidescan sonar image looking north-west, at 80 m range, of 70184, 103.4 m x 40.1 m x 0.8 m



Magnetic profile of 70184 measuring 11,450 nT

Coordinate system:
WGS84 UTM z30N

Date:	24/07/2018	Revision Number:	0
Scale:	Inset map 1:800,000 at A3	Illustrator:	KL
Path:	W:\Projects\116961\GIS\FigsMXD\geophyz\2018_07_18		

5.4.6 Anomaly **70193** is a broad area of debris measuring 73.5 x 65.8 x 2.6 m, thought to be associated with the UKHO record 20024 of a well broken up, unidentified steam ship. On the SSS data, the feature is identified as an area of numerous dark reflectors with height (**Wreck Sheet 2**). As with wreck **70184**, the wreck is located within a boulder field making the exact boundaries of the feature hard to discern. As the wreck is located at the very edge of the Marine Cable Corridor, the feature has not been covered in its entirety by the SSS data and was outside the limits of the MBES and magnetometer coverage, therefore the full extents of the feature have not been identified during this assessment. Although the main area of wreckage was not covered by the magnetometer data, it was identified on the closest magnetometer line as an anomaly of 296 nT, indicating ferrous material.

5.4.7 This wreck is charted and included in the UKHO database (ID 20024) as the wreckage of an unidentified steamship, reported in 1974 as possibly a WWI coaster. It is reported to be orientated east to west and is much broken up and rusted. The wreck is last reported to have been surveyed in 1997, with the highest points being the two boilers which stood about 15 feet high. The remains of this vessel are classed as a dangerous wreck.

5.4.8 In addition to the wrecks mentioned above, there are two additional features that have been classified as A1 anomalies within the Marine Cable Corridor.

5.4.9 Anomaly **70204** is a large debris field, measuring 50.0 x 23.0 m comprising numerous dark reflectors with heights of up to 1.4 m (**Figure 8**). The feature does not look particularly distinct on the sonar data and, as such, the boundaries are hard to discern. However, the feature corresponds with a very large magnetic anomaly measuring 2670 nT, indicating significant amounts of ferrous material. It is possible the feature represents an area of modern anthropogenic debris. However, given the size of the feature and the magnetic amplitude, it is possible the feature represents a dispersed wreck site in which no coherent structure remains and, as such, has been given an A1 discrimination.

5.4.10 Anomaly **70018** is a very large magnetic anomaly, measuring 1265 nT, without an associated SSS or MBES contact. This indicates a significant amount of ferrous debris that is buried or has no surface expression (**Figure 9**). As with anomaly **70204**, it is possible the feature represents an area of modern anthropogenic debris. However, as the magnetic amplitude suggests significant amounts of ferrous material, it is possible the feature represents a buried wreck site and, as such, has been given an A1 discrimination.

5.4.11 The remaining 383 anomalies have an A2 discrimination, which is defined as features of uncertain origin, but of possible archaeological interest (see **Appendix V** for full list of anomalies).

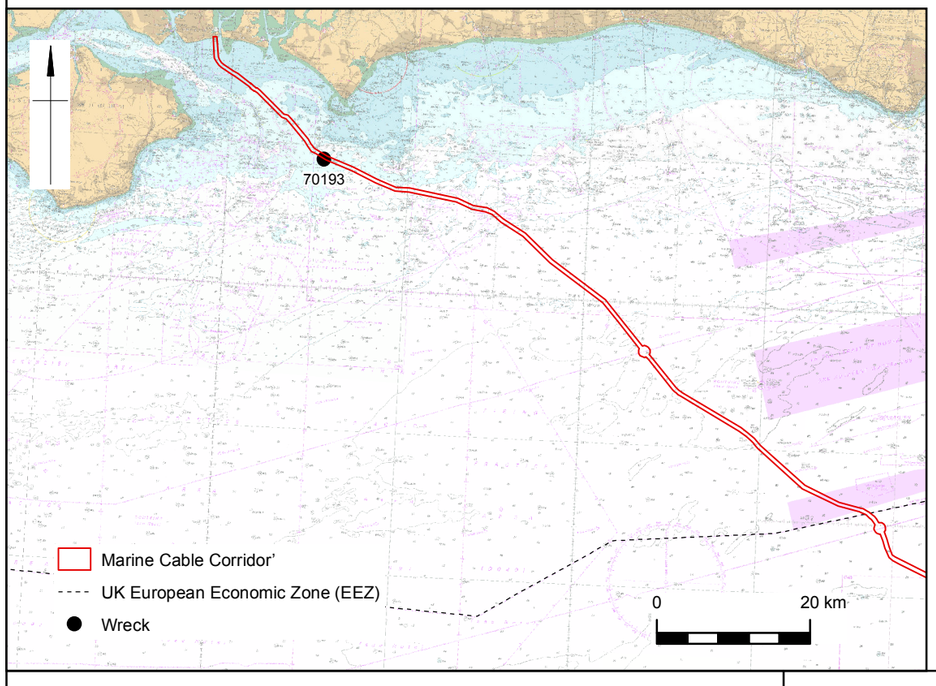
5.4.12 Of these A2 anomalies, ten have been classified as debris fields (**70012, 70069, 70075, 70104-5, 70212, 70214, 70241, 70250, 70298**). These are defined as discrete areas containing numerous individual debris items that are potentially anthropogenic and can include dispersed wreck sites for which no coherent structure remains.

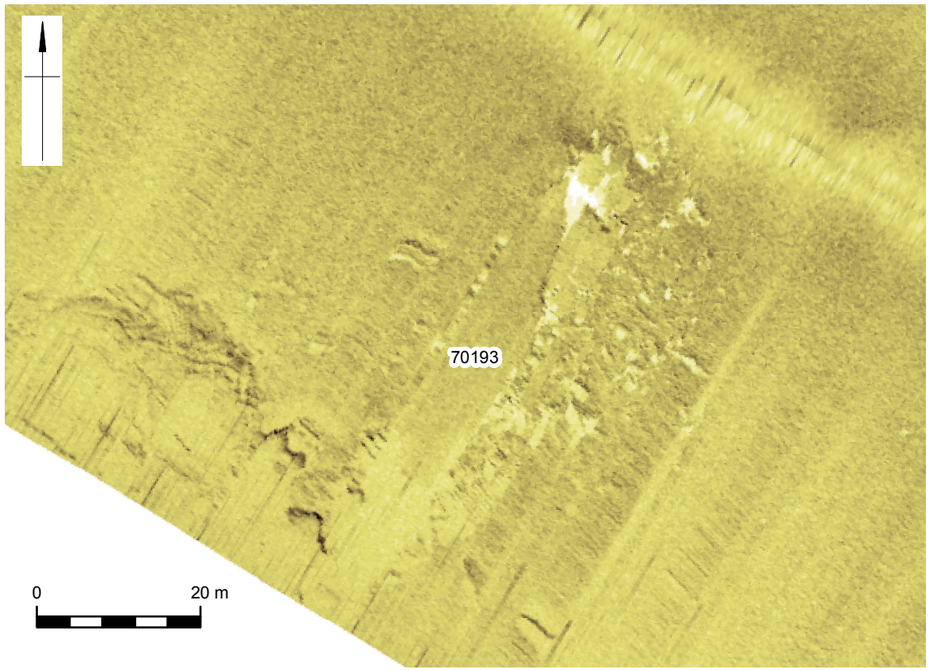
5.4.13 Eight of these interpreted debris field have an associated magnetic anomaly, indicating the presence of ferrous material. Anomaly **70214** is seen on the SSS data as a relatively small area (14.3 x 6.0 m), comprising several small dark reflectors with heights of up to 0.7 m. The feature corresponds with a magnetic anomaly of 171 nT.

5.4.14 Anomalies **70104** and **70105** have no corresponding magnetic anomalies but have been classified as debris fields based on their form. Any debris present at these locations is likely to be non-ferrous. Anomaly **70104** is seen on the sonar data to be an area of disturbed

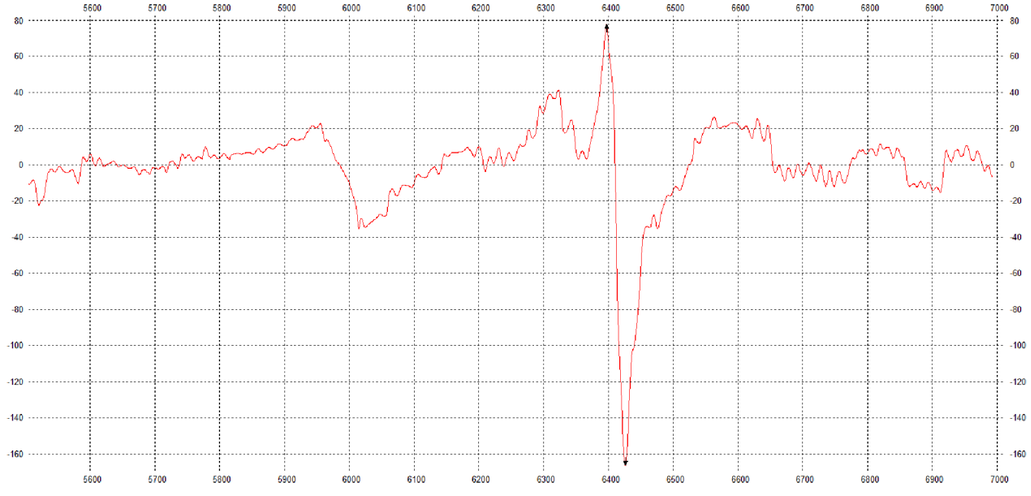
ID **70193** – Unknown

Location		654006E, 5613141N	**Area**	Aquind UK Sector
Archaeological Importance		High		
Geophysical survey dimensions and notes		Wreck **70193** is identified in the sidescan sonar data as a broad area of numerous dark reflectors with height. The overall dimensions of the debris spread are 73.5 x 65.8 x 2.6 m, however the feature is identified close to the edge of the Cable Corridor and, as such, the feature was not seen in its entirety. The wreck was outside the limits of the MBES and magnetometer data coverage, however it was identified on the closest magnetometer line as an anomaly measuring 296 nT, indicating ferrous material. In the UKHO record, the wreck is identified as the wreckage of a steamship (ID 20024), reported in 1974 as possibly a WWI coaster lying east to west. The wreck is last reported to have been surveyed in 1997, with the highest points being the two boilers which stood about 15 feet high. The remains of this vessel are classed as a dangerous wreck.		
Build	**Type**	Steamship		
	Construction	Unknown		
	Dimensions	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Unknown		
Extent of Survival		The wreck appears to be well broken up and dispersed, however the full extent of the wreck was not covered by the geophysical data. The UKHO record notes that in 1974, the wreck was reported to be much broken up and rusted.		





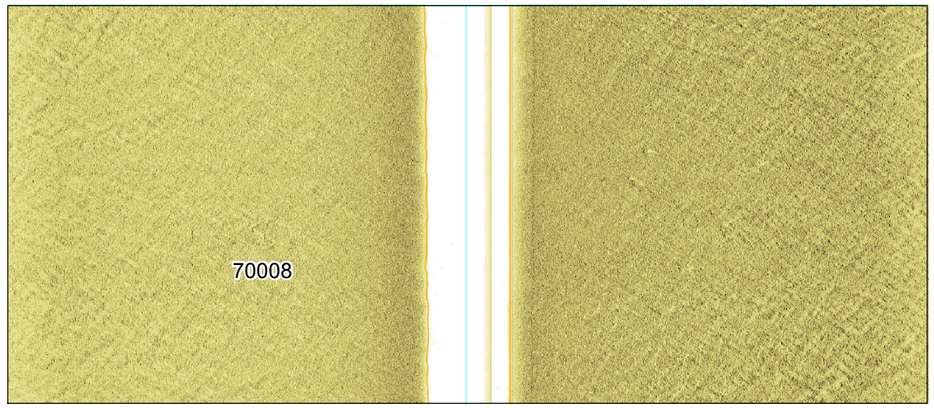
Sidescan sonar mosaic of 70193, 73.5 x 65.8 x 2.6 m



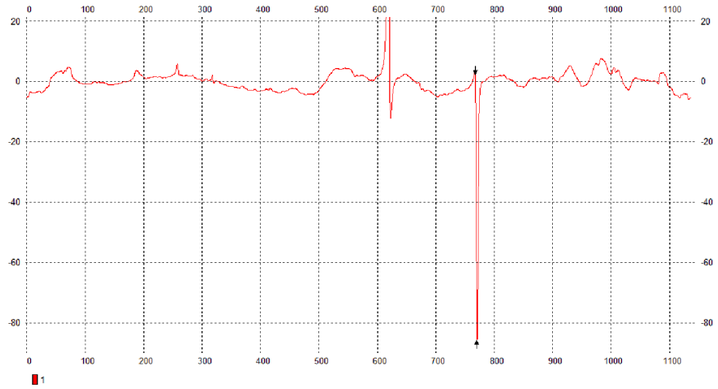
Magnetic profile of 70193 measuring 296 nT

Coordinate system:
WGS84 UTM z30N

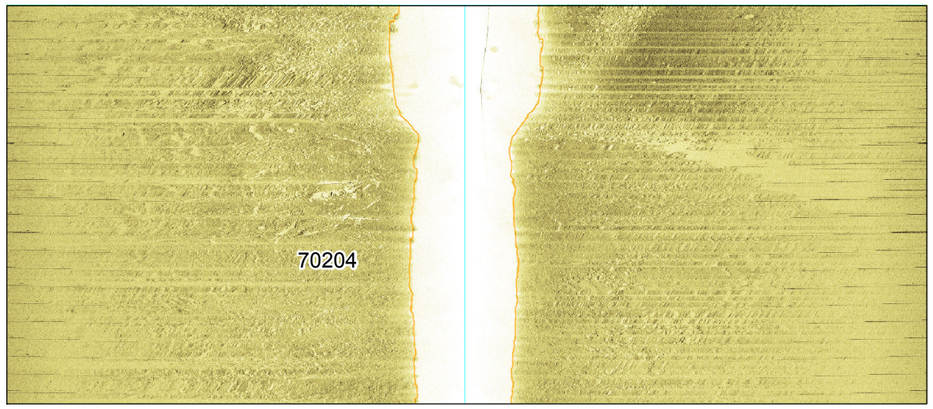
Date:	24/07/2018	Revision Number:	0
Scale:	Inset map 1:800,000 at A3	Illustrator:	KL
Path:	W:\Projects\116961\GIS\FigsMXD\geophyz\2018_07_18		



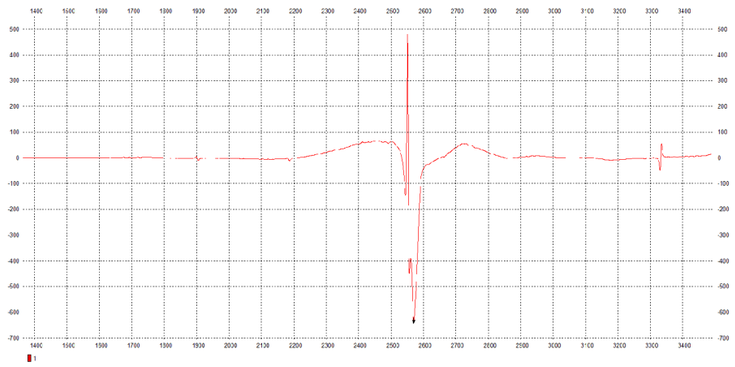
Sidescan sonar image at 50 m range of ferrous debris item 70008, measuring 8.6 x.3.0 m



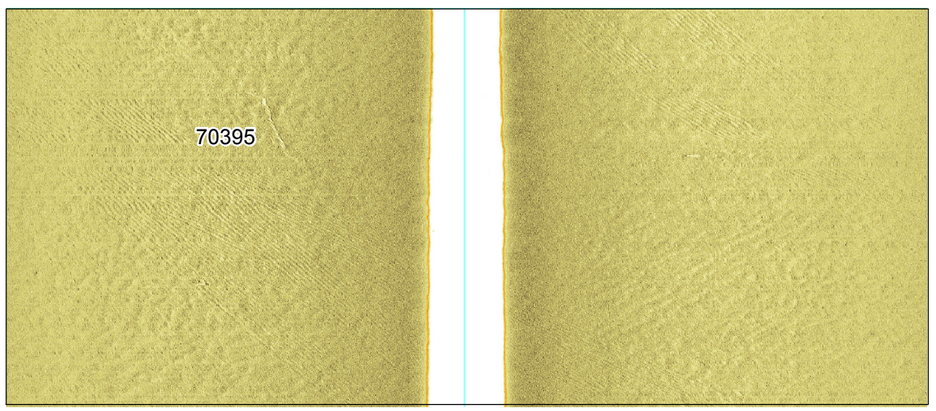
Magnetometer profile image of ferrous debris item 70008, measuring 867 nT



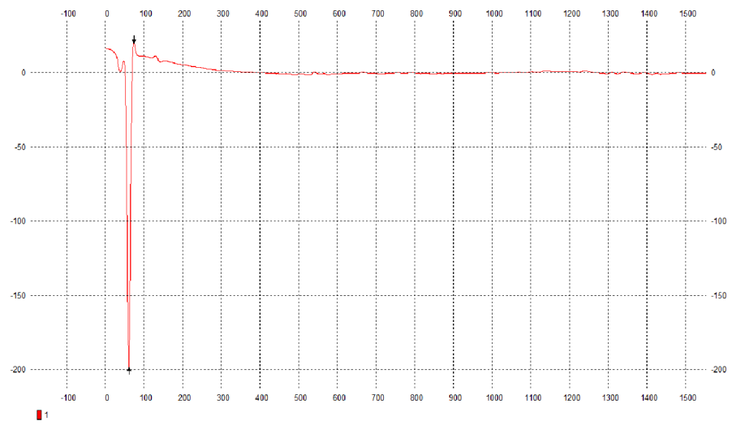
Sidescan sonar image, at 100 m range, of ferrous debris field 70204 measuring 50 x 23 x 1.4 m



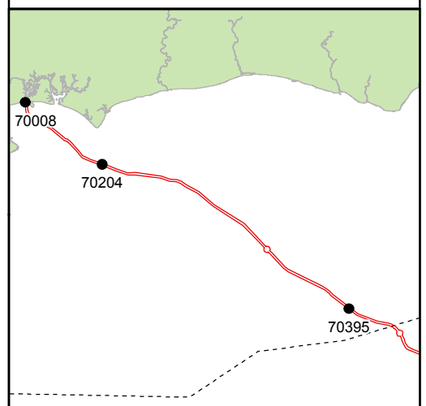
Magnetometer profile image of ferrous debris field 70204, measuring 2670 nT



Sidescan sonar image at 80 m range of ferrous linear debris item 70395, measuring 36.5 x 0.3 x 0.1 m



Magnetometer profile image of ferrous linear debris item 70395, measuring 219 nT



Marine Cable Corridor'

UK European Economic Zone (EEZ)

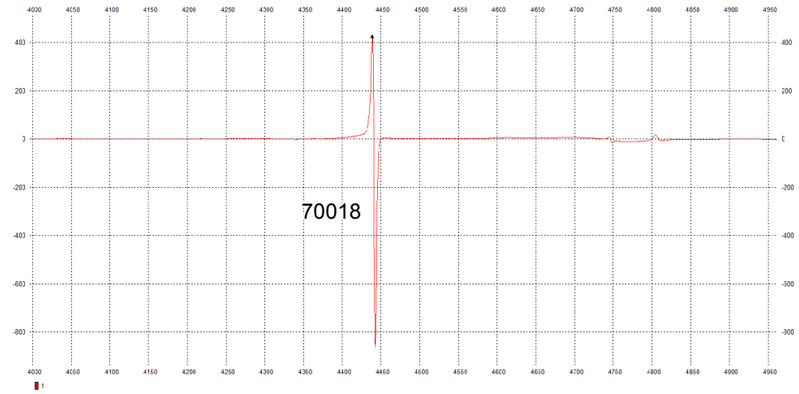
Data example

Coordinate system:
WGS84 UTM z30N

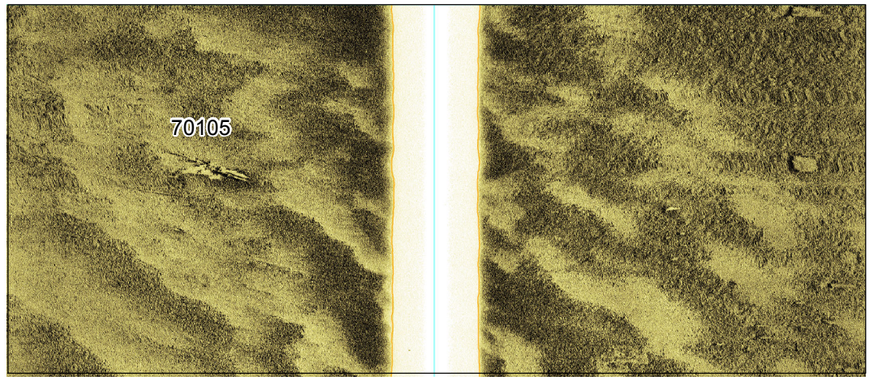
Date:	15/08/2018
Revision Number:	0
Scale:	n/a
Illustrator:	KL
Path:	W:\Projects\116961\GIS
	\FigsMXD\geophyz\2018_07_18

