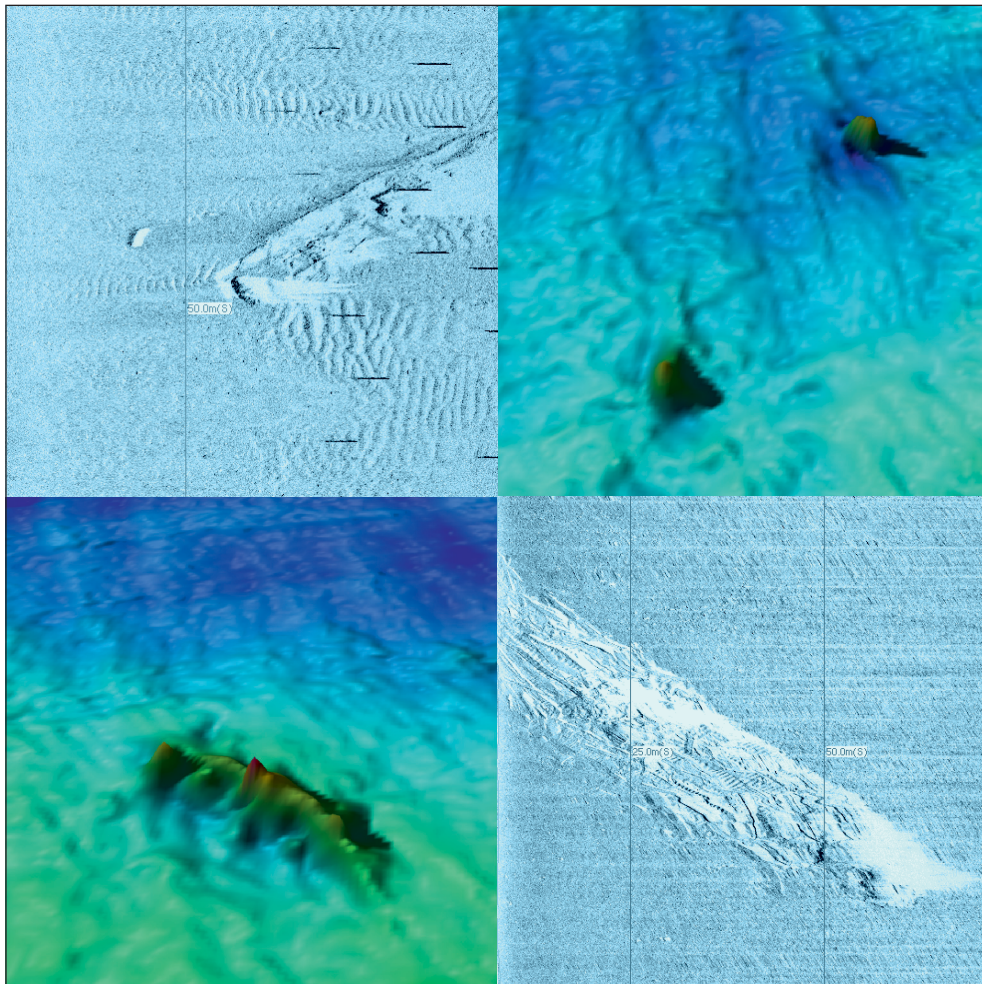




making sense of heritage

# Round 3 Hornsea Zone, Subzone 1 and Offshore Cable Route

Archaeological Assessment of Geophysical Data



Ref: 87152.01  
April 2013



# **ROUND 3 HORNSEA ZONE SUBZONE 1 AND OFFSHORE CABLE ROUTE**

## **Archaeological Assessment of Geophysical Data**

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# ROUND 3 HORNSEA ZONE SUBZONE 1 AND OFFSHORE CABLE ROUTE

## Archaeological Assessment of Geophysical Data

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# ROUND 3 HORNSEA ZONE SUBZONE 1 AND OFFSHORE CABLE ROUTE

## Archaeological Assessment of Geophysical Data

### Summary

Wessex Archaeology was commissioned by RPS Energy on behalf of SMart Wind Limited to undertake an archaeological assessment of geophysical data obtained from the proposed Subzone 1 and Offshore Cable Route of the Round 3 Hornsea Zone. This was undertaken as part of ongoing assessments of the Zone ahead of the development of the proposed wind farm and associated infrastructure. As part of this, Wessex Archaeology was asked to undertake two separate assessments: an archaeological review of geophysical data covering the Offshore Cable Route, acquired by both Fugro OSAE GmbH and EGS Limited during surveys in 2011 and 2012, and an archaeological assessment of the results of an interpretation undertaken by EMU Limited covering the Subzone 1 area.

The review was to include an assessment of these results in conjunction with both historical data and previously acquired geotechnical and geoarchaeological data, and focussed on the potential for remnant land surfaces that may contain archaeological material relating to times of lower sea level, and the potential for the remains of maritime craft or aircraft of cultural heritage importance within the area that may be impacted upon by the proposed scheme.

A total of 494 geophysical anomalies of possible archaeological potential were identified by Wessex Archaeology along the Offshore Cable Route. Of these, 10 have been identified as wreck sites with a further 11 considered of high archaeological potential, and 13 are recorded wrecks or obstructions within the database provided by Seazone that have not been definitively identified within the geophysical data.

Similarly, 571 of the anomalies previously interpreted by EMU Limited from Subzone 1 were deemed to be of archaeological potential. Of these, six are recorded as wreck sites and a further seven are recorded wrecks or obstructions within the Seazone database that have not been definitively identified within the geophysical data. Two are identified wrecks located outside of the Subzone 1 boundary, but deemed close enough to warrant inclusion in the gazetteer. The archaeological potential of these anomalies were determined purely from the information provided by EMU, and no geophysical data was assessed by Wessex Archaeology from Subzone 1.

A number of palaeogeographic features were identified along the Offshore Cable Route, of which a number were considered to be of possible archaeological potential. These are all interpreted as Holocene features, but can be divided into two phases. The first phase comprises the Upper Botney Cut Formation: Late Devensian glacial features with a later fill of possible Early Holocene fluvial or estuarine deposits. The second phase comprises a series of dendritic fluvial channels dating to the Early Holocene, the largest of which is the buried offshore course of the River Humber. These fluvial features are considered of high archaeological potential as they record a period of time when the Offshore Cable Route was exposed as a terrestrial environment and is likely to have been inhabited by Human communities.



# ROUND 3 HORNSEA ZONE SUBZONE 1 AND OFFSHORE CABLE ROUTE

## Archaeological Assessment of Geophysical Data

### Acknowledgements

This investigation was commissioned by RPS Energy on behalf of SMart Wind Ltd. The data were supplied by Fugro OSAE GmbH, EGS Ltd. and EMU Ltd. and their assistance is acknowledged in this respect. Further information was also provided by Charles Le Quesne of RPS Energy and Liam Leahy of SMart Wind, and their assistance is also acknowledged.

The assessment was carried out by David Howell and Rachel Chester, and the report was compiled by David Howell. Figures were created by Karen Nichols and Kitty Foster, and geophysical quality control was carried out by Dr Paul Baggaley and Dr Louise Tizzard. The project was managed for Wessex Archaeology by Dr Paul Baggaley.



# ROUND 3 HORNSEA ZONE SUBZONE 1 AND OFFSHORE CABLE ROUTE

## Archaeological Assessment of Geophysical Data

### 1 INTRODUCTION

#### 1.1 Background

1.1.1 Wessex Archaeology (WA) was commissioned by RPS Energy (RPS) on behalf of SMart Wind Limited (SW) to undertake an archaeological assessment of geophysical data obtained from the proposed Subzone 1 (SZ1) and Offshore Cable Route of the Round 3 Hornsea Zone. This was undertaken as part of ongoing assessments of the Zone ahead of the development of the proposed wind farm and associated infrastructure.

1.1.2 As part of this, WA was asked to undertake an archaeological review of geophysical data, acquired by both Fugro OSAE GmbH (Fugro OSAE) and EGS Limited (EGS) during surveys in 2011 and 2012. The assessment was to be undertaken in two parts: A full interpretation of geophysical data acquired along the proposed Offshore Cable Route, and an archaeological assessment of the results of the interpretation undertaken by EMU Limited (EMU) of the SZ1 area.

1.1.3 The review was to include an assessment of these results in conjunction with both the historical data and geotechnical and geoarchaeological data resulting from the vibrocoring and boreholing campaigns undertaken along the proposed Offshore Cable Route and within SZ1.

1.1.4 SZ1 is the first development zone within the Round 3 Hornsea Zone to be assessed in detail and is an irregular area approximately 407km<sup>2</sup> in size located approximately 120km East of Hornsea in East Yorkshire. The proposed Offshore Cable Route extends approximately 140km from the southern edge of SZ1 to landfall at Horseshoe Point on the North Lincolnshire Coast, with a number of route options being surveyed (**Figure 1**).

#### 1.2 Aims and objectives

1.2.1 The aim of this review was to undertake an archaeological interpretation of geophysical data acquired from the proposed Offshore Cable Route, alongside an archaeological review of the previous interpretation of SZ1 undertaken by EMU. The objectives were as follows:

- *To assess the geophysical data acquired along the Offshore Cable Route by Fugro OSAE and EGS in order to identify whether any material of archaeological potential is located on the seabed along the proposed cable route.*
- *To identify any evidence for palaeolandscapes along the Cable Route.*
- *To review the geophysical interpretation of SZ1 undertaken by EMU and identify any anomalies which could indicate material of archaeological potential on the seabed.*



- *To compare both the Cable Route and SZ1 results with any desk-based assessment, known archaeological sites and previous work undertaken in the region.*
- *To propose future mitigation for any material of archaeological interest identified.*

## 2 METHODOLOGY

### 2.1 Data Sources

- 2.1.1 A number of data sources were consulted during the archaeological assessment of SZ1 and the proposed Offshore Cable Route (see **Section 6**), including:
- *Geophysical survey datasets from the Cable Route and their associated reports (e.g. PMSS 2011, Fugro OSAE 2011);*
  - *Gazetteer of geophysical anomalies from SZ1 as interpreted by EMU;*
  - *Geotechnical data from boreholes and vibrocores acquired from SZ1 and the Cable Route, collected by Fugro in 2012;*
  - *Seazone records of shipwrecks and navigational hazards, based on the United Kingdom Hydrographic Office (UKHO) Wreck Database taken from historic and modern charts;*
  - *Written sources, including academic papers, previous WA reports and other offshore wind farm environmental statements that are in the public domain (e.g. Cameron et al. 1992, Tappin et al. 2011, WA 2011);*
  - *Modern Admiralty and geological charts relevant to the Cable Route and SZ1*
- 2.1.2 Any sites, either previously recorded in these databases or identified during this geophysical assessment, which are located outside of the Study Areas are deemed beyond the scope of the current project and are subsequently not included in this report.
- 2.1.3 For the purposes of this report, the Study Areas were defined in two different ways. The Study Area for SZ1 was delineated by the SZ1 shapefile provided to WA by RPS. The Study Area for the Cable Route was defined by the extents of the multibeam bathymetry data coverage, as this would mark the maximum extents of the coverage of all geophysical systems. The SZ1 Study Area also includes the area between the southern boundary of SZ1 and the Cable Route (**Figure 1**).
- 2.1.4 The geophysical data used for this report comprised sidescan sonar, multibeam bathymetry, marine magnetometer and sub-bottom profiler datasets.
- 2.1.5 These were acquired during three separate surveys: A full cable route survey in 2011 (Fugro OSAE), a nearshore cable route survey in 2012 (EGS) and an offshore cable route survey in 2012 (EGS). Each data set was assessed for quality, and each system rated using the following criteria:





Data Quality	Description
Good	Data which are clear and unaffected by weather conditions or sea state. The dataset is suitable for the interpretation of standing and partially buried metal wrecks and their character and associated debris field. These data also provide the highest chance of identifying wooden wrecks and debris.
Average	Data which are affected by weather conditions and sea state to a slight or moderate degree. The dataset is suitable for the identification and partial interpretation of standing and partially buried metal wrecks, and the larger elements of their debris fields. Wooden wrecks may be visible in the data, but their identification as such is likely to be difficult.
Variable	This category contains datasets with the quality of individual lines ranging from good to average to below average. The dataset is suitable for the identification of standing and some partially buried metal wrecks. Detailed interpretation of the wrecks and debris field is likely to be problematic. Wooden wrecks are unlikely to be identified.

**Table 1: Criteria for Assigning Data Quality Rating**

- 2.1.6 The sidescan sonar data collected during 2011 survey and the 2012 offshore survey have been rated as 'Average' using the above criteria. Large scale seabed features and seabed anomalies were generally easily visible, though a degree of 'snatching' due to adverse weather conditions was observed on a number of survey lines. This increases the difficulty in the identification of smaller seabed anomalies, and can reduce the measurement accuracy of the dimensions of any identified features.
- 2.1.7 The sidescan sonar data acquired during the 2012 nearshore survey have been rated as 'Variable' using the above criteria. This is due to a significant degree of sea surface noise being observed on the records due to the shallow water depths encountered along this section of the Cable Route.
- 2.1.8 A more significant issue encountered with the sidescan sonar data from both of the 2012 surveys was that it was problematic to apply corrected navigation to the data, though this was corrected to a satisfactory level by the processing outlined in **Section 2.3**.
- 2.1.9 The multibeam bathymetry data collected along the Cable Route during all three surveys has been rated as 'Good' using the above criteria, with seabed features clearly visible. The data from both of the 2012 surveys is generally of lower resolution with tides less accurately applied, though this does not detrimentally affect the data to a significant degree.
- 2.1.10 The marine magnetometer data collected during the 2011 survey have been rated as 'Good' using the above criteria, and is a clean dataset with low background noise within which small anomalies can be identified. The marine magnetometer data collected during both of the 2012 surveys have been rated as 'Variable' using the above criteria, as a relatively large amount of background noise, possibly due to the magnetometer being towed very close to the seabed, makes identification of smaller anomalies difficult.
- 2.1.11 The sub-bottom profiler data collected during the 2012 offshore survey has been rated as 'Good' using the above criteria, with shallow reflectors clearly visible. By contrast, the data collected during the 2012 nearshore survey have been rated as 'Variable', as shallow



water depths along this section of the Cable Route has created numerous multiples which obscure the data. The data acquired during the 2011 survey has been rated as 'Average', as less detail is visible in this data set as a whole, though the nearshore section seems better quality and less affected by shallow water depths relative to the 2012 data.

## 2.2 Geophysical Data – Technical Specifications

- 2.2.1 The geophysical data for the Cable Route were collected by Fugro OSAE and EGS over the course of three separate surveys. The initial survey was undertaken by Fugro OSAE during April 2011 on board the MV *Meridian*.
- 2.2.2 Fugro OSAE used a Klein 3000 dual frequency sidescan sonar operated at both 130kHz and 445kHz and recorded with a range of 50m per channel in the nearshore area and 100m per channel further offshore. Towfish positioning was provided by a Nautronics ATS II USBL system, with the towfish position recorded along with the data. The sidescan sonar data were recorded digitally using Klein's SonarPro software and provided to WA as *.xtf* files.
- 2.2.3 The magnetometer data were acquired by Fugro OSAE using a Marine Magnetics SeaSpy Overhauser Effect Magnetometer, piggy-backed on the sidescan sonar. The data were digitally recorded in QINSy and provided to WA as *.leo* files.
- 2.2.4 Fugro OSAE used a hull-mounted GeoAcoustics Pipeliner system to acquire the shallow seismic data, operated at either 3.5kHz or 5kHz. The data were digitally recorded using an Octopus 760 system and provided to WA as both raw *.seg* files and processed *.sgy* files.
- 2.2.5 The multibeam bathymetry data were acquired by Fugro OSAE using a Reson Seabat 7125 dual head system operated at 200kHz and 400kHz. The data were digitally recorded in QINSy and provided to WA as both raw and processed *.txt* files.
- 2.2.6 Primary positioning for the survey was provided by the Fugro Starfix DGPS network, with secondary positioning provided by a Novatel OEMV 3 receiver with DGPS corrections. Primary motion and heading corrections were provided by a Coda Octopus F180 system, with secondary motion and heading corrections provided by an iXSEA Octans-III Motion Reference Unit.
- 2.2.7 The second offshore survey was undertaken by EGS during August – September 2012 on board the RV *Ridley Thomas*.
- 2.2.8 EGS used a Benthos 1625 Chirp/SSS combined system to acquire the sidescan sonar data. Both 100kHz and 400kHz frequency data were acquired simultaneously at ranges of 75m or 100m per channel depending on water depth. Towfish positioning was provided by a Sonardyne 8142 USBL system. The sidescan sonar data were recorded digitally using the Triton Elics Isis system and provided to WA as *.xtf* files.
- 2.2.9 The marine magnetometer data were acquired by EGS using a Geometrics G-882 Caesium Vapour magnetometer, piggy backed 5m behind the sidescan sonar. The data were recorded digitally and provided to WA as *.raw* files.
- 2.2.10 The sub-bottom profiler data were acquired by EGS using a hull-mounted GeoPulse 4x4 pinger array, operated at 3.5kHz. The data were digitally recorded using the C-View Seabed Data Management Package, and provided to WA as raw and processed *.seg* files.



- 2.2.11 EGS used a Reson SeaBat 7101 system operated at 240kHz to acquire the multibeam bathymetry data. The data were digitally recorded and provided to WA as .s7k files.
- 2.2.12 Primary and secondary positioning for the survey were provided by two separate Veripos LD2 navigation systems, with a Ratheon Standard 22 Gyro Compass, Seapath 320+ attitude sensor and Seatex MRU5 providing heading and motion corrections.
- 2.2.13 EGS used a Klein 3000 dual frequency system to acquire the sidescan sonar data. Both 100kHz and 445kHz frequency data were acquired simultaneously at a range of 75m pre channel. Towfish positioning was provided by manual layback, ranging from 4m – 10m depending on the water depth. The sidescan sonar data were recorded and provided to WA as .xtf files.
- 2.2.14 The marine magnetometer data were acquired by EGS using a Geometrics G-882 Caesium Vapour magnetometer. Towfish positioning was provided by manual layback, ranging from 20m – 40m depending on water depth. The data were recorded digitally using Geometrics MagLog Lite software and provided to WA as separate .MAGNETOMETER and .GPS files.
- 2.2.15 The sub-bottom profiler data were acquired by EGS using a pole-mounted Neptune T335 2x2 pinger system, operated at 3.5kHz. The data were digitally recorded and provided to WA as .seg files.
- 2.2.16 EGS used a pole-mounted Kongsberg EM3002D Dual Head system operated at 200kHz to acquire the multibeam bathymetry data. The data were digitally recorded using Kongsberg SIS 3.8.5 acquisition software and provided to WA as a single .xyz file.
- 2.2.17 Primary positioning for the survey was provided by a C&C Technologies C-Nav 3050 GPS system, with secondary positioning provided by a Leica 1200 GPS. Motion corrections were applied using a Kongsberg Seatex MRU-5 motion reference unit.
- 2.2.18 For all three surveys, all positions were recorded and expressed as WGS 84, UTM Zone 31N.
- 2.2.19 The above datasets were collected along the Cable Route only, and only this data was fully assessed by WA. The data source for the assessment of SZ1 was provided in the form of a gazetteer of anomalies interpreted by EMU, including classification, position, dimensions and short descriptions.