Data Examples of Ferrous Seabed Features

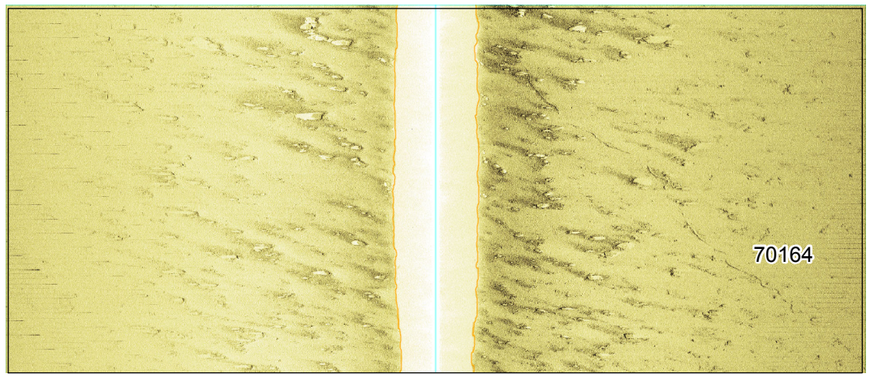
Figure 8



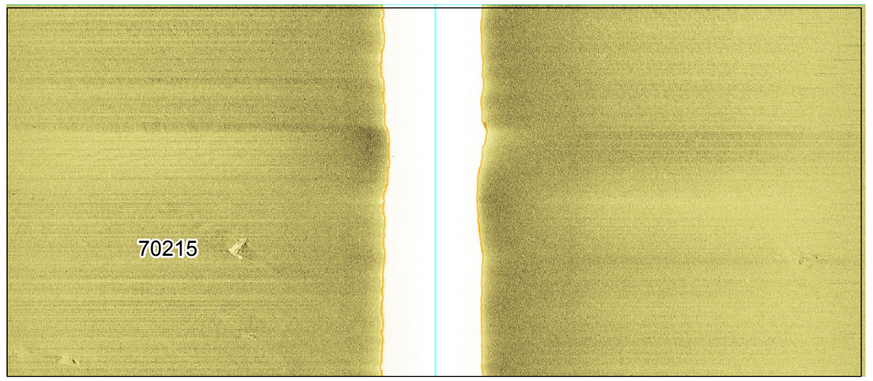
Magnetometer profile image of magnetic anomaly 70018, measuring 1295 nT



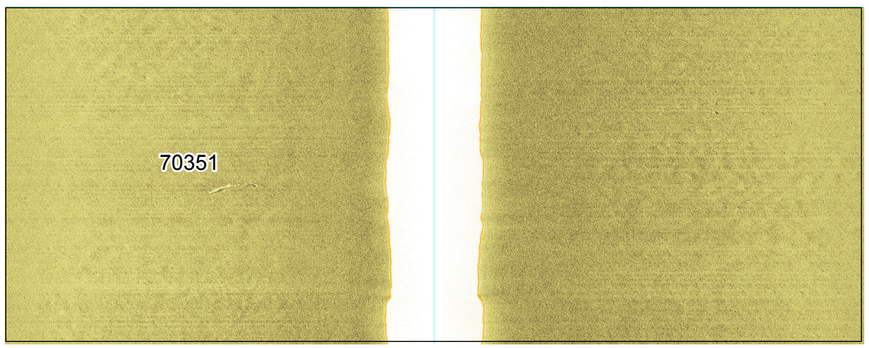
Sidescan sonar image at 50 m range of nonferrous debris field 70105, measuring 9 x 5.2 x 0.5 m



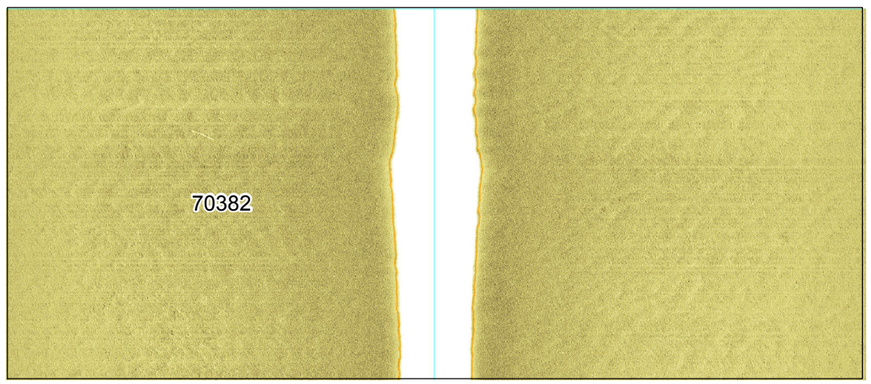
Sidescan sonar image at 80 m range of rope/chain item 70164, measuring 6134.6 x 0.4 x 0.1 m



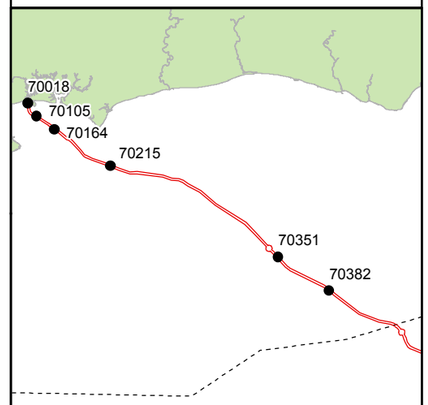
Sidescan sonar image at 80 m range of nonferrous debris item 70215, measuring 7.8 x 0.8 x 0.6 m



Sidescan sonar image at 80 m range of nonferrous debris item 70351, measuring 10.7 x 0.8 x 0.1 m



Sidescan sonar image at 80 m range of linear bright reflector item 70382, measuring 6.1 x 0.8 m



Marine Cable Corridor'

UK European Economic Zone (EEZ)

Data example

Coordinate system:
WGS84 UTM z30N

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Revision Number:	0
Scale:	n/a
Illustrator:	KL
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Data Examples of Ferrous Seabed Features

Figure 9

seabed, measuring 26.4 x 12.9 m, comprising several elongated dark reflectors with heights of up to 0.2 m, and one long bright reflector. Anomaly **70105** is an area measuring 9.0 x 5.2 m, seen to comprise several linear dark reflectors with heights of up to 0.5 m, possibly with some bright reflectors (**Figure 9**). The feature appears to have a linear dark reflector extending approximately 28 m north-west, however this appears to be a scar and, as such, is not deemed to be of archaeological interest.

5.4.15 A further 47 of the A2 anomalies have been classified as items of debris, which are defined as objects visible on the seabed, generally exhibiting height or with evidence of structure, that are considered potentially anthropogenic in origin based on their form or associated magnetic anomaly.

5.4.16 Of these 47 items of debris, 24 of the features have an associated magnetic anomaly (**70008, 70029, 70030, 70050, 70073, 70083, 70093, 70106, 70117, 70126, 70134, 70143, 70229, 70275, 70279, 70310, 70341, 70392-7, 70404**). The largest of which is anomaly **70008**, which is an interpreted item of debris measuring 8.6 x 3.0 m. On the SSS data, the feature looks relatively indistinct, however it corresponds with a large magnetic anomaly, measuring 867 nT, indicating a significant amount of ferrous material (**Figure 8**).

5.4.17 Six of these ferrous items of debris are classified as linear items of debris (anomalies **70392 – 70397**). These features are identified relatively close to another and are seen on the SSS data as narrow dark reflectors, with lengths of up to 36.5 m (anomaly **70395, Figure 8**). The features appear to correspond with a linear magnetic anomaly, with amplitudes of up to 219 nT. It is possible that these features are part of a partially broken up length of uncharted cable, however, as this cannot be confirmed without further investigation, they have been retained as potential archaeology.

5.4.18 The remaining 23 debris items have no associated magnetic anomaly but are considered as potential debris based on their form. Twenty-one of these non-ferrous features are linear items of debris (**70032, 70055, 70061, 70088, 70092, 70094, 70167, 70177-9, 70181, 70186, 70207-8, 70217, 70222, 70297, 70351, 70358, 70372-3**).

5.4.19 Two non-ferrous debris items (**70215** and **70383**) have been classified as such based on their size and angular nature. Anomaly **70215** is an angular 'L' shaped dark reflector, measuring 7.8 x 0.8 m, with a height of 0.6 m (**Figure 9**). Anomaly **70383** is a large rectangular object, measuring 52.7 x 2.9 x 0.6 m, comprising linear dark reflectors with height.

5.4.20 Anomaly **70351** is an elongated item of debris, measuring 10.7 x 0.8 m, with a slightly jagged shadow (**Figure 9**). It is possible that the feature is a linear item of debris, however it may also be a larger, partially buried object. The feature is located outside the magnetometer data coverage, meaning it is not possible to discern whether it is composed of ferrous material.

5.4.21 Five features have been classified as seabed disturbances (**70189**, **70249**, **70276**, **70283**, **70299**). These are defined as an area of disturbance without individual, distinct objects, which may indicate wreck debris or other anthropogenic features buried just below the seabed. The largest of these is anomaly **70189**, which is seen on the SSS data as a slightly elongate seabed disturbance measuring 27.1 x 6.9 m, possibly with some bright and dark reflectors.

5.4.22 Seven anomalies have been classified as rope/chain (**70038, 70056, 70064, 70108, 70164, 70192** and **70220**). These are defined as curvilinear dark reflectors, often with a small

amount of height, indicating a rope or chain (if ferrous). Of these, three are ferrous, indicating a possible length of chain or cable (**70108**, **70192** and **70220**). The remaining four have no associated magnetic anomalies, suggesting they are more likely to be lengths of rope. These features may not be of archaeological potential in themselves but may be attached to archaeological features (e.g. anchors) or be snagged on mostly buried debris not visible in the SSS or MBES data.

5.4.23 The longest of these rope/chain features is anomaly **70164**, which is identified on the sonar data as an intermittent curvilinear with height, measuring 134.6 m in length (**Figure 9**). As the feature has no corresponding magnetic anomaly, it is most likely a length of rope.

5.4.24 Four anomalies have been classified as bright reflectors (**70221**, **70230**, **70311** and **70382**), which are defined as individual objects or areas of low reflectivity, characteristic of materials that absorb acoustic energy, such as waterlogged wood or synthetic materials (**Figure 9**). These range in size from the largest (anomaly **70311**), identified as a curvilinear bright reflector measuring 8.6 x 0.1 m, to the smallest (anomaly **70221**), a slightly rectangular elongated bright reflector measuring 5.0 x 1.0 m.

5.4.25 Forty-four anomalies have been classified as dark reflectors, which are defined as individual objects or areas of high reflectivity that display some anthropogenic characteristics, although their precise nature is uncertain. These range in size from the smallest (**70111**), seen as a poorly defined dark reflector measuring 1.1 x 0.8 x 0.5 m, to the largest (**70014**), measuring 7.3 x 0.9 x 0.6 m (for full list see **Appendix V**). These could represent individual pieces of debris or natural features.

5.4.26 The remaining 266 features are magnetic anomalies with no associated seabed surface expression, which have the potential to represent possible buried ferrous debris. These magnetic anomalies range in size from 7 nT (anomaly **70260**) to 754 nT (anomaly **70194**) (for full list see **Appendix V**).

5.4.27 Three of these magnetic anomalies appear to correspond with slight mounds on the MBES data (**70017**, **70168** and **70232**), however nothing distinct was identified on the SSS data at these locations, possibly indicating superficial burial of material.

5.4.28 No recorded wrecks or obstructions were identified within the Marine Cable Corridor besides those already described (**70184** and **70193**).

5.5 Maritime Archaeological Potential

5.5.1 The assessment of potential for the discovery of shipwreck and shipwreck-derived material within the ASA draws on the results of the geophysical survey and desk-based research combined with further research of the wider area.

Navigational Hazards

5.5.2 A project entitled Enhancing our Understanding: Mapping Navigational Hazards as areas of Maritime Archaeological Potential, undertaken by Bournemouth University (Merritt et al., 2007) assessed historical records of navigational hazards to interpret and characterise the marine historic environment. Areas assessed to be hazardous were considered alongside a model of the preservation potential of marine sediments with the purpose of identifying areas where there was not only a high potential for ship losses, but where there was also a high potential for the preservation of archaeological remains. These areas were coined as Areas of Maritime Archaeological Potential (AMAPs).

5.5.3 The proposed Marine Cable Corridor truncates two AMAPs within the Eastern Solent and the approaches to Langstone Harbour that are defined as having a high percentage of fine grained sediments and therefore a high potential of preservation, alongside their hazardous nature as areas of shifting sand banks.

5.5.4 The coastal section of the ASA is within an area of high potential for navigational hazard, with an extensive shallow sandy foreshore, exposed to south easterly winds. A number of banks are found within these shallow waters, such as East and West Winner and Horse and Dean Sands.

5.5.5 Further offshore, the area is of medium potential for navigational hazard, exposed to all wind directions. Several navigational points are present marking out offshore rocky areas, such as Selsey Bill, Bembridge Point and the coast south east of Portsmouth.

5.5.6 The ASA falls within an area of significant shipping and navigation activity. These include the passage of merchant vessels, recreational craft, military vessels, and vessels engaged on specialist operations such as aggregate dredgers.

Recorded Losses

5.5.7 As discussed in **Section 3.2**, Recorded Losses are records for ships or aircraft that are known to have wrecked or crashed offshore, but for which the exact locations are not known. Recorded Losses are often grouped together by their general area of loss into Maritime Named Locations (displayed spatially as polygons or centre points of polygons, often associated with NRHE data), however many records (particularly from the HER dataset) are given co-ordinates (displayed spatially as points), although these are similarly unsubstantiated.

5.5.8 Recorded Losses can be considered as an indication of the potential for archaeological maritime remains to exist within the ASA and the type and number of wrecks that could be present. These records relate to vessels reportedly lost or for which no physical wreck remains have ever been identified. **Table 10** shows the distribution of these documented losses according to the date of loss for those records whose positions fall within the ASA. Details regarding these losses are presented in **Appendix VI**.

Table 10 Recorded Losses based on NRHE and HER data

Period	Number of Losses
Medieval	-
Post-medieval	7
19th century	30
Modern	37
Unknown	30
Total	**104**

5.5.9 Recorded Losses are predominantly reported to have stranded in coastal areas, around Eastney Fort/ Point and Dean and Horse Sands. Other areas mentioned include Langstone Harbour, Fort Cumberland, Owers Light Vessel and Selsey Bill, roughly covering 20 km of coastline. The majority of losses wrecked at or foundered at Horse and Dean Sand, Hampshire, with Langstone Harbour being the second most numerous wrecking location. Both locations are Maritime Named Locations.

5.5.10 In general, Recorded Losses paint a vibrant picture of the types of voyages being undertaken around the coast of Portsmouth and Hampshire County. The losses across the

area generally represent 19th and 20th century vessels, including those involved in international trade. The sailing ships of the 19th century lost at Portsmouth predominantly feature cargo sailing vessel, crafts, schooners, and a few brigs and ketches.

Overview of Potential

5.5.11 There is potential for the presence of archaeological material of maritime nature spanning from the Mesolithic period to the present day within the ASA. The key areas of potential are summarised in **Table 11** below.

Table 11 Summary of key areas of maritime potential

Period	Summary
Pre-1508 AD	Low potential for material associated with prehistoric maritime activities. Prehistoric maritime activities include coastal travel, fishing and the exploitation of other marine and coastal resources. Vessels of this period include rafts, hide covered watercraft and log boats.
	Low potential for material associated with later prehistoric maritime activities, including seaworthy watercraft suitable for overseas voyages to facilitate trade and the exploitation of deep water resources. Such remains are likely to comprise larger boat types, including those representing new technologies such as the Bronze Age sewn plank boats which are associated with a growing scale of seafaring activities.
	Low potential for material of Romano-British date, associated with the expansion and diversification of trade with the Continent. Watercraft of this period, where present, may be representative of a distinct shipbuilding tradition known as 'Romano-Celtic' shipbuilding, often considered to represent a fusion of Roman and northern European methods.
	Low potential for material associated with coastal and seafaring activity in the 'Dark Ages', associated with the renewed expansion of trade routes and Germanic and Norse invasion and migration. Vessels of this period may be representative of new shipbuilding traditions such as the technique.
	Low potential for material associated with medieval maritime activity, including that associated with increasing trade between the UK and Europe, the development of established ports around the southern North Sea and the expansion of fishing fleets and the herring industry. Vessels of this period are representative of a shipbuilding industry which encompassed a wide range of vessel types (comprising both larger ships and vernacular boats). Such wrecks may also be representative of new technologies (e.g. the use of flush-laid strakes in construction), developments in propulsion, the development of reliable navigation techniques and the use of ordnance.
1509 to 1815	Medium potential for post-medieval shipwrecks representative of continuing technological advances in the construction, fitting and arming of ships, and in navigation, sailing and steering techniques. Vessels of this period continued to variously represent both the clinker techniques and construction utilising the flush-laid strakes technique.
	Medium potential for post-medieval shipwrecks associated with the expansion of transoceanic communications and the opening up of the New World.
	Medium potential for post-medieval shipwrecks associated with the establishment of the Royal Navy during the Tudor period and the increasing scale of battles at sea.
	Medium potential for post-medieval shipwrecks associated with continuing local trade and marine exploitation including the transport of goods associated with the agricultural revolution.
1816 to 1913	Higher potential for the discovery of shipwrecks associated with the introduction of iron and later steel in shipbuilding techniques. Such vessels may also be representative of other fundamental changes associated with the industrial revolution, particularly with regards to propulsion and the emergence of steam propulsion and the increasing use of paddle and screw propelled vessels.

Period	Summary
	Higher potential for the discovery of shipwrecks demonstrating a diverse array of vernacular boat types evolved for use in specific environments.
	Higher potential for wrecks associated with large scale worldwide trade, the fishing industry or coastal maritime activity including marine exploitation.
1914 to 1945	Higher potential for the discovery of shipwrecks associated with the two world wars including both naval vessels and merchant ships. Wrecks of this period may also be associated with the increased shipping responding to the demand to fulfil military requirements. A large number of vessels dating to this period were lost as a result of enemy action.
Post- 1946	Potential for wrecks associated with a wide range of maritime activities, including military, commerce, fishing and leisure. Although ships and boats of this period are more numerous, loses decline due to increased safety coupled with the absence of any major hostilities. Vessels dating to this period are predominantly lost as a result of any number of isolated or interrelated factors including human error, adverse weather conditions, collision with other vessels or navigational hazards or mechanical faults.

5.6 Aviation Archaeological Baseline and Potential

Approach

5.6.1 The assessment of potential for the discovery of aircraft crash sites and aircraft derived material within the ASA draws on the results of the geophysical survey and desk-based research combined with further research of the wider area.

5.6.2 There are no known aircraft crash sites recorded within the ASA, however there is potential for the discovery of previously unknown aircraft material.

Recorded Losses

5.6.3 There are 21 Recorded Losses for aircraft casualties listed by the NRHE within the ASA, although it is not confirmed if material relating to the crash sites has been discovered within the area, hence their inclusion as Recorded Losses. Details regarding these aircraft are provided in **Appendix VII.**

5.6.4 The aircraft were lost during WWII and comprise of seven British Hurricane MK I type fighters; seven British Spitfire MK I type fighters; two British Typhoon type fighter bombers; a Shark MK II torpedo-bomber, a Roc MK I fighter; a Hampden MK I bomber; a Halifax MK II bomber and a Blenheim MK IV fighter.

5.6.5 Seventeen of these aircraft are recorded as having been lost off Selsey Bill, Sussex with the remaining four records recorded as being lost off Eastney, Portsmouth. These records illustrate the potential for hitherto unknown aircraft remains to exist on the seafloor within the ASA.

Overview of Potential

5.6.6 There is potential for the presence of aviation material dating from the early 20th century until more recent times, with a concentration dating to the World Wars and in particular to the Second World War. Discoveries may occur anywhere within the ASA, but potential may increase nearer the coastlines in the vicinity of coastal defence networks protecting the strategically important military and civil infrastructure on England's south coast.

5.6.7 The key areas of aviation potential that may be uncovered within the ASA are summarised in **Table 12**.

Table 12 Summary of key areas of aviation potential

Period	Summary
Pre- 1939	Minimum potential for material associated with the early development of aircraft. Aircraft of this period may represent early construction techniques (e.g. those constructed of canvas covered wooden frames) or may be associated with the mass-production of fixed wing aircraft in large numbers during WWI.
	Minimum potential for material associated with the development of civil aviation during the 1920s and 1930s, associated with the expansion of civilian flight from the UK to a number of European and worldwide destinations.
1939 to 1945	Very high potential for WWII aviation remains, particularly as the east coast acted as a hub for hostile activity. Aircraft of this period are likely to be representative of technological innovations propelled by the necessities of war which extended the reliability and range of aircraft. This potential is signified by the 21 aircraft Recorded Losses outlined above.
Post- 1945	Potential for aviation remains associated with military activities dominated by the Cold War, the evolution of commercial travel and recreational flying and the intensification of offshore industry (including helicopter remains). Aircraft of this period may be representative of advances in aerospace engineering and the development of the jet engine

6 ARCHAEOLOGICAL ASSESSMENT: INTERTIDAL HERITAGE POTENTIAL

6.1 Data Assessment

6.1.1 There is a total of two records (**WA 1000** & **WA 1001**) relating to archaeological sites, artefacts, material and standing remains within the intertidal zone (to MHWS) of the proposed Marine Cable Corridor at the landfall search zone of Eastney Beach. These records have been derived from the NRHE and HER archives and more information is presented in **Appendix IX**.

6.1.2 The two records refer to prehistoric findspots that no longer exist at the locations provided. **WA 1000** consists of a prehistoric handaxe, whilst **WA 1001** consist of a Roman coin of *Victorinus*, dating to AD268-271.

Walkover Survey

6.1.3 A walkover survey was carried out by Wessex Archaeology staff along the length of the intertidal zone up to the MHWS, covering the landing position of the cable route. The area was staked out using a Leica Netrover GS08+ with a CS10 console system. This was then photographed, and a walkover survey carried out on the falling spring tide.

6.1.4 No new archaeological features or objects were identified within the survey area.

6.1.5 Other visible features identified within the survey area include the remains of timber and steel constructed groynes, steel shuttering and steel reinforced concrete beach defences, with a small amount of modern ceramic building material present (**Plate 1**). A brick-built culvert access that forms part of the storm defences for Portsmouth and the surrounding area is also visible.

6.1.6 On the northern edge of the beach there is a row of flat-topped concrete blocks (referring to NRHE_HER 909636) forming a 500 m long row of anti-tank defences. Some have eroded out of position, and now lie with varying degrees of exposure. These appear to be interspersed with latter beach defence blocks (**Plate 2**).

6.2 *Overview of Potential*

6.2.1 Generally, coastal areas, particularly soft sandy coasts, may contain an array of isolated finds from a wide range of archaeological periods.

6.2.2 Findspots within the intertidal beach zone at Eastney are limited to the two records indicating there is established potential for early and later artefacts to be encountered at the coast.

6.2.3 In addition, a specific note is made here with reference to the concentration of military defence features present within the wider (intertidal) area (including Fort Cumberland) clearly indicates the importance and vulnerability to attack of this stretch of coastline during past historical conflicts, especially naval actions (and more recently aerial combat in World War II) and the lengths taken to protect important historic naval infrastructure at Portsmouth. Further details on the archaeological potential within the wider onshore area can be found within Chapter 20 of this PEIR.

Plate 1: East end of Eastney beach; remains of timber and steel groynes, photograph taken facing west

Plate 2: Midsection of Eastney beach; remains of anti-tank defence blocks, photograph taken facing west

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7 HISTORIC SEASCAPE CHARACTER

7.1.1 As part of the National Heritage Protection Plan (NHPP), English Heritage (now Historic England) commissioned a Historic Seascape Characterisation (HSC) for the Solent and waters off the Isle of Wight, and the work was undertaken by the projects teams of Hampshire and Wight Trust for Maritime Archaeology (HWTMA), Bournemouth University and Southampton University (2007).

7.1.2 The Solent and Isle of Wight HSC project aimed to complete strategic-level HSC in accord with the national HSC Method that extends and applies the principles already in use for Historic Landscape Characterisation (HLC) to the coast and seas. The method assesses and defines areas with Historic Seascape Character types that promote an understanding of historic trends and processes in order to inform the sustainable management of change over time. This is achieved by addressing the multi-level character of the sea by splitting the marine zone into four tiered levels; the sea surface, the water column, the sea floor and the sub-sea floor. The characterisation is GIS-based, enabling key characteristics within the ASA to be identified, and are summarised below.

7.1.3 The known and potential prehistoric, maritime and aviation heritage assets that form part of the HSC have been discussed in the relevant baseline characterisations above. The character descriptions below refer only to the cultural processes which have shaped the historic seascape of the ASA.

7.1.4 The Solent and Isle of Wight HSC project identified several areas that are within or intersect with the ASA, shown in **Table 13**.

Table 13 HSC – primary cultural processes in the ASA

Present Broad Character Types	Present Character Sub-Types
Cultural Topography	Landward mobile cliffs
	Marine sand banks with sand waves
	Palaeolandscapes
Coastal Infrastructure	Flood and erosion defences
Communications	Submarine telecommunication cables
Fishing	Aquaculture – cultivated shellfish
	Inshore fisheries
	Offshore fishing grounds – trawling, netting, longline, potting
Industry	Energy industry – gas supply pipeline; commercial shipping
	Extractive industry – marine aggregates dredging
Military	Military defence and fortification
Navigation	Maritime safety – lighthouse
	Navigation route / Historic Channel

8 VALUE AND SENSITIVITY

8.1 Introduction

8.1.1 This section will apply the assessment of value criteria set out in **Section 3.4** and within **Table 5** to the known and potential archaeological receptors outlined in **Sections 4 – 6**.

8.2 Seabed prehistory

Value

8.2.1 Although there are no records of any known prehistoric sites from offshore contexts within the Marine Cable Corridor, there is potential for the presence of as yet undiscovered *in situ* prehistoric sites and finds. For example, *in situ* archaeology that may be associated with identified palaeogeographic features (**Figure 3 – 6**) would be considered as **high** value.

8.3 Seabed features: maritime

Value

8.3.1 There are no wrecks with statutory designations within the UK element of the Marine Cable Corridor.

8.3.2 There are two known wreck sites (**70184**; **70193**) and two other receptors which may be of anthropogenic origin (the debris scatter **70204** and the large magnetic anomaly **70018**). These are considered of **high** value.

8.3.3 For all A2 anomalies, there is insufficient data to assess the value of each individual anomaly at this point. As such, all A2 anomalies must be considered to potentially have archaeological value, to a greater or lesser degree and, in accordance with the precautionary principle, and in EIA terms are considered as **high** value assets.

8.3.4 Similarly, as the value of potential wrecks cannot be evaluated until they are discovered, potential wrecks of all periods should be expected to be of **high** value.

8.4 Seabed features: aviation

Value

8.4.1 There are no known aircraft crash sites in the UK element of the Marine Cable Corridor. Nonetheless, there is the potential for aircraft or aircraft-related debris to exist on the seafloor within the Marine Cable Corridor. Given the identified potential of the area for military aircraft crashes, particularly relating to WWII, the likelihood would be for any aircraft crash to be of military origin, which would be protected under PMRA 1986 and therefore would be of **high** value.

8.4.2 This would include both Allied and Axis aircraft and would relate to both complete aircraft wrecks and debris scatters.

8.5 Intertidal heritage assets

Value

8.5.1 Currently, there are no intertidal receptors. Two findspots within the northern end of the Marine Cable Corridor indicate potential for stray finds to be located in the intertidal zone.

8.5.2 The value of any potential *in situ* sites and artefacts within the intertidal zone may be considered of **high** value, particularly given the known potential for early prehistoric

archaeology (and particularly Mesolithic archaeology within the intertidal zone of Langstone Harbour, as discussed above) and rich archaeological record of the area, more generally.

8.6 Sensitivity of heritage assets

8.6.1 All archaeological receptors have the potential to be physically damaged, destabilised or destroyed if they are directly or indirectly impacted. Furthermore, all damage to archaeological sites or material is permanent and recovery is limited to stabilisation or re-burial to limit further impact.

8.6.2 Archaeological receptors have no recoverability if they are affected by a direct or indirect physical impact. As such, all receptors should be regarded as having **high sensitivity** to direct and indirect physical impacts of the Proposed Development.

9 ENVIRONMENTAL APPRAISAL AND RECOMMENDATIONS

9.1 High-level environmental appraisal

9.1.1 Archaeological assets relating to seabed prehistory, maritime and aviation archaeology have been identified within the Marine Cable Corridor, as has the potential for further assets to be discovered. The Proposed Development has the potential to physically and adversely impact known and potential archaeological receptors within the construction footprint and area of effect of indirect physical effects such as changes in seabed sediment regimes, scour etc.

9.1.2 Typically, adequate and appropriate mitigation is required to ensure that the archaeological value of the baseline within this report is maintained. Recommendations for appropriate mitigation are set out below.

9.2 Recommendations

Avoidance

9.2.1 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).

9.2.2 The mitigation will establish appropriately sized AEZs around receptors which have been considered to be of high archaeological potential, in consultation with Historic England. These areas would be out of bounds to construction activities and to anchoring. Monitoring of any AEZs to ensure there is no disturbance to them will be part of this mitigation.

9.2.3 The four AEZs currently proposed are presented in **Figures 7a – 7z2** and represent 100 m radius AEZs around the identified extent of the seabed feature. This buffer has been selected to account for the large dimensions (over 50 m in length) and magnetic readings of the identified assets.

9.2.4 In addition, for possible features of anthropogenic origin (A2), AEZs are not typically proposed, but avoidance through micro-siting of the cable route, where possible, is recommended in the first instance.

Reduction

9.2.5 Reduction of impact can be achieved by means of appropriate mitigation identified through potential opportunities for further investigation of assets (e.g. during UXO survey and clearance). Further investigations mean that anomalies can either have their archaeological value removed, if they prove to be of non-anthropogenic nature or modern, or their value as archaeological assets confirmed. If their value is confirmed, mitigation in the form of either avoidance (which may be enacted by the implementation of an AEZ) or through remedying or offsetting measures as identified through a Working Scheme of Investigation (WSI) which includes a Protocol for Archaeological Discoveries.

Remedying and offsetting

9.2.6 In cases where avoidance is either inappropriate or impossible, the damage to archaeological assets should be offset. In the case of seabed prehistoric features, this can be achieved by undertaking a palaeoenvironmental assessment of deposits with high geoarchaeological potential, principally peat deposits. Pollen and macrofossil assessment, supported by radiocarbon dating, will provide information on age and vegetation history of the terrestrial environment, providing a landscape context to any prehistoric activity within

the area. Recovery of artefacts and/or other archaeological receptors should be a final resort, when all other mitigation has failed. Any recovery should be completed under the supervision of an appropriately qualified and experienced marine archaeologist. Recovery methods are identified through the WSI. Due to the vast differences in practice and implementation between these methods, each will be covered by a specific Method Statement, approved by the Archaeological Curator, should they be implemented.

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APPENDICES

Appendix I: Legislative, policy and guidance

Global policy and legislation

Legislation/Policy	Summary
The World Heritage Convention 1972	The Convention provides for the identification, protection, conservation and presentation of cultural and natural sites of 'outstanding universal value' for inscription on the World Heritage List. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The 1972 UNESCO World Heritage Convention was ratified by the UK in 1984 and the UK currently has 29 World Heritage Sites.
The United Nations Convention on the Law of the Sea 1982	UNCLOS 1982 was ratified by the UK in 1997. Article 149 applies only to those archaeological and historical objects that lie outside national jurisdiction and stipulates that 'all objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin'. Article 303 stipulates that 'states have the duty to protect objects of an archaeological and historical nature found at sea and shall co-operate for this purpose'. Article 303 also provides for coastal states to exert a degree of control over the archaeological heritage to 24 nm, though the UK has not introduced any measures to implement this right.
International Council of Monuments and Sites Charter on the Protection and Management of Underwater Cultural Heritage 1996 (the Sofia Charter)	The Charter upon which the Annex of the UNESCO Convention is largely based includes a series of statements regarding best practice, intending 'to ensure that all investigations are explicit in their aims, methodology and anticipated results so that the intention of each project is transparent to all'. The UK is a member of the International Council of Monuments and Sites.
UNESCO Convention on the Protection of the Underwater Cultural Heritage (2001)	The UNESCO Convention was concluded in 2001, and is a comprehensive attempt to codify the law internationally with regards to underwater archaeological heritage. The UK abstained in the vote on the final draft of the Convention, however, it has stated that it has adopted the Annex of the Convention, which governs the conduct of archaeological investigations, as best practice for archaeology. Although the UK is not a signatory, the convention entered into force on 2nd January 2009 having been signed or ratified by 60 member states.

European Policy and Legislation

Legislation/Policy	Summary
The European Convention on the Protection of the Archaeological Heritage (Revised) 1992 (The Valletta Convention)	The Articles of the Valletta Convention tackle various aspects. Article 1 deals with the inventorying and protection of sites and areas; Article 2 deals with the mandatory reporting of chance finds and providing for 'archaeological reserves' on land or underwater; Article 3 promotes high standards for all archaeological work undertaken by suitably qualified people; Article 4 requires the conservation of excavated sites and the safe-keeping of finds; and Article 5 is concerned with consultation that should take place between planning authorities and developers to avoid damage to archaeological remains. The Valletta Convention was ratified by the UK Government in 2000 and came into force in 2001. The convention binds the UK to implement protective measures for the archaeological heritage within the jurisdiction of each party, including sea areas. Insofar as the UK exerts jurisdiction over the Continental Shelf, then it would appear that the provisions of the Valletta Convention apply to that jurisdiction.
The European Landscape Convention 2000	The European Landscape Convention became binding on the UK from 1 March 2007. Its principal clauses require the Government to protect and manage landscapes and to integrate landscape into regional and town planning policies including its cultural, environmental, agricultural, social and economic policies. The Convention applies to the entire territory of the UK and includes land, inland water and marine areas. It is not regarded as applying to sea areas regulated by the UK that lie beyond territorial waters.
European Directives for Environmental Impact Assessments (2014/52/EU)	The EIA Directive entered into force on 15 May 2014 to simplify the rules for assessing the potential effects of projects on the environment. The newly amended directive replaces former directives (85/337/EEC; 97/11/EC; 2003/35/EC; 2009/31/EC; 2011/92/EU) and Member States applied these in May 2017.

United Kingdom policy and legislation

Legislation/Policy	Summary
Ancient Monuments and Archaeological Areas Act 1979 (as amended)	Scheduled Monuments and Archaeological Areas of Importance (AAIs or their equivalent) are afforded statutory protection and the consent of Secretary of State (DCMS), as advised by Historic England, is required for any works. This Act is primarily used to protect terrestrial site, but has also been used to protect underwater sites.
NPPF: Conserving and enhancing the historic environment. Para. 189	In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.
NPPF: Conserving and enhancing the historic environment. Para. 190	Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any

Legislation/Policy	Summary
	necessary expertise. They should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal.
NPPF: Conserving and enhancing the historic environment. Para. 193	When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be.
NPPF: Conserving and enhancing the historic environment. Para. 197	The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.
NPPF: Conserving and enhancing the historic environment. Para. 199	Local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.
NPPF: Conserving and enhancing the historic environment. Para. 200	Local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.
National Policy Statement for Energy (EN-1)	This National Policy Statement (NPS) sets out national policy for energy infrastructure, and the importance of archaeological assessment in the development process (Section 5.8 Historic Environment).
Protection of Wrecks Act 1973: Section One	Wrecks and wreckage assessed to be of historical, archaeological or artistic value can be protected by way of site specific designation. It is an offence to carry out certain activities within a defined area surrounding a designated wreck, unless a licence for those activities has been obtained through Historic England.
Protection of Wrecks Act 1973: Section Two	This provides protection for wrecks that have been designated as dangerous due to their contents and is administered by the Maritime and Coastguard Agency through the Receiver of Wreck.
Protection of Military Remains Act 1986	Under the Protection of Military Remains Act 1986, all aircraft that have crashed whilst in military service are automatically protected. Maritime vessels (e.g. ships and boats) lost during military service are not automatically protected, although the Ministry of Defence (MoD) has powers to protect any vessel that was in military service when lost. The MoD can designate wrecks whose position is known as 'controlled sites' and can designate named vessels whose location is unknown 'protected places'. It is not necessary to demonstrate the presence of human remains for wrecks to be designated as either 'controlled sites' or 'protected places'.
Merchant Shipping Act 1995	This Act sets out the procedures for determining the ownership of underwater finds classified as 'wreck'; defined as any flotsam, jetsam, derelict and lagan found in or on the shores of the sea or any tidal water. It includes ship, aircraft, hovercraft, parts of these, their cargo or equipment. If any such finds are brought ashore, the salvor is required to give notice to the Receiver of Wreck that he/she has found or taken possession of them and, as directed by the Receiver, either hold them pending the Receiver's order or deliver them to the Receiver. The Act is administered by the Maritime and Coastguard Agency. Beyond the 12 nm limit, the Merchant Shipping Act 1995 covers wreck found or taken into possession outside UK waters, and stipulates that if brought into UK waters, finds must be reported to the

Legislation/Policy	Summary
	Receiver of Wreck. The provisions of the Protection of Military Remains Act 1986 regarding Controlled Sites are applicable in international waters, though they are only enforceable with respect to British-controlled ships, British citizens and British companies.
Marine and Coastal Access Act 2009	Under this Act the UK was divided into marine planning regions with an associated plan authority responsible for preparing a marine plan for that area.
Overarching National Policy Statement for Energy (EN-1) (Department of Energy and Climate Change 2011a)	This National Policy Statement (NPS) sets out national policy for energy infrastructure, and the importance of archaeological assessment in the development process.
National Policy Statement for Renewable Energy Infrastructure (EN-3) (Department of Energy and Climate Change 2011b)	This NPS, taken together with the overarching NPS (EN-1), provides the primary basis for decisions by the Planning Inspectorate on renewable energy infrastructure development applications. It sets out the importance of the historic environment and the ways it can be impacted by development, outlines guidance for application assessments, Planning Inspectorate decision making and mitigation measures.
National Policy Statement for Electricity Networks Infrastructure (EN-5) (Department of Energy and Climate Change 2011c)	This NPS, taken together with the overarching NPS (EN-1) provides for decision making on above ground electricity lines of 132kV and over and other electricity networks associated with a Nationally Significant Infrastructure Project e.g. substations and converted stations.
Marine Policy Statement 2011	The Marine Policy Statement was jointly published by all UK Administrations in March 2011 as part of a new system of marine planning being introduced across UK seas.
South Marine Plans 2018	This was a development of the Marine Plan which apply the MPS framework at a national, regional and area specific level. The South Inshore and Offshore Marine Plan was published in July 2018.
Enterprise and Regulatory Reform Act 2013	This Act was given Royal Assent, and has implications for Listed Buildings and Conservation Areas. A provision for the reduction of legislative burdens, it includes heritage planning regulation (Schedule 17), with amendments to the National Heritage Act 1983, the Town and Country Planning Act 1990, and the Planning (Listed Buildings and Conservation Areas) Act 1990.

Professional Guidance

Code of Practice for Seabed Developers, Joint Nautical Archaeology Policy Committee (Joint Nautical Archaeology Policy Committee 2006)	This voluntary Code provides a framework for seabed developers similar to the principles found in current policy and practice on land. The aim of the Code is to ensure a best practice model for seabed development. The Code offers guidance to developers on issues such as risk management and legislative implications.
Standard and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists 2014)	This guidance seeks to define good practice for the execution and reporting of desk-based assessment, in line with the by-laws of the Chartered Institute for Archaeologists. The standard and guidance was formally adopted as approved practice at the Annual General Meeting of the Institute held on 14 October 1994. This revision recognises the new Chartered status of the Institute.

Appendix II: Terminology

Glossary

The terminology used in this assessment follows definitions contained within the UK's National Planning Policy Framework (Department for Communities and Local Government, 2012: 50-57):

Archaeological interest	There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Conservation (for heritage policy)	The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.
Designated heritage asset	A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.
Development Plan	This includes adopted Local Plans, neighbourhood plans and the London Plan, and is defined in section 38 of the Planning and Compulsory Purchase Act 2004.
Environmental Impact Assessment	A procedure to be followed for certain types of projects to ensure that decisions are made in full knowledge of any likely significant effects on the environment.
Heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).
Heritage coast	Areas of undeveloped coastline which are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors.
Historic environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
Historic environment record	Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.
Significance (for heritage policy)	The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

Chronology

Where reference to in the text, the main archaeological periods in Britain are broadly defined by the following date ranges:

Period	Date Range
Palaeolithic	*c.* 900,000 BP– 9500 BC
Early Post-glacial	9500 – 8500 BC
Mesolithic	8500 – 4000 BC
Neolithic	4000 – 2200 BC
Bronze Age	2200 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – 410
Early Medieval	410 – 1085
Medieval	1085 – 1500
Post-medieval	1500 – 1800
19th century	1800 – 1899
Modern	1900 – present day

The geological periods and associated Marine Isotope Stages are defined by the following date ranges:

Period	Date Range	MIS
Holocene	11,700 – present day	1
Devensian	115,000 – 11,700 BP	5d – 2
Ipswichian	130,000 – 115,000 BP	5e
Saalian	374,000 – 130,000 BP	10 – 6
Hoxnian	424,000 – 374,000 BP	11
Anglian	478,000 – 424,000 BP	12
Pre-Anglian	>478,000 BP	>12

Appendix III: Palaeogeographic Features of Archaeological Potential

ID number	Classification	Archaeological discrimination	Description
75000	**Complex Channel**	**P1**	**Area of complex channelling with acoustically chaotic fill, possibly some cross-bedding, largely below interpreted modern seabed sediments. Channel system has a distinct, undulating basal reflector, however the boundaries of the feature are poorly defined due to the complex structure of the sediments in this area and, as such, the exact extents of the feature are hard to discern. Depth range: 0.5 - 8.2 m BSB.**
75001	**Complex Channel**	**P1**	**Area of complex channelling, largely below interpreted modern seabed sediments. Channel system has two narrow, distinct branches running towards the northeast, however the boundaries of the feature are less defined along the western edge. Unit fill appears to be relatively well layered, possibly with multiple phases of fill. Some possible areas of gas within the channel in the southern section of the feature, which disrupt the basal reflector. Extents of feature are not clearly defined due to the complex structure of the sediments in this area. Preliminary vibrocore logs (735-VC-B01-002 and 003) indicate very soft, occasionally gravelly clay, up to 2.8 m above silty sand. Depth range: 0.5 - 8.2 m BSB.**
75002	**Complex Channel**	**P1**	**Area of complex channelling identified below the interpreted modern seabed sediments. Unit fill appears to be relatively well layered, with some possible gas at the base and within feature which disrupt the basal reflector. Possibly part of a larger channel feature to the southeast (75004), however the gas within the channel makes the exact boundaries difficult to discern. Depth range: 0.8 - 6.5 m BSB.**
75003	**Complex Channel**	**P1**	**Area of complex channelling identified below the interpreted modern seabed sediments. Unit fill appears to be relatively well layered, possibly with more than one phase of fill. Some possible gas within feature with acoustic blanking. Feature is possibly part of a larger channel towards the southeast (75004), however due to the gas within the feature disrupting the basal reflector, the exact boundaries are difficult to discern. Depth range: 0.0 - 9.5 m BSB.**
75004	**Complex Channel**	**P1**	**Large, complex area of channelling with numerous phases of fill identified beneath a unit of modern seabed sediments. Unit fill is largely well layered with an undulating basal reflector. The feature appears to contain a significant amount of gas, both at the base of and within the channel, which disrupts the basal reflector making the exact boundaries difficult to discern. Feature has a possible gravel bank at the northern edge of the feature. Depth range: 0.2 - 10.3 m BSB.**
75005	Fine-grained deposit	P2	Possible fine-grained deposit identified BSB. Unit fill appears to be relatively well layered, possibly with some crossbedding, and multiple phases of deposition. The feature has a distinct undulating basal reflector. Depth range: 0.2 - 7.3 m BSB.
75006	Fine-grained deposit	P2	Possible fine-grained deposit identified BSB. Unit fill appears to be relatively well layered, possibly with some crossbedding, and multiple phases of deposition. The feature has a distinct undulating basal reflector. Possibly a section of a larger feature to the north (**75005**). Depth range: 0.2 - 7.3 m BSB.
75007	Simple cut and fill	P2	Small, simple cut and fill identified BSB. The feature has a distinct basal reflector and well layered fill. Possibly part of a larger feature extending to the north-east. Preliminary vibrocore log (735-VC-B01-008) indicates that the featured may be cutting into a gravel unit, which may be reworked Pleistocene gravels. Depth range: 0.3 - 2.4 m BSB.