### **2.3 Geophysical Data – Processing**

- 2.3.1 The sidescan sonar data were processed by WA using Coda Geosurvey software. This allowed the data to be replayed with various gain settings in order to optimise the quality of the images. The data were initially scanned to give an understanding of the geological nature of the area and were then 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.
- 2.3.2 A mosaic of the sidescan sonar data is produced during this process to assess the quality of the sonar towfish positioning. The survey lines are smoothed, and the navigation corrected either with .cnv files provided by the survey company who acquired the data or individual fixed laybacks as recorded in the survey logs. This allows the position of anomalies to be checked between different survey lines and for the layback values to be



further refined if necessary. In this case, .cnv files were used during processing of the 2011 data and the 2012 offshore data, and manual layback was used for the 2012 nearshore data.

- 2.3.3 Problems occurred with the mosaicing and navigation correction phase of the 2012 survey data. The 2012 nearshore data were recorded without heading values, though this was corrected by averaging the heading values in Coda based on the position data. The 2012 offshore survey data were more problematic, and involved heading and time stamping errors. This was finally overcome by editing the data within the Coda mosaic, applying the created corrected navigation files to the waterfall data display window, and exporting the interpretation from here rather than from within the mosaic. The disadvantage of both these approaches is that the resulting anomaly positioning is less accurate. During processing the positioning accuracy of individual anomalies was estimated to be  $\pm 20\text{m}$ .
- 2.3.4 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.
- 2.3.5 The magnetometer data were processed by WA using Geometrics MagPick software in order to identify any discrete magnetic contacts which could represent buried metallic debris or structures such as wrecks.
- 2.3.6 The software enables both 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 the observed 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 and images taken in a similar process to that undertaken for the sidescan sonar data.
- 2.3.7 The shallow seismic data were studied in order to detect any in-filled palaeochannels, ravinement surfaces and peat/fine-grained sediment horizons that may have archaeological potential. An initial interpretation comprising the cable route centre line plus two wing lines was initially undertaken, with additional lines interpreted around any identified features of possible archaeological potential.
- 2.3.8 The shallow seismic data were processed by WA using Coda Seismic+ software. This software allows the data to be visualised with user selected filters and gain settings in order 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 a sedimentary boundary that might be of archaeological interest.
- 2.3.9 The shallow seismic 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  $1,600\text{ms}^{-1}$ . This is a standard estimate for shallow, unconsolidated sediments.
- 2.3.10 Any small reflectors which appear to be buried material such as a wreck site covered by sediment were also recorded, the position and dimensions of any such objects 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.

2.3.11 The multibeam bathymetry data were used to provide a vertical reference for the sub-bottom profiler data, and were fully analysed to identify any unusual seabed structures that could be shipwrecks or other anthropogenic debris. The data were gridded and analysed using IVS Fledermaus software, which enables 3-D visualisation of the acquired data and geo-picking of seabed anomalies.

2.3.12 The archaeological assessment of the anomalies provided by EMU was based purely on the information within the gazetteer and associated report (PMSS 2011) without any accompanying data. Whether or not an identified anomaly was included as a possible archaeological feature was dependant on a number of criteria:

- *EMU Classification – Anything classified as ‘wreck’, ‘debris’ or ‘mound’ were included as possible archaeology.*
- *Dimensions – Anything classified as ‘boulder’ but measuring more than 5m in any one direction were included as possible archaeology.*
- *Magnetic Anomaly – Any magnetic only anomaly greater than 5nT in size, or anything classed as ‘boulder’ but associated with a magnetic anomaly were included as possible archaeology.*
- *Description – A number of features were classified as ‘boulder’ but described as debris or as having an anthropogenic component such as attached rope or chain.. These were also included as possible archaeology.*
- *Location – A large number of the features within the gazetteer are located outside of the SZ1 and Cable Route study areas. Any such features were considered beyond the scope of this assessment and discarded.*

2.3.13 In addition to the features within SZ1, any anomalies previously identified by EMU located along the Cable Route and considered by WA to represent potential archaeology were merged with the results of the geophysical interpretation of the Cable Route.

## **2.4 Geophysical Data – Anomaly Grouping and Discrimination**

2.4.1 The previous section describes the initial interpretation of all available geophysical data sets which were conducted independently of each other. This inevitably leads to the possibility of any one object being the cause of numerous anomalies in different data sets and apparently overstating the number of archaeological features in the Study Area.

2.4.2 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 Seazone record, a magnetic anomaly and multiple sidescan sonar anomalies.

2.4.3 Once all the geophysical anomalies and desk-based information have been grouped, a discrimination flag is added to the record in order to discriminate against those which are not thought to be of an archaeological concern. For anomalies located on the seabed, these flags are ascribed as follows:





<b>Non-Archaeological</b>	U1	Not of anthropogenic origin
	U2	Known non-archaeological feature
	U3	Non-archaeological hazard
<b>Archaeological</b>	A1	Anthropogenic origin of archaeological interest
	A2	Uncertain origin of possible archaeological interest
	A3	Historic record of possible archaeological interest with no corresponding geophysical anomaly

**Table 2: Criteria Discriminating Relevance of Seabed Features to Proposed Scheme**

2.4.4 Similarly, the discrimination flags applied to shallow geological features of possible archaeological potential are ascribed as follows:

<b>Non-Archaeological</b>	U2	Feature of non-archaeological interest
<b>Archaeological</b>	P1	Feature of probable archaeological interest, either because of its palaeogeography or likelihood for producing palaeoenvironmental material
	P2	Feature of possible archaeological interest

**Table 3: Criteria Discriminating Relevance of Palaeogeographic Features to Proposed Scheme**

2.4.5 All the sites that have been identified are presented in **Appendix I** and **Appendix II**, summarised in **Table 4**, **Table 5**, **Table 6** and **Table 7**, and discussed in this report. Recommendations have been made for mitigation measures should the sites be impacted by the proposed development scheme.

2.4.6 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 PROJECT BASELINE

#### 3.1 Geological Baseline

3.1.1 SZ1 of the Round 3 Hornsea Zone is situated within the Southern North Sea Basin, approximately 120km East of Hornsea in East Yorkshire. The proposed Offshore Cable Route runs WSW from the southern end of this Zone to landfall at Horseshoe Point, North Lincolnshire (**Figure 1**).

3.1.2 The basement, pre-Quaternary geology of both SZ1 and the Cable Route generally comprises Upper Cretaceous chalk, the exception being where the Cable Route crosses the Sole Pit Trough within which the basement geology comprises Upper Jurassic oolitic limestone (Cameron *et al.* 1992).

3.1.3 The boundary between this basement geology and the overlying sediments represents a significant hiatus and regional unconformity. No sediments of Tertiary Age are recorded as being present in the area, and the basement geology is directly overlain by a sequence of Pleistocene and later deposits (Cameron *et al.* 1992)



- 3.1.4 The Quaternary history of the North Sea, including the SZ1 and Cable Route areas, is dominated by repeated glacial / interglacial cycles which are reflected in the shallow geology of the region. Episodes of lodgement and ablation till deposition are punctuated by episodes of erosion by glacial outwash and deposition of shallow marine sediments (Cameron *et al.* 1992, Tappin *et al.* 2011). These sequences are generally separated by marked erosion surfaces created by repeated ice sheet advance, and increase in thickness from nearshore to offshore.
- 3.1.5 The most recent (Devensian) glaciation is also likely to be the origin of three large bathymetric features known to exist in the area, all three of which the proposed cable routes cross at their northern ends (BGS 1991, Cameron *et al.* 1992). These, the Silver Pit, Sole Pit and Well Hole, are NNE-SSW to NNW-SSE trending elongate deeps which possibly originated as sub-glacial tunnel valleys or glacial outwash channels and were later modified by marine action during the Flandrian transgression (Cameron *et al.* 1992), though it is likely that the exact formation process differed for each feature (Tappin *et al.* 2011).
- 3.1.6 After the retreat of the ice sheet following the last glacial maximum (LGM) the survey area is expected to have been a terrestrial landscape, situated in the central and western areas of 'Doggerland' an extensive terrestrial plain that covered a large section of the Southern North Sea between south and east England and the continent (Coles 1998). During this period it is likely that terrestrial sediments, such as fluvial deposits, would have been deposited within the area (Cameron *et al.* 1992).
- 3.1.7 However, gradual continued sea level rise since the LGM eventually inundated both SZ1 and the Cable Route. Reconstructed sea level curves indicate that SZ1 will have been inundated between 9,000 BP and 8,000 BP, most of the Cable Route will have been inundated by 7,000 BP, and the current approximate coastline will have been achieved by 5,000 BP (Shennan *et al.* 2000, Shennan & Horton 2002, Tappin *et al.* 2011) (**Figure 2**).
- 3.1.8 The erosive power of this most recent marine transgression will have been much less than during the previous glacial advances, so the potential remains for the preservation of relict post-LGM land surfaces across the survey area. However, previously assessed data sources from the area suggest these surviving terrestrial features are likely to be restricted to incised features such as palaeochannels (Tappin *et al.* 2011)
- 3.1.9 At present, both the Cable Route and SZ1 are located within a fully marine environment. The modern sediment input is likely to be variable, with the nearshore section of the Cable Route receiving significantly more sediment input (from the Humber) than the more offshore sections and SZ1. As a result, there is potentially a difference in bedforms within the area, with currently active bedforms likely to be located closer to the coast, and the offshore area possibly including more relict features.

## 3.2 Archaeological Baseline

- 3.2.1 As has been mentioned previously (**Section 3.1**), the area covered by SZ1 and the proposed Cable Route is likely to have been a terrestrial environment for a period of time since the LGM. As a result, there is the potential for prehistoric (Late Upper Palaeolithic and Mesolithic) archaeological sites to be present on this now submerged land surface, as hominin populations are likely to have found it an attractive environment for occupation.
- 3.2.2 However, due to variable present day water depths within this area of the North Sea, the potential for the existence of such sites will vary between SZ1 and the Cable Route, and also along the Cable Route itself. Potential is likely to be highest in those areas that were



sub-aerially exposed for the longest period of time, such as near the present day coastline. This is particularly the case for sites dating to the Mesolithic Period when this area would have been part of 'Doggerland'.

- 3.2.3 The remains of this terrestrial landscape are frequently recovered by dredging and fishing in numerous areas around the Southern North Sea, generally in the form of the remains of extinct megafauna (e.g. mammoths). The discovery of actual human artefacts, such as hand axes and worked bone, is a rarer occurrence, but some artefacts have been recovered from areas in the Southern North Sea, including around Dogger Bank and the Holderness coast.
- 3.2.4 The North Sea Palaeolandscapes Project (NSPP), headed by Professor Vince Gaffney at the University of Birmingham (Fitch *et al.* 2005, Gaffney *et al.* 2007), has been undertaken in order to map and assess the potential of submerged landscapes in the Southern North Sea using offshore industry seismic data. A significant portion of both SZ1 and the Cable Route are located within the NSPP study area, and a number of palaeolandscape features of possible archaeological potential have been identified within these areas (**Figure 3**).
- 3.2.5 Continued sea level rise since the LGM fully inundated the proposed cable route during the Mesolithic, though a source of terrestrial derived material still remains at the landfall end of the Cable Route due to erosion of the Lincolnshire coast and sediment input from the River Humber. This could potentially also provide an input of terrestrially derived archaeological material into the nearshore section of the Cable Route.
- 3.2.6 The majority of the potential post-Mesolithic archaeology within SZ1 and along the Cable Route, however, is likely to relate to maritime activities. The North Sea has historically been a busy waterway, both from a commercial and military perspective, and remains so at present. The potential remains for previously unknown wreck sites which are periodically covered and uncovered by mobile sand to be identified by new geophysical data.

## 4 RESULTS

### 4.1 Seabed Features Assessment

#### *Cable Route*

- 4.1.1 A total of 888 sidescan sonar anomalies and 334 magnetometer anomalies were identified within the geophysical data along the Cable Route, alongside 69 anomalies previously identified by EMU and 26 Seazone/UKHO recorded wrecks and obstructions. After anomaly grouping and discrimination as described in **Section 2.4**, 494 sites of archaeological potential were found to exist along the proposed Cable Route. These have been characterised as follows:



Archaeological Discrimination	Number of Anomalies	Interpretation
A1	21	Anthropogenic origin of archaeological interest
A2	460	Uncertain origin of possible archaeological interest
A3	13	Historic record of possible archaeological interest with no corresponding geophysical anomaly
<b>Total</b>	<b>494</b>	

**Table 4: Anomalies of Archaeological Potential along the Cable Route**

4.1.2 Furthermore, these anomalies can be classified by probable type, which can aid in interpreting archaeological potential and importance:

Anomaly Classification	Number of Anomalies
Wreck	10
Recorded Wreck/Obstruction	13
Debris	112
Rope/Chain	7
Dark Reflector	155
Bright Reflector	5
Seafloor Disturbance	3
Mound	3
Magnetic	186
<b>Total</b>	<b>494</b>

**Table 5: Types of Anomalies Identified along the Cable Route**

4.1.3 These anomalies are discussed below, and a full gazetteer supplied in **Appendix I**. The distribution of the anomalies is illustrated in **Figure 4** and **Figure 5**.

4.1.4 A total of 10 wreck sites have been identified along the cable route. Three of these wreck sites are located close to the Cable Route landfall and have been identified by magnetometer only, though they correlate with previously recorded Seazone wreck locations.

4.1.5 Anomaly **70016** is located at the recorded position of the wreck of the destroyer HMS *Sherwood*, and is a magnetic anomaly measuring 13449nT in amplitude. Formerly the American vessel USS *Rodgers*, the vessel was acquired by the Royal Navy in 1940 and re-named the HMS *Sherwood*. It was eventually beached at the location of **70016** in 1943 to be used as target practice by the Royal Air Force, and was later dismantled and removed as part of the Royal Navy Wreck Disposal Program in 1946. No structure or debris was identified on the seabed at this location, though the large, laterally extensive magnetic anomaly identified at this location suggests a significant degree of buried ferrous debris still exists in the vicinity (**Figure 6**).

4.1.6 Anomaly **70045** is located at the recorded position of the wreck of the Yacht HMS *Gael* (though the site is recorded as an obstruction), and is a magnetic anomaly measuring 1143nT in amplitude. It also correlates with three previously recorded EMU magnetic anomalies, provided to WA as part of their gazetteer of interpreted geophysical anomalies. The vessel is reported to have sunk in 1940 and is recorded as dead, and no anomalies suggesting debris or the remains of a structure were identified on the seabed. However, the large magnetic anomaly identified at this location suggests a significant degree of buried ferrous debris exists within the vicinity.



- 4.1.7 Anomaly **70077** is located at the recorded position of the wreck of the HMS *Manx Prince*, and is a magnetic anomaly measuring 1558nT in amplitude. Originally a trawler, the *Manx Prince* was used as a minesweeper in both WWI and WWII and was mined and sank in 1940. As with the anomalies **70016** and **70045**, no visible debris has been identified on the seabed at this location, though the large magnetic anomaly suggests the presence of a significant degree of buried ferrous debris in the vicinity.
- 4.1.8 The remaining seven wreck sites have all been identified by at least two of the geophysical systems. Anomaly **70122** is a previously unrecorded wreck site identified by all of the geophysical equipment (**Sheet 1**). Orientated approximately NE-SW, the wreck is poorly defined and is mostly buried by sand waves. An overlap between the 2011 and 2012 multibeam bathymetry data close to this location has revealed the seabed sediment is highly mobile in this area, and the sand waves migrated by approximately 30m - 40m SW in the space of one year. Because of this, it is likely that the wreck was completely buried during the 2011 survey but partially exposed during the 2012 survey.
- 4.1.9 Because the wreck is only partially exposed, very little can be said about its condition with any certainty. It appears to be a single structure, suggesting it is at least partially intact, and the very large (21233nT) associated magnetic anomaly suggests it is likely to be steel-hulled. However, this anomaly is so large that there is likely to be an error within one of the data sets and the amplitude is exaggerated. Although no wrecks or obstructions are recorded at this location, the location of the wreck of the *Vasco*, currently recorded as dead and not identified during this assessment, is located approximately 345m to the NW (**70120**). This wreck could potentially be that of the *Vasco*, though this is only speculation and further work would need to be undertaken to confirm or deny this.
- 4.1.10 Anomaly **70194** is a large, distinct wreck identified by all of the geophysical equipment (**Sheet 2**). The wreck appears as a rectangular mound of debris and, although restricted to a distinct area rather than being dispersed across a large section of the seabed, no identifiable structure is visible suggesting the vessel is badly broken up and degraded. The large magnetic anomaly of 9070nT suggests a significant ferrous component to the debris.
- 4.1.11 This wreck is reported to be one section of the SS *Ravonia*, a British stem cargo ship lost in 1944 after a collision with the trawler HMT *Eroicon*, with the second section reportedly laying approximately 1170m to the NNE and outside of the current Study Area. However, measuring 109m long, this section is likely to be the largest remaining structure or possibly even represents a separate vessel. There is a large discrepancy between the original dimensions of the vessel and those apparent in the sidescan sonar, so the latter is possibly true.
- 4.1.12 Anomaly **70332** is another distinct wreck identified by all of the geophysical equipment (**Sheet 3**). The wreck is characterised by an elongate mound orientated approximately NW-SE. The outline of a vessel can be seen within the sidescan sonar data, though the structure appears half buried leaving three individual upstanding structures the most obvious part of the wreck. The large magnetic anomaly of 1991nT suggests it is the remains of a steel hulled vessel. Although a debris field was not identified, a single piece of debris was identified approximately 18m off the north edge of the wreck and is possibly related (**70333**). This wreck is recorded as being the SS *Nieuwland*, a Dutch steam cargo vessel mined and sunk in 1914.
- 4.1.13 Anomaly **70334** is a very poorly defined possible wreck identified by all of the geophysical equipment (**Sheet 4**). Characterised by a small mound in the multibeam bathymetry data, only a relatively small, poorly defined anomaly has been identified in the sidescan sonar





data, though a distinct magnetic anomaly of 849nT suggests a significant amount of ferrous debris. No wrecks or obstructions are recorded at this location, and it could be a previously unrecorded wreck site or a second section of wreck **70335**, located approximately 145m to the NE.