ID number	Classification	Archaeological discrimination	Description
75008	Simple cut and fill	P2	Small, shallow, simple cut and fill identified BSB. The feature has relatively well layered fill. Possibly part of a larger feature extending to the north-east. Preliminary vibrocore log (735-VC-B01-008) indicates that the featured may be cutting into a gravel unit, which may be reworked Pleistocene gravels. Depth range: 0.3 - 1.4 m BSB.
75009	Simple cut and fill	P2	Small, simple cut and fill identified BSB. The feature has a distinct basal reflector and acoustically chaotic fill. Possibly part of a larger feature extending to the north-east. Preliminary vibrocore log (735-VC-B01-008) indicates that the featured may be cutting into a gravel unit, which may be reworked Pleistocene gravels. Depth range: 0.2 - 2.9 m BSB.
75010	**Channel**	**P1**	**Edge of channel, deepening towards the west identified BSB cut into the top of the interpreted Eocene clays. The unit fill appears to be relatively well layered. Some possible gas identified within the unit fill. Basal reflector becomes indistinct towards the west, making the boundaries of the feature hard to discern. The preliminary vibrocore log (735-VC-B01-009) indicates very soft greyish brown sandy clay. Depth range: 0.3 - 14.3 m BSB.**
75011	**Channel**	**P1**	**Small channel, orientated north to south, identified BSB cut into the interpreted Eocene clays. Unit fill relatively well layered with some areas of acoustically chaotic fill. Feature has a relatively distinct, but slightly irregular basal reflector. Some possible gas in the base and within the feature. Towards the south of the feature the channel boundaries become relatively indistinct, however the presence of disturbed sediments, possibly gaseous, indicates a continuation of the feature. Depth range 0.2 - 8.7 m BSB.**
75012	**Channel**	**P1**	**Small channel identified BSB, cut into the interpreted Eocene clays, orientated south - north. The feature has a distinct basal reflector and relatively acoustically chaotic fill. High amplitude basal reflector possibly indicates gas at the base of the channel, however this may also be coarse sediments. Depth range 0.4 - 4.9 m BSB.**
75013	**Channel**	**P1**	**Channel identified BSB, cut into the interpreted Eocene clays. The feature has a distinct basal reflector and relatively acoustically quiet fill. Strong basal reflector possibly indicated gas at base of feature. The feature is orientated north to south and splits into two forks towards the north. Depth range: 0.2 - 6.4 m BSB.**
75014	**Channel**	**P1**	**Small, shallow channel identified BSB, cut into the interpreted Eocene clays, orientated SW-NE. Feature has a distinct basal reflector and relatively acoustically quiet fill. Depth range:0.4 - 2.2 m BSB.**
75015	**Channel**	**P1**	**Broad, relatively shallow identified BSB, cut into the interpreted Eocene clays. Channel is orientated SSW to NNE and forks into two separate channels towards the north. Feature has a relatively distinct basal reflector and multiple phases of fill. Depth range: 0.3 - 12.1 m BSB.**
75016	**Channel**	**P1**	**Small channel identified BSB, cut into the interpreted Eocene clays, orientated north to south. Feature has a relatively distinct basal reflector and acoustically quiet fill. High amplitude, chaotic basal reflector indicates possible gas at the base of the channel. Depth range: 0.4 - 3.7 m BSB.**
75017	**Channel**	**P1**	**Channel feature identified partially beneath an interpreted modern sand unit, possibly a sand wave, and cut into the interpreted Eocene clays. The feature has a faint, undulating basal reflector and acoustically chaotic fill. Depth range: 0.6 - 7.8 m BSB.**
75018	Erosion Surface	P2	Possible infilled depression or erosion surface identified BSB, above the interpreted Eocene clays. Feature has a distinct basal reflector, overlain by acoustically quiet fill. Corresponds with a very slight topographic low on the bathymetry data. Although the sediments overlying the interpreted erosion surface look similar to modern marine sands, it has been retained based on its similarity to nearby features **75019** and **75021**, which have a channel cutting through them, indicating that they must have been deposited prior to the formation of channel feature **75020.** A better understanding of these features may be developed on review of the final ground truthing logs. Depth range: 0.6 - 4.2 m BSB.

ID number	Classification	Archaeological discrimination	Description
75019	Erosion Surface	P2	Possible infilled depression or erosion surface identified BSB, above the interpreted Eocene clays. Feature has a distinct basal reflector, overlain by acoustically quiet fill. Although the sediments overlying the interpreted erosion surface look similar to modern marine sands, it has a channel cutting through it, indicating that it must have been deposited prior to the formation of channel feature **75020**. A better understanding of these features may be developed on review of the final ground truthing logs. Depth range: 0.5 - 3.0 m BSB.
75020	**Complex Channel**	**P1**	**Channel identified BSB, cutting though an acoustically quiet unit, with a distinct basal reflector. Unit fill is relatively quiet; however, it has a distinct upper cut, representing a later phase of channelling, which is more acoustically chaotic. Depth range: 0.3 - 11.8 m BSB.**
75021	Erosion Surface	P2	Possible infilled depression or erosion surface identified BSB, above the interpreted Eocene clays. Feature has a distinct basal reflector, overlain by acoustically quiet fill. Although the sediments overlying the interpreted erosion surface look similar to modern marine sands, it has a channel cutting through it, indicating that it must have been deposited prior to the formation of channel feature **75020**. A better understanding of these features may be developed on review of the final ground truthing logs. Depth range: 0.6 - 9.2 m BSB.
75022	Simple cut and fill	P2	Small, shallow simple cut and fill identified BSB, cut into the interpreted Eocene clays. Feature appears to have relatively acoustically chaotic fill. Depth range: 0.6 - 2.8 m BSB.
75023	Complex cut and fill	P2	Small complex cut and fill identified BSB, cut into the interpreted Eocene clays. Feature fill is relatively acoustically quiet, possibly with more than one phase of fill. Feature has a distinct, irregular basal reflector. Depth range: 0.7 - 6.0 m BSB.
75024	**Channel**	**P1**	**Channel identified BSB, orientated north to south. Feature has relatively acoustically chaotic fill, possibly with multiple phases of fill. The basal reflector of the feature is relatively irregular and high amplitude in places, possibly indicating the presence of gaseous organic matter however it may also be representative of coarser sediments. Depth range: 0.3 -13.9 m BSB.**
75025	**Channel**	**P1**	**Broad channel, orientated north- south, identified BSB. Feature forks into two separate channels towards the north. Feature has a distinct, irregular basal reflector and seismically chaotic fill. Possibly multiple phases of channelling. The basal reflector of the feature is relatively irregular and high amplitude in places, possibly indicating the presence of gaseous organic matter however it may also be representative of coarser sediments. Depth range: 0.3 - 22.7 m BSB.**
75026	Simple cut and fill	P2	Possible shallow simple cut and fill identified BSB. Feature is orientated northeast - southwest, parallel to another similar feature. Feature has acoustically chaotic fill and relatively faint base. Not particularly distinct, possibly modern sediments over tertiary, however it is possibly associated with the Northern Palaeovalley and as such has been retained. Depth range: 0.4 - 4.5 m BSB.
75027	Simple cut and fill	P2	Possible shallow simple cut and fill identified BSB. Feature is orientated northeast - southwest, parallel to another similar feature. Feature has acoustically chaotic fill and relatively faint base. Not particularly distinct, possibly modern sediments over tertiary, however it is possibly associated with the Northern Palaeovalley and as such has been retained. Depth range: 0.5 - 4.0 m BSB.
75028	Simple cut and fill	P2	Broad, shallow, simple cut and fill identified BSB, orientated southwest-northeast. Feature has a poorly defined, undulating base and acoustically chaotic fill. Feature is not particularly distinct; however, it is possibly associated with the Northern Palaeovalley and as such has been retained. Depth range: 0.2 - 8.9 m BSB.

ID number	Classification	Archaeological discrimination	Description
75029	Simple cut and fill	P2	Small simple cut and fill identified BSB, cut into the interpreted Eocene clays. Feature has a relatively distinct basal reflector and acoustically chaotic fill. Depth range: 0.6 - 3.5 m BSB.
75030	Simple cut and fill	P2	Broad, shallow channel identified BSB, orientated southwest-northeast. Feature has a poorly defined, undulating base and acoustically chaotic fill. Basal reflector less distinct towards the south-eastern edge making the exact feature boundaries difficult to discern. Depth range: 0.4 - 6.5 m BSB.
75031	**Channel**	**P1**	**Broad, shallow channel, identified BSB, cut into the interpreted Eocene clays. Feature has a faint, poorly defined, undulating base and multiple phases of acoustically chaotic fill. Depth range: 0.9 - 11.9 m BSB.**
75032	Simple cut and fill	P2	Small simple cut and fill identified BSB, cut into the top of interpreted Eocene clays. Feature has a faint, poorly defined, undulating base and acoustically chaotic fill. Depth range: 1.0 - 5.6 m BSB.
75033	Simple cut and fill	P2	Small simple cut and fill identified BSB, cut into the top of interpreted Eocene clays. Feature has a relatively acoustically chaotic fill. Feature appears to be in line with another similar feature suggesting it was possibly once part of a larger feature, extending to the south- west. Depth range: 1.0 - 4.3 m BSB.
75034	Simple cut and fill	P2	Small simple cut and fill identified BSB, cut into the top of interpreted Eocene clays. Feature has a relatively acoustically chaotic fill. Feature appears to be in line with another similar feature suggesting it was possibly once part of a larger feature, extending to the south- west. Depth range: 0.4 - 5.5 m BSB.
75035	**Channel**	**P1**	**Broad, shallow channel identified BSB, cut into the top of interpreted Eocene clays, and orientated north-east to south-west. Channel fill appears to be relatively acoustically chaotic, possibly indicating reworked sediments, with a faint basal reflector. The features appear to correspond with the BGS palaeochannel maps. Depth range 0.6 - 4.8 m BSB.**
75036	**Channel**	**P1**	**Broad channel identified BSB, cut into the top of interpreted Eocene clays. Channel fill is acoustically chaotic, possibly containing reworked sediments, with numerous phases of fill and a faint, undulating basal reflector. The features appear to correspond with the BGS palaeochannel maps. Depth range 0.6 - 16.8 m BSB.**
75037	**Channel**	**P1**	**Broad channel identified BSB, cut into the top of interpreted Eocene clays. Channel fill is acoustically chaotic, possibly containing reworked sediments, with numerous phases of fill and a faint, undulating basal reflector. The features appear to correspond with the BGS palaeochannel maps. Depth range 0.6 - 8.4 m BSB.**

Appendix IV: Review of geotechnical logs

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B01-001	-	-	Gravel with sand filling matrix (2.36 m) (Beach - Unit 2) gravel and cobbles (2.76 m) (Fluvial - Unit 2)	Low
735-VC-B01-002	75001	complex channel	Low strength sandy gravelly clay (2.83 m) (Alluvium - Unit 2)	Medium
735-VC-B01-003	75001	complex channel	Gravelly sand (0.33 m) (Marine - Unit 3) gravel (0.66 m) (Lag - Unit 3) low strength sandy clay (4.87 m) (Alluvium - Unit 2)	Medium
735-VC-B01-004	-	-	Gravelly sand (1.53 m) (Marine - Unit 3) sandy gravel (2.52 m) (Beach - Unit 2) low strength sandy gravelly clay (4.14 m) (Alluvium - Unit 2) organic laminated clay (4.27 m) (Organic alluvium - Unit 2) sandy gravelly clay (4.94 m) (Alluvium - Unit 2) sandy gravel (5.27 m) (Fluvial - Unit 2)	Medium
735-VC-B01-005	-	-	Gravelly sand (0.30 m) (Marine - Unit 3) sand with shell and beds of matrix supported gravel (4.53 m) (Beach - Unit 2)	Low
735-VC-B01-006	-	-	Low strength sandy silty clay (4.31 m) (Alluvium - Unit 2)	Medium
735-VC-B01-007	-	-	Gravelly silty sand (0.41 m) (Marine - Unit 3) sandy clay (2.87 m) (Unit 1)	Low
735-VC-B01-008	-	-	Sand (0.38 m) (Marine - Unit 3) sand and gravel (4.85 m) (Fluvial - Unit 2)	Low
735-VC-B01-009	75010	channel	Sand (0.68 m) (Marine - Unit 3) low strength clay (3.70 m) (Alluvium - Unit 2)	Medium
735-VC-B02-010	-	-	High strength clay (1.84 m) (Unit 1)	Low
735-VC-B02-012	-	-	High strength clay (2.29 m) (Unit 1)	Low
735-VC-B02-013	-	-	Sandy gravel (0.34 m) (Lag - Unit 3) high strength clay (1.98 m) (Unit 1)	Low
735-VC-B02-013A	-	-	Gravelly sand (0.23 m) (Marine - Unit 3) high strength clay (2.40 m) (Unit 1)	Low
735-VC-B02-014	-	-	Sand becoming slightly gravelly near base (3.33 m) (Marine - Unit 3) slightly sandy gravel (4.28 m) (Lag - Unit 3)	Low
735-VC-B02-016	-	-	High strength clay (2.50 m) (Unit 1)	Low
735-VC-B02-017	-	-	Sandy gravel (0.72 m) (Lag - Unit 3) high strength clay (2.15 m) (Unit 1)	Low

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B02-018	75015	channel	Slightly sandy gravel (0.56 m) (Lag - Unit 3) gravelly sand w/shell (1.49 m) (Alluvium - Unit 2) sand w/shell (2.56 m) (Alluvium - Unit 2) sandy gravel, becoming clayey with depth (3.54 m) (Fluvial - Unit 2) High strength clay (4.00 m) (Unit 1)	Medium
735-VC-B02-019	-	-	Gravelly sand (0.26 m) (Marine - Unit 3) sandy clayey gravel (2.08 m) (Fluvial - Unit 2) high strength clay (2.88 m) (Unit 1)	Low
735-VC-B02-019A	-	-	Gravelly sand (0.42 m) (Marine - Unit 3) sandy clayey gravel (2.37 m) (Lag - Unit 3) high strength clay (2.37 m) (Unit 1)	Low
735-VC-B02-020	-	-	Gravelly sand (3.18 m) (Marine - Unit 3) high strength clay (3.73 m) (Unit 1)	Low
735-VC-B02-022	-	-	Sandy gravel (2.60 m) (Marine - Unit 3) silty gravelly sand w/ shell (3.54 m) (Marine - Unit 3) high strength clay (4.07 m) (Unit 1)	Low
735-VC-B02-023	-	-	Gravelly sand (1.49 m) (Marine - Unit 3) high strength clay (2.55 m) (Unit 1)	Low
735-VC-B02-025	75017	channel	Clayey sandy gravel (4.66 m) (Fluvial - Unit 2) high strength clay (4.75 m) (Unit 1)	Low
735-VC-B02-026	-	-	Sandy clayey gravel (0.24 m) (Marine - Unit 3) high strength clay (0.67 m) (Unit 1)	Low
735-VC-B02-026A	-	-	Sandy gravel (0.15 m) (Marine - Unit 3) sandy gravel with organic matrix (0.25 m) (Palaeosol - Unit 2) high strength clay (0.62 m) (Unit 1)	Medium
735-VC-B02-027	75018	erosion surface	Gravelly sand (0.08 m) (Marine - Unit 3) medium strength clay (0.95 m) (Unit 1)	Low
735-VC-B02-027A	-	-	Gravelly sand (0.30 m) (Marine - Unit 3) high strength clay (0.92 m) (Unit 1)	Low
735-VC-B02-028	75019	erosion surface	Sandy gravel (0.80 m) (Marine - Unit 3) low strength clay (1.65 m) (Unit 1)	Low
735-VC-B02-030	-	-	Sand becoming gravelly near base (0.66 m) (Marine - Unit 3) sandy gravel (Beach - Unit 2)	Low
735-VC-B02-032A	-	-	Sandy gravel (0.13 m) (Marine - Unit 3)	Low
735-VC-B02-034	-	-	Sandy gravel (0.80 m) (Marine - Unit 3) sand and gravel (3.41 m) (Fluvial - Unit 2) high strength clay (4.00 m) (Unit 1)	Low
735-VC-B02-036	-	-	Very gravelly sand (3.50 m) (Fluvial - Unit 2) high strength clay (4.00 m) (Unit 1)	Low
735-VC-B02-038	-	-	Sandy gravel (0.44 m) (Marine - Unit 3) high strength clay (1.42 m) (Unit 1)	Low

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B02-040	-	-	Sandy gravel (0.41 m) (Marine - Unit 3) gravel with organic matrix (0.71 m) (Palaeosol - Unit 2) high strength clay (1.91 m) (Unit 1)	Medium
735-VC-B02-041	-	-	Gravelly sand (3.55 m) (Marine - Unit 3) sandy gravel (4.79 m) (Lag - Unit 3) low strength clay (6.00 m) (Unit 1)	Low
735-VC-B02-043	-	-	Medium strength clay (2.64 m) (Unit 1)	Low
735-VC-B02-044	-	-	Low strength clay (1.07 m) (Unit 1)	Low
735-VC-B02-045A	75024	channel w/ possible gas	Sandy gravel (0.29 m) (Marine - Unit 3) soft slightly gravelly clay with silt laminations, possible organic fragments (5.17 m) (Alluvium - Unit 2)	Medium
735-VC-B02-046	**75025**	**channel w/possible gas**	**Clayey gravel (0.24 m) (Marine - Unit 3) peat (0.30 m) (Peat - Unit 2) soft laminated clay (2.68 m) (Alluvium - Unit 2) organic clay (3.17 m) (Organic alluvium - Unit 2) medium strength clay (4.68 m) (Unit 1)**	**High**
735-VC-B03-047	75025	channel w/possible gas	Slightly gravelly sand (3.05 m) (Marine - Unit 3)	Low
735-VC-B03-048	-	-	Silty medium sand (3.40 m) (Marine - Unit 3)	Low
735-VC-B03-049	-	-	Medium strength clay (1.06 m) (Unit 1)	Low
735-VC-B03-049A	-	-	Clayey sandy gravel (0.17 m) (Marine - Unit 3) medium strength clay (1.10 m) (Unit 1)	Low
735-VC-B03-050	-	-	Gravelly silty sand (0.90 m) (Marine - Unit 3) very gravelly sand (2.50 m) (Fluvial - Unit 2)	Low
735-VC-B03-051	-	-	Slightly gravelly sand (2.51 m) (Marine - Unit 3) clayey sandy gravel (2.73 m) (Lag - Unit 3) very sandy soft clay (3.58 m) (Alluvium - Unit 2) gravelly clayey sand (4.93 m) (Fluvial - Unit 2) sandy clayey gravel (6.00 m) (Fluvial - Unit 2)	Medium
735-VC-B03-052	-	-	Gravelly silty sand (1.90 m) (Marine - Unit 3) gravelly sand (3.60 m) (Alluvium - Unit 2) soft sandy silty clay (4.21 m) (Alluvium - Unit 2) silty gravelly sand (5.60 m) (Alluvium - Unit 2)	Medium
735-VC-B03-053	-	-	Gravelly sand becoming more gravelly with depth (5.00 m) (Marine - Unit 3) gravel and cobbles (5.23 m) (Lag - Unit 3) soft clay (5.36 m) (Unit 1)	Low
735-VC-B03-054	-	-	Clayey gravel (0.36 m) (Marine - Unit 3) high strength clay (2.13 m) (Unit 1)	Low
735-VC-B03-055	-	-	Gravelly clayey sand (0.31 m) (Marine - Unit 3) high strength clay (1.90 m) (Unit 1)	Low

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B03-057			Gravelly sand (1.87 m) (Marine - Unit 3) gravel (2.26 m) (Lag - Unit 3) medium strength clay (4.10 m) (Unit 1)	Low
735-VC-B03-058	75026	simple cut and fill	Gravelly sand (2.30 m) (Marine - Unit 3) sandy gravel (4.42 m) (Marine - Unit 3) sand with clay laminations (4.62 m) (Alluvium - Unit 2) silty gravel (4.83 m) (Fluvial - Unit 2)	Medium
735-VC-B03-059	75027	simple cut and fill	Gravelly sand (1.49 m) (Marine - Unit 3) sandy gravel (2.30 m) (Marine - Unit 3) sand with clay laminations (3.07 m) (Alluvium - Unit 2) high strength clay (4.10 m) (Unit 1)	Medium
735-VC-B03-060	-	-	Sandy gravel (0.94 m) (Marine - Unit 3) high strength clay (2.00 m) (Unit 1)	Low
735-VC-B03-060A	-	-	Silty sandy gravel (1.05 m) (Marine - Unit 3) high strength clay (2.00 m) (Unit 1)	Low
735-VC-B03-061	-	-	Gravelly sand (5.69 m) (Marine - Unit 3) fine sand (6.00 m) (Fluvial - Unit 2)	Low
735-VC-B03-063	-	-	Gravelly sand (3.99 m) (Marine - Unit 3) silty sand (5.28 m) (Fluvial - Unit 2)	Low
735-VC-B03-064	-	-	Gravelly sand (5.26 m) (Marine - Unit 3) sandy gravel (5.60 m) (Fluvial - Unit 2) silty sand (6.00 m) (Fluvial - Unit 2)	Low
735-VC-B03-066	75028	simple cut and fill	Sandy gravel (0.68 m) (Marine - Unit 3) gravelly sand (2.20 m) (Marine - Unit 3) sand (5.56 m) (Fluvial - Unit 2) gravelly sand (5.65 m) (Fluvial - Unit 2)	Low
735-VC-B03-067	-	-	Gravel and cobbles (0.71 m) (Marine - Unit 3) high strength clay (1.15 m) (Unit 1)	Low
735-VC-B03-068	-	-	Sandy gravel (2.99 m) (Marine - Unit 3) gravelly sand (4.98 m) (Fluvial - Unit 2)	Low
735-VC-B03-070	-	-	Gravelly silty sand (2.90 m) (Marine - Unit 3) gravelly sand (3.51 m) (Fluvial - Unit 2) gravelly sand and silt (5.15 m) (Alluvium - Unit 2)	Medium
735-VC-B03-072	-	-	Gravelly sand becoming more gravelly with depth (0.95 m) (Marine - Unit 3)	
735-VC-B03-073	75030	simple cut and fill	Gravelly sand (0.40 m) (Marine - Unit 3) sandy gravel (1.36 m) (Marine - Unit 3) gravelly sand (2.29 m) (Marine - Unit 3) silty gravelly sand (3.32 m) (Alluvium - Unit 2) Medium strength clay (4.46 m) (Unit 1)	Medium
735-VC-B03-074	75030	simple cut and fill	Gravelly sand (3.60 m) (Marine - Unit 3) gravelly sand becoming more gravelly with depth (5.08 m) (Fluvial - Unit 2) medium strength clay (5.75 m) (Unit 1)	Low