- 4.1.14 Anomaly **70335** is a small but distinct wreck identified by all of the geophysical equipment (**Sheet 5**). The wreck appears upright and generally intact, with some structure visible, and orientated approximately NW-SE. No debris field was identified, and the 215nT magnetic anomaly suggests a significant amount of ferrous debris is present. The wreck is located approximately 30m W of the position of an unnamed wreck recorded in the Seazone database, and it is interpreted as relating to this record. The wreck is very small and is possibly only one section of a larger structure. The other section is possibly the previously mentioned **70334**, though further work would have to be undertaken to ascertain whether these anomalies are two parts of the same vessel or separate wreck sites.
- 4.1.15 Anomaly **70439** is located at the edge of the area covered by the geophysical data, but was identified by all of the geophysical equipment (**Sheet 6**). The wreck is characterised by an elongate mound in the multibeam bathymetry data, but was only tentatively identified as an area of seafloor disturbance on the sidescan sonar data. The visible mound is unrecognisable as a vessel, and appears badly broken up and possibly mostly buried. An associated magnetic anomaly of 44nT suggests it is partially ferrous in nature. The wreck is approximately 25m ESE of a previously recorded by unnamed wreck, and is interpreted as relating to this record.
- 4.1.16 Finally, anomaly **70454**, again located on the edge of the area covered by geophysical data, was identified by sidescan sonar but only tentatively by the magnetometer and multibeam bathymetry datasets (**Sheet 7**). It also correlates with four anomalies identified by EMU in their provided gazetteer. No coherent wreck structure is visible, but an elongate area of debris is clearly visible within the geophysical data, suggesting the vessel is badly broken up and/or mostly buried. A larger upstanding anomaly marks each end of the wreck, and a small area of associated scour is visible in the multibeam bathymetry data. An associated magnetic anomaly of 41nT suggests the remaining debris is partially ferrous in nature. The wreck is located approximately 20m and 40m NE of the locations of two wrecks recorded in the Seazone database, and is interpreted as relating to both of these records.
- 4.1.17 In addition to these identified wrecks, 13 recorded wrecks and obstructions located along the Cable Route were not identified within the geophysical datasets. There are a number of reasons why this could occur. **70017** is the recorded location of the wreck of the *Georgie*, a fishing vessel lost in 1972. No structure or debris was identified on the seabed, but the location is within the large magnetic anomaly associated with the HMS *Sherwood* (**70016**) so any signature associated with buried ferrous debris would be masked by the presence of the debris from this vessel. It is possible that debris may exist at this location, but more work but be needed to confirm this.
- 4.1.18 **70120** is the recorded location of the wreck of the *Vasco*, but no anomalies were identified at this location within any of the datasets. As has been discussed earlier, a previously unidentified wreck located approximately 345m SE of this location could actually be the *Vasco*, but more work would be needed to confirm or deny this.
- 4.1.19 **70048** and **70284** are the recorded locations of the *John and Thomas*, a sloop lost in 1876, and the *Revigo*, a vessel lost in 1914 respectively. Both wrecks are currently recorded as dead and unreliably positioned, and are likely to be located elsewhere.



Similarly, **70028**, **70211**, **70246**, **70247**, **70252** and **70429** are all recorded locations of unnamed wrecks which could possibly be located elsewhere.

- 4.1.20 **70161**, **70317** and **70325** are all recorded obstructions not identified by the geophysical data. These could potentially represent ephemeral natural features that have since moved or been buried, or are poorly positioned and actually located elsewhere.
- 4.1.21 Of the remaining 471 geophysical anomalies identified along the Cable Route, 112 have been classified as pieces of possible anthropogenic debris (see **Appendix I** for full list). The majority of these pieces of debris have been classified as A2 features, though four have been classified as A1.
- 4.1.22 Anomaly **70008** is a distinct dark reflector with large shadow and a large, 691nT magnetic anomaly. Located close to the Cable Route landfall, this is interpreted as being a significant piece of ferrous debris. Anomalies **70192**, **70193** and **70333** are smaller dark reflectors but are possibly debris associated with identified wreck sites (**70194** and **70332**).
- 4.1.23 Anomaly **70321** is a very distinct feature located on the seabed and associated with a large 417nT magnetic anomaly. The distinct shape of this feature suggests it is a piece of modern debris, possibly seabed geotechnical equipment, and as such is of relatively low archaeological potential. However, as this is not confirmed at present, it is included in this assessment as ferrous debris with an A2 classification.
- 4.1.24 Anomalies **70104**, **70107**, **70131**, **70147** and **70152** are interpreted as pieces of debris associated with magnetic anomalies (5nT, 6nT, 5nT, 76nT and 67nT respectively) and so are likely to be at least partially ferrous in nature. Anomalies **70119**, **70182** and **70183** are discrete areas characterised by a scatter of small, irregular, dark and bright reflectors and are interpreted as being small debris fields rather than individual pieces of debris. The remaining anomalies are interpreted as being individual pieces of non-ferrous debris.
- 4.1.25 Seven of the identified anomalies (**70154**, **70158**, **70167**, **70176**, **70204**, **70384** and **70403**) are curvilinear dark or bright reflectors, generally with a small shadow, and have been interpreted as lengths of rope or chain. Anomaly **70384** has been associated with a 14nT magnetic anomaly, so is possibly more likely to be a length of chain. These features could be modern, though they could also be attached to previously unrecorded wrecks which are currently buried within the mobile seabed sediment.
- 4.1.26 Five anomalies (**70256**, **70276**, **70277**, **70307** and **70336**) identified along the cable route have been classified as bright reflectors. None have been associated with a magnetic anomaly. These could potentially represent natural features such as shadows created by irregular seabed, or could be pieces of debris made from material that absorbs acoustic energy rather than reflecting it such as saturated wood or synthetic material.
- 4.1.27 A total of 155 anomalies have been classified as dark reflectors (see **Appendix I** for full list). These are anomalies of a more ambiguous nature and origin, which could be pieces of anthropogenic debris or natural features. None have been associated with a magnetic anomaly, so any debris present at these locations is likely to be non-ferrous in nature.
- 4.1.28 Anomalies **70314**, **70463** and **70465** are small mounds identified by EMU but not by WA. None have been associated with a magnetic anomaly, though it is possible that these mounds are the surface expression of buried non-ferrous debris, though they could be natural features. Similarly anomalies **70355**, **70442** and **70443** are areas of seafloor



disturbance which could represent non-ferrous debris buried just beneath the seabed sediment.

- 4.1.29 The remaining 186 anomalies are purely magnetic in nature without any associated sidescan sonar or multibeam bathymetry contacts. Seven of these, **70006, 70020, 70088, 70116, 70117, 70142** and **70144**, are particularly larger (131nT, 370nT, 129nT, 726nT, 142nT, 3840nT and 3673nT respectively) and visible on a number of survey lines. These potentially indicate the presence of significant pieces of ferrous debris or wrecks buried at these locations, and as such are classified as A1 anomalies. The remaining magnetic anomalies (see **Appendix I** for full list) also potentially represent buried ferrous debris, but are classified as A2 anomalies.

#### SZ1

- 4.1.30 An initial gazetteer containing 8940 geophysical anomalies was provided to WA by EMU which formed the basis of the SZ1 assessment, alongside 16 Seazone recorded wrecks and obstructions. After anomaly selection, grouping and discrimination as described in **Section 2.3** and **Section 2.4**, 571 sites of archaeological potential were found to exist within SZ1. These have been characterised as follows:

Archaeological Discrimination	Number of Anomalies	Interpretation
A1	14	Anthropogenic origin of archaeological interest
A2	550	Uncertain origin of possible archaeological interest
A3	7	Historic record of possible archaeological interest with no corresponding geophysical anomaly
<b>Total</b>	<b>571</b>	

**Table 6: Anomalies of Archaeological Potential within SZ1**

- 4.1.31 Furthermore, these anomalies can be classified by probable type, which can aid in interpreting archaeological potential and importance:

Anomaly Classification	Number of Anomalies
Wreck	8
Recorded Wreck/Obstruction	7
Debris	362
Rope/Chain	22
Dark Reflector	34
Seafloor Disturbance	39
Mound	89
Magnetic	10
<b>Total</b>	<b>571</b>

**Table 7: Types of Anomalies Identified within SZ1**

- 4.1.32 These anomalies are discussed below, and a full gazetteer supplied in **Appendix I**. The distribution of the anomalies is illustrated in **Figure 7**. The classifications and descriptions are taken directly from the EMU gazetteer (though some classifications have been edited slightly to match the WA classification system). Since the relevant data have not been seen by WA, no further information beyond the EMU descriptions can be provided. However, data examples provided in the PMSS report (PMSS 2011) have formed the basis of some of the wreck descriptions.



- 4.1.33 A total of eight wrecks or possible wrecks were identified by EMU within SZ1. Anomaly **70838** is described as two elongate reflectors with a series of right-angled reflectors at one end, and a possible broken up and partially buried wreck site. No associated magnetic anomaly has been identified, so any remains are likely to be that of a wooden vessel. There are no recorded wrecks or obstructions at this location.
- 4.1.34 Anomaly **70965** is characterised by two adjacent low mounds of debris and an associated magnetic anomaly. These possibly represent two ends of a wreck, with the centre section being buried. The 42nT magnetic anomaly suggests the structure is at least partially ferrous in construction. This wreck is located approximately 30m SSE and 25m E of two different recorded Seazone wreck locations, and is interpreted as relating to both of these records.
- 4.1.35 Anomaly **71007** is a distinct wreck that appears upright but broken up, partially buried and separated into two or three sections. EMU suggest it is possibly a metal wreck, though the lack of an associated magnetic anomaly suggests it is may be non-ferrous. One of the two associated Seazone records it as being a probable aircraft, though the size and general appearance of the structure suggests it is more likely to be a vessel. The identified location is approximately 30m SE of the recorded location.
- 4.1.36 Anomaly **71008** is a wreck that appears upright but broken up, and with one end better preserved than the other. An associated 96nT magnetic anomaly suggests a significant ferrous content. This wreck is located approximately 45m and 15m NNE of two different recorded Seazone wreck locations, and is interpreted as relating to both of these records.
- 4.1.37 Anomaly **70545** is an elongate area of reflectors with parallel structures on the edge of a sand wave. No associated magnetic anomaly has been identified, but it could be the remains of a wooden wreck periodically covered and uncovered by mobile sediment. There are no recorded wrecks or obstructions in the vicinity of this anomaly.
- 4.1.38 Anomaly **71035** is a distinct wreck site, some sections of which appear to have collapsed outwards. An associated 2483nT magnetic anomaly suggests the vessel has a steel hull. Five separate, distinct pieces of possible associated debris (**71034**, **71036**, **71037**, **71038** and **71039**) have also been identified within 60m of the main wreck structure. This wreck is situated at the position of two known but unidentified Seazone wreck locations, and is interpreted as relating to both of these records.
- 4.1.39 Anomalies **71069** and **71070** are both wrecks identified by EMU that are located outside of the SZ1 boundary, but were deemed close enough to warrant inclusion in the gazetteer. **71069** is recorded as a large, angular structure with associated scour and large magnetic anomaly, suggesting it is a partially exposed wreck containing a significant proportion of ferrous material. There are no recorded wrecks or obstructions in the vicinity of this anomaly.
- 4.1.40 **71070** is a clearly identifiable wreck site, and is upright though appears collapsed and broken at one end and has an associated debris field. It is recorded by EMU as being metal hulled, though the associated magnetic anomaly of 2nT does not support this. It is located in the vicinity of two recorded Seazone wreck locations, and is possibly the wreck of the *Perseus*, a trawler lost in 1915.
- 4.1.41 In addition to these identified wrecks, seven recorded Seazone wrecks and obstructions are located within SZ1 which have not been identified within the geophysical data. There could be a number reasons why this is the case. **71028** is the location of a recorded



wreck, though the wreck is currently classified as dead and as being inaccurately position. It is possible that the wreck is located elsewhere.

- 4.1.42 **71025, 71026, 71027, 71029, 71030** and **71031** are all recorded obstructions, none of which have been identified within the geophysical data. It is possible that these are all inaccurately positioned and located elsewhere, or that they originally represented ephemeral natural features that are either buried or no longer present at this location.
- 4.1.43 A total of 362 anomalies within SZ1 have been classified by EMU as possible pieces of debris. In general, these are irregular anomalies of a number of specific sizes and shapes. Anomaly **70833** is located approximately 40m NE of wreck **71007** and is possibly associated, and so has been classified as an A1 anomaly. Similarly, **71034, 71036, 71037, 71038** and **71039** are possibly associated with wreck **71035** and have also been classified as A1 anomalies. The remainder are classified as A2.
- 4.1.44 Of these anomalies classified as debris, eight (**70603, 70704, 70705, 70706, 70707, 70708, 70709** and **70784**) have been described as possible pieces of fishing gear. However, as the data has not been seen by WA to verify this, they have been retained as A2 anomalies due to their interpreted anthropogenic origin. 14 of the debris anomalies (**70535, 70539, 70544, 70546, 70565, 70591, 70592, 70653, 70656, 70741, 70890, 71042, 71043** and **71051**) have been associated with magnetic anomalies and so are potential ferrous in nature. Many of these anomalies are very small (<5nT), though the 69nT anomaly associated with **70591** suggests a significant piece of ferrous debris. The remaining debris anomalies (see **Appendix I** for full list) are interpreted as being non-ferrous. Anomalies **70949** and **71059** have been associated with previously recorded Seazone obstructions.
- 4.1.45 22 anomalies within SZ1 (see **Appendix I** for full list) have been classified as lengths of rope or chain. These were originally also classed as debris by EMU, but edited to match the WA classification system. These are curvilinear anomalies, generally with a small shadow and could be modern, though they could also be attached to previously unrecorded wrecks which are currently buried within the mobile seabed sediment.
- 4.1.46 A total of 34 anomalies within SZ1 have been classified as dark reflectors (see **Appendix I** for full list). These are generally anomalies which were classified as boulders by Emu, but were described as possible debris or had unusually large dimensions. They have been classified as dark reflectors by WA due to this uncertainty and ambiguity in their original descriptions. None have been associated with a magnetic anomaly and so are interpreted as being non-ferrous, and they could be debris or natural features.
- 4.1.47 89 anomalies were classified as mounds by EMU (see **Appendix I** for full list). These appear to be features of varying character, though generally comprise low elongate or circular mounds. These could be natural features or could represent debris located just beneath the seabed. No magnetic anomalies were associated with any of these features, so any debris is likely to be non-ferrous in nature. Similarly, 39 anomalies were classified as areas of seafloor disturbance (see **Appendix I** for full list), and again could be natural features or represent non-ferrous debris located just beneath the seabed.
- 4.1.48 Finally, 10 of the identified anomalies (**71013, 71014, 71015, 71016, 71017, 71018, 71019, 71040, 71052** and **71052**) are solely magnetic in nature without any associated sidescan sonar or multibeam bathymetry contacts. Ranging in amplitude from 5nT (**71013, 71017, 71052**) to 59nT (**71018**), these possibly represent pieces of buried ferrous debris of varying size. The magnetic amplitude values have been rounded up by WA as





the 2 decimal places quoted by EMU in their gazetteer is considered beyond the recording accuracy of industry standard magnetometers.

## 4.2 Palaeogeographic Assessment

### Cable Route

- 4.2.1 As previously mentioned (**Section 3.1** and **Section 3.2**), the SZ1 and Cable Route areas will have been exposed as a terrestrial landscape for a period of time between the LGM and the Flandrian marine transgression. This landscape will have been an attractive environment for habitation by human communities, and as such the features of this landscape are of possible archaeological potential.
- 4.2.2 The features generally considered to be of highest archaeological potential are buried palaeochannels and their associated deposits, lacustrine and estuarine sediments, and buried preserved palaeosols (especially peat deposits), which potentially contain both *in-situ* and derived archaeological artefacts and material potentially important to palaeoenvironmental studies. A number of such features have been identified along the proposed cable route. These are described individually in **Appendix II** and their distribution illustrated in **Figure 8**.
- 4.2.3 A separate, in-depth geoarchaeological assessment of vibrocore and borehole samples from SZ1 and the Cable Route is provided in WA 2013.
- 4.2.4 Because the survey area has experienced numerous glacial / interglacial cycles and associated periods of deposition and erosion, the underlying shallow geology can be complex. The broad geological sequence along the Cable Route can be summarised as follows (interpreted from the current geophysical data, Cameron *et al.* 1992, Fugro OSAE 2011, Tappin *et al.* 2011 and WA 2011):

Unit	Description	Archaeological Potential
8	Holocene gravelly sands / sandy gravels	Considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites.
7	Shallow cut and fill/channel features cut into the top of <b>BDK</b> (Early Holocene terrestrial sediments)	Potential to contain <i>in-situ</i> and derived archaeological material, and palaeoenvironmental material.
6	Late Devensian till overlain by pebbly glaciolacustrine / glaciomarine muds ( <b>Botney Cut Formation, BCT</b> )	Lower fill unlikely to contain archaeological material, though upper fill potentially contains palaeoenvironmental material
5	Devensian sandy gravelly till ( <b>Bolders Bank Formation, BDK</b> )	Unlikely to contain archaeological material.
4	Hoxnian marine sand with layers of laminated clay ( <b>Egmond Ground Formation, EG</b> )	Unlikely to contain archaeological material, but could cover older sites.
3	Early Hoxnian shallow marine laminated clays and silts with frequent organic material ( <b>Sand Hole Formation, SH</b> ).	Potential to contain and cover archaeological and palaeoenvironmental material.
2	Cromerian delta top sand with layers of mud ( <b>Yarmouth Roads Formation, YM</b> )	Possible archaeological and palaeoenvironmental interest in upper unit if not eroded.
1	Pre-Quaternary bedrock (Jurassic limestone and Cretaceous chalk)	Not of archaeological interest.

**Table 8: Generalised Stratigraphy Identified along the Cable Route**



- 4.2.5 Not all of these units are present along the entire Cable Route. The sequence is thicker and more complete further offshore, with a number of units becoming absent towards the nearshore.
- 4.2.6 **Unit 1**, the Pre-Quaternary Jurassic and Cretaceous bedrock, is far too old to be considered of archaeological potential. The bedrock surface could potentially have provided a land surface for hominin communities, especially towards the landfall end of the cable route where the overlying sediments are relatively thin, though it is expected that any sediments associated with this surface will have been removed during subsequent glaciations.
- 4.2.7 **Unit 2**, tentatively identified in the offshore section of the Cable Route (generally beyond the Silver Pit), is an extensive sandy deposit present across a large area of the Southern North Sea. Boreholing undertaken at SZ1 has found this unit to comprise silty sands with occasional laminations, and is interpreted as a delta top deposit with fluvial, estuarine and shallow marine components (WA 2013). The upper layers of **YM** are contemporaneous with the Cromer Forest Beds of North Norfolk and the Palaeolithic sites at Pakefield and Happisburgh.
- 4.2.8 This indicates that the upper layers of **YM**, which are also known to contain wood and peat remains, are of potential archaeological and palaeoenvironmental interest. However, it is likely that these layers do not survive offshore having been eroded by the subsequent Anglian glaciation. Additionally, as the top of **YM** has been identified at approximately 10m – 15m below seabed (BSB), any deposits of archaeological potential within **Unit 2** will be beyond the expected vertical footprint of an electrical export cable.
- 4.2.9 **Unit 3** has also only been tentatively identified within the sub-bottom profiler data and is limited to a relatively small area in the immediate vicinity of Silver Pit. The age, location and composition of **SH** indicate that it is a potentially archaeologically important unit. The estimated age of **SH**, during the Hoxnian interglacial, coincides with a number of Period 2 Lower Palaeolithic sites in Britain, mostly found associated with river deposits.
- 4.2.10 The location of **SH** in a relatively small area of the Central North Sea suggests a localised area of low topography towards and into which fluvial systems would have naturally drained. This increases the possibility for both *in-situ* and re-deposited archaeological material to be present both within **SH** and around the area where it is present.
- 4.2.11 Finally, **SH** is a unit comprising fine laminated clays and silts, and has been shown to frequently contain preserved organic material (Fugro GeoConsulting, 2009; WA, 2010), potentially important for dating and palaeoenvironmental reconstruction purposes.
- 4.2.12 However, as with **Unit 2**, **Unit 3** is generally observed approximately 15m – 20m BSB and as such any deposits of archaeological potential are likely to be beyond the expected vertical footprint of an electrical export cable.
- 4.2.13 **Unit 3** transitions gradually upwards into **Unit 4**, which marks a steady increase in sea level during the Hoxnian interglacial, and is sporadically observed as a generally thin deposit along much of the Cable Route. This unit has been found by boreholing to comprise silty fine to coarse shallow marine sand (WA 2013), and potentially covers and protects older land surfaces, it also has the potential to contain derived archaeological artefacts, though in general is considered of relatively low archaeological potential.
- 4.2.14 **Unit 5**, a blanket deposit of Devensian glacial till, unconformably overlies **Unit 3** when present, and **Unit 1** and **Unit 2** nearshore and offshore respectively. It is the most

extensive deposit across the Cable Route, being present at shallow depth along its entire length and often outcropping at seabed (with the exception of around Silver Pit and Sole Pit). The unit can be tentatively divided into two members in some areas, previously interpreted as being a lower lodgement till and an upper ablation till.

- 4.2.15 A number of relatively large channel features have been observed within and at the base of **Unit 5**. These are generally orientated NE-SW or NW-SE and are characterised by an irregular base and generally a single acoustically unstructured or chaotic fill, though faint sub-horizontal reflectors have been observed in some features. These are interpreted as being glacial channels associated with the Devensian glaciation and are interpreted as being completely filled with glacial till.
- 4.2.16 As a glacial till deposit **Unit 5** and its associated features are interpreted as being of low archaeological potential, as they are unlikely to contain any archaeological artefacts or palaeoenvironmental material and any underlying land surfaces are likely to have been removed prior to till deposition.
- 4.2.17 **Unit 6** has been identified as seven separate features along the Cable Route, and has been found to occur in two different forms. The first, represent solely by feature **75005**, is a wide, deep, N-S trending channel feature that cuts into the underlying units (**Figure 9**). Interpreted as having a glacial origin, the deposits within this feature can be tentatively divided into two separate fills.
- 4.2.18 The lower fill is generally acoustically unstructured, though some faint internal reflectors are visible, especially towards the base. This fill is interpreted as being reworked glacial material from **Unit 5**, re-deposited in the Late Devensian during the retreat of the Devensian ice sheet. As a reworked till deposit, this sub-unit is not considered of archaeological potential.
- 4.2.19 The upper fill of **Unit 6** is characterised by sub-parallel, sub-horizontal internal reflectors, and is interpreted as comprising Early Holocene fluvial/estuarine sediments. This upper fill is potentially of archaeological and palaeoenvironmental interest, as it represents evidence of an ice-free terrestrial landscape and possible later re-activation of earlier glacio-fluvial channels as purely terrestrial fluvial systems.
- 4.2.20 The second form of **Unit 6** deposit is represent by features **75009**, **75011**, **75012**, **75013**, **75024** and **75025**. These are more blanket deposits associated with large scale depressions identified within the multibeam bathymetry data (such as Silver Pit), though they are likely to have origins as channel features. These are less likely to contain archaeological artefacts, though are potentially of palaeoenvironmental interest.
- 4.2.21 Feature **75011** is located within a small depression to the west of Silver Pit, and solely comprises the upper fill of **Unit 6**. Data from vibrocoring (WA 2013) indicates it is likely that other thin, localised pockets of **Unit 6** are located within the vicinity of **75011** but have not been mapped.
- 4.2.22 Features **75009**, **75012** and **75013** are directly associated with Silver Pit and are deposits of **Unit 6** located on the edges of this large deep (**Figure 10**). It is likely that more of **Unit 6** than has been observed was once present within Silver Pit, but was scoured out by hydraulic action during the Flandrian transgression. The two phases of fill as described previously are also tentatively visible here, though the upper fill appears to be more extensive than the lower. Similarly, features **75024** and **75025** are located on the edges of Sole Pit, and are likely to have a similar origin.



- 4.2.23 **Unit 7** is present intermittently along the Cable Route, and is found solely as a series of channel or cut and fill features mainly cut into the surface of **Unit 6**. Although identified along the entire length of the Cable Route, the highest concentration of these features appears to be further offshore at the boundary between the Cable Route and SZ1 (**Figure 8**).
- 4.2.24 A total of 20 of these features (see **Appendix II** for full list) have been classified as buried palaeochannels. These features are generally characterised in the seismic data by numerous sub-parallel internal reflectors with a sometimes complex fill suggesting more than one phase of cut and fill. These are interpreted as being fluvial features of Early Holocene age, and the complex fills suggest creation by migrating channels rather than single stable features (**Figure 11**).
- 4.2.25 The interpreted Early Holocene age of these features correspond with the age of palaeochannels and other palaeolandscape features identified during the NSPP (**Figure 3**). However, only one such feature, **75031**, has been definitively linked with a palaeochannel present within the NSPP data.
- 4.2.26 These Early Holocene channels are distinguished from the Late Devensian **Unit 6** features by their narrower width, shallower depth and more meandering character relative to the straighter form of a channel of glacial origin. Features **75027**, **75032** and **75033** are particularly good examples of this meandering nature, and have been shown to be extensive fluvial systems comprising a main channel and a number of tributaries (**Figure 12**). These three features are located at the junction between the Cable Route and SZ1, and are likely to be a southern extension of the fluvial system identified during the NSPP in the SZ1 area which drain northwards into the Outer Silver Pit (**Figure 3**, **Figure 8**).
- 4.2.27 These channels are interpreted as being palaeolandscape features associated with the Mesolithic 'Doggerland', and as such could contain both *in-situ* and derived artefacts and preserved palaeoenvironmental material. They are also at a very shallow depth, often covered by only a veneer of modern seabed sediment, so lie within the vertical footprint of an electrical cable.
- 4.2.28 Features **75019**, **75030** and **75028** are of the same age as the channels described above, but they are interpreted as cut and fills. These features were only identified along one or two survey lines and could not be traced any distance as coherent palaeochannels. They are likely to be the remnants of eroded palaeochannel systems, but as their nature is less certain they are considered of lower archaeological potential.
- 4.2.29 Feature **75026** is of more uncertain origin and could either be a small, isolated cut and fill feature or could be a seabed depression infilled with more recent marine sediment.
- 4.2.30 Finally, one of the largest features of **Unit 7** is **75000**. This is located close the Cable Route landfall, and is a large complex feature characterised by numerous internal reflectors. The extents of the feature are poorly defined, as the data here is obscured by numerous seabed multiples caused by the shallow water depths nearshore.
- 4.2.31 This feature is interpreted as being the offshore extension of the River Humber, and is likely to be the longest lived of the **Unit 7** features identified along the Cable Route and the last to have been submerged during the Flandrian transgression. As such there is the potential for *in-situ* and derived artefacts spanning a significant period of time to be present within **75000**, along with a long record of palaeoenvironmental material. A large area of acoustic blanking identified within this feature, interpreted as representing shallow



gas, indicates preserved organic material is likely to be present within the fills of **75000 (Figure 13)**.

- 4.2.32 **Unit 8** solely comprises the modern seabed sediment along the Cable Route, and is the most recent identified deposit. It is generally very thin, often less than 1m thick, though in some areas it is thick enough to form sand waves, and has been found by vibrocoring to comprise gravelly sands and sandy gravels (WA 2013). Although not considered of archaeological potential in itself, Unit 8 could potentially cover previously unknown wreck sites in areas where sand waves form, as is the case with wreck **70122 (Sheet 1)**.

#### SZ1

- 4.2.33 Although no actual data from SZ1 was assessed as part of this report, the previous geotechnical (Fugro GeoConsulting 2012) and archaeological (PMSS 2011) reports give some indications as to the palaeolandscape features present within this area.
- 4.2.34 The borehole interpretation of SZ1 indicates that the same generalised stratigraphy is present here as was identified along the Cable Route (Fugro GeoConsulting 2012). However, no samples of **Unit 6** and **Unit 7** were encountered during this boreholing program, though this is likely to be a result of the sampling strategy rather than an absence of these features.
- 4.2.35 The geophysical interpretation undertaken by PMSS (2011) show a number of shallow channel features within SZ1 that appear to be draining northwards, many of which correlate with interpreted fluvial features identified during the NSPP (**Figure 14**). One series of these features in particular continue directly on from channels identified along the Cable Route (**75027, 75032 and 75033**).
- 4.2.36 In the SZ1 report (PMSS 2011) these are attributed to **Unit 6**. However, given their dendritic appearance and direct correlation with the above mentioned fluvial features from the Cable Route, it is likely that they actually belong to **Unit 7** as described here and are Early Holocene fluvial channels rather than Late Devensian glacio-fluvial features (although, as mentioned previously, it is likely that some **Unit 6** features were longer lived and later became the basis of a fluvial system).
- 4.2.37 The boreholes acquired within SZ1 during the 2012 campaign did not sample any of these shallow features, and as such their nature can only be inferred by correlation with similar features observed along the Cable Route. However, if these features are Early Holocene fluvial channels, they are considered to be of relatively high archaeological potential and, since they are located at a shallow depth within the stratigraphy, are likely to be directly impacted by any emplacement of wind turbines across SZ1.
- 4.2.38 As previously stated, these are just a few observations made based on previous reports, and interpretation of the data would be needed to confirm or deny this interpretation. However, it does seem that palaeolandscape features of possible archaeological and palaeoenvironmental potential are present within SZ1.

## 5 DISCUSSION

- 5.1.1 It should be emphasised at this point that the archaeological interpretation of the Cable Route and SZ1 were undertaken in very different ways, and as such there is a difference in confidence of this interpretation between the two areas.
- 5.1.2 As the raw geophysical data were fully assessed for the Cable Route, the confidence of interpretation is relatively higher. However, some areas of the Cable Route, most notably



towards the landfall, have been found to be covered in relatively large thicknesses of mobile sand. The movement of this sand across the seabed can periodically cover and uncover sites of archaeological potential, and so it can not be guaranteed that all such sites have been identified within these areas. This is highlighted by the mostly buried nature of wreck **70122**, and the complete burial at present of the remains of wrecks **70016**, **70045** and **70077**.

- 5.1.3 By contrast, the confidence of the archaeological interpretation of SZ1 is considered lower than that for the Cable Route, as no data was assessed by WA. The identification and positioning of geophysical anomalies by EMU is likely to be sound, but the archaeological interpretation is fully dependant upon their provided descriptions and not from analysis of the actual anomalies themselves. As such, it can not be guaranteed by WA that all sites of possible archaeological potential have been identified from SZ1.
- 5.1.4 Similarly, the confidence of the palaeogeographic interpretation undertaken along the Cable Route is considered to be relatively high. However, the ages of the identified features are only inferred in this report based on their position within the stratigraphy, and would only be confirmed by methods such as radiocarbon dating.
- 5.1.5 As no sub-bottom profiler data from SZ1 has been interpreted by WA, the archaeological potential of palaeogeographic features from within SZ1 is less certain in the opinion of WA. As with the seabed anomalies, the location and description of these features is fully dependant on another report (PMSS 2011) and, although the location of features interpreted by PMSS is likely to be accurate, differences in interpretation are apparent. This is highlighted in **Section 4.2.36** and in **Figure 14**, where, despite a generally good correlation between the interpretations, only three of the four observed features at the southern edge of SZ1 were actually observed by WA to continue into the Cable Route.