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B03-075	-	-	Gravelly sand becoming more gravelly with depth (4.90 m) (Marine - Unit 3)	Low
735-VC-B03-076A	-	-	Clayey sandy gravel (1.00 m) (Marine - Unit 3) low strength clayey silt (3.11 m) (Unit 1)	Low
735-VC-B03-077	-	-	Gravelly sand (1.85 m) (Marine - Unit 3) low strength clayey silt (5.27 m) (Unit 1)	Low
735-VC-B03-078	-	-	Sandy gravel (1.28 m) (Marine - Unit 3) low strength clayey silt (2.77 m) (Unit 1)	Low
735-VC-B03-079	-	-	Sandy gravel (0.45 m) (Marine - Unit 3) gravelly sand (3.05 m) (Marine - Unit 3) sand with clay laminations (3.58 m) (Unit 1)	Low
735-VC-B03-081	75031	channel	Gravelly sand (1.34 m) (Marine - Unit 3) sandy gravel (1.73 m) (Marine - Unit 3) silty sand (2.56 m) (Marine - Unit 3) clayey sandy gravel (3.02 m) (Fluvial - Unit 2) soft clayey silt (4.86 m) (Unit 1)	Low
735-VC-B03-082	-	-	Gravelly sand (0.90 m) (Marine - Unit 3) sandy gravel becoming coarser with depth (3.42 m) (Fluvial - Unit 2) gravelly sand (3.95 m) (Fluvial - Unit 2)	Low
735-VC-B03-084	-	-	Sandy gravel (0.75 m) (Marine - Unit 3) low strength clay (1.80 m) (Unit 1)	
735-VC-B03-085	75035	channel	Sandy gravel (1.31 m) (Marine - Unit 3) sandy gravel (1.82 m) (Fluvial - Unit 2) low strength clay (2.62 m) (Unit 1)	Low
735-VC-B03-087	75036	channel	Sandy gravel (0.90 m) (Marine - Unit 3) silty gravelly sand (2.90 m) (Alluvium - Unit 2) sandy gravel (3.88 m) (Fluvial - Unit 2)	Medium
735-VC-B03-089	75036	channel	Sand (2.69 m) (Marine - Unit 3) sandy gravel becoming gravelly with depth (4.0 m) (Marine - Unit 3) sandy gravel (4.43 m) (Fluvial - Unit 2)	Low
735-VC-B03-091	75036	channel	Sandy gravel with cobbles (3.63 m) (Fluvial - Unit 2)	Low
735-VC-B03-092A	75036	channel	Sandy gravel (1.00 m) (Fluvial - Unit 2) gravelly sand (2.00 m) (Fluvial - Unit 2) sand (3.10 m) (Fluvial - Unit 2)	Low
735-VC-B03-093	75036	channel	Gravelly sand (2.00 m) (Fluvial - Unit 2)	Low
735-VC-B03-094	75036	channel	Gravelly sand (1.52 m) (Marine - Unit 3) sandy gravel and cobbles becoming coarser with depth (4.02 m) (Fluvial – Unit 2) high strength clay (4.41 m) (Unit 1)	Low
735-VC-B03-095	-	-	Gravelly sand (2.10 m) (Marine - Unit 3) sandy gravel becoming coarser with depth (3.24 m) (Fluvial - Unit 2) high strength clay (4.29 m) (Unit 1)	

Vibrocore	Geophysics ID number	Geophysics classification	Vibrocore description	Geoarchaeological potential
735-VC-B03-096	75036	channel	Sandy gravel (4.43 m) (Fluvial - Unit 2)	Low
735-VC-B03-097	75036	channel	Sandy gravel (0.90 m) (Marine - Unit 3) sandy gravel (2.70 m) (Fluvial - Unit 2) silty sand (3.10 m) (Fluvial - Unit 2) clayey gravel (4.61 m) (Fluvial - Unit 2) high strength clay (5.00 m) (Unit 1)	Low
735-VC-B03-098A	75036	channel	Sandy gravel (1.40 m) (Fluvial - Unit 2) gravelly sand (2.00 m) (Fluvial - Unit 2) sandy gravel (3.10 m) (Fluvial - Unit 2)	Low
735-VC-B03-099	75036	channel	Sandy gravel (2.86 m) (Fluvial - Unit 2)	Low
735-VC-B03-100	-	-	Clayey sandy gravel (0.76 m) (Fluvial - Unit 2) medium strength clay (1.78 m) (Unit 1)	Low
735-VC-B03-101	-	-	Sandy gravel (1.00 m) (Fluvial - Unit 2) gravelly sand (2.77 m) (Fluvial - Unit 2) sand (3.48 m) (Fluvial - Unit 2) sandy gravel becoming coarser with depth (4.47 m) (Fluvial - Unit 2)	Low
735-VC-B03-102	-	-	Sandy gravel (2.65 m) (Fluvial - Unit 2) silty sand (2.65 m) (Unit 1)	Low
735-VC-B03-104	-	-	Sandy gravel (0.51 m) (Marine - Unit 3) gravelly sand (1.79 m) (Fluvial - Unit 2)	Low
735-VC-B03-105	-	-	Gravelly sand (0.75 m) (Marine - Unit 3) sandy gravel (1.26 m) (Fluvial - Unit 2) sand (1.58 m) (Fluvial - Unit 2) sandy silt (5.54 m) (Unit 1)	Low
735-VC-B03-106	-	-	Gravelly sand (0.15 m) (Marine - Unit 3) gravelly sand becoming coarser with depth (1.50 m) (Fluvial - Unit 2) sandy gravel and cobbles (2.68 m) (Fluvial - Unit 2) silty sand (4.43 m) (Unit 1)	Low
735-VC-B03-107	-	-	Gravelly sand (0.98 m) (Fluvial - Unit 2) silty sand (4.28 m) (Unit 1)	Low
735-VC-B03-108	-	-	Gravelly sand becoming coarser with depth (1.26 m) (Fluvial - Unit 2) sandy gravel (1.74 m) (Fluvial - Unit 2) silt and sand (2.68 m) (Unit 1)	Low
735-VC-B03-109	-	-	Gravelly sand (1.00 m) (Marine - Unit 3) gravel and cobbles (1.66 m) (Fluvial - Unit 2) clayey sand (2.72 m) (Unit 1)	Low
735-VC-B03-110	-	-	Gravelly sand becoming coarser with depth (1.00 m) (Fluvial - Unit 2) gravel and cobbles (2.86 m) (Fluvial - Unit 2) cobbles (3.52 m) (Fluvial - Unit 2)	Low

Appendix V: Seabed Anomalies of Archaeological Potential

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70000	Magnetic	638467	5627798	A2	-	-	-	69	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70001	Dark reflector	638659	5627870	A2	1.6	1.2	0.6	-	Angular dark reflector with a broad, relatively distinct, shadow identified in an area of megaripples. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70002	Magnetic	638360	5627644	A2	-	-	-	55	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70003	Magnetic	638517	5627673	A2	-	-	-	34	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70004	Dark reflector	638720	5627698	A2	2.9	1.9	0.5	-	Large, slightly elongated dark reflector with a broad, but tapered, shadow. Identified in an area of disturbed seabed. Corresponds with a mound on the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70005	Magnetic	638447	5627511	A2	-	-	-	137	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70006	Magnetic	638518	5627512	A2	-	-	-	71	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70007	Magnetic	638593	5627542	A2	-	-	-	44	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70008	Debris	638540	5627348	A2	8.6	3	0	867	Very large negative monopole identified on more than one line. Corresponds with a slight seabed disturbance identified on the sonar data. Possible partially buried item of ferrous debris.	-
70009	Magnetic	638713	5627429	A2	-	-	-	131	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70010	Magnetic	638765	5627407	A2	-	-	-	31	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70011	Magnetic	638658	5627288	A2	-	-	-	38	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70012	Debris field	638520	5627276	A2	6.8	2.6	0.3	213	Large asymmetric dipole identified on the magnetometer data. Feature corresponds with a seabed disturbance, comprised dark reflectors with height, identified on the sonar data. Possible item of ferrous debris.	-
70013	Magnetic	638411	5627261	A2	-	-	-	45	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70014	Dark reflector	638507	5627168	A2	7.3	0.9	0.6	-	Relatively straight, elongated dark reflector with a distinct, jagged shadow. Relatively isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70015	Magnetic	638362	5627024	A2	-	-	-	78	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70016	Magnetic	638829	5627129	A2	-	-	-	87	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70017	Magnetic	638761	5627050	A2	2.6	2.2	0.8	177	Large dipole identified on the magnetometer data. Nothing distinct identified at this location on the sonar data, however a small mound was identified on the MBES data indicating a possible item of partially buried ferrous debris.	-
70018	**Magnetic**	**638700**	**5627005**	**A1**	**-**	**-**	**-**	**1295**	**Very large dipole identified on the magnetometer data, indicating significant amounts of ferrous material. Nothing distinct identified at this location on the sonar data, indicating a possible buried item of ferrous debris. Feature has been given an A1 discrimination based on the magnetic amplitude.**	**-**
70019	Magnetic	638678	5626881	A2	-	-	-	31	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70020	Magnetic	638740	5626902	A2	-	-	-	20	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70021	Magnetic	638749	5626858	A2	-	-	-	15	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70022	Magnetic	638516	5626864	A2	-	-	-	48	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70023	Magnetic	638476	5626825	A2	-	-	-	86	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70024	Magnetic	638553	5626817	A2	-	-	-	25	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70025	Magnetic	638377	5626791	A2	-	-	-	22	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70026	Magnetic	638509	5626762	A2	-	-	-	92	Medium asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70027	Magnetic	638560	5626781	A2	-	-	-	12	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70028	Magnetic	638590	5626728	A2	-	-	-	21	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70029	Debris	638679	5626697	A2	3.7	1	0.5	45	Small dipole identified on the magnetometer data. Feature corresponds with a small dark reflector with a distinct, curving shadow identified on the sonar data indicating a ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70030	Debris	638860	5626720	A2	3.7	0.9	0.4	17	Small asymmetric dipole identified on the magnetometer data. Feature corresponds with a relatively straight, slightly rectangular, elongated dark reflector with a distinct, jagged shadow identified on the sonar data. Feature also identified on the MBES data as a slightly elongated mound in an area of numerous objects with height. Possible ferrous item of debris.	-
70031	Magnetic	638766	5626579	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70032	Debris	638674	5626627	A2	18.0	0.2	0.1	-	Linear dark reflector with slight height. Close to an area of modern fishing gear, however not obviously associated. Possible short length of rope/chain, or may be a linear item of non-ferrous debris.	-
70033	Magnetic	638647	5626502	A2	-	-	-	37	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70034	Magnetic	638467	5626556	A2	-	-	-	175	Large negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70035	Magnetic	638440	5626526	A2	-	-	-	11	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70036	Magnetic	638446	5626508	A2	-	-	-	19	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70037	Magnetic	638491	5626369	A2	-	-	-	21	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70038	Rope/chain	638501	5626310	A2	28.6	0.4	0.0	-	Faint, curved and coiled linear dark reflector with no discernible height. Feature has no corresponding magnetic anomaly which may suggest the feature is more likely to be a length of rope.	-
70039	Magnetic	638665	5626402	A2	-	-	-	52	Medium asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70040	Magnetic	638918	5626408	A2	-	-	-	15	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70041	Magnetic	638853	5626339	A2	-	-	-	181	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70042	Magnetic	638815	5626270	A2	-	-	-	35	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70043	Dark reflector	638529	5626246	A2	1.6	1.1	0.2	-	Small, rounded dark reflector with slight height. Appears to be slightly hollow in centre. Possibly natural or modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-
70044	Magnetic	638480	5626096	A2	-	-	-	45	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70045	Magnetic	638640	5626144	A2	-	-	-	76	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70046	Magnetic	638611	5626076	A2	-	-	-	66	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70047	Magnetic	638644	5626080	A2	-	-	-	34	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70048	Magnetic	638622	5626024	A2	-	-	-	164	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70049	Magnetic	638669	5626040	A2	-	-	-	43	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70050	Debris	638694	5626030	A2	2.1	1.3	0.2	16	Round dark reflector, with what appears to be a hollow centre, and a faint but relatively broad shadow. Feature corresponds with a small magnetic anomaly indicating ferrous material. Possibly modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70051	Dark reflector	638694	5626054	A2	1.3	1	0.3	-	Round dark reflector, with what appears to be a hollow centre, and a faint but relatively broad shadow. Feature is identified approximately 20 m west of a magnetic anomaly (70052) measuring 76 nT, indicating the possibility of ferrous material however, as they are not clearly associated, the features have not been grouped together. Possibly natural or modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-
70052	Magnetic	638713	5626059	A2	-	-	-	76	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70053	Magnetic	638814	5626065	A2	-	-	-	72	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70054	Magnetic	638963	5625934	A2	-	-	-	34	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70055	Debris	638942	5625951	A2	4.9	0.5	0.1	-	Straight, elongated dark reflector with a very slight shadow. Possibly natural however may also be an item of non-ferrous debris.	-
70056	Rope/chain	638897	5625953	A2	90.0	0.2	0.0	-	Straight, narrow linear dark reflector with no discernible height. Feature corresponds with a weak magnetic response measuring 8 nT which hasn't been retained as an anomaly based in its form, however the possibility of some ferrous material cannot be ruled out. Possible rope/chain or length of cable.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70057	Magnetic	638707	5625952	A2	-	-	-	151	Large asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70058	Dark reflector	638725	5625990	A2	1.3	0.8	0.2	-	Small rounded dark reflector with a distinct shadow. Appears to have a hollow centre. Possibly natural or modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-
70059	Magnetic	638610	5625967	A2	-	-	-	36	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70060	Magnetic	638650	5625894	A2	-	-	-	102	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70061	Debris	638671	5625871	A2	6.2	0.3	0.1	-	Short, linear dark reflector with very slight height. Not particularly distinct but looks a little anomalous. Possible short linear item of non-ferrous debris.	-
70062	Dark reflector	638555	5625683	A2	2.4	1.1	0.4	-	Slightly elongated, angular dark reflector with height. Identified in an area of disturbed seabed. Feature is seen on the bathymetry data as a depression, measuring 6.9 x 5.5 x -0.2 m), with a small mound in its centre. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70063	Magnetic	638619	5625699	A2	-	-	-	204	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70064	Rope/chain	638776	5625805	A2	49.7	0.8	0.0	-	Long, narrow linear dark reflector with no discernible height. Possible scar however may be a length of rope/chain or cable. The feature appears to have no associated magnetic anomaly which may suggest a length of rope to be more likely.	-
70065	Magnetic	638858	5625778	A2	-	-	-	220	Large positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70066	Magnetic	638887	5625741	A2	-	-	-	137	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70067	Magnetic	638889	5625722	A2	-	-	-	18	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70068	Magnetic	638792	5625693	A2	-	-	-	95	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70069	Debris field	638889	5625685	A2	7.7	3.3	0.3	43	Small debris field comprised irregularly shaped dark reflectors with height identified within an area of disturbed seabed. Feature corresponds with a small dipole identified on the magnetometer data, indicating ferrous material.	-
70070	Magnetic	638902	5625664	A2	-	-	-	83	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70071	Magnetic	638882	5625617	A2	-	-	-	51	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70072	Dark reflector	638900	5625539	A2	1.6	1.3	0.5	-	Round dark reflector, with what appears to be a hollow centre, and a faint but relatively broad shadow. Feature is identified approximately 12 m south of a magnetic response measuring 19 nT, which has been interpreted as being likely natural based on the form of the magnetic signal, however the presence of ferrous material cannot be ruled out. Possibly natural or modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-
70073	Debris	638765	5625511	A2	1.4	0.4	0.4	140	Small, distinct, square dark reflector with a relatively distinct shadow and some disturbance to surrounding seabed identified on the sonar data. Feature corresponds with a mound within a depression (measuring 6.7 x 4.8 x -0.2 m) identified on the MBES data and a large magnetic anomaly, indicating ferrous material. Possible item of debris.	-
70074	Magnetic	638679	5625314	A2	-	-	-	43	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70075	Debris field	638937	5625279	A2	12	4.9	0.3	25	Irregularly shaped seabed disturbance with a distinct linear dark reflector (measuring 6.7 x 1.2 x 0.3 m) identified on the sonar data, corresponding with an elongated mound on the MBES data. Feature has two small magnetic anomalies nearby, indicating the presence of some ferrous material. Possible item of debris with seabed disturbance, or possibly a small debris field.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70076	Magnetic	639011	5625190	A2	-	-	-	30	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70077	Magnetic	638971	5625207	A2	-	-	-	33	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70078	Magnetic	638769	5625072	A2	-	-	-	29	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70079	Magnetic	638912	5624874	A2	-	-	-	60	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70080	Magnetic	639108	5624923	A2	-	-	-	31	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70081	Magnetic	638935	5624683	A2	-	-	-	36	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70082	Dark reflector	639205	5624723	A2	2.6	1.3	0.3	-	Round dark reflector, with what appears to be a hollow centre, and a broad, distinct shadow. Possibly natural or modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70083	Debris	639180	5624524	A2	1.6	0.9	0.3	98	Round dark reflector, with what appears to be a hollow centre, and a faint but relatively broad shadow. Feature corresponds with a medium magnetic anomaly indicating ferrous material. Possibly modern anthropogenic debris, however the possibility of the feature being of archaeological interest cannot be ruled out and, as such, has been retained.	-
70084	Magnetic	639239	5624464	A2	-	-	-	163	Large asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70085	Magnetic	639308	5624391	A2	-	-	-	46	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70086	Magnetic	639409	5624170	A2	-	-	-	38	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70087	Magnetic	639531	5624385	A2	-	-	-	345	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70088	Debris	639696	5624209	A2	4.9	0.8	0.1	-	Straight, linear dark reflector with a very slight shadow. Feature relatively isolated on the seabed. Possibly a short linear item of non-ferrous debris.	-
70089	Magnetic	639780	5624245	A2	-	-	-	122	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70090	Magnetic	639817	5624300	A2	-	-	-	114	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70092	Debris	639973	5624169	A2	21.1	0.3	0.3	-	Distinct, curvilinear dark reflector with a very slight shadow. The linear feature appears to have an object, measuring 1.2 x 0.9 x 0.2 m, at its eastern end however it is not clear whether it is associated. Possibly a length of rope/chain.	-
70093	Debris	640047	5623748	A2	3.1	2.3	0.3	151	Slightly curved 'U' shaped dark reflector, with a very slight shadow, identified within an area of seabed disturbance. Feature corresponds with a large dipole, indicating ferrous material. Possible item of debris.	-
70094	Debris	640027	5623842	A2	8.9	0.6	0.1	-	Distinct curvilinear dark reflector in a 'J' shape with very slight height. Feature is relatively isolated on the seabed. Possible linear item of non-ferrous debris.	-