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## 7 APPENDIX I – SEABED FEATURES OF ARCHAEOLOGICAL POTENTIAL

WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70000	Magnetic	307293	5933959	A2	-	-	-	26	Medium magnetic anomaly identified on more than one survey line but without an associated sidescan sonar or multibeam bathymetry contact. Possible small piece of buried ferrous debris.	60000	-	Cable Route
70001	Magnetic	306994	5934229	A2	-	-	-	40	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60002	-	Cable Route
70002	Magnetic	307053	5934214	A2	-	-	-	12	Possible small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Located in an area of relatively noisy data, and could be natural or a small piece of buried ferrous debris.	60003	-	Cable Route
70003	Magnetic	307167	5934117	A2	-	-	-	22	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60004	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70004	Magnetic	307141	5934154	A2	-	-	-	18	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60005	-	Cable Route
70005	Magnetic	307051	5934113	A2	-	-	-	27	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60006	-	Cable Route
70006	Magnetic	307041	5934353	A1	-	-	-	131	Large, distinct magnetic anomaly identified on a number of survey lines but without an associated sidescan sonar or multibeam bathymetry contact. Possible large piece of buried ferrous debris.	60007	-	Cable Route
70007	Magnetic	307101	5934459	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60008	-	Cable Route
70008	Debris	307482	5933771	A1	4.2	1.6	0.6	691	Distinct elongate dark reflector with well-defined shadow located at the edge of a natural seabed feature. Associated with a large magnetic anomaly identified on a number of survey lines. Probable piece of ferrous debris.	60012	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70009	Magnetic	307529	5933741	A2	-	-	-	64	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible piece of buried ferrous debris, possibly associated with 70008.	60014	-	Cable Route
70010	Magnetic	307327	5933744	A2	-	-	-	26	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60015	-	Cable Route
70011	Magnetic	307517	5933578	A2	-	-	-	12	Small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Could be a natural feature or a small piece of buried ferrous debris.	60016	-	Cable Route
70012	Magnetic	307604	5933599	A2	-	-	-	82	Distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only definitively identified on one survey line. Possible piece of buried ferrous debris.	60017	-	Cable Route
70013	Debris	308014	5934448	A2	3.2	0.6	0.5	-	Small area of irregular dark and bright reflectors with small scour but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60018	EMU_0077000	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70014	Magnetic	308321	5934251	A2	-	-	-	29	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60021	-	Cable Route
70015	Magnetic	308068	5933778	A2	-	-	-	21	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60022	-	Cable Route
70016	Wreck	307988	5933180	A1	-	-	-	13449	Extensive scatter of large magnetic anomalies associated with the recorded location of the wreck of the Destroyer HMS <i>Sherwood</i> . The vessel is recorded as being beached for use as a target in 1943, then dismantled as part of the Royal Navy Wreck Disposal Programme in 1946. No sidescan sonar or multibeam bathymetry contacts have been identified, and the site likely comprises scattered buried ferrous debris rather than a coherent structure.	60025	1080514, 1080515 (Seazone)	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70017	Recorded Wreck	308094	5933087	A3	-	-	-	-	The recorded location of the wreck of the fishing vessel <i>Georgie</i> , lost in 1972, though no sidescan sonar or multibeam bathymetry contacts have been identified. The location is within the extended magnetic anomaly of the wreck of the HMS <i>Sherwood</i> (70016), and so it is possible that scattered ferrous debris remains in the vicinity, though the wreck could also be located elsewhere.	60026	1080511, 6793815 (Seazone)	Cable Route
70018	Magnetic	308256	5932946	A2	-	-	-	26	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Possibly related to the wreck of the HMS <i>Sherwood</i> (70016).	60027	-	Cable Route
70019	Magnetic	308293	5933045	A2	-	-	-	27	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Possibly related to the wreck of the HMS <i>Sherwood</i> (70016).	60028	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70020	Magnetic	308273	5932998	A1	-	-	-	370	Large, distinct magnetic anomaly identified on a number of survey lines but without an associated sidescan sonar or multibeam bathymetry contact. Possible large piece of buried ferrous debris, possibly related to the wreck of the HMS <i>Sherwood</i> (70016).	60029	-	Cable Route
70021	Magnetic	308222	5933141	A2	-	-	-	64	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible piece of buried ferrous debris, possibly related to the wreck of the HMS <i>Sherwood</i> (70016).	60030	-	Cable Route
70022	Magnetic	308082	5933325	A2	-	-	-	29	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Possibly related to the wreck of the HMS <i>Sherwood</i> (70016).	60031	-	Cable Route
70023	Magnetic	308173	5933413	A2	-	-	-	92	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible piece of buried ferrous debris.	60034	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70024	Magnetic	308193	5933320	A2	-	-	-	20	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60035	-	Cable Route
70025	Magnetic	308221	5933295	A2	-	-	-	21	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60036	-	Cable Route
70026	Magnetic	308283	5933270	A2	-	-	-	22	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60037	-	Cable Route
70027	Magnetic	308354	5933291	A2	-	-	-	211	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact and only identified on one survey line. Possible large piece of buried ferrous debris.	60038	-	Cable Route
70028	Recorded Wreck	308248	5933211	A3	-	-	-	-	Recorded location of the wreck of an unidentified vessel, not identified within any of the geophysical data sets. Recorded position is noted as being unreliable, and wreck is possibly located elsewhere.	60039	1080513 (Seazone)	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70029	Magnetic	308711	5934028	A2	-	-	-	29	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Located close to 70030 and possibly associated.	60044	-	Cable Route
70030	Magnetic	308649	5934005	A2	-	-	-	31	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Located close to 70029 and possibly associated.	60045	-	Cable Route
70031	Magnetic	308731	5934090	A2	-	-	-	24	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60046	-	Cable Route
70032	Magnetic	308751	5933785	A2	-	-	-	54	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60047	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70033	Magnetic	308624	5933669	A2	-	-	-	15	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible small piece of buried ferrous debris.	60048	-	Cable Route
70034	Magnetic	308536	5933586	A2	-	-	-	36	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible piece of buried ferrous debris.	60049	-	Cable Route
70035	Magnetic	308708	5933644	A2	-	-	-	31	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60050	-	Cable Route
70036	Magnetic	308611	5933503	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60051	-	Cable Route
70037	Magnetic	308882	5933557	A2	-	-	-	17	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60052	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70038	Magnetic	309394	5932637	A2	-	-	-	20	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60053	-	Cable Route
70039	Magnetic	309511	5932793	A2	-	-	-	26	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60055	-	Cable Route
70040	Magnetic	308963	5933000	A2	-	-	-	15	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60057	-	Cable Route
70041	Magnetic	308772	5933088	A2	-	-	-	104	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact and only identified on one survey line. Possible large piece of buried ferrous debris.	60058	-	Cable Route
70042	Magnetic	309253	5932954	A2	-	-	-	26	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60059	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70043	Magnetic	308796	5934700	A2	-	-	-	62	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60061	-	Cable Route
70044	Magnetic	309122	5934685	A2	-	-	-	13	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60062	-	Cable Route
70045	Wreck	309073	5934394	A1	-	-	-	1143	Very large, distinct, but broad and complex magnetic anomaly identified on a number of survey lines. No associated sidescan sonar or multibeam bathymetry anomaly. Located approximately 40m SE of a recorded obstruction, also recorded to be the location of the wreck of the Yacht HMS <i>Gael</i> , lost in 1940. Site possibly comprises scattered buried ferrous debris rather than a coherent structure.	60063	1080527 (Seazone), EMU_007756, EMU_007757, EMU_007758	Cable Route
70046	Magnetic	309232	5934320	A2	-	-	-	16	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60064	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70047	Magnetic	309159	5933626	A2	-	-	-	24	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60068	-	Cable Route
70048	Recorded Wreck	309342	5933665	A3	-	-	-	-	Recorded location of the wreck of the <i>John and Thomas</i> , a sloop lost in 1876, though not identified by any of the geophysical equipment. A magnetic anomaly identified approximately 25m to the south (70049) is interpreted as being too small to indicate the presence of a vessel, and the wreck is likely to be badly positioned and located elsewhere.	60069	1080519 (Seazone)	Cable Route
70049	Magnetic	309335	5933638	A2	-	-	-	21	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris. Located approximately 25m S of the recorded location of the wreck of the <i>John and Thomas</i> (70048), though is probably too small to indicate the remains of a vessel.	60070	-	Cable Route
70050	Magnetic	309579	5933894	A2	-	-	-	25	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60071	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70051	Magnetic	309705	5934704	A2	-	-	-	31	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60076	-	Cable Route
70052	Magnetic	310059	5934414	A2	-	-	-	34	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60078	-	Cable Route
70053	Magnetic	310199	5934413	A2	-	-	-	23	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60079	-	Cable Route
70054	Magnetic	310023	5933648	A2	-	-	-	85	Distinct magnetic anomaly identified on tow separate surveys, without an associated sidescan sonar or multibeam bathymetry contact. Possible piece of buried ferrous debris.	60082	-	Cable Route
70055	Magnetic	310265	5935019	A2	-	-	-	66	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. One of three similar anomalies located close together along one survey line.	60085	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70056	Magnetic	310305	5935015	A2	-	-	-	40	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. One of three similar anomalies located close together along one survey line.	60086	-	Cable Route
70057	Magnetic	310355	5935030	A2	-	-	-	94	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. One of three similar anomalies located close together along one survey line.	60087	-	Cable Route
70058	Magnetic	310467	5934905	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified during two different surveys. Possible small piece of buried ferrous debris.	60090	-	Cable Route
70059	Magnetic	310281	5934821	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60091	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70060	Magnetic	310507	5934650	A2	-	-	-	24	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60092	-	Cable Route
70061	Debris	310557	5934614	A2	3.1	2.1	0.2	-	A rectangular object, with some defined edges, and right angles. Intersects a sediment wave and may represent a piece of debris.	-	EMU_007709	Cable Route
70062	Magnetic	310236	5934611	A2	-	-	-	18	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60093	-	Cable Route
70063	Magnetic	310441	5934516	A2	-	-	-	27	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60094	-	Cable Route
70064	Magnetic	310570	5934275	A2	-	-	-	40	Medium, relatively broad magnetic anomaly identified on a number of survey lines and on two separate surveys. No associated sidescan sonar or multibeam bathymetry contact. Possible piece of buried ferrous debris.	60095	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70065	Magnetic	310474	5934206	A2	-	-	-	34	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly associated with 60095.	60096	-	Cable Route
70066	Magnetic	310643	5933681	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on two survey lines. Possible small piece of buried ferrous debris.	60097	-	Cable Route
70067	Magnetic	310425	5933259	A2	-	-	-	98	Large, irregular magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, only definitively identified along one survey line. Possible piece of buried ferrous debris, though amplitude is possibly exaggerated.	60098	-	Cable Route
70068	Magnetic	310911	5934924	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60107	-	Cable Route
70069	Magnetic	311083	5934850	A2	-	-	-	62	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly associated with 60109.	60108	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70070	Magnetic	311131	5934849	A2	-	-	-	21	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly associated with 60108.	60109	-	Cable Route
70071	Magnetic	311302	5935150	A2	-	-	-	56	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60110	-	Cable Route
70072	Magnetic	311475	5935168	A2	-	-	-	36	Distinct but broad magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Identified on more than one line and in two surveys. Possible piece of buried ferrous debris, though located at the end of a linear feature so could be natural.	60111	-	Cable Route
70073	Magnetic	311518	5934135	A2	-	-	-	15	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60117	-	Cable Route
70074	Magnetic	311498	5934183	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60118	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70075	Magnetic	312145	5933850	A2	-	-	-	29	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60122	-	Cable Route
70076	Magnetic	312856	5933975	A2	-	-	-	149	Large, broad magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, only identified along one survey line. Possible large piece of buried ferrous debris.	60131	-	Cable Route
70077	Wreck	312535	5934334	A1	-	-	-	1558	Very large, distinct, magnetic anomaly identified on a number of survey lines. No associated sidescan sonar or multibeam bathymetry contacts. Located approximately 35m NE of a recorded obstruction, also recorded to be the location of the wreck of the HMS <i>Manx Prince</i> , mined and lost in 1940. No visible debris on the seabed, but a significant amount of buried ferrous debris associated with this wreck could be present within the mobile seabed sediment.	60132	1080528 (Seazone)	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70078	Magnetic	312453	5934460	A2	-	-	-	52	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly related to the location of the wreck of the HMS <i>Manx Prince</i> (70070).	60133	-	Cable Route
70079	Debris	312536	5935369	A2	3.8	1.5	0.6	-	An elongated object emerging from the sand waves. Partially exposed and forming some scour this is likely to represent a piece of debris	-	EMU_007701	Cable Route
70080	Dark Reflector	312569	5935307	A2	1.7	0.8	0.3	-	Isolated dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of partially buried non-ferrous debris.	60135	-	Cable Route
70081	Debris	312424	5935284	A2	1.8	0.1	0.0	-	Elongate dark reflector without a shadow or associated magnetic anomaly. Possible small piece of partially buried, non-ferrous debris.	60136	-	Cable Route
70082	Magnetic	312837	5935385	A2	-	-	-	9	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60137	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70083	Magnetic	312457	5935035	A2	-	-	-	20	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60139	-	Cable Route
70084	Dark Reflector	312690	5935090	A2	1.6	0.2	0.2	-	Small, elongate dark reflector with small shadow and possible scour, but no associated magnetic anomaly. Could be natural or a piece of partially buried non-ferrous debris.	60140	-	Cable Route
70085	Magnetic	312855	5935160	A2	-	-	-	19	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60141	-	Cable Route
70086	Magnetic	312941	5935150	A2	-	-	-	11	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60142	-	Cable Route
70087	Magnetic	313121	5934750	A2	-	-	-	34	Irregular but distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60143	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70088	Magnetic	312886	5934805	A1	-	-	-	129	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible large piece of buried ferrous debris.	60144	-	Cable Route
70089	Magnetic	313066	5934328	A2	-	-	-	16	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60145	-	Cable Route
70090	Debris	313127	5934278	A2	7.6	0.5	0.0	-	Curvilinear dark reflector without a shadow or associated magnetic anomaly, located in an area of sand ripples. Possible piece of non-ferrous debris.	60147	-	Cable Route
70091	Magnetic	313276	5935150	A2	-	-	-	181	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Identified on tow separate surveys, though with very different amplitudes. Possible piece of buried ferrous debris, though amplitude may be exaggerated.	60151	-	Cable Route
70092	Magnetic	313471	5935149	A2	-	-	-	20	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60152	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70093	Dark Reflector	313633	5935176	A2	2.2	1.4	0.5	-	Irregular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60153	-	Cable Route
70094	Dark Reflector	313485	5935031	A2	1.7	0.7	0.4	-	Isolated dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of partially buried non-ferrous debris.	60157	-	Cable Route
70095	Magnetic	314031	5934940	A2	-	-	-	72	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60160	-	Cable Route
70096	Magnetic	313511	5934670	A2	-	-	-	24	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60161	-	Cable Route
70097	Magnetic	314302	5934730	A2	-	-	-	59	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60164	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70098	Magnetic	314164	5934741	A2	-	-	-	29	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60165	-	Cable Route
70099	Magnetic	314772	5935600	A2	-	-	-	11	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on more than one survey line. Possible small piece of buried ferrous debris.	60168	-	Cable Route
70100	Dark Reflector	314341	5935363	A2	1.8	0.8	0.4	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60169	-	Cable Route
70101	Magnetic	314492	5935480	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60170	-	Cable Route
70102	Debris	314410	5935446	A2	2.0	0.6	0.2	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Possible piece of non-ferrous debris.	60171	EMU_007711	Cable Route
70103	Dark Reflector	314516	5935411	A2	1.9	1.5	0.8	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60172	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70104	Debris	314413	5935316	A2	7.0	0.7	0.2	5	Two adjacent, aligned, elongate dark reflectors with small shadow and possible small scour, located in an area of sand ripples. Associated with a small magnetic anomaly. Possible partially buried piece of linear ferrous debris.	60173	-	Cable Route
70105	Dark Reflector	314344	5935364	A2	1.8	0.9	0.4	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60174	-	Cable Route
70106	Dark Reflector	314279	5935318	A2	1.8	1.2	0.5	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60175	-	Cable Route
70107	Debris	314108	5935275	A2	3.8	0.9	0.1	6	Dark reflector with shadow and possibly associated with a small magnetic anomaly, though this is uncertain. Possible piece of ferrous debris.	60176	-	Cable Route
70108	Magnetic	314081	5935090	A2	-	-	-	690	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, only identified on one survey line. Possible large piece of ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60177	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70109	Magnetic	314161	5935140	A2	-	-	-	72	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60178	-	Cable Route
70110	Magnetic	314218	5935115	A2	-	-	-	389	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, possibly identified on two survey lines. Possible large piece of ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60179	-	Cable Route
70111	Magnetic	314351	5935180	A2	-	-	-	28	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60180	-	Cable Route
70112	Magnetic	314355	5935130	A2	-	-	-	43	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60181	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70113	Magnetic	314334	5935090	A2	-	-	-	32	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60182	-	Cable Route
70114	Magnetic	314435	5935130	A2	-	-	-	65	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60183	-	Cable Route
70115	Magnetic	314465	5935180	A2	-	-	-	31	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60184	-	Cable Route
70116	Magnetic	314595	5935130	A1	-	-	-	726	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, possibly identified on two survey lines. Possible large piece of ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60185	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70117	Magnetic	314668	5935096	A1	-	-	-	142	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on two survey lines. Possible large piece of ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60186	-	Cable Route
70118	Magnetic	314651	5934980	A2	-	-	-	75	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris. Part of an area of approximately 11 similar magnetic anomalies.	60187	-	Cable Route
70119	Debris Field	314621	5935290	A2	25.0	1.2	0.6	-	Area comprising one dark reflector with distinct shadow, and two elongate dark reflectors with poorly defined shadows. Located in an area of sand waves, no associated magnetic anomaly. Possible area of partially buried non-ferrous debris.	60188	EMU_007710	Cable Route
70120	Recorded Wreck	314767	5935273	A3	-	-	-	-	Recorded location of the wreck of the <i>Vasco</i> , lost in 1948. Not identified by any of the geophysical equipment at this location. However, a previously unrecorded wreck identified approximately 345m SE (70122) could potentially be the <i>Vasco</i> .	60190	1080538 (Seazone)	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70121	Magnetic	314815	5935179	A2	-	-	-	27	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly related to wreck 70122.	60191	-	Cable Route
70122	Wreck	315075	5935126	A1	54.3	15.8	0.8	21233	Previously unrecorded wreck identified by all geophysical equipment. Structure is almost completely buried within an area of sand waves and is poorly defined on both sidescan sonar and multibeam bathymetry data. Because of the extent of burial the condition of the wreck is difficult to determine, though some possible structure is visible and the wreck seems contained to one relatively small area, suggesting a significant part of the structure may remain intact. A very large magnetic anomaly has been associated with the structure, suggesting a significant ferrous construction, though the anomaly is so large it is possibly over exaggerated. Although no known wreck is recorded in this location it is possibly the <i>Vasco</i> , the recorded position of which is approximately 345m NW though was not identified at this position.	60192	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70123	Dark Reflector	315387	5935310	A2	2.2	0.3	0.7	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60193	-	Cable Route
70124	Magnetic	314968	5934983	A2	-	-	-	18	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60194	-	Cable Route
70125	Magnetic	315209	5934789	A2	-	-	-	37	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on two survey lines. Possible piece of buried ferrous debris.	60196	-	Cable Route
70126	Magnetic	315135	5934719	A2	-	-	-	69	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60197	-	Cable Route
70127	Magnetic	314976	5934728	A2	-	-	-	51	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60198	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70128	Magnetic	315392	5934660	A2	-	-	-	36	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60200	-	Cable Route
70129	Magnetic	315747	5935195	A2	-	-	-	12	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60201	-	Cable Route
70130	Dark Reflector	315870	5935080	A2	3.1	0.5	0.6	-	Angular dark reflector with shadow but no associated magnetic anomaly, located in an area of sand ripples. Could be natural or a piece of non-ferrous debris.	60202	-	Cable Route
70131	Debris	316107	5934738	A2	3.8	0.6	0.8	5	Elongate, angular dark reflector with shadow and possible small scour, associated with a small but distinct magnetic anomaly. Possible small piece of ferrous debris.	60217	EMU_007712	Cable Route
70132	Magnetic	315645	5934483	A2	-	-	-	17	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60219	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70133	Magnetic	316025	5934323	A2	-	-	-	35	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60220	-	Cable Route
70134	Dark Reflector	315591	5934160	A2	3.2	1.3	0.4	-	Rectangular shaped dark reflector with shadow and possible small scour but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60222	-	Cable Route
70135	Magnetic	316492	5934605	A2	-	-	-	16	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60224	-	Cable Route
70136	Dark Reflector	316571	5934307	A2	1.6	1.5	0.5	-	Dark reflector with shadow and possible internal structure, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60225	-	Cable Route
70137	Dark Reflector	316427	5934492	A2	2.4	0.7	1.0	-	Angular dark reflector with shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60227	-	Cable Route
70138	Dark Reflector	316248	5934144	A2	1.7	1.6	0.6	-	Dark reflector with shadow and possible internal structure, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60228	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70139	Dark Reflector	316211	5934180	A2	1.5	1.6	0.5	-	Angular dark reflector with shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60229	-	Cable Route
70140	Magnetic	316914	5934103	A2	-	-	-	21	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, possibly identified on two survey lines. Possible piece of buried ferrous debris.	60232	-	Cable Route
70141	Magnetic	317467	5933790	A2	-	-	-	7	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60235	-	Cable Route
70142	Magnetic	316705	5933599	A1	-	-	-	3840	Very large magnetic anomaly identified on a number of survey lines, but without an associated sidescan sonar or multibeam bathymetry contact. Indicates the presence of a significant amount of buried ferrous debris, possibly the remains of a wreck site though no previously recorded wrecks are located in the vicinity. Probably related to nearby similar features 70143 and 70144.	60239	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70143	Magnetic	316931	5933584	A2	-	-	-	43	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris, possibly related to 70142 and 70144.	60240	-	Cable Route
70144	Magnetic	316862	5933487	A1	-	-	-	3673	Very large magnetic anomaly identified on a number of survey lines and two sets of survey data, but without an associated sidescan sonar or multibeam bathymetry contact. Indicates the presence of a significant amount of buried ferrous debris, possibly the remains of a wreck site though no previously recorded wrecks are located in the vicinity. Probably related to nearby similar features 70142 and 70143.	60241	-	Cable Route
70145	Magnetic	316676	5933460	A2	-	-	-	17	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60242	-	Cable Route
70146	Dark Reflector	316972	5933345	A2	2.5	1.5	0.7	-	Three distinct, adjacent dark reflectors with large shadows and small scour but without an associated magnetic anomaly. Could be natural or non-ferrous debris.	60245	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70147	Debris	317103	5933222	A2	3.1	2.8	0.8	76	Angular dark reflector with large shadow associated with a distinct medium magnetic anomaly. Possible piece of ferrous debris.	60246	-	Cable Route
70148	Magnetic	317997	5933385	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60247	-	Cable Route
70149	Magnetic	317621	5933200	A2	-	-	-	48	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60249	-	Cable Route
70150	Dark Reflector	317496	5933162	A2	3.3	1.3	0.4	-	Angular dark reflector with large shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60250	-	Cable Route
70151	Magnetic	317445	5932899	A2	-	-	-	23	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, possibly identified on two survey lines. Possible piece of buried ferrous debris.	60252	-	Cable Route
70152	Debris	317953	5932764	A2	30.2	0.7	0.0	67	Right angled linear bright reflector associated with a distinct medium magnetic anomaly. Probable piece of partially buried ferrous debris.	60253	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70153	Dark Reflector	318160	5932806	A2	4.3	1.1	0.7	-	Large, distinct, angular dark reflector with large shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60254	-	Cable Route
70154	Rope / Chain	318103	5932504	A2	29.2	0.8	0.0	-	Curvilinear bright reflector without an associated magnetic anomaly. Possible length of rope or chain.	60255	-	Cable Route
70155	Magnetic	318935	5932163	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60259	-	Cable Route
70156	Dark Reflector	318818	5931938	A2	2.0	0.7	0.8	-	Rounded dark reflector with shadow and possible internal structure, though without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60260	-	Cable Route
70157	Magnetic	319104	5931679	A2	-	-	-	70	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60264	-	Cable Route
70158	Rope / Chain	319462	5931826	A2	22.6	0.5	0.2	-	Curvilinear dark reflector with small shadow but without an associated magnetic anomaly. Possible length of rope or chain.	60265	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70159	Magnetic	319383	5931650	A2	-	-	-	187	Large, distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible large piece of buried ferrous debris.	60266	-	Cable Route
70160	Magnetic	319587	5931690	A2	-	-	-	24	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60267	-	Cable Route
70161	Recorded Obstruction	319702	5931366	A3	-	-	-	-	Location of a foul ground recorded by UKHO. Not identified by any of the geophysical systems, and possibly represents an ephemeral natural feature or is located elsewhere.	-	9601120 (UKHO)	Cable Route
70162	Dark Reflector	319636	5931171	A2	2.8	2.0	0.6	-	Isolated, distinct dark reflector with large shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60268	-	Cable Route
70163	Dark Reflector	320502	5931082	A2	4.1	1.4	0.3	-	Isolated irregular dark reflector with shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60271	-	Cable Route
70164	Magnetic	320797	5931015	A2	-	-	-	9	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60272	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70165	Magnetic	321112	5931060	A2	-	-	-	20	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60273	EMU_007750	Cable Route
70166	Debris	321539	5930906	A2	2.5	1.0	0.5	-	Elongate, rectangular dark reflector with shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60274	-	Cable Route
70167	Rope / Chain	321241	5930641	A2	37.4	0.8	0.0	-	Curvilinear bright reflector without an associated magnetic anomaly. Possible length of rope or chain.	60275	-	Cable Route
70168	Magnetic	321131	5930431	A2	-	-	-	23	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60276	-	Cable Route
70169	Magnetic	321707	5930700	A2	-	-	-	8	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60278	-	Cable Route
70170	Magnetic	321932	5930525	A2	-	-	-	14	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60279	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70171	Debris	321826	5930273	A2	2.1	0.3	1.1	-	Elongate, rectangular dark reflector with shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60280	-	Cable Route
70172	Dark Reflector	322220	5930019	A2	3.3	1.7	0.7	-	Distinct dark reflector with large shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60281	-	Cable Route
70173	Dark Reflector	322283	5929682	A2	2.5	1.3	0.5	-	Distinct dark reflector with shadow and possible internal structure but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60282	-	Cable Route
70174	Dark Reflector	322705	5929097	A2	3.7	0.5	0.6	-	Elongate dark reflector with shadow and possible internal structure, but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60285	-	Cable Route
70175	Magnetic	323043	5929009	A2	-	-	-	30	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible piece of buried ferrous debris.	60287	-	Cable Route
70176	Rope / Chain	323186	5928875	A2	56.4	0.6	0.2	-	Curvilinear dark reflector with small shadow but without an associated magnetic anomaly. Possible partially buried length of rope or chain.	60289	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70177	Debris	323232	5929598	A2	26.6	0.9	0.5	-	Several small, shadow casting reflectors with indications of a connecting linear scour. Indicates several objects connected by rope/chain	-	EMU_007714	Cable Route
70178	Dark Reflector	324352	5929727	A2	4.2	0.3	0.4	-	Small, elongate dark reflector with small shadow but no associated magnetic anomaly. Could be natural or a piece of partially buried non-ferrous debris.	60291	-	Cable Route
70179	Debris	323727	5929052	A2	4.7	1.7	1.2	-	Large, angular dark reflector with large shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60293	-	Cable Route
70180	Dark Reflector	323724	5929045	A2	1.9	0.6	0.5	-	Angular dark reflector with shadow but no associated magnetic anomaly, possibly associated with 70179. Could be natural or a piece of non-ferrous debris.	60294	-	Cable Route
70181	Debris	323780	5928925	A2	3.0	2.7	1.3	-	Large, distinct dark reflector with large shadow and possible internal structure, but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60295	-	Cable Route
70182	Debris Field	325662	5930059	A2	7.1	6.7	0.0	-	Small area of irregular dark reflectors with small shadows but no associated magnetic anomaly. Possible small scatter of non-ferrous debris.	60298	-	Cable Route
70183	Debris Field	325713	5929572	A2	16.2	5.4	0.0	-	Small area of irregular dark and bright reflectors with some small shadows but no associated magnetic anomaly. Possible small scatter of non-ferrous debris.	60300	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70184	Dark Reflector	325269	5929352	A2	3.4	1.7	0.5	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60301	-	Cable Route
70185	Dark Reflector	325692	5929225	A2	2.3	1.1	0.8	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60302	-	Cable Route
70186	Dark Reflector	325774	5929255	A2	1.8	0.8	0.6	-	Small dark reflector with very distinct shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60303	-	Cable Route
70187	Debris	326095	5929733	A2	3.0	0.8	0.8	-	Two adjacent irregular dark reflectors with shadows but no associated magnetic anomaly, possible pieces of non-ferrous debris.	60304	-	Cable Route
70188	Dark Reflector	326253	5929385	A2	2.6	1.1	0.8	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60305	-	Cable Route
70189	Dark Reflector	326892	5929731	A2	2.4	0.8	0.8	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60307	-	Cable Route
70190	Dark Reflector	326958	5929508	A2	2.3	0.9	0.9	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60308	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70191	Magnetic	327077	5930395	A2	-	-	-	15	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60309	EMU_007746	Cable Route
70192	Debris	328035	5929869	A1	3.0	1.1	0.6	-	Irregular dark reflector with shadow, magnetic anomaly unknown as would be masked by signature from nearby wreck. Possible debris related to wreck 70193.	60316	-	Cable Route
70193	Debris	328030	5929869	A1	4.0	0.4	0.2	-	Short, curvilinear dark reflector with small shadow, magnetic anomaly unknown as would be masked by signature from nearby wreck. Possible debris related to wreck 70194.	60317	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70194	Wreck	328072	5929813	A1	109.1	42.3	2.0	9070	Large wreck site visible in all geophysical data, identified orientated approximately NE-SW. Recorded by UKHO as possibly part of the wreck of the SS <i>Ravonia</i> , a British steam cargo ship lost in 1944 after collision with the HMT trawler <i>Eroican</i> . The other part of the wreck is reported to be located approximately 1170m NNE, outside of the area covered by the geophysics. The wreck is badly broken up and appears as a large, elongate mound of debris unrecognisable as a vessel. However, parallel ridges in numerous areas of the mound indicate individual pieces of intact structure still survive. The highest point of the structure is towards the centre, and the very high magnetic anomaly suggests a significant degree of surviving ferrous material.	60318	9601090 (UKHO)	Cable Route
70195	Dark Reflector	328304	5929752	A2	3.6	0.8	0.7	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60319	-	Cable Route
70196	Dark Reflector	328987	5930122	A2	3.0	1.2	0.4	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60320	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70197	Dark Reflector	329064	5930172	A2	4.1	1.2	0.7	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60321	-	Cable Route
70198	Magnetic	329802	5930740	A2	-	-	-	11	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60324	-	Cable Route
70199	Dark Reflector	329779	5930537	A2	2.2	0.8	0.3	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60326	-	Cable Route
70200	Dark Reflector	330030	5930211	A2	1.9	1.1	0.4	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60327	-	Cable Route
70201	Dark Reflector	330120	5930241	A2	4.4	2.5	0.9	-	Large, distinct dark reflector with large shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60328	-	Cable Route
70202	Magnetic	330447	5931105	A2	-	-	-	7	Distinct small magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60329	-	Cable Route
70203	Dark Reflector	330747	5930530	A2	3.9	1.2	0.6	-	Angular dark reflector with shadow but no associated magnetic anomaly, could be natural or a piece of non-ferrous debris.	60330	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70204	Rope / Chain	332605	5931359	A2	4.6	0.4	0.3	-	Curvilinear dark reflector with shadow but no associated magnetic anomaly. Possible length of rope or chain.	60344	-	Cable Route
70205	Dark Reflector	332979	5930811	A2	2.5	1.1	0.3	-	Distinct curved dark reflector with shadow but without any associated magnetic anomaly. Could be natural or piece non-ferrous debris.	60348	-	Cable Route
70206	Debris	335336	5931691	A2	1.0	0.7	0.9	-	Dark reflector with distinct shadow but without an associated magnetic anomaly. Poss. piece of non-ferrous debris.	60351	-	Cable Route
70207	Debris	335384	5931715	A2	5.5	0.4	1.5	-	Two adjacent irregular dark reflectors with distinct shadows but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60352	-	Cable Route
70208	Debris	335398	5931647	A2	3.7	3.1	1.9	-	Dark reflector with distinct irregular shadow but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60353	-	Cable Route
70209	Dark Reflector	335797	5931523	A2	2.0	1.1	0.3	-	Dark reflector with shadow but no associated magnetic anomaly. Some errors in the dimension measurements. Possible piece of non-ferrous debris.	60355	-	Cable Route
70210	Magnetic	335617	5932030	A2	-	-	-	8	Small magnetic anomaly without sidescan sonar or multibeam bathymetry contact. Could be natural or small piece of buried ferrous.	60356	-	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70211	Recorded Wreck	335829	5931642	A3	-	-	-	-	Recorded location of an unnamed wreck, currently recorded as dead. Not identified by any of the geophysical equipment and probably located elsewhere.	60357	1080821 (Seazone)	Cable Route
70212	Dark Reflector	335976	5932222	A2	2.2	0.5	0.6	-	Slightly elongated dark reflector with shadow without an associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60358	-	Cable Route
70213	Dark Reflector	339362	5932079	A2	2.2	1.0	0.7	-	Curvilinear dark reflector with distinct shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60366	-	Cable Route
70214	Debris	339826	5932657	A2	21.7	2.0	-	-	Curvilinear bright reflector without an associated magnetic anomaly. Only identified on one survey line. Could be natural or length of rope.	60367	-	Cable Route
70215	Magnetic	340308	5932476	A2	-	-	-	49	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, identified on only one survey line. Possible piece of buried ferrous debris.	60372	-	Cable Route
70216	Debris	340808	5932670	A2	1.5	0.5	1.3	-	Dark reflector with a distinct shadow but no associated magnetic anomaly. Identified on more than one survey line. Possible piece of non-ferrous debris.	60373	-	Cable Route