70095	Magnetic	640156	5624026	A2	-	-	-	200	Large asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70096	Dark reflector	640295	5623911	A2	3.2	0.7	0.0	-	Straight elongated dark reflector with no discernible height. Feature appears to fork out at one end. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70097	Magnetic	640322	5623856	A2	-	-	-	18	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70098	Magnetic	640333	5623759	A2	-	-	-	15	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70099	Magnetic	640434	5623704	A2	-	-	-	11	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70100	Magnetic	640605	5623530	A2	-	-	-	72	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70101	Magnetic	640649	5623476	A2	-	-	-	22	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70102	Magnetic	640733	5623660	A2	-	-	-	20	Small positive monopole identified on the magnetometer data. Identified approximately 20 m NW of a dark reflector (anomaly number 70103). As the features are not clearly related they have been kept as two separate anomalies, however the possibility of these features being associated cannot be ruled out.	-
70103	Dark reflector	640749	5623646	A2	3.7	0.6	0.4	-	Straight, elongated dark reflector with a broad, slightly jagged shadow. Possibly natural however may be an item of debris. Identified approximately 20 m NW of a magnetic anomaly measuring 20nT (anomaly number 70102). As the features are not clearly related they have been kept as two separate anomalies, however the possibility of ferrous material cannot be ruled out.	-
70104	Debris field	640681	5623767	A2	26.4	12.9	0.2	-	Area of disturbed seabed comprises elongated, straight dark reflectors with height and a long bright reflector. May be natural however may also be a debris field or partially buried non-ferrous structure.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70105	Debris field	640757	5623760	A2	9	5.2	0.5	-	Possible debris field comprised dark reflectors with height, and possibly some bright reflectors, however there is no associated magnetic anomaly indicating that the features are not ferrous. Feature is identified on the MBES data as an irregularly shaped mound. The feature appears to have a linear dark reflector extending approximately 28 m northwest, possibly with an object with height at one end, although this is not clearly discernible. The linear feature appears to be a seabed scar and, as such, has not been tagged, however the possibility for an associated length of rope remains.	-
70106	Debris	640867	5623815	A2	1.1	0.5	0.4	213	Small, distinct dark reflector with a tapered shadow. The object appears to have a small, slightly angular bright reflector protruding however this may be associated seabed disturbance. Feature corresponds with a large magnetic anomaly, indicating a ferrous item of debris.	-
70107	Magnetic	640768	5623494	A2	-	-	-	51	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70108	Rope/chain	640789	5623376	A2	16.5	0.3	0.1	136	Short, coiled, linear dark reflector with a slight shadow and some possible, relatively indistinct associated objects with height. Feature corresponds with a large magnetic anomaly, indicating some ferrous debris.	-
70109	Magnetic	640948	5623456	A2	-	-	-	30	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70110	Magnetic	641037	5623529	A2	-	-	-	19	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70111	Dark reflector	641042	5623555	A2	1.1	0.8	0.5	-	Faint, poorly defined dark reflector with a distinct, jagged shadow. Feature looks relatively anomalous in comparison to other nearby features. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70112	Magnetic	641081	5623447	A2	-	-	-	26	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70113	Magnetic	641230	5623539	A2	-	-	-	21	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70114	Dark reflector	641232	5623407	A2	3.1	1.1	0.5	-	Slightly angular dark reflector with a relatively broad, distinct shadow. Identified within an area of disturbed seabed. Identified on the MBES data as a mound at the end of a seabed scar, which extends 45 m to the north-east. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70115	Magnetic	641219	5623156	A2	-	-	-	59	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70116	Dark reflector	641301	5623108	A2	3.4	2.5	0.4	-	Faint, irregularly shaped and poorly defined dark reflector with a distinct shadow. Feature relatively isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70117	Debris	641296	5623160	A2	8.4	2.8	0.3	143	Irregular, slightly 'L' shaped item of debris. Appears to be comprised linear dark reflectors with height. Feature corresponds with a large magnetic anomaly indicating ferrous material.	-
70118	Magnetic	641309	5623291	A2	-	-	-	12	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70119	Magnetic	641283	5623306	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70120	Magnetic	641307	5623323	A2	-	-	-	35	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70121	Magnetic	641335	5623392	A2	-	-	-	16	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70122	Magnetic	641452	5623438	A2	-	-	-	9	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70123	Magnetic	641578	5623400	A2	-	-	-	32	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70124	Magnetic	641620	5623414	A2	-	-	-	14	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70125	Magnetic	641840	5622742	A2	-	-	-	53	Medium asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70126	Debris	641985	5622814	A2	2	0.2	0.3	87	Distinct, angular dark reflector with a broad, distinct shadow. Feature corresponds with a medium magnetic anomaly, indicating a ferrous item of debris.	-
70127	Magnetic	642067	5622880	A2	-	-	-	43	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70128	Magnetic	642247	5622845	A2	-	-	-	33	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70129	Magnetic	642453	5622903	A2	-	-	-	16	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70130	Magnetic	642249	5622610	A2	-	-	-	41	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70131	Magnetic	642278	5622591	A2	-	-	-	39	Small irregular magnetic anomaly identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-
70132	Magnetic	642212	5622573	A2	-	-	-	41	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70133	Magnetic	642288	5622523	A2	-	-	-	28	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70134	Debris	642426	5622473	A2	2.6	1	0.5	139	Elongated dark reflector with a distinct, jagged shadow. Feature corresponds with a large magnetic anomaly indicating a ferrous item of debris.	-
70135	Magnetic	642484	5622379	A2	-	-	-	46	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70136	Magnetic	642551	5622542	A2	-	-	-	15	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70137	Magnetic	642657	5622623	A2	-	-	-	17	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70138	Magnetic	642763	5622708	A2	-	-	-	139	Large asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70139	Magnetic	642855	5622446	A2	-	-	-	24	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70140	Magnetic	642680	5622258	A2	-	-	-	44	Small asymmetric dipole identified on the magnetometer data. Feature identified approximately 10 m west of a seabed disturbance which has been interpreted as being natural. Possibly a buried item of ferrous debris, however it is possible that there is a ferrous object at the surface which is hard to discern due to being obscured by the seabed disturbance.	-
70141	Magnetic	643062	5622546	A2	-	-	-	68	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70142	Magnetic	643030	5622501	A2	-	-	-	14	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70143	Debris	643063	5622424	A2	1.5	1.1	0.8	120	Distinct dark reflector with height and some possible disturbance to surrounding sediment. Identified on the MBES data as a mount within a depression (measuring 4.8 x 3.1 x -0.1 m), which may be associated scour. Feature corresponds with a large magnetic anomaly indicating a ferrous item of debris.	-
70144	Magnetic	642965	5622316	A2	-	-	-	21	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70145	Magnetic	642934	5622059	A2	-	-	-	33	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70146	Magnetic	643067	5622150	A2	-	-	-	84	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70147	Magnetic	643101	5622074	A2	-	-	-	41	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70148	Magnetic	643199	5622230	A2	-	-	-	27	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70149	Magnetic	643286	5622192	A2	-	-	-	15	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70150	Magnetic	643318	5622242	A2	-	-	-	46	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70151	Magnetic	643219	5622059	A2	-	-	-	23	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70152	Magnetic	643253	5621981	A2	-	-	-	12	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70153	Magnetic	643288	5621927	A2	-	-	-	29	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70154	Magnetic	643465	5621878	A2	-	-	-	11	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70155	Magnetic	643570	5621939	A2	-	-	-	26	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70156	Magnetic	643498	5622045	A2	-	-	-	23	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70157	Dark reflector	643859	5622018	A2	3.2	0.5	0.2	-	Short, straight, elongated dark reflector with a slight shadow. Identified in an area of numerous objects with height. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70158	Dark reflector	643689	5621770	A2	5	1.2	0.7	-	Relatively straight, elongated dark reflector with a broad, distinct shadow. Identified in an area of textured seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70160	Magnetic	643597	5621680	A2	-	-	-	33	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70161	Dark reflector	644450	5621608	A2	3.8	3.2	1.6	-	Dark reflector with a broad distinct shadow identified in an area of numerous objects with height. Possibly natural however retained based on size. Possibly a non-ferrous item of debris.	-
70162	Magnetic	644620	5621179	A2	-	-	-	51	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70163	Dark reflector	645130	5620884	A2	4.0	1.0	1.0	-	Relatively straight, elongated dark reflector with a broad but faint shadow. Identified in an area of numerous objects with height. Possibly natural however retained based on size. Possibly a non-ferrous item of debris.	-
70164	Rope/chain	645125	5620550	A2	134.6	0.4	0.1	-	Large curvilinear dark reflector with slight height. Feature is seen intermittently in some places, possibly indicating that it is partially broken up or partially buried. Feature does not appear to have an associated magnetic anomaly, indicating it is comprised non-ferrous material.	-
70165	Magnetic	646168	5619734	A2	-	-	-	104	Large positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70166	Magnetic	646511	5619886	A2	-	-	-	66	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70167	Debris	646829	5619442	A2	80.1	1.7	0.3	-	Straight, linear dark reflector with height. Relatively isolated on the seabed. Possible length or rope/chain or linear item of debris. Feature is identified approximately 40 m west of a magnetic anomaly (anomaly 70168). The features are not clearly related and therefore have not been grouped together, however the presence of ferrous material cannot be ruled out.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70168	Magnetic	646912	5619423	A2	3.8	2.8	0.4	133	Large irregular magnetic anomaly identified on the magnetometer data. Nothing distinct identified at this location on the sonar data, however a small mound is identified on the MBES data, possibly indicating a partially buried item of ferrous debris. The feature is also located approximately 40 east of a linear feature (anomaly 70167), therefore it is possible that the two anomalies may be related.	-
70169	Magnetic	647291	5619312	A2	-	-	-	109	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70170	Magnetic	647132	5619188	A2	-	-	-	63	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70171	Magnetic	647308	5619026	A2	-	-	-	116	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70172	Dark reflector	647222	5618798	A2	4.0	2.2	1.1	-	Angular dark reflector with large height, located near a similar object in an area of textured seabed. Possibly natural however retained based on size. May be a non-ferrous item of debris.	-
70174	Magnetic	647706	5618529	A2	-	-	-	143	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70175	Dark reflector	647998	5618208	A2	3.7	1	0.3	-	Irregularly shaped dark reflector with height, identified in an area of numerous boulders. Feature appears to have a slight elongated dark reflector protruding from the main feature. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70176	Magnetic	648038	5618234	A2	-	-	-	125	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70177	Debris	648441	5618506	A2	9.2	1.5	0.6	-	Angular, elongated dark reflector, with an object with height at one end. Identified along the edge of a bedform, therefore may part of a natural feature, however appears to be more distinct compared to surrounding feature. Possibly a linear item of non-ferrous debris.	-
70178	Debris	648446	5618283	A2	14.7	0.5	0.3	-	Straight, linear dark reflector with slight height, identified approximately 50 m NE of another, similar feature. Possible linear item of non-ferrous debris.	-
70179	Debris	648403	5618250	A2	17.1	0.6	0.3	-	Linear dark reflector with associated height, isolated at the edge of an area of textured seabed. Identified approximately 50 m NE of another, similar feature. Shadow suggests there may be object with height at one end, however this isn't clearly discernible. Possible linear item of non-ferrous debris.	-
70181	Debris	648703	5618081	A2	34.9	0.5	0.1	-	Curvilinear dark reflector with height identified within an area of boulders. Feature appears to bend round at a right angle at its south-eastern end. Possible linear item of non-ferrous debris.	-
70183	Magnetic	649046	5618207	A2	-	-	-	122	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70184	**Wreck**	**648958**	**5617761**	**A1**	**103.4**	**40.1**	**0.8**	**11450**	**A large area of debris thought to be the remains of a dispersed wreck. Identified on the sonar data as a large area of dark reflectors with height and some linear features. A larger, more coherent slatted structure, measuring approximately 8.2 x 2.5 m, is identified within the debris field. The wreck is located within a boulder field, therefore the exact boundaries of the area of dispersed debris are hard to discern. On the MBES data, the wreck is identified as numerous small mounds within a slight depression. The feature corresponds with a very large magnetic anomaly, suggesting a significant amount of ferrous debris. The feature has a corresponding UKHO record which identified the wreck as *Corbet Woodall*, a steamship measuring 61 x 10.1 m with a draught of 4 m, which was mined and sunk in 1917 whilst *en route* from South Shields to Poole.**	**20073 (UKHO)**
70185	Magnetic	649164	5617789	A2	-	-	-	226	Large positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70186	Debris	649928	5617223	A2	51.8	0.6	0.3	-	Long, straight, linear dark reflector with height, relatively isolated on the seabed. The feature bends into a right angle at its southern end. Identified on the MBES data as a long, straight, slight linear mound with some possible scour along its eastern edge. Possible linear item of debris. Feature does not appear to have an associated magnetic anomaly, indicating it is comprised non-ferrous material.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70187	Magnetic	650648	5615866	A2	-	-	-	70	Medium asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70188	Magnetic	650980	5615901	A2	-	-	-	276	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70189	Seabed disturbance	650990	5616128	A2	27.1	6.9	0	-	Elongated, slightly capsule shaped seabed disturbance with some objects with height and some possible bright reflectors. Feature has no corresponding magnetic anomaly indicating the feature is comprised of non-ferrous material. The feature appears to be quite similar to natural outcrops seen elsewhere in the Marine cable corridor; however, the shape and size make the feature appear to be slightly anomalous and, as such, has been retained as potential archaeology.	-
70190	Magnetic	652870	5614002	A2	-	-	-	130	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70191	Magnetic	653620	5613866	A2	-	-	-	39	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70192	Rope/chain	653639	5613604	A2	16.2	0.9	0.3	204	Curvilinear dark reflector with slight height. The feature is quite faint and not always clearly discernible, possibly indicating partial burial. The feature corresponds with a large magnetic anomaly, indicating ferrous material. Possible length of rope/chain.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70193	**Wreck**	**654006**	**5613141**	**A1**	**73.5**	**65.8**	**2.6**	**296**	**A broad area of debris thought to be related to the wreck of a steam ship. Identified on the sonar data as an area of numerous dark reflectors with height, some of which appear to be quite straight. The wreck corresponds with a large magnetic anomaly, indicating ferrous material. The feature has a corresponding UKHO record which identifies the remains of a well broken up steam ship, with a length of 63 m and a height of 3.5 m. The wreck is identified outside of the survey area, however the spread of the debris and the wreck's recommended AEZ is within the Marine cable corridor and, as such, has been retained. The wreck is not entirely covered by the geophysical data. As such, the dimensions and magnetic amplitudes identified on the geophysical data should be considered a minimum.**	**20024 (UKHO)**
70194	Magnetic	654446	5613293	A2	-	-	-	754	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70195	Magnetic	654430	5613191	A2	-	-	-	212	Large negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70197	Dark reflector	654899	5612995	A2	3.4	1.6	0.5	-	Small dark reflector with a distinct, slightly irregular shadow. Feature is relatively isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70198	Dark reflector	655230	5612838	A2	4.9	1.6	0.6	-	Relatively straight, elongated dark reflector with a distinct shadow. Feature is isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70200	Magnetic	656240	5612656	A2	-	-	-	70	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70201	Magnetic	656377	5612758	A2	-	-	-	117	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70202	Magnetic	656591	5612557	A2	-	-	-	47	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70203	Magnetic	656690	5612473	A2	-	-	-	121	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70204	**Debris field**	**657334**	**5612253**	**A1**	**50**	**23**	**1.4**	**2670**	**Debris field comprised numerous dark objects with height and some straight linear features. The feature does not look particularly distinct on the sonar data and, as such, the boundaries are hard to discern. Identified as several small mounds, the largest of which measuring 8.6 x 2.6 x 0.7 m, on the MBES data. The feature corresponds with a very large magnetic anomaly indicating a significant amount of ferrous material and, as such, has been given an A1 archaeological discrimination.**	**-**