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70217	Debris	340811	5932659	A2	4.5	0.8	1.0	-	Dark reflector with distinct shadow but without an associated magnetic anomaly. Poss. piece of non-ferrous debris.	60374	-	Cable Route
70218	Dark Reflector	341103	5932941	A2	3.1	0.7	0.9	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60379	-	Cable Route
70219	Debris	341767	5933383	A2	2.1	0.4	0.5	-	Dark reflector with distinct shadow and depression. No associated magnetic anomaly. Probable piece of non-ferrous debris. Only identified on one survey line.	60386	-	Cable Route
70220	Debris	341750	5933438	A2	2.9	0.4	0.6	-	Elongated dark reflector with shadow. No associated magnetic anomaly. Probably piece of non-ferrous debris. Only identified on one survey line.	60387	-	Cable Route
70221	Dark Reflector	341744	5933150	A2	1.9	0.5	0.5	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60385	EMU_007713	Cable Route
70222	Dark Reflector	341925	5933724	A2	2.6	1.0	0.9	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris. Some variation in dimension measurements.	60389	-	Cable Route
70223	Dark Reflector	341898	5933835	A2	7.3	1.7	1.6	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris. Some variation in dimension measurements.	60392	-	Cable Route



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70224	Debris	342254	5933487	A2	3.6	1.3	0.8	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Slight depression before object. Probable non-ferrous debris.	60395	-	Cable Route
70225	Debris	343214	5933157	A2	3.7	0.4	0.5	-	Two adjacent elongated dark reflectors with shadow. No associated magnetic anomaly. Probable non-ferrous debris.	60401	-	Cable Route
70226	Debris	343626	5933098	A2	3.4	1.8	0.3	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable non-ferrous debris.	60405	-	Cable Route
70227	Dark Reflector	343899	5933099	A2	2.0	0.5	0.8	-	Group of dark reflectors with shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60409	-	Cable Route
70228	Dark Reflector	343971	5933369	A2	0.6	0.5	0.9	-	Distinct dark reflector with shadow and no associated magnetic anomaly. Could be natural or non-ferrous debris.	60411	-	Cable Route
70229	Dark Reflector	343972	5933431	A2	4.3	1.1	1.4	-	Elongated dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60412	-	Cable Route
70230	Dark Reflector	344010	5933582	A2	3.7	2.3	0.8	-	Two adjacent dark reflectors with shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60413	-	Cable Route
70231	Debris	344097	5933381	A2	2.1	0.6	0.6	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60414	-	Cable Route



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70232	Dark Reflector	344137	5934270	A2	2.9	1.2	1.1	-	Two adjacent dark reflectors with shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris. Some variation in dimension measurements.	60416	-	Cable Route
70233	Debris	344664	5933512	A2	2.1	1.4	-	-	Distinct bright reflector but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60419	-	Cable Route
70234	Debris	344907	5933334	A2	3.9	1.2	0.6	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60421	-	Cable Route
70235	Debris	344858	5933547	A2	6.5	0.5	0.5	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60422	-	Cable Route
70236	Debris	345133	5933758	A2	3.7	0.6	0.6	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60424	-	Cable Route
70237	Magnetic	345022	5934155	A2	-	-	-	18	Medium magnetic anomaly but no associated sidescan sonar or multibeam bathymetry contact. Could be piece of buried ferrous.	60426	-	Cable Route
70238	Dark Reflector	346572	5934326	A2	5.9	4.6	0.9	-	Irregular dark reflector with shadow but no associated magnetic anomaly, Could be natural or a piece of non-ferrous debris.	60430	-	Cable Route



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70239	Debris	346381	5935269	A2	11.9	1.3	-	-	Curvilinear bright reflector but no associated magnetic anomaly. Probable piece of non-ferrous debris. Similar in shape to anomaly 70241 71 m NE.	60434	-	Cable Route
70240	Dark Reflector	346386	5935276	A2	4.4	0.9	0.7	-	Dark reflector with shadow adjacent to anomaly 70239. No associated magnetic anomaly. Could be natural or non-ferrous debris.	60435	-	Cable Route
70241	Debris	346439	5935311	A2	12.1	1.5	-	-	Curvilinear bright reflector but no associated magnetic anomaly. Probable piece of non-ferrous debris. Similar in shape to anomaly 70239 71 m SW..	60436	-	Cable Route
70242	Dark Reflector	346530	5935475	A2	43.1	40.8	-	-	Series of dark reflectors with shadow but no associated magnetic anomaly. Could be natural or selection of non-ferrous debris.	60437	-	Cable Route
70243	Dark Reflector	346605	5935941	A2	3.0	0.7	0.5	-	Slightly elongated dark reflector with shadow without an associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60438	-	Cable Route
70244	Debris	346267	5936041	A2	5.9	1.3	0.9	-	Elongated dark reflector with irregular shadow showing height variation. No associated magnetic anomaly. Probably piece of non-ferrous debris.	60441	EMU_007715	Cable Route
70245	Debris	347427	5936068	A2	5.5	1.5	0.7	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60442	-	Cable Route



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70246	Recorded Wreck	345527	5936605	A3	-	-	-	-	Recorded location of an unnamed dangerous wreck, currently recorded as live. Not identified by any of the geophysical equipment and probably located elsewhere.	60445	1080981 (Seazone)	Cable Route
70247	Recorded Wreck	346463	5936486	A3	-	-	-	-	Recorded location of an unnamed wreck, currently recorded as live. Not identified by any of the geophysical equipment and probably located elsewhere.	60446	1080976 (Seazone)	Cable Route
70248	Magnetic	346627	5936840	A2	-	-	-	26	Medium magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Could be noise or buried ferrous.	60447	-	Cable Route
70249	Magnetic	346722	5936590	A2	-	-	-	57	Medium magnetic negative monopole but without any sidescan sonar or multibeam bathymetry contact. Probable buried ferrous.	60448	EMU_007778	Cable Route
70250	Magnetic	347450	5937018	A2	-	-	-	49	Medium magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable buried ferrous.	60450	-	Cable Route
70251	Dark Reflector	347279	5937304	A2	1.7	1.2	0.8	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60452	-	Cable Route
70252	Recorded Wreck	346467	5937850	A3	-	-	-	-	Recorded location of an unnamed wreck, currently recorded as dead. Not identified by any of the geophysical equipment and probably located elsewhere.	60457	1080605 (Seazone)	Cable Route



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70253	Dark Reflector	346920	5938267	A2	4.6	1.5	1.2	-	Dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60458	-	Cable Route
70254	Dark Reflector	347933	5937759	A2	1.4	1.2	0.9	-	Dark reflector with distinct shadow but without associated magnetic anomaly. Located amongst sand waves. Could be natural or piece of non-ferrous debris.	60460	-	Cable Route
70255	Dark Reflector	347885	5937810	A2	6.4	0.8	1.0	-	Slightly elongated dark reflector with distinct shadow but without associated magnetic anomaly. Located amongst sand waves. Could be natural or piece of non-ferrous debris.	60461	-	Cable Route
70256	Bright Reflector	347604	5938544	A2	15.8	4.0	-	-	Irregular bright reflector but without associated magnetic anomaly. Could be piece of non-ferrous debris.	60463	-	Cable Route
70257	Magnetic	348710	5938462	A2	-	-	-	11	Medium magnetic negative monopole but without any sidescan sonar located on edge of sand waves. Probable buried ferrous.	60466	-	Cable Route
70258	Dark Reflector	348879	5940024	A2	4.0	0.7	0.6	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60467	-	Cable Route





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70259	Debris	349187	5940341	A2	1.1	1.0	0.7	-	Dark reflector with a distinct shadow plus depression running perpendicular to survey line across object. No associated magnetic anomaly. Possible piece of non-ferrous debris.	60468, 60469	EMU_007702	Cable Route
70260	Dark Reflector	349137	5940516	A2	3.4	0.5	0.4	-	Elongated dark reflector with irregular shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60473	-	Cable Route
70261	Magnetic	349837	5940665	A2	-	-	-	38	Distinct Medium magnetic dipole but no associated sidescan sonar or multibeam bathymetry contact. Could be piece of buried ferrous.	60476	-	Cable Route
70262	Magnetic	349815	5941226	A2	-	-	-	32	Medium distinct dipole but no associated sidescan sonar or multibeam bathymetry. Probable piece of buried ferrous.	60480	-	Cable Route
70263	Magnetic	350932	5940660	A2	-	-	-	24	Medium distinct positive dipole but without sidescan sonar or multibeam bathymetry contact. Located on edge of silver pit. Probable piece of buried ferrous.	60481	-	Cable Route
70264	Magnetic	350552	5940870	A2	-	-	-	286	Large distinct anomaly but without associated sidescan sonar located on edge of silver pit. Probable piece of buried ferrous.	60482	-	Cable Route
70265	Magnetic	350522	5941095	A2	-	-	-	60	Distinct broad anomaly located on the edge of silver pit. Probable piece of buried ferrous.	60483	-	Cable Route



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70266	Dark Reflector	350394	5941038	A2	2.3	1.0	1.3	-	Dark reflector with a distinct shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60487	-	Cable Route
70267	Magnetic	349960	5941808	A2	-	-	-	18	Medium magnetic anomaly with no associated sidescan sonar. Located on a ridge within silver pit. Possibly natural or buried ferrous.	60497	-	Cable Route
70268	Magnetic	350090	5941982	A2	-	-	-	17	Medium magnetic anomaly with no associated sidescan sonar. Located on a ridge within silver pit. Possibly natural or buried ferrous.	60498	-	Cable Route
70269	Dark Reflector	350464	5942035	A2	3.3	0.6	1.0	-	Slightly elongated dark reflector with no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60499	-	Cable Route
70270	Debris	351992	5942061	A2	5.2	0.8	0.4	-	Elongated dark reflector with shadow amongst sand waves but no associated magnetic anomaly. Probable non-ferrous debris.	60505	-	Cable Route
70271	Magnetic	351474	5942452	A2	-	-	-	23	Medium magnetic anomaly with no sidescan sonar or multibeam bathymetry contact. Probable buried ferrous.	60506	-	Cable Route
70272	Dark Reflector	351851	5941199	A2	1.7	0.5	1.1	-	Dark reflector with distinct shadow but with no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60507	-	Cable Route
70273	Magnetic	351602	5940815	A2	-	-	-	8	Small magnetic anomaly with no sidescan sonar or bathymetric contact. Located on inner edge of silver pit. Could be natural or piece of buried ferrous.	60508	-	Cable Route



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70274	Dark Reflector	351472	5940901	A2	6.6	0.6	0.7	-	Elongated dark reflector with a distinct shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60509	-	Cable Route
70275	Debris	351600	5941109	A2	6.9	5.0	0.1	-	A square edged feature, defined by narrow reflectors. Possible flat lying debris.	-	EMU_007732	Cable Route
70276	Bright Reflector	351756	5941293	A2	68.8	24.2	-	-	Large circular bright reflector with no associated magnetic anomaly. Possibly natural feature due to the steep decline into silver pit or a piece of non-ferrous debris.	60510	-	Cable Route
70277	Bright Reflector	351550	5941792	A2	35.5	11.0	-	-	Distinct bright reflector but no associated magnetic anomaly. Could be natural due to the decline into silver pit or a piece of non-ferrous debris.	60511	-	Cable Route
70278	Debris	351465	5942289	A2	7.2	0.3	0.7	-	Elongated anomaly with irregular shadow. Probable piece of non-ferrous debris.	60512	-	Cable Route
70279	Magnetic	351937	5942580	A2	-	-	-	21	Medium magnetic anomaly but no associated sidescan sonar or multibeam bathymetry contact. Could be natural or piece of buried ferrous.	60513	-	Cable Route
70280	Debris	352528	5941185	A2	13.5	0.8	0.2	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60514	-	Cable Route
70281	Debris	352641	5942874	A2	10.9	0.2	0.8	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60515	-	Cable Route



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70282	Debris	352622	5941539	A2	14.4	0.3	0.3	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60519	-	Cable Route
70283	Debris	354584	5941810	A2	2.6	2.2	0.3	-	Square shaped object lying by some sand ripples. Possible piece of debris	-	EMU_007731	Cable Route
70284	Recorded Wreck	355024	5941959	A3	-	-	-	-	Recorded location of the wreck of the <i>Revigo</i> , lost in 1914. Not identified by any of the geophysical equipment. Position is recorded as being unreliable, and the wreck is likely to be located elsewhere.	60528	1080972 (Seazone)	Cable Route
70285	Debris	355100	5941980	A2	3.4	1.3	0.7	-	Distinct object situated amongst sand ripples and clearly different to the surrounding boulders. Square shaped and possibly with some detail. Likely to be anthropogenic. It may represent some of the remains of the reported UKHO wreck loss UKHO9146.	-	EMU_007706	Cable Route
70286	Dark Reflector	355301	5942362	A2	3.5	0.5	0.3	-	Dark reflector with shadow amongst sand wave but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60533	-	Cable Route
70287	Debris	355245	5942404	A2	36.9	16.8	-	-	Angular linear dark reflector with slight shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60534	-	Cable Route



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70288	Dark Reflector	355424	5942665	A2	2.9	1.3	1.6	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60535	-	Cable Route
70289	Dark Reflector	355361	5942790	A2	2.7	1.0	1.3	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60536	-	Cable Route
70290	Dark Reflector	355406	5942866	A2	1.5	1.1	1.4	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60538	-	Cable Route
70291	Dark Reflector	355382	5942951	A2	1.6	1.0	1.1	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60539	-	Cable Route
70292	Dark Reflector	355367	5943028	A2	2.2	1.5	1.2	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60540	-	Cable Route
70293	Dark Reflector	355434	5943056	A2	2.5	1.4	0.9	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60541	-	Cable Route
70294	Dark Reflector	355385	5943194	A2	2.8	1.0	1.3	-	Slight elongated dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60542	-	Cable Route
70295	Magnetic	355302	5943435	A2	-	-	-	11	Small distinct magnetic anomaly but no associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60544	-	Cable Route



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70296	Dark Reflector	355531	5943524	A2	5.8	0.7	0.3	-	Elongated dark reflector with irregular shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60546	-	Cable Route
70297	Dark Reflector	355930	5943695	A2	2.4	1.5	1.3	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60548	-	Cable Route
70298	Dark Reflector	356031	5943397	A2	2.1	1.9	1.0	-	Dark reflector with distinct shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris. Some variation in the dimension measurements.	60549	-	Cable Route
70299	Dark Reflector	356111	5943403	A2	1.8	0.8	0.9	-	Dark reflector with distinct shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris. Some variation in the dimension measurements.	60550	-	Cable Route
70300	Dark Reflector	356323	5943997	A2	1.2	0.7	0.9	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60556	-	Cable Route
70301	Debris	356825	5943107	A2	2.8	0.1	0.5	-	Curvilinear dark reflector with shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60558	-	Cable Route
70302	Debris	356927	5943428	A2	2.4	2.4	0.7	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris	60559	-	Cable Route



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70303	Debris	356894	5943478	A2	2.4	2.1	1.2	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris	60560	-	Cable Route
70304	Magnetic	357162	5943035	A2	-	-	-	13	Distinct negative magnetic anomaly amongst noisy data. No associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60563	-	Cable Route
70305	Magnetic	357572	5943015	A2	-	-	-	14	Medium magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable buried ferrous.	60567	-	Cable Route
70306	Dark Reflector	358087	5943861	A2	2.5	1.2	0.9	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60572	-	Cable Route
70307	Bright Reflector	357956	5943421	A2	7.8	3.9	-	-	Irregular bright reflector but without associated magnetic anomaly. Could natural or be piece of non-ferrous debris.	60573	-	Cable Route
70308	Magnetic	358972	5943315	A2	-	-	-	12	Distinct positive monopole but with no associated sidescan sonar. Located on edge of ridge. Possible piece of buried ferrous or natural.	60575	-	Cable Route
70309	Magnetic	358622	5943500	A2	-	-	-	34	Distinct medium dipole but with no associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60576	-	Cable Route
70310	Magnetic	359962	5943830	A2	-	-	-	79	Medium magnetic anomaly with no associated sidescan sonar. Located on a ridge. Possibly natural or buried ferrous.	60579	-	Cable Route



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70311	Dark Reflector	360307	5943939	A2	2.9	0.7	0.6	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Possibly natural or buried ferrous.	60580	-	Cable Route
70312	Dark Reflector	362098	5944973	A2	3.1	1.1	1.0	-	Dark reflector with shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60586	-	Cable Route
70313	Dark Reflector	363460	5945541	A2	2.0	0.6	0.7	-	Dark reflector with distinct shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60587	-	Cable Route
70314	Mound	362504	5944035	A2	6.9	6.7	0.1	-	Distinct angular anomaly that appears to emerge from a sand wave. Possible structure	-	EMU_007718	Cable Route
70315	Dark Reflector	363562	5944765	A2	4.8	1.6	0.5	-	Irregular dark reflector with shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60590	-	Cable Route
70316	Dark Reflector	363603	5944185	A2	3.8	0.2	0.7	-	Elongated dark reflector with shadow amongst sand waves but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60591	-	Cable Route
70317	Recorded Obstruction	364016	5944387	A3	-	-	-	-	Recorded location of an obstruction, recorded as foul ground. Not identified by any of the geophysical equipment. Could be an ephemeral natural feature or be located elsewhere.	60592	28265899 (Seazone)	Cable Route





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70318	Magnetic	364037	5944125	A2	-	-	-	6	Small magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60594	-	Cable Route
70319	Magnetic	365722	5944290	A2	-	-	-	15	Medium magnetic anomaly with no sidescan sonar. Located on edge of ridge. Could be natural or buried ferrous.	60598	-	Cable Route
70320	Dark Reflector	366164	5944578	A2	2.7	0.4	0.8	-	Elongated dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60599	-	Cable Route
70321	Debris	365636	5946149	A2	10.2	4.5	5.3	417	Irregular dark reflector and distinct shadow showing some structure. Large magnetic anomaly with some evidence on multibeam bathymetry. Probable non-archaeological anthropogenic feature such as geotechnical equipment, though could be the remains of a different older structure.	60602	-	Cable Route
70322	Debris	366428	5944773	A2	3.7	2.0	0.3	-	Distinct group of anomalies, one with a particular angular shape. Possible piece of debris/structure	-	EMU_007719	Cable Route
70323	Dark Reflector	366925	5945336	A2	7.5	2.3	0.4	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris. Some variation in dimension measurements.	60604	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70324	Dark Reflector	367216	5945222	A2	5.2	2.3	1.1	-	Small dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60605	-	Cable Route
70325	Recorded Obstruction	368004	5944617	A3	-	-	-	-	Recorded location of an obstruction, recorded as foul ground. Not identified by any of the geophysical equipment. Could be an ephemeral natural feature or be located elsewhere.	60607	1081310 (Seazone)	Cable Route
70326	Dark Reflector	368576	5945242	A2	3.2	0.5	0.8	-	Slightly elongated dark reflector with distinct shadow but without associated magnetic anomaly. Located amongst sand waves. Could be natural or piece of non-ferrous debris.	60612	-	Cable Route
70327	Dark Reflector	368916	5945515	A2	2.5	0.9	1.2	-	Slightly elongated dark reflector with distinct shadow but without associated magnetic anomaly. Located amongst sand waves. Could be natural or piece of non-ferrous debris.	60613	-	Cable Route
70328	Dark Reflector	369369	5945971	A2	2.7	0.5	0.7	-	Dark reflector with distinct shadow but without associated magnetic anomaly. Located amongst sand waves. Could be natural or piece of non-ferrous debris.	60614	-	Cable Route
70329	Debris	369380	5947159	A2	7.0	5.7	1.9	-	Angular linear dark reflector with slight shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60615	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70330	Magnetic	369337	5947220	A2	-	-	-	169	Large distinct dipole but without associated sidescan sonar. Slight evidence on multibeam bathymetry. Probable piece of buried ferrous.	60616	-	Cable Route
70331	Magnetic	370128	5947063	A2	-	-	-	80	Medium broad anomaly without associated sidescan sonar or multibeam bathymetry contact. Could be natural or buried ferrous.	60618	-	Cable Route
70332	Wreck	370438	5947503	A1	56.1	36.0	1.6	1991	Wreck identified by all geophysical equipment. Located approximately 46m NW from the recorded location of the wreck of SS <i>Nieuwland</i> , a Dutch cargo ship mined and lost 3/10/1914. A very large distinct magnetic anomaly suggests a construction of ferrous material. Some structure can be identified by the sidescan sonar, though in general the wreck appears fairly damaged and broken up.	60623	1081221 (Seazone)	Cable Route
70333	Debris	370430	5947535	A1	4.7	1.0	0.5	-	Elongate dark reflector with shadow and associated scour. Located close to wreck 70332 and is possibly associated debris. Magnetic anomaly unknown, as any anomaly would be masked by the nearby wreck.	-	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70334	Wreck	370887	5947705	A1	33.1	14.4	2.7	849	Wreck identified by all geophysical equipment. Located approx 154m SW of a recorded unidentified wreck (including some other debris) and approx 500m ENE of SS <i>Nieuwland</i> . A large, distinct magnetic anomaly suggesting a construction of ferrous material. Little structure identifiable from sidescan sonar indicated a significant proportion is buried. Location identifiable on multibeam bathymetry. Could be debris related to 70334 or individual small wreck.	60625	1081223 (Seazone)	Cable Route
70335	Wreck	370945	5947842	A1	14.5	6.6	2.6	215	Wreck identified by all geophysical equipment. Located at recorded location of unidentified wreck and approx 650m ENE from SS <i>Nieuwland</i> . Could be debris related to 70334 or individual small wreck. Minimal structure can be seen from the sidescan sonar but some height is identifiable. Large magnetic anomaly could indicate some buried structure. Location identifiable on multibeam bathymetry.	60626	1081223 (Seazone)	Cable Route
70336	Bright Reflector	370868	5947989	A2	7.4	1.7	-	-	Distinct irregular bright reflector but with no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60627	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70337	Magnetic	372842	5948965	A2	-	-	-	12	Medium magnetic anomaly but no associated sidescan sonar or bathymetry contact. Could be natural or piece of buried ferrous	60633	-	Cable Route
70338	Dark Reflector	372894	5948936	A2	4.2	2.5	0.9	-	Irregular dark reflector with distinct shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60634	-	Cable Route
70339	Magnetic	373562	5949320	A2	-	-	-	16	Medium magnetic anomaly but no associated sidescan sonar or bathymetry contact. Could be natural or piece of buried ferrous	60635	-	Cable Route
70340	Magnetic	375077	5950085	A2	-	-	-	15	Medium magnetic anomaly but with no associated sidescan sonar. Located on ridge. Could be natural or buried ferrous.	60638	-	Cable Route
70341	Dark Reflector	376110	5950094	A2	2.0	0.6	1.3	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60640	-	Cable Route
70342	Debris	377140	5950323	A2	2.5	0.5	0.9	-	Elongated dark reflection with distinct shadow. No associated magnetic anomaly. Probable non-ferrous debris.	60641	-	Cable Route
70343	Magnetic	376722	5950955	A2	-	-	-	13	Medium magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable buried ferrous.	60642	-	Cable Route
70344	Magnetic	376852	5950920	A2	-	-	-	18	Medium magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable buried ferrous	60643	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70345	Magnetic	377677	5950410	A2	-	-	-	6	Small magnetic anomaly amongst noisy data. No associated sidescan sonar or multibeam bathymetry contact. Could be natural or buried ferrous.	60644	-	Cable Route
70346	Magnetic	378232	5951248	A2	-	-	-	58	Medium, broad magnetic anomaly but no sidescan sonar. Located at base of ridge. Could be natural or buried ferrous.	60646	-	Cable Route
70347	Magnetic	380047	5951895	A2	-	-	-	14	Medium magnetic anomaly but no associated sidescan sonar or multibeam bathymetry contact. Could be natural or buried ferrous.	60648	-	Cable Route
70348	Debris	371175	5945808	A2	2.0	1.2	0.5	-	Particularly square shaped object. Possible object of archaeological interest	-	EMU_007717	Cable Route
70349	Dark Reflector	371343	5945686	A2	3.7	0.5	0.8	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60657	-	Cable Route
70350	Debris	373919	5947250	A2	3.8	3.1	0.1	-	Angular object between sand waves. Possible piece of debris or structure	-	EMU_007716	Cable Route
70351	Magnetic	376162	5948150	A2	-	-	-	6	Small magnetic anomaly with no associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60665	-	Cable Route
70352	Dark Reflector	376488	5948406	A2	3.4	0.4	1.0	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or non-ferrous debris.	60666	EMU_007708	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70353	Debris	377292	5948848	A2	3.8	1.7	0.8	-	Distinctively square shaped object situated amongst sand waves and associated with other smaller angular objects next to it. It may be the largest of a patch of debris.	-	EMU_007703	Cable Route
70354	Magnetic	378227	5949420	A2	-	-	-	4	Small magnetic anomaly amongst noisy data. No associated sidescan sonar or multibeam bathymetry contact. Could be natural or buried ferrous.	60668	-	Cable Route
70355	Seafloor Disturbance	380502	5950915	A2	9.1	8.1	0.0	-	Discrete patch of material disturbing the seabed. Unknown origin but possible archaeological interest	-	EMU_007720	Cable Route
70356	Debris	380587	5950823	A2	4.1	2.7	-	-	Irregular bright reflector but with no associated magnetic anomaly. Probable non-ferrous debris.	60669	EMU_007707	Cable Route
70357	Dark Reflector	383303	5952723	A2	2.8	0.7	0.8	-	Dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60675	-	Cable Route
70358	Debris	384688	5952680	A2	3.1	0.8	1.0	-	Discrete object situated amongst sand ripples. Slightly unusual, possible piece of debris	-	EMU_007739	Cable Route
70359	Debris	384682	5952584	A2	6.1	2.9	0.5	-	Group of angular anomalies may represent a patch of debris. Site's situated in an area of undulating sand ripples	-	EMU_007743	Cable Route
70360	Debris	386138	5952998	A2	5.9	0.9	0.7	-	Elongated dark reflector with distinct shadow but no associated magnetic anomaly. Probable piece of non-ferrous debris.	60684	-	Cable Route