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70205	Magnetic	657345	5612188	A2	-	-	-	88	Medium dipole identified on the magnetometer data. Feature is located approximately 42 m south of anomaly 70204, however as it is not clearly associated they have been left as two separate features. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70206	Magnetic	657461	5612149	A2	-	-	-	40	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70207	Debris	657784	5612060	A2	14.2	0.9	0.1	-	Relatively straight linear dark reflector with height with some possible associated scour. Identified approximately 12 m WNW of another, similar feature (70208). Feature does not appear to have an associated magnetic anomaly, indicating it is comprised non-ferrous material.	-
70208	Debris	657796	5612060	A2	4.8	0.9	0.2	-	Relatively straight linear dark reflector with height with some possible associated scour. Identified approximately 12 m ESE of another, similar feature (70207). Feature does not appear to have an associated magnetic anomaly, indicating it is comprised non-ferrous material.	-
70209	Dark reflector	658002	5611852	A2	4.4	1.7	1.1	-	Distinct dark reflector with a relatively broad shadow. Feature is identified within an area of disturbed seabed with some associated scour. Possibly natural however retained based on size. Possibly a non-ferrous item of debris.	-
70210	Dark reflector	658110	5611816	A2	3.7	2.6	0.9	-	Distinct dark reflector with a relatively broad shadow. Feature is identified within an area of disturbed seabed with some associated scour. Possibly natural however retained based on size. Possibly a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70211	Magnetic	658170	5611892	A2	-	-	-	41	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70212	Debris field	658205	5611876	A2	28.1	19.7	0.3	76	Area of disturbed seabed consisting of dark reflectors with height, identified on the sonar data. The feature is seen on the MBES data as an area of disturbed seabed. Feature looks similar to a natural outcrop, however it appears to correspond with a medium magnetic anomaly indicating the presence of ferrous material. As such, the feature has been classified as a debris field and retained as potential archaeology.	-
70213	Magnetic	658268	5611846	A2	-	-	-	86	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70214	Debris field	658526	5611858	A2	14.3	6	0.7	171	Small area comprised several distinct dark reflectors with height. Feature is located approximately 17 m NW of a large magnetic anomaly which, based on its form, is interpreted as being associated with the feature identified on the sonar, indicating the presence of ferrous material. Possible small debris field.	-
70215	Debris	658792	5611615	A2	7.8	0.8	0.6	-	Angular dark reflector in an 'L' shape, with a broad, distinct shadow. On the sonar data, the feature appears to possibly be partially buried. On the MBES data, the feature is seen as an elongated mound. Possibly natural however retained based on size and form. May be a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70216	Magnetic	659009	5611608	A2	-	-	-	125	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70217	Debris	660170	5611125	A2	9.4	0.8	0.4	-	Straight, linear dark reflector with a broad, distinct shadow. Relatively isolated on the seabed. Identified on the MBES data as an elongated mound. Possible length of linear non-ferrous debris.	-
70218	Magnetic	660566	5610801	A2	-	-	-	37	Small asymmetric dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70220	Rope/chain	661217	5610865	A2	79	0.5	0.3	64	Relatively straight linear dark reflector with height, possibly with an object with height at one end however this is not clearly discernible on the sonar data. Feature appears to correspond with a medium magnetic anomaly at its south-eastern end indicating an associated item of ferrous debris. Possibly a ferrous debris item with an associated rope.	-
70221	Bright reflector	661353	5610850	A2	5.0	1.8	0.0	-	Elongated, slightly rectangular bright reflector identified in an area of textured seabed. Possibly natural however shape looks slightly anomalous. Possible non-ferrous item of debris.	-
70222	Debris	661506	5610931	A2	22.4	0.7	0.2	-	Relatively straight linear dark reflector with height. The feature appears to bed round at its north-eastern end. The feature has no corresponding magnetic anomaly indicating a non-ferrous item of linear debris.	-
70223	Magnetic	663276	5610074	A2	-	-	-	48	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70224	Magnetic	663572	5609896	A2	-	-	-	47	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70225	Magnetic	663813	5609956	A2	-	-	-	22	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70226	Magnetic	665622	5609905	A2	-	-	-	27	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70227	Magnetic	666084	5610061	A2	-	-	-	24	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70228	Dark reflector	666369	5610118	A2	4.6	1.4	1.3	-	Distinct dark reflector with a broad shadow. Identified in an area of textured seabed. Feature is seen on the MBES data as a distinct mound. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70229	Debris	667508	5609736	A2	7.9	2.8	0.5	252	Faint, poorly defined dark reflector with a bright, slightly irregular shadow identified on the sonar data. The feature corresponds with a large magnetic anomaly indicating ferrous material. Possible item of debris.	-
70230	Bright reflector	667926	5609781	A2	7.2	4.6	0.0	-	Irregularly shaped bright reflector isolated on the seabed identified on the sonar data. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70231	Magnetic	668819	5609766	A2	-	-	-	140	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70232	Magnetic	670191	5609244	A2	1.8	1.3	0.1	83	Medium dipole identified on the magnetometer data. Nothing distinct identified at this location on the sonar data, however the feature corresponds with a distinct mound within a depression on the MBES data, indicating a possible partially buried item of ferrous debris.	-
70233	Dark reflector	670506	5609232	A2	2.3	0.3	0.6	-	Slightly elongated dark reflector with a broad distinct shadow, isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70234	Magnetic	670595	5609308	A2	-	-	-	125	Large dipole identified on the magnetometer data. Close to another magnetic anomaly. Possibly two separate but related features. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70235	Magnetic	670635	5609322	A2	-	-	-	192	Large negative monopole identified on the magnetometer data. Close to another magnetic anomaly. Possibly two separate but related features. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70236	Magnetic	670983	5609423	A2	-	-	-	44	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70237	Magnetic	671027	5609352	A2	-	-	-	63	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70239	Magnetic	671369	5609139	A2	-	-	-	89	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70240	Magnetic	672010	5609087	A2	-	-	-	22	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70241	Debris field	672311	5608978	A2	11.4	3.3	0.7	33	Small patch of disturbed seabed with several objects with height, including a relatively straight elongated object. Identified on the MBES data as an elongated, irregular mound. Feature corresponds with a small magnetic anomaly, indicating the presence of ferrous material. Possibly a small debris field.	-
70242	Dark reflector	672430	5608678	A2	3.4	1.0	0.5	-	Faint, poorly defined dark reflector with a distinct, slightly jagged shadow, identified on the sonar data. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70243	Magnetic	672675	5608823	A2	-	-	-	42	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70244	Magnetic	672858	5608541	A2	-	-	-	71	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70245	Dark reflector	676406	5607859	A2	6.3	0.9	0.3	-	Slightly elongated, poorly defined dark reflector with a bright, slightly irregular shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70246	Dark reflector	677056	5607206	A2	3.5	1.6	1.6	-	Rounded dark reflector with a distinct shadow identified on the sonar data. The feature appears to be relatively isolated on the seabed. Possibly natural, however retained based on size. Feature has no corresponding magnetic anomaly, however there is the possibility of it being a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70247	Magnetic	678524	5606523	A2	-	-	-	40	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70248	Magnetic	679215	5606279	A2	-	-	-	23	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70249	Seabed disturbance	679358	5606169	A2	16.8	7.6	0.8	-	A poorly defined mound with a broad, distinct shadow. Possibly one large object or numerous small ones. Identified as a mound on the MBES data. Feature appears to have no corresponding magnetic anomaly, however is located approximately 10 m north of another similar feature which does. It may be that the magnetic anomaly is associated with both features however, due to the positioning, it has only been grouped with the closest anomaly (70250). As such, this feature has been classified as a seabed disturbance, however it should be noted that the presence of ferrous material cannot be ruled out.	-
70250	Debris field	679366	5606147	A2	11.0	10.4	1.1	58	A poorly defined mound with a broad, distinct shadow identified on the sonar data. Possibly one large object or numerous small ones. Identified on the MBES data as a slightly elongated mound. The feature corresponds with a medium magnetic anomaly, indicating the presence of ferrous material. Feature is located approximately 10 m south of another, similar feature. Possibly a small debris field.	-
70251	Magnetic	679857	5606135	A2	-	-	-	32	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70252	Magnetic	679963	5606149	A2	-	-	-	15	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70253	Magnetic	680737	5605608	A2	-	-	-	57	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70254	Magnetic	680812	5605480	A2	-	-	-	42	Medium positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70255	Magnetic	680375	5605559	A2	-	-	-	68	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70256	Magnetic	680448	5605763	A2	-	-	-	124	Large negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70257	Magnetic	680152	5605531	A2	-	-	-	57	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70258	Dark reflector	680499	5605574	A2	2.8	1.7	0.9	-	Distinct dark reflector with a relatively broad shadow, identified in an area of megaripples. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70259	Magnetic	681076	5605425	A2	-	-	-	15	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70260	Magnetic	681529	5604806	A2	-	-	-	7	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70261	Magnetic	681294	5604888	A2	-	-	-	8	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70262	Dark reflector	681781	5604874	A2	6.0	1.6	0.2	-	Elongated dark reflector with a broad, slightly jagged shadow identified on the sonar data. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70263	Magnetic	682332	5604351	A2	-	-	-	17	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70264	Magnetic	682164	5604054	A2	-	-	-	13	Irregular magnetic anomaly identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70265	Magnetic	682745	5603728	A2	-	-	-	21	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70267	Magnetic	682933	5603546	A2	-	-	-	45	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70269	Magnetic	683107	5603319	A2	-	-	-	9	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70270	Magnetic	683845	5602893	A2	-	-	-	15	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70271	Magnetic	684179	5602508	A2	-	-	-	31	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70272	Magnetic	685458	5601630	A2	-	-	-	32	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70273	Dark reflector	686083	5601504	A2	5.2	3.5	0.3	-	Small, faint, irregularly shaped dark reflector with slight height identified on the sonar data. Some possible disturbance to surrounding seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70274	Magnetic	686289	5600953	A2	-	-	-	89	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70275	Debris	686636	5600860	A2	2.5	0.5	0.6	24	Distinct dark reflector with a long, narrow shadow, identified at the edge of a trawl scar. Feature corresponds with a small magnetic anomaly, indicating some ferrous material. Possible item of debris.	-
70276	Seabed disturbance	687183	5600574	A2	14.5	6.1	0.0	-	A small area of disturbed seabed, possibly with some possible coiled linear features, however these are hard to discern. Possibly natural however has the potential of being a partially buried non-ferrous structure or debris field.	-
70277	Magnetic	687475	5600136	A2	-	-	-	15	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70278	Magnetic	687521	5600172	A2	-	-	-	21	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70279	Debris	687620	5600254	A2	5.2	0.5	0.1	59	Short, straight elongated dark reflector with a distinct shadow. Feature corresponds with a medium magnetic anomaly, indicating ferrous material. Feature interpreted as being an item of debris.	-
70280	Magnetic	687559	5600289	A2	-	-	-	28	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70281	Magnetic	687340	5600283	A2	-	-	-	96	Large positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70282	Magnetic	687985	5600046	A2	-	-	-	18	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70283	Seabed disturbance	688652	5599597	A2	16.3	13.3	0.0	-	Irregularly shaped area of disturbed seabed comprised of both dark and bright reflectors. Identified as an irregular mound on the MBES data. Possibly natural however has the potential of being a partially buried non-ferrous structure or debris field.	-
70284	Magnetic	688831	5599351	A2	-	-	-	119	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70285	Magnetic	688951	5599343	A2	-	-	-	15	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70287	Magnetic	689083	5599391	A2	-	-	-	28	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70288	Magnetic	689024	5599227	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70290	Magnetic	689578	5599019	A2	-	-	-	64	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70291	Magnetic	689439	5599135	A2	-	-	-	12	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70292	Magnetic	690268	5598853	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70293	Magnetic	690131	5598702	A2	-	-	-	35	Irregular anomaly identified on the magnetometer data. Feature appears to be part of a linear feature, however there is no corresponding feature on the sonar data. Possibly natural however appears to be seen on adjacent line and, as such has been retained as a precaution as it may represent a possible buried item of ferrous debris.	-
70294	Magnetic	690257	5598455	A2	-	-	-	14	Irregular magnetic anomaly identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70295	Magnetic	691058	5598425	A2	-	-	-	12	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70296	Magnetic	690991	5598397	A2	-	-	-	10	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70297	Debris	690824	5598139	A2	6.9	0.3	0.1	-	Elongated dark reflector with a bright shadow. Relatively isolated on the seabed. Possible item of non-ferrous linear debris.	-
70298	Debris field	691007	5597848	A2	13.6	3.4	0.0	17	Area of disturbed seabed with some bright and dark reflectors identified on the sonar data. Feature corresponds with a small magnetic anomaly, indicating the presence of some ferrous material. Possibly a partially buried item of ferrous debris or a small debris field.	-
70299	Seabed disturbance	691427	5597688	A2	21.1	3.7	0.2	-	Elongated area of disturbed seabed comprised some liner bright and dark reflectors. Possible linear feature extending from one side, however this looks to be a seabed scar and, as such, has not been included in the tag boundaries. Possibly natural however has the potential of being a partially buried non-ferrous structure.	-
70300	Magnetic	691708	5597709	A2	-	-	-	46	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70301	Magnetic	692269	5596797	A2	-	-	-	8	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70302	Magnetic	692273	5596877	A2	-	-	-	30	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70303	Magnetic	692300	5597010	A2	-	-	-	89	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70304	Magnetic	692483	5597061	A2	-	-	-	50	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70305	Magnetic	692548	5596834	A2	-	-	-	18	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70306	Magnetic	692761	5596642	A2	-	-	-	20	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70307	Magnetic	692944	5596414	A2	-	-	-	30	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70308	Magnetic	693097	5596585	A2	-	-	-	14	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70310	Debris	693100	5596109	A2	6.4	1.8	0.7	11	Poorly defined dark reflector with a distinct shadow, identified close to a number of seabed scars. Feature appears to correspond with a small magnetic anomaly, indicating the presence of some ferrous material. Possible item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70311	Bright reflector	693376	5596014	A2	8.6	0.1	0.0	-	Curvilinear bright reflector, curled into an 's' shape. Feature has no corresponding magnetic anomaly, indicating that the feature is possibly a length of coiled rope or a partially buried item of non-ferrous debris.	-
70313	Magnetic	693505	5595553	A2	-	-	-	23	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70314	Magnetic	694094	5595266	A2	-	-	-	58	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70316	Magnetic	694988	5594564	A2	-	-	-	26	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70317	Dark reflector	694744	5594400	A2	2.2	0.5	0.2	-	Small rounded dark reflector, possibly hollow or with a bright reflector in its centre. Feature identified within an area of scour. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70319	Magnetic	694822	5594255	A2	-	-	-	27	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70320	Magnetic	694885	5594188	A2	-	-	-	19	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70322	Magnetic	695086	5593968	A2	-	-	-	8	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70324	Magnetic	695515	5593612	A2	-	-	-	30	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70325	Magnetic	696174	5593313	A2	-	-	-	101	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70326	Magnetic	696187	5593219	A2	-	-	-	19	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70327	Magnetic	696104	5593139	A2	-	-	-	28	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70328	Magnetic	696239	5592991	A2	-	-	-	41	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70329	Magnetic	696190	5592972	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70330	Magnetic	696221	5592842	A2	-	-	-	19	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70331	Magnetic	697029	5592319	A2	-	-	-	13	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70332	Magnetic	696926	5592111	A2	-	-	-	16	Small dipole identified on the magnetometer data. Possibly part of a natural, linear formation however this is not clear and as such has been retained as potential archaeology. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70333	Magnetic	696898	5592053	A2	-	-	-	17	Small dipole identified on the magnetometer data. Possibly part of a natural, linear formation however this is not clear and as such has been retained as potential archaeology. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70335	Magnetic	697342	5592154	A2	-	-	-	19	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70336	Magnetic	696919	5591416	A2	-	-	-	34	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70337	Magnetic	697296	5591704	A2	-	-	-	11	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70338	Magnetic	697233	5591340	A2	-	-	-	19	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70339	Magnetic	697406	5591247	A2	-	-	-	10	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70340	Magnetic	697702	5591278	A2	-	-	-	126	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70341	Debris	697733	5591461	A2	1.3	0.3	0.6	17	Small but distinct dark reflector with a bright shadow identified on the sonar data. Feature corresponds with a small negative monopole, indicating ferrous material. Possible item of debris.	-
70342	Magnetic	697990	5591618	A2	-	-	-	55	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70344	Magnetic	698177	5590525	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70345	Dark reflector	698674	5590352	A2	2.6	1.4	1.0	-	Distinct, slightly rounded dark reflector with a relatively broad, bright shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	-
70346	Magnetic	698915	5590481	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70347	Magnetic	699702	5589493	A2	-	-	-	26	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70348	Magnetic	699552	5589483	A2	-	-	-	30	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70349	Magnetic	699837	5589349	A2	-	-	-	16	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70350	Magnetic	699600	5589365	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70351	Debris	699887	5589416	A2	10.7	0.8	0.1	-	Elongated dark reflector with a slightly jagged shadow, relatively isolated on the seabed. Appears to be partially buried. Feature sits just outside of magnetometer coverage, therefore it is not possible to discern whether the feature is comprised of ferrous material. Possible linear, or partially buried item of debris.	-
70352	Magnetic	700011	5589000	A2	-	-	-	13	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70353	Magnetic	700157	5589108	A2	-	-	-	11	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70354	Magnetic	700419	5588415	A2	-	-	-	19	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70355	Magnetic	701007	5588207	A2	-	-	-	68	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70356	Magnetic	701123	5587912	A2	-	-	-	41	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70357	Magnetic	701048	5588069	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70358	Debris	701742	5586990	A2	7.2	0.7	0.1	-	Linear dark reflector with height. Not particularly distinct, possibly part of a seabed scar, however may also be a linear item of non-ferrous debris.	-
70359	Magnetic	701902	5586714	A2	-	-	-	36	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70360	Magnetic	702692	5586532	A2	-	-	-	18	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70361	Magnetic	704894	5585370	A2	-	-	-	73	Medium irregular magnetic anomaly identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70362	Magnetic	704788	5585424	A2	-	-	-	26	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70363	Magnetic	705155	5585297	A2	-	-	-	8	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70366	Dark reflector	705277	5585010	A2	2.9	1.3	1.1	-	Angular dark reflector with a relatively broad shadow. Possible associated rectangular seabed disturbance, however this is not distinct. Identified as an area of disturbed seabed on the MBES data. Possibly natural however retained based on height. Feature has the potential of being a non-ferrous item of debris.	-
70367	Magnetic	705465	5585275	A2	-	-	-	21	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70368	Magnetic	705441	5585097	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70370	Dark reflector	706496	5584602	A2	3.3	2.2	1.1	-	Faint dark reflector with a distinct, irregular shadow which appears to be in a slight 'x' shape. Possibly natural however retained based on height. Feature has the potential of being a non-ferrous item of debris.	-
70371	Dark reflector	707056	5584323	A2	6.7	3.3	0.1	-	Irregularly shaped object with slight height. Some slight disturbance to surrounding seabed. Close to an object with height. Possible seabed scar however may also be a partially buried non-ferrous item of debris.	-
70372	Debris	707061	5584264	A2	5.6	0.3	0.3	-	Straight, elongated dark reflector with a distinct shadow. Possibly in line with a longer, but less distinct, linear feature. Possible linear item of non-ferrous debris.	-
70373	Debris	707160	5584256	A2	67.8	0.9	0.1	-	Linear feature comprised dark and bright reflectors. Bright reflector is possibly a shadow; however, this is not clearly discernible. May be a seabed scar however may also be a linear item of non-ferrous debris. Possibly related to debris item 70372.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70374	Magnetic	707143	5584129	A2	-	-	-	55	Medium negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70375	Magnetic	707358	5583823	A2	-	-	-	13	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70376	Dark reflector	707443	5583833	A2	3.0	1.2	0.8	-	Distinct dark reflector with a relatively broad shadow. Feature has an associated linear seabed disturbance which hasn't been tagged as it looks as though it may be a scar rather than an object on the seabed. Possibly natural however may also be an item of non-ferrous item of debris.	-
70377	Magnetic	708657	5583315	A2	-	-	-	10	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70378	Magnetic	709142	5583213	A2	-	-	-	219	Large dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70379	Magnetic	710524	5582390	A2	-	-	-	25	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70380	Magnetic	711185	5582147	A2	-	-	-	13	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70381	Magnetic	712156	5581714	A2	-	-	-	34	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70382	Bright reflector	712342	5581178	A2	6.1	0.8	0.0	-	Small, straight, linear bright reflector. Feature isolated on the seabed. Possible a small seabed scar, however there is the possibility of being a linear item of non-ferrous debris	-
70383	Debris	713443	5580181	A2	52.7	2.9	0.6	-	Large rectangular object comprised two long, linear dark reflectors with height. Possibly partially buried. Feature appears to have an object with height at northern end measuring 2.3 x 1.3 x 0.6 m. Feature is possibly an item of modern anthropogenic debris or fishing equipment, however this cannot be confirmed without further investigation and, as such, the feature has been retained as a possible item of non-ferrous debris.	-
70384	Magnetic	713872	5579951	A2	-	-	-	12	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70385	Magnetic	714121	5579615	A2	-	-	-	16	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70386	Dark reflector	714165	5580053	A2	2.4	2.3	1.6	-	Distinct, angular dark reflector with a long, bright shadow. Identified on the MBES data as a distinct mound. Possibly natural however tagged based on size and form. Feature possibly a non-ferrous item of debris.	-
70387	Magnetic	715529	5578683	A2	-	-	-	12	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70388	Magnetic	715683	5578849	A2	-	-	-	93	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70389	Magnetic	716105	5578316	A2	-	-	-	13	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70390	Dark reflector	716779	5578126	A2	2.4	1.1	1.0	-	Distinct dark reflector with a bright, tapered shadow. Identified on the MBES data as a distinct mound. Possibly natural however tagged based on size and form. Feature possibly a non-ferrous item of debris.	-
70391	Magnetic	717428	5577083	A2	-	-	-	11	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70392	Debris	717546	5576958	A2	7.9	0.2	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length on uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70393	Debris	717555	5576938	A2	8.7	0.4	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length on uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-
70394	Debris	717544	5576919	A2	11.3	0.2	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length of uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70395	Debris	717695	5576916	A2	36.5	0.3	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length of uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-
70396	Debris	717796	5576941	A2	25.8	0.5	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length of uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70397	Debris	717824	5576964	A2	26.9	0.3	0.1	219	A short curvilinear dark reflector with height identified on the sonar data. The feature is close to several similar features, possibly indicating a partially buried or broken up linear feature. The feature also corresponds with a linear magnetic anomaly identified on the gridded magnetometer data, which extends approximately 550 m SW-NE and has magnetic amplitudes up to 219 nT, indicating ferrous material. The feature is possibly a partially broken up length of uncharted cable however there is a possibility of being a ferrous linear debris item and, as such, has been retained as potential archaeology.	-
70398	Magnetic	718753	5576351	A2	-	-	-	35	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70399	Dark reflector	718873	5576008	A2	3.0	2.8	2.3	-	Distinct dark reflector with a long but tapered shadow. Relatively isolated on the seabed, but with some disturbance to surrounding sediment. Identified on the MBES data as a distinct mound. Possibly natural however retained based on height. Feature has the potential of being a non-ferrous item of debris.	-
70400	Magnetic	719107	5576020	A2	-	-	-	10	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70401	Magnetic	719669	5575870	A2	-	-	-	15	Small dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70402	Magnetic	719689	5575453	A2	-	-	-	63	Medium dipole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70403	Magnetic	719941	5575699	A2	-	-	-	8	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70404	Debris	721869	5574521	A2	3.1	1.3	1.3	16	Large, angular dark reflector with a distinct, but tapered shadow. Other, smaller objects with height nearby. Identified on the MBES data as a distinct mound. Feature appears to correspond with a small magnetic anomaly, possibly indicating ferrous material. Possible item of debris.	-
70405	Dark reflector	722083	5574688	A2	4.2	3.4	1.2	-	Slightly curved dark reflector with a broad but tapered shadow. Close to other objects with height. Identified on the MBES data as a distinct mound. Possibly natural however retained based on size. Feature has the potential of being a non-ferrous item of debris.	-
70406	Dark reflector	722577	5574720	A2	2.9	1.6	1.8	-	Distinct dark reflector with a long but tapered shadow. Some slight disturbance to surrounding sediment. Identified on the MBES data as a distinct mound. Possibly natural however retained based on size. Feature has the potential of being a non-ferrous item of debris.	-
70407	Dark reflector	724882	5573602	A2	2.1	1.1	1.1	-	Distinct dark reflector with a long, but tapered, shadow. Possibly two objects close together. Possibly natural however retained based on size. Feature has the potential of being a non-ferrous item of debris.	-