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70361	Dark Reflector	386522	5952956	A2	2.9	1.4	1.4	-	Dark reflector with distinct shadow. No associated magnetic anomaly. Could be natural or piece of non ferrous debris.	60686	-	Cable Route
70362	Debris	386430	5952925	A2	4.6	1.8	0.7	-	Irregular dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60687	EMU_007733	Cable Route
70363	Debris	386564	5953008	A2	8.7	1.7	0.7	-	Prominent and unusual anomaly situated amongst sand ripples may represent a large piece of debris or structure	-	EMU_007744	Cable Route
70364	Debris	386623	5953010	A2	6.7	1.5	0.7	-	Irregular dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60688	-	Cable Route
70365	Debris	386527	5953106	A2	3.9	1.4	0.6	-	Irregular dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60689	EMU_007734	Cable Route
70366	Debris	386950	5953203	A2	6.1	1.5	0.7	-	Object identified amongst undulating sand waves. Possible debris	-	EMU_007735	Cable Route
70367	Dark Reflector	386991	5953154	A2	5.3	0.2	0.3	-	Elongated dark reflector with irregular shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60691	-	Cable Route
70368	Debris	387711	5953450	A2	3.5	1.7	0.7	-	Distinct object with scour situated amongst sand ripples. Possible piece of debris	-	EMU_007742	Cable Route





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70369	Dark Reflector	388194	5953787	A2	2.9	1.1	0.6	-	Irregular dark reflector with distinct shadow amongst sand waves. No associated magnetic anomaly. Probable piece of non-ferrous debris or natural.	60699	-	Cable Route
70370	Dark Reflector	388989	5953909	A2	4.4	0.9	0.8	-	Elongated dark reflector with irregular shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60701	-	Cable Route
70371	Dark Reflector	389426	5954119	A2	1.6	0.6	0.8	-	Distinct dark reflector with shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60702	-	Cable Route
70372	Debris	389462	5954482	A2	1.9	0.6	0.5	-	Irregular dark reflector with shadow amongst sand waves. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60703	-	Cable Route
70373	Debris	389668	5954321	A2	6.3	1.3	1.5	-	Elongated irregular dark reflector with distinct shadow amongst sand waves. Probable piece of non-ferrous debris.	60704	EMU_007736	Cable Route
70374	Debris	390126	5954253	A2	4.9	2.1	0.7	-	Irregular dark reflector with distinct shadow amongst sand waves. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60705	EMU_007737	Cable Route
70375	Debris	390328	5954582	A2	2.7	0.9	0.6	-	Irregular dark reflector with distinct shadow amongst sand waves. Scour mark visible. No magnetic anomaly. Probable piece of non-ferrous debris.	60706	-	Cable Route



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70376	Dark Reflector	390406	5954637	A2	1.9	0.6	0.7	-	Distinct dark reflector with shadow amongst sand waves. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60707	-	Cable Route
70377	Debris	390721	5954664	A2	2.2	0.8	0.4	-	Two angular objects identified close to each other. Situated amongst sand ripples, they may represent pieces of debris	-	EMU_007740, EMU_007741	Cable Route
70378	Debris	391437	5954954	A2	5.6	1.1	0.4	-	Small and isolated object situated in an area of undulating sand waves. Angular and unusual shape suggests this may be a piece of debris	-	EMU_007738	Cable Route
70379	Magnetic	393512	5955515	A2	-	-	-	8	Negative monopole with no associated sidescan sonar or multibeam bathymetry contact. Probable piece of buried ferrous.	60709	-	Cable Route
70380	Dark Reflector	394777	5955869	A2	3.7	3.0	0.4	-	Irregular dark reflector with distinct shadow but no associated magnetic anomaly. Bathymetry shows located on ridge. Could be natural or piece of non-ferrous debris.	60711	-	Cable Route
70381	Debris	395269	5955989	A2	3.2	1.0	0.7	-	Slight elongated dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60713	-	Cable Route
70382	Dark Reflector	398027	5957323	A2	2.0	1.5	0.8	-	Dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60725	-	Cable Route



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70383	Magnetic	397857	5957075	A2	-	-	-	411	Large magnetic anomaly only identified on one line. No associated sidescan sonar or multibeam bathymetry. Could be natural or buried ferrous.	60726	-	Cable Route
70384	Rope / Chain	397997	5956995	A2	22.8	0.6	0.0	14	Linear feature believed to be a rope or chain. Possibly associated with a small magnetic anomaly.	60727	EMU_007721	Cable Route
70385	Debris	399749	5956597	A2	7.1	0.7	0.3	-	Elongated dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60730	-	Cable Route
70386	Dark Reflector	399923	5957142	A2	4.7	0.7	0.9	-	Dark reflector with irregular shadow. No associated magnetic anomaly. Could be natural or non-ferrous debris.	60732	-	Cable Route
70387	Dark Reflector	399943	5957275	A2	1.9	0.2	0.6	-	Elongated dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris or natural	60733	-	Cable Route
70388	Dark Reflector	400129	5957313	A2	2.4	0.4	0.8	-	Elongated dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris or natural	60734	-	Cable Route
70389	Debris	400576	5957618	A2	2.0	1.4	1.0	-	Irregular dark reflector with distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60736	-	Cable Route
70390	Debris	401038	5957715	A2	2.5	1.6	1.3	-	Irregular dark reflector with a distinct shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60740	-	Cable Route



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70391	Debris	401039	5957589	A2	4.9	0.2	0.3	-	Elongated dark reflector with shadow. No associated magnetic anomaly. Probable piece of non-ferrous debris.	60741	-	Cable Route
70392	Dark Reflector	401385	5957618	A2	2.6	0.8	0.7	-	Dark reflector with irregular shadow. No associated magnetic anomaly. Could be natural or non-ferrous debris.	60743	-	Cable Route
70393	Dark Reflector	403380	5958105	A2	3.7	0.8	0.4	-	Irregular dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60753	-	Cable Route
70394	Debris	409859	5959228	A2	1.9	1.4	0.5	-	Distinctively square object of unknown origin. Possible piece of debris. Although this is an object considered to be of low archaeological potential, a modern origin should not be discarded as the pipeline is less than 100m west.	-	EMU_007730	Cable Route
70395	Dark Reflector	411190	5959055	A2	4.5	1.6	0.7	-	Curved dark reflector with shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris. Some variations for dimension measurements	60772	-	Cable Route
70396	Dark Reflector	411378	5959421	A2	2.3	0.6	0.9	-	Dark reflector with distinct shadow. No associated magnetic anomaly. Could be natural or piece of non ferrous debris.	60773	-	Cable Route



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70397	Dark Reflector	411852	5959721	A2	1.8	0.5	0.5	-	Irregular dark reflector with distinct shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60781	-	Cable Route
70398	Magnetic	412022	5959475	A2	-	-	-	8	Small magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Could be natural or piece of buried ferrous debris.	60782	-	Cable Route
70399	Dark Reflector	411760	5960654	A2	3.2	0.8	1.0	-	Distinct dark reflector with shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60789	-	Cable Route
70400	Dark Reflector	413605	5960311	A2	2.1	0.3	0.3	-	Distinct dark reflector with shadow but no associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60794	-	Cable Route
70401	Debris	414188	5960660	A2	6.2	0.3	0.5	-	Elongated dark reflector with shadow but no associated magnetic anomaly. Probable non-ferrous debris.	60796	-	Cable Route
70402	Magnetic	414257	5960985	A2	-	-	-	13	Medium magnetic anomaly but with no associated sidescan sonar. Could be natural or buried ferrous.	60797	-	Cable Route
70403	Rope / Chain	414631	5960857	A2	7.9	1.4	0.8	-	Elongated anomaly likely to represent a piece of rope or cable.	-	EMU_007723, EMU_007724	Cable Route
70404	Dark Reflector	412903	5961187	A2	2.1	1.4	0.8	-	Dark reflector with distinct shadow lying in proximity to a sand wave. No associated magnetic anomaly. Could be natural or non-ferrous debris.	60799	-	Cable Route



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70405	Magnetic	414257	5960985	A2	-	-	-	13	Medium magnetic anomaly but with no associated sidescan sonar. Located on edge of sand waves. Could be natural or a piece of buried ferrous debris.	60800	-	Cable Route
70406	Magnetic	412552	5961045	A2	-	-	-	39	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Could be natural or a piece of buried ferrous debris.	60801	-	Cable Route
70407	Magnetic	413242	5965745	A2	-	-	-	17	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Could be natural or a piece of buried ferrous debris.	60802	-	Cable Route
70408	Dark Reflector	411853	5965753	A2	10.3	1.9	0.2	-	Not identified by WA, recorded by Emu as a natural feature but the dimensions are quite large so could be non-ferrous debris.	-	EMU_002657	Cable Route
70409	Dark Reflector	411872	5965771	A2	10.1	1.1	0.2	-	Not identified by WA, recorded by Emu as a natural feature but the dimensions are quite large so could be non-ferrous debris.	-	EMU_002658	Cable Route
70410	Magnetic	412822	5965635	A2	-	-	-	17	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Could be natural or a piece of buried ferrous debris.	60803	-	Cable Route
70411	Magnetic	412707	5964490	A2	-	-	-	9	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Could be natural or a piece of buried ferrous debris.	60806	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70412	Magnetic	411807	5963435	A2	-	-	-	20	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Located in region of sand waves. Could be natural or a piece of buried ferrous debris.	60807	-	Cable Route
70413	Magnetic	412457	5962590	A2	-	-	-	16	Medium magnetic anomaly but with no associated sidescan sonar or multibeam bathymetry contact. Located in region of sand waves. Could be natural or a piece of buried ferrous debris.	60808	-	Cable Route
70414	Debris	412654	5962783	A2	0.8	0.4	0.4	-	Curved dark reflector with shadow. No associated magnetic anomaly. Could be natural or piece of non-ferrous debris.	60810	-	Cable Route
70415	Magnetic	414002	5964535	A2	-	-	-	19	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60817	-	Cable Route
70416	Debris	414450	5964489	A2	7.0	2.7	0.9	-	Distinct, elongate dark reflector with irregular shadow, but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60818	-	Cable Route
70417	Dark Reflector	413585	5964051	A2	4.5	1.3	0.7	-	Distinct dark reflector with shadow and small scour but no associated magnetic anomaly, located in an area of mobile seabed sediment. Could be natural or a piece of non-ferrous debris.	60819	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70418	Dark Reflector	413394	5964009	A2	2.1	0.7	0.8	-	Distinct dark reflector with shadow and small scour but no associated magnetic anomaly, located in an area of mobile seabed sediment. Could be natural or a piece of non-ferrous debris.	60820	-	Cable Route
70419	Debris	413561	5964142	A2	6.9	0.8	0.5	-	Sharp, elongate dark reflector with shadow and small scour but no associated magnetic anomaly, located in an area of mobile seabed sediment. Possible piece of partially buried non-ferrous debris.	60821	-	Cable Route
70420	Debris	413156	5963069	A2	4.5	2.0	0.7	-	Distinct dark reflector with shadow and possible small scour, but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60828	-	Cable Route
70421	Debris	413330	5962906	A2	6.1	2.9	0.8	-	Irregular, relatively poorly defined dark reflector with distinct shadow and scour, but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60829	-	Cable Route
70422	Dark Reflector	413642	5962996	A2	1.7	0.6	0.2	-	Small, irregular dark reflector with small shadow and scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60830	-	Cable Route
70423	Dark Reflector	414136	5962686	A2	2.7	1.1	1.3	-	Dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60832	-	Cable Route





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70424	Dark Reflector	414814	5961737	A2	3.6	0.9	0.6	-	Distinct, elongate dark reflector with shadow but no associated magnetic anomaly, located in an area of mobile seabed sediment. Could be natural or a piece of non-ferrous debris.	60837	-	Cable Route
70425	Dark Reflector	414769	5961541	A2	2.5	1.5	0.5	-	Distinct dark reflector with shadow but no associated magnetic anomaly, located in an area of mobile seabed sediment. Could be natural or a piece of non-ferrous debris.	60838	-	Cable Route
70426	Debris	415261	5965764	A2	6.0	1.6	0.4	-	A large, unusual shaped, linear reflector with anomalous shadow pattern	-	EMU_002955	Cable Route
70427	Debris	415282	5960881	A2	6.9	3.6	0.6	-	Square shaped anomaly identified in a featureless seabed with significant height and scouring. Possible structure of archaeological interest	-	EMU_007705	Cable Route
70428	Debris	416157	5964643	A2	4.5	2.8	1.1	-	Distinct dark reflector with large shadow but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60853	-	Cable Route
70429	Recorded Wreck	415232	5964076	A3	-	-	-	-	Recorded location of an unnamed wreck, currently recorded as dead. Not identified by any of the geophysical equipment and probably located elsewhere.	60854	1081191 (Seazone)	Cable Route
70430	Dark Reflector	415601	5962438	A2	4.4	1.4	1.1	-	Distinct dark reflector with large shadow and scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60860	-	Cable Route



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70431	Dark Reflector	416491	5961438	A2	1.4	0.5	0.8	-	Distinct dark reflector with large shadow and scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60866	EMU_007725	Cable Route
70432	Magnetic	416307	5961090	A2	-	-	-	7	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60869	-	Cable Route
70433	Dark Reflector	416001	5960866	A2	8.7	1.1	0.8	-	Elongate dark reflector with shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60870	-	Cable Route
70434	Debris	417145	5962722	A2	2.9	0.9	1.4	-	Distinct dark reflector with large shadow but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60875	-	Cable Route
70435	Magnetic	417712	5963190	A2	-	-	-	7	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60877	-	Cable Route
70436	Dark Reflector	418008	5961856	A2	2.9	0.3	0.1	-	Short, elongate dark reflector with small shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60881	-	Cable Route



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70437	Magnetic	418482	5964595	A2	-	-	-	31	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Possible piece of buried ferrous debris.	60883	-	Cable Route
70438	Dark Reflector	418712	5962034	A2	2.9	1.6	0.9	-	Distinct dark reflector with large shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60888	-	Cable Route
70439	Wreck	418774	5961246	A1	27.9	8.2	1.5	44	Area of seafloor disturbance identified by all geophysical systems located at the position of an unnamed recorded wreck. Feature is visible as a low, elongate mound on multibeam bathymetry data, and appears as an area of indistinct dark and bright reflectors on sidescan sonar data. Feature is unrecognisable as a vessel, but the association with a medium magnetic anomaly suggests this is the broken up and mostly buried remains of an at least partially ferrous vessel.	60891	1081187, 27710838 (Seazone)	Cable Route
70440	Magnetic	418842	5965555	A2	-	-	-	13	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60892	-	Cable Route



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70441	Debris	419096	5965051	A2	3.7	0.5	0.6	-	Irregular dark reflector with shadow, scour, and possible internal structure, but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60893	-	Cable Route
70442	Seafloor Disturbance	419450	5962324	A2	9.4	5.5	0.0	-	Distinct oval shaped mottled area. Appears to be a patch of material, possibly debris	-	EMU_007726	Cable Route
70443	Seafloor Disturbance	419492	5962333	A2	3.7	2.4	0.0	-	Smallest of two areas of potential debris. Rounded and mottle appears to be material, possibly a patch of debris	-	EMU_007727	Cable Route
70444	Debris	419818	5963965	A2	2.6	0.3	0.5	-	Distinct, elongate dark reflector with shadow and small scour, but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60901	-	Cable Route
70445	Dark Reflector	420086	5962129	A2	5.2	1.5	0.4	-	Irregular dark reflector with shadow and small scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60908	-	Cable Route
70446	Dark Reflector	420320	5961999	A2	2.1	0.9	1.0	-	Distinct dark reflector with large shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60909	-	Cable Route
70447	Dark Reflector	421596	5964283	A2	2.3	0.3	0.9	-	Irregular dark reflector with shadow and small scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60911	-	Cable Route



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70448	Dark Reflector	420605	5962076	A2	3.4	0.4	0.5	-	Irregular dark reflector with shadow and small scour, but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60924	-	Cable Route
70449	Magnetic	421687	5961685	A2	-	-	-	15	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact, though only identified on one survey line. Possible small piece of buried ferrous debris.	60925	-	Cable Route
70450	Debris	422484	5962695	A2	4.5	1.3	1.0	-	Distinct dark reflector with shadow and large scour, but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60926	EMU_007728	Cable Route
70451	Dark Reflector	422647	5961967	A2	2.7	0.3	0.5	-	Large, distinct dark reflector with large shadow but no associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60933	-	Cable Route
70452	Dark Reflector	423910	5962607	A2	1.8	0.4	0.1	-	Angular dark reflector with small shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60940	-	Cable Route
70453	Dark Reflector	425025	5963281	A2	1.9	0.8	0.8	-	Two adjacent, irregular dark reflectors with shadows but without an associated magnetic anomaly. Could be natural or non-ferrous debris.	60952	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70454	Wreck	426180	5963601	A1	65.1	27.2	3.7	41	Wreck of an unidentified vessel, located on the edge of the geophysics coverage and tentatively identified by all of the geophysical equipment orientated approximately NNE-SSW. The wreck appears as an elongate debris field unrecognisable as a vessel, and is characterised in the sidescan sonar data by two large dark reflectors with large shadows and accompanying smaller irregular dark and bright reflectors. The feature was poorly resolved in the multibeam bathymetry data, and only tentatively associated with a medium magnetic anomaly approximately 100m away suggesting an amount of ferrous debris. The structure is badly broken up and likely mostly buried.	60958	1081192, 27710880 (Seazone), EMU_002497, EMU_006227, EMU_006229, EMU_007597	Cable Route
70455	Dark Reflector	426291	5963431	A2	6.9	1.2	0.4	-	Elongate dark reflector with shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris associated with wreck 70454.	60959	-	Cable Route
70456	Magnetic	426547	5962260	A2	-	-	-	94	Irregular but distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Possible piece of buried ferrous debris.	60960	-	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70457	Debris	426773	5963085	A2	2.4	0.5	0.7	-	Distinct, small dark reflector with shadow and small scour, but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60961	-	Cable Route
70458	Dark Reflector	427134	5963136	A2	2.5	0.7	0.5	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60963	-	Cable Route
70459	Magnetic	427257	5963060	A2	-	-	-	85	Distinct medium magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Possible piece of buried ferrous debris.	60964	EMU_007842	Cable Route
70460	Dark Reflector	427172	5962500	A2	1.3	0.5	0.4	-	Short, curvilinear dark reflector with small shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60965	-	Cable Route
70461	Dark Reflector	427691	5963552	A2	2.2	0.6	0.4	-	Two adjacent distinct dark reflectors with shadows and small scours, but without an associated magnetic anomaly. Could be natural or non-ferrous debris.	60966	-	Cable Route
70462	Debris	428381	5962933	A2	3.0	0.3	0.4	-	Short, linear dark reflector with small shadow but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60972	-	Cable Route
70463	Mound	428801	5963473	A2	7.8	4.5	0.3	-	Two low adjacent elongate mounds.	-	EMU_006211, EMU_006212	Cable Route



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70464	Debris	428886	5963472	A2	5.0	2.5	0.9	-	Large, high reflectivity curved object with apparent