ID Number	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	External references
70408	Magnetic	727433	5572899	A2	-	-	-	35	Small negative monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70409	Magnetic	727565	5572923	A2	-	-	-	13	Small positive monopole identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-
70410	Magnetic	727914	5573290	A2	-	-	-	11	Medium irregular magnetic anomaly identified on the magnetometer data. Nothing identified at this location on the sonar data, indicating a possible buried item of ferrous debris.	-

Appendix VI: Maritime Recorded Losses

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1228512; HER_55552	Unknown	Cargo Vessel	Post-medieval	1697	Wreck of a Dutch cargo vessel which stranded on the Dean Sand, homeward-bound to Vlissingen from Surinam with indigo, gold dust, sugar and ivory; the last named cargo suggests that her voyage began in Africa, and that she was therefore involved in the slave trade.
HBO_UID 1368548	Mary	Cargo Vessel	Post-medieval	1735	Wreck of a British cargo vessel from Portsmouth that was en route to London with wheat and lost on the Horse Sand.
HBO_UID 1435820	Rowley	Cargo Vessel	Post-medieval	1746	Wreck of a British transport wooden sailing vessel, which stranded near Lumps Farm, Southsea, on her passage, possibly from Portsmouth to Gibraltar. The vessel was carrying soldiers, clothing, and military equipment.
HBO_UID 1082111	HMS Invincible	Sailing Vessel	Post-medieval	1758	The remains of the wreck of a British Third Rate ship of the line, HMS Invincible, which stranded and capsized on the Horse and Dean Sand on departing St. Helen's for Louisburg, Canada in 1758. This wooden sailing vessel was built in 1744 and captured from the French in 1747 at Cape Finisterre. When in French hands she was called L 'Invincible. Status: designated wreck site.
MPM1154	Peter and Ann	Cargo Vessel	Post-medieval	1763	Record of cargo ship which grounded near Eastney Fort en route from St Ubes for Dram in Norway, loaded chiefly with salt and some fruit.
HBO_UID 898846; HER_27673	Bailies	Cargo Vessel	Post-medieval	1797	Wreck of an English cargo vessel en route from London to the West Indies, which wrecked on the Horse Sand off Portsmouth.
HER_27665	HMS Impregnable	Warship	Post-medieval	1799	HMS Impregnable, a British second rate warship, stranded near the entrance to Langstone Harbour, Solent, 1799.
HBO_UID 898854; HER_27674	Incredible	Sailing Vessel	19th century	1800	Wreck of British transport wooden sailing vessel which stranded and bilged on the Horse Sand during a storm; a wooden sailing vessel.
HBO_UID 1234362; HER_55563	Isabella	Craft	19th century	1806	Wreck of a British craft en route from Grenada and Limerick to London, which foundered on shore on the Horse Sand, near Portsmouth.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1234571	Unknown	Brig	19th century	1809	Wreck of a large transport brig which foundered on the Horse.
HBO_UID 898863	Good Intent	Craft	19th century	1811	Wreck of an English craft, bound to Bristol, which was driven on shore off Fort Cumberland.
HBO_UID 898869; HER_27675	Antigonus	Craft	19th century	1815	Wreck of craft which foundered after grounding on the Horse and Dean Sand, while bound from Saint-Martin-de-Re to Ostend. Constructed of wood, she was a sailing vessel.
HBO_UID 1240379	Unknown	Sloop	19th century	1829	Wreck of a sloop in ballast, foundered in deep water between the buoy of the Warner and the buoy of the Dean, and all hands drowned. The FANNY, of Cowes, went to her assistance, but was too late.
HBO_UID 1175452	Earl of Moira	Craft	19th century	1829	Wreck of a British craft, en route from Littlehampton for London, sprung a leak and sunk near the Owers Light Vessel.
HER_55562	Unknown	Recorded Wreck	19th century	1829	Early C19 ship wreck, name unknown.
HBO_UID 1175547	Thomas and Mary	Craft	19th century	1831	Wreck of a British craft en route from London to Galway, which sunk with three of the crew off the Owers Light Vessel.
HBO_UID 1407197	Vedra	Brig	19th century	1832	Wreck of an English wooden sailing brig which stranded on the Owers during a gale.
HBO_UID 895799	HMS Pincher	Schooner	19th century	1838	Wreck of British schooner which capsized and foundered off the Owers, off the north east coast of the Isle of Wight, to be recovered, beached and sold some months later. It is unclear whether she was sold as a constructive total loss to be broken up.
HBO_UID 1364225; HER_55585	Hopewell	Craft	19th century	1838	Wreck of a British craft, which struck on the Horse Shoe during a violent gale from the east south-east.
HBO_UID 1240492	Amity	Schooner	19th century	1852	Wreck of an English schooner which ran on the Horse Sand in thick weather with rain, a wind force of 8 from the south south-west and eventually drove on shoal near Fort Cumberland.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1240494; HER_55479	Arrow	Snow	19th century	1852	Wreck of an English snow which drove on the Horse Sand through stress of weather.
HER_27676	Flowers	Merchantman	19th century	1852	Wreck of Flowers, a South African merchantman foundered near Dean Sand, Portsmouth in 1852.
HBO_UID 1176132	Margaritha Agnes	Galliot	19th century	1853	Wreck of Dutch galliot which was abandoned to founder following a collision with another Dutch vessel, while en route from Nantes for Rotterdam. Constructed of wood, she was a sailing vessel.
HBO_UID 1155711; MPM1152	Prince Regent	Smack	19th century	1853	Wreck of a British smack that struck the Horse and Dean Sand in thick weather, during a south south-east Force 10 gale. The ship was run ashore on the mainland at Lumps Beach to prevent her foundering. The crew were saved together with some of the sails and rigging.
HBO_UID 1176148	Ardina	Cargo Vessel	19th century	1856	Wreck of Dutch cargo vessel which foundered off the Owers, following a collision en route from Lisbon for Rotterdam with fruit. Constructed of wood, she was a cargo vessel.
HBO_UID 1177912	Elizabeth Jenkins	Braque	19th century	1866	Wreck of a Canadian wooden braque which was sunk by a collision in the English Channel.
HBO_UID 1153193	Sarah	Craft	19th century	1866	Wreck of an English craft which foundered off Langstone Harbour, Portsmouth.
HBO_UID 895966	Esmeralda	Schooner	19th century	1867	Wreck of English schooner which wrecked near the Owers Lightship, West Sussex.
HER_27677	Florence	Schooner	19th century	1868	Wreck of Florence, an English schooner, foundered near Dean Shoal, Solent, 1868.
HBO_UID 903077	Dragon	Craft	19th century	1880	Wreck of an English craft that sank following a collision with the SS Sumatra of London, approximately 6 to 8 miles south of Owers Light Vessel.
HBO_UID 1175213	Campeador	Cargo Vessel	19th century	1882	Wreck of a Spanish cargo vessel which sank following a collision with the Liverpool registered sailing ship Knight of the Thistle, in south winds Force 5, 1.5 miles south east of Owers Light Vessel.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 898954	Elizabeth	Ketch	19th century	1883	Wreck of an English ketch that stranded whilst at moorings in Langstone Harbour.
HBO_UID 903099	Pilot Boat No. 3	Schooner	19th century	1883	Wreck of a Dutch schooner that sank following a collision with the Dutch SS Hollandia, in wind conditions of Force 7 from the west north-west, approximately 4 miles south south-east of Owers Light Vessel.
HBO_UID 1165531	Rose Mysterieuse	Ketch	19th century	1890	Wreck of a French ketch which sank following a collision with the SS Larpool of Whitby, during a west wind Force 3.
HBO_UID 903406	Scotia	Yawl	19th century	1895	Wreck of an English yawl-rigged yatch, which sank following a collision with SS Penzance off Cardiff, in south south-west winds of Force 2.
HBO_UID 903433	Frances	Schooner	19th century	1898	Wreck of English schooner that sank following a collision with SS *Haytor* of London, 8 miles south south-east of Owers Lightships.
HBO_UID 903449	Ann Humphreys	Schooner	Modern	1900	Wreck of an English schooner which sank following a collision with SS Hispania of South Shields, in south west winds Force 5, 6 miles south east of Owers Light Vessel.
HBO_UID 1165885	Grimaldi	Schooner	Modern	1901	Wreck of an English schooner, which sank following a collision with SS Torrington of Liverpool, 3 miles east of Owers Light Vessel.
HBO_UID 1155191; MPM1155	Mary Farleigh	Schooner	Modern	1902	Wreck of an English schooner that was reported stranded near Fort Cumberland.
HBO_UID 1165917	Rose	Ketch	Modern	1907	Wreck of an English ketch which sank following a collsion with SS Waterloo of Norway, 7 miles south east of Owers Light Vessel.
HBO_UID 1165995	Sileverlands	Schooner	Modern	1908	Wreck of an English schooner which sank following a collision with SS William Bailey of Hull, 5 miles south west of Owers Light Vessel.
HBO_UID 1155756	Leonie	Dandy	Modern	1911	Wreck of a French dandy which stranded at Southsea Breakwater, Portsmouth.
HBO_UID 1166000	Venture	Cutter	Modern	1911	Wreck of an English cutter which foundered 5 miles east of Owers Light Vessel.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 903565	Envoy	Barge	Modern	1912	Wreck of an English barge near Owers Light Vessel.
HBO_UID 1614394	HMS Klondyke	Trawler	Modern	1916	Wreck of a British Admiralty trawler which foundered following a collision near the Owers Light Vessel.
HBO_UID 1450539	Alert	Cargo Vessel	Modern (WWI)	1916	Wreck of an English cargo vessel which foundered 6 miles east south-east of the Owers light vessel after being fired on, then scuttled, by a German submarine. She was lost on the same day as the ALISON and the RAMSGARTH, while on a voyage from Le Havre to Littlehampton in ballast. Constructed of steel, she was a steam-driven vessel.
HBO_UID 1171571	Alert	Cargo Vessel	Modern (WWI)	1916	Possible remains of 1916 wreck of English cargo vessel which foundered 6 to 8 miles south east of the Owers light vessel after being fired on by a German submarine, then scuttled by bombs when boarded by a party from the submarine. If the ALERT, she was a steel-built, steam-powered vessel, en route from Le Havre to Littlehampton in ballast, but the identity of this wreck site does not appear to have been confirmed.
HBO_UID 911749; HBO_UID 1390471	Huntsholm	Cargo Vessel	Modern (WWI)	1917	Possible remains of a Scottish cargo vessel, which foundered 4 miles south east of the Owers Lightship after being torpedoed, en route from Dieppe to Southampton in ballast. This steam vessel was built in 1914 and is located approximately 8.6 nautical miles south-east of Selsey Bill.
HBO_UID 903608	Advance	Smack	Modern (WWI)	1917	Wreck of a British fishing smack which was stopped by a German submarine and her crew forced to abandon ship, after which she was sunk by gunfire.
HBO_UID 1440061	Donegal	Steam Ship	Modern (WWI)	1917	Wreck of British hospital ship, properly a casualty clearing ship, which foundered 19 miles south east of the Dean Light Vessel after being torpedoed while en route from Le Havre to Southampton, repatriating wounded British soldiers.
HBO_UID 1444173	Algiers	Cargo Vessel	Modern (WWI)	1917	Wreck of English cargo vessel which foundered 3 miles south of the Owers Light Vessel after being torpedoed by a U-boat en route from Calais to Barry Roads in ballast. Constructed of iron, she was a steam-driven vessel.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1166431	HMS Evadne	Trawler	Modern (WWI)	1917	Wreck of British trawler which foundered off the Owers Light Vessel after being mined while on minesweeping duties. Constructed of steel in 1907, she was powered by steam and was originally a civilian fishing vessel.
HBO_UID 1468286	Atlas	Cargo Vessel	Modern (WWI)	1917	Wreck of Norwegian cargo vessel, operating under the British flag, which foundered 5 miles south east of the Owers Light Vessel after being torpedoed en route from Warkworth or Amble to Rouen with coal. Constructed of steel in 1904, she was a steam-driven vessel.
HBO_UID 1459890	Thelma	Cargo Vessel	Modern (WWI)	1917	Wreck of a Norwegian cargo vessel which foundered 4 miles south of the Owers Light Vessel after striking a mine, en route from the River Tyne for Rouen with coal. Constructed of iron in 1884, she was a steam-driven vessel.
HBO_UID 911743	Gartland/Lightfoot	Cargo Vessel	Modern (WWI)	1918	Remains of the 1918 wreck of a Scottish cargo vessel recorded as *Gartland*, torpedoed by the German submarine UB 30 approximately 1 mile south-east of Owers. She was a steel-hulled steamer, en route from Newcastle upon Tyne to Gibraltar with a cargo of coal.
HBO_UID 1612496	Lightfoot	Cargo Vessel	Modern (WWI)	1918	Wreck of a British collier, torpedoed by the German submarine UB 30, approximately 1 miles south east of the Owers Light Vessel. She was a steel-hulled steamer on Admiralty Service as a collier, and was en route from London to Barry in ballast. See 911169 for the site of her possible remains, and see 911743 for a site formerly thought to be her remains, now positively identified as the remains of the GARTLAND.
HBO_UID 911746	Gartland	Cargo Vessel	Modern (WWI)	1918	Site formerly believed to be the remains of the 1918 wreck of the Scottish cargo vessel GARTLAND. No physical remains were detected in this location during surveys in 1977 and 2002. See 911743 for the wreck now positively identified as the remains of the GARTLAND.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 805579; HER_55549	Unknown	Submarine	Modern	1920	Wreck of German Submarine UB21, which foundered 3 nautical miles south of Eastney Point, while under tow to be broken up for scrap.
HBO_UID 895523	Unknown	Craft	Modern	1921	Craft, 1921
HBO_UID 899033; HER_27678	Excel	Ketch	Modern	1925	Wreck of a converted steel trawler that foundered off Horse Sand Fort Light.
HBO_UID 805709; HBO_UID 1398110; HER_27975; MPM1167	Whitern	Dredger	Modern	1926	Remains of bucket dredger lying on its side, least depth 3ft, marked on the south side by a conical buoy, buoy replaced by spherical green buoy. Dived on in 1970, called WITHERN, lies on an even keel, lying north to south (bows), intact superstructure collapsed, propeller still attached, hold open but three-quarters full of sand, general depth 8.6m, height 2.1m, least depth 6.5m.(Diver J Bevan)
HBO_UID 767384; HER_28235	HMS Undine	Destroyer	Modern	1928	Wreck of a British destroyer which sunk at Horse Fort Sand and was extensively salvaged.
HBO_UID 895829	Rasholm	Vessel	Modern	1934	Wreck of a Norwegian vessel that collided with *Stancor* 10 miles south east of Owers Lightship.
HBO_UID 903639	Bantry	Cargo Vessel	Modern	1934	Wreck of an Irish cargo vessel, carrying cement, which sunk following a collision with the steamship Cardita.
HBO_UID 805401	Edenwood (Possible)	Cargo Vessel	Modern	1939	Possible remains of the English cargo vessel *Edenwood*, which foundered following a collision with the armed merchant cruiser HMS *Derbyshire*. The *Edenwood* was a steel-hulled steamer, en route from Seaham to Portsmouth with a cargo of coal.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 895519; HER_27976	Percy	Dredger	Modern	1941	Wreck of an English grab dredger which was sunk by mines with Irishman. This crane-barge grab dredger was under tow of the paddle tug IRISHMAN when the tug detonated a German laid magnetic mine, causing her to sink. In foundering she dragged down the PERCY with her, drowning three crew members.
HER_27974	Irishman	Tug	Modern	1941	Wreck of Irishman, a British tug, mined and sank in Langstone Harbour, 1941. Remains of the wreck dry out at low water springs.
HER_28188	VB 21	Submarine	Modern	1945	Wreck of VB 21, German submarine, foundered while being towed to the breakers yard, three miles south of Eastney Point. Later salvaged, wreckage strewn over a wide area.
HBO_UID 1397608	Unknown	Recorded Wreck	Modern	1957	Wreck of a German tug which was lost off Bembridge. This vessel was found in 1957. Local diver Maurice Harknett studied her remains and called her a German tug. The wreck is mainly broken though the bows are complete. The boilers and propellers remain intact. The anchors are still in their hawses. Coal, a rope roller, bronze dolphins, and bottles have been found. One bottle had the date February 1922 moulded into it.
HBO_UID 911186	Unknown	Steamer	19th century	Unknown	Remains of craft located approximately 5 miles south of Selsey Bill. Originally identified as a capsized barge or landing craft, she is now recognised as the largely-collapsed remains of a steamer. Her two-cylinder engine and steel construction indicate the date of construction as being approximately 1875 to 1890; the vessel is likely to have been lost any time between then and the mid 20th century. The vessel concerned would have foundered in this offshore position.
HBO_UID 767339	Unknown	Trawler	Modern	Unknown	Possible remains of a trawler, mined during the Second World War. Chichester (District), West Sussex.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1397584	Unknown	E-boat	Modern	Unknown	Wreck of a German E boat which foundered off Bembridge, Isle of Wight, after she grounded. She was later dispersed.
HBO_UID 911175	Unknown	Recorded Wreck	Modern	Unknown	Wreck remains believed to comprise British Mulberry Harbour bridge sections, together with the dumb barges without propulsion on which they were towed, located approximately 11.5 miles south east of Selsey Bill or 11.7 miles south south-east of Bognor Regis. If these remains represent sections of the Mulberry Harbour, they are therefore likely to have been lost between 06-JUN-1944, D-Day, beginning the invasion of Normandy, and 18-JUN-1944, when the temporary Mulberry Harbour structures on the Normandy invasion beaches were completed. Their position on the south coast suggests that they were lost en route from a south coast port to Normandy. In this offshore position the vessels would have foundered, but the cause of loss, as at 2012, is not known.
HBO_UID 911191	Unknown	Recorded Wreck	Modern	Unknown	Wreck site of two tanks, two bulldozers and a gun, lying in shallow scour at a depth of 20 metres, 8 miles south of Bracklesham, West Sussex. It was originally thought that the war machinery had been lost after slipping from a Mulberry Harbour 'Whale' bridge, which lie some 1.07 km distant to the south west. However, following survey work undertaken by the Southsea Sub-Aqua Club (SSAC) in July 2008 evidence now points to the fact that they were lost from a Landing Craft Tank, lost from LCT(A)2428. Status: adopted wreck.
HBO_UID 911180	Unknown	Recorded Wreck	Unknown	Unknown	Possible remains of a vessel which wrecked in the district of Arun, West Sussex.
HBO_UID 766472; HER_27654	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 1526715	Unknown	Recorded Wrecks	Unknown	Unknown	Assemblage of two hulked vessels in the inter-tidal zone in Langstone Harbour. Recorded in a survey of 2000.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1027892	Unknown	Recoded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 767446	Unknown	Recorded Obstruction	Unknown	Unknown	Mooring Buoy located off the north east coast of the Isle of Wight.
HBO_UID 766499; HER_27657	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 1027926	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Arun (District), West Sussex.
HBO_UID 1027950	Candia (Possible)	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen approximately 12 miles south of Littlehampton; possibly indicative either of wreckage of uncertain date, which foundered in this position, or of a submerged natural feature. This obstruction lies close to, and may be an alternative account of, the wreck site now known as the CANDIA
HBO_UID 1397671	Mask (Possibly)	Cargo Vessel	Unknown	Unknown	Wreck of cargo vessel *Mask (Possibly)*, formerly a dredger, which was lost in Langstone Harbour.
HBO_UID 911218	Unknown	Recorded Wreck	Unknown	Unknown	Remains of a vessel which wrecked in the district of Chichester, West Sussex.
HBO_UID 766473; HER_27655	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 766491; HER_27656	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 1027898	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Chichester (District), West Sussex.
HBO_UID 1027925	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Arun (District), West Sussex.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 1397619	Fravis	Dredger	Unknown	Unknown	Wreck of dredger *Fravis*, which was lost near Portsmouth.
HBO_UID 766445; HER_28097	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 1027923	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Chichester (District), West Sussex.
HBO_UID 1027937	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Arun (District), West Sussex.
HBO_UID 767341	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified feature. Chichester (District), West Sussex.
HBO_UID 1397600; HER_56162; MPM1168	Excelsior	Dredger	Unknown	Unknown	Wreck of dredger *Excelsior*, which foundered at her moorings. She is upright and intact on the seabed, though her remains are fragile. Her bow points north and her bell was recovered in 1970.
HBO_UID 766431; HER_28096	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 766449; HER_28098	Unknown	Recorded Obstruction	Unknown	Unknown	Seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Havant (District), Hampshire.
HBO_UID 1027897	Unknown	Recorded Obstruction	Unknown	Unknown	Unidentified seabed obstruction reported by fishermen. Possibly indicative of wreckage or a submerged feature. Chichester (District), West Sussex.
HBO_UID 1398124	Unknown	Recorded Wreck	Unknown	Unknown	An assemblage of an unspecified number of partial remains, said to be of prison hulks dating from the Napoleonic era, has been reported in Langstone Harbour, within the Langstone Channel approximately 475 metres south of Sword Point in the inter-tidal zone. It is thought that, after hulking, the vessels may have been abandoned; some jars were recovered from the site in the 1990s.

Source	Name	Type	Period	Year Lost	Description
HBO_UID 767442	Unknown	Recorded Wreck	Unknown	Unknown	Wreck of a vessel off north east coast of the Isle of Wight.
HER_64839	Mast	Vessel	Unknown	Unknown	Wreck of Mast, which is visible on aerial photographs.
HER_27661	Unknown	Recorded Wreck	Unknown	Unknown	Unknown vessel.
HER_27666	Unknown	Recorded Wreck	Unknown	Unknown	An unknown vessel, lost at the Isle Of Wight, date unknown.
HER_65034	Unknown	Recorded Wreck	Unknown	Unknown	Site of Wreck
HER_66521	Unknown	Recorded Wreck	Unknown	Unknown	Remains of a wreck exposed during heavy storms January 2014, East Winner Shipwreck

Appendix VII: Aviation Recorded Losses

Source	Name	Type	Period	Year_Lost	Description
HBO_UID 1352820	BLENHEIM MK IV V6691	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down by BF 109 in the sea off Bognor, Chichester, West Sussex.
HBO_UID 1355169	HALIFAX MK II HR721	Bomber	Modern (WWII)	1943	Aircraft crash site of a British heavy bomber which was abandoned off Selsey Bill, Sussex, returning from Nurnberg.
HBO_UID 1318536	HAMPDEN MK I P1219	Bomber	Modern (WWII)	1942	Aircraft crash site of a British fighter which crashed into the sea 2 miles south of Selsey Bill, Sussex, on training flight.
HBO_UID 1319143	HURRICANE MK I P3108	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down by Bf 109s off Selsey Bill, Sussex.
HBO_UID 1319635	HURRICANE MK I P3387	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was hit by return fire from Ju 88 and crashed in the sea off Selsey Bill.
HBO_UID 1319679	HURRICANE MK I P3400	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was damaged by Bf 109 and ditched off Selsey Bill, Sussex.
HBO_UID 1320048	HURRICANE MK I P3531	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down by Bf 109s and abandoned off Selsey Bill.
HBO_UID 1320644	HURRICANE MK I P3780	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was damaged by Bf 110 and abandoned off Selsey Bill, Sussex.
HBO_UID 1320920	HURRICANE MK I P3964	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was abandoned and crashed in sea off Selsey Bill, Sussex.
HBO_UID 1323425	HURRICANE MK I R4189	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down by Bf 109 off Selsey, Sussex.
HBO_UID 1327393	ROC MK I L3126	Fighter	Modern (WWII)	1941	Aircraft crash site of a British fighter which sideslipped off turn and hit sea off Eastney, Portsmouth.
HBO_UID 1327295	SHARK MK II L2384	Seaplane	Modern (WWII)	1939	Aircraft crash site of a British torpedo-bomber which was ditched off Eastney, Portsmouth due to engine cut, and sank under tow.
HBO_UID 1329312	SPITFIRE MK I N3282	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down by Bf 110 off Selsey Bill, Sussex.
HBO_UID 1322656; HER_55441	SPITFIRE MK I P9333	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was shot down in sea off Portsmouth.
HBO_UID 1323944	SPITFIRE MK I R6978	Fighter	Modern (WWII)	1940	Aircraft crash site of a British fighter which was missing from interception of Ju 88 off Selsey Bill and possibly collided with R6982.

Source	Name	Type	Period	Year_Lost	Description
HBO_UID 1323953	SPITFIRE MK I R6982	Spitfire	Modern (WWII)	1940	Aircraft crash site of a British fighter which went missing from interception off Selsey Bill, possibly collided with R6978.
HBO_UID 1340883	SPITFIRE MK IX MJ979	Spitfire	Modern (WWII)	1944	Aircraft crash site of a British figher which collided with MK344 off Selsey Bill, Sussex.
HBO_UID 1340910	SPITFIRE MK IX MK344	Fighter	Modern (WWII)	1944	Aircraft crash site of a British fighter which collided with MJ979 off Selsey Bill and crashed in the sea.
HBO_UID 1343054	SPITFIRE MK VB BM472	Spitfire	Modern (WWII)	1942	Aircraft crash site of a British fighter which was shot down by Fw 190s south of Selsey Bill, Sussex.
HBO_UID 1318324	TYPHOON IB DN473	Bomber	Modern (WWII)	1943	Aircraft crash site of a British fighter bomber, which was abandoned after engine cut 3 miles off Selsey, Sussex.
HBO_UID 1341034	TYPHOON MK IB MN465	Bomber	Modern (WWII)	1944	Aircraft crash site of a British fighter bomber which was ditched due to engine failure 11 miles south of Selsey Bill, Sussex.

Appendix VIII: Geoarchaeological recording

Vibrocore	Depth (m below seabed)	Description	Depositional environment	Unit
735-VC-B02-046	0.00-0.20	10YR 4/3 brown coarse silty sandy gravel. Gravel is sub-angular to sub-rounded <0.10m. Sharp lower boundary.	Marine seabed sediments	3
	0.20-0.40	10YR 2/2 v. dark brown stiff, compact woody peat. Some horizontal bedding. Sharp lower boundary. Sub samples taken @0.22-0.23m, 0.27-0.28m, 0.32-0.33m and 0.37-0.38m	Coastal marsh	2
	0.40-2.64	Gley 1 dark grey soft “buttery” silty clay w/ occasional waterlogged organic inclusions <0.01m throughout. Clear lower boundary.	Estuarine	2
	2.64-2.90	10YR 3/1 v. dark grey firm organic silty clay w/ frequent shell inclusions <0.01m throughout. Clear lower boundary.	Estuarine	2
	2.90-3.20	10YR 2/1 black firm organic silty clay. Clear lower boundary.	Tidal flat/floodplain	2
	3.20-4.70	10YR 3/2 v. dark greyish brown silty v. fine sand w/ rare sub-rounded stone inclusion <0.03m @ 3.64m. Gradually becoming Gley 1 6/1 greenish grey from 3.50m.	Bedrock	1

Appendix IX: Intertidal Heritage Assets

WA ID	Site Type	Description	Period	NRHE_HER
1000	Find Spot	Handaxe Eastney Beach	Prehistoric	MPM1022
1001	Find Spot	Roman coin of Victorinus	Roman	HBO_UID 893382; MPM46

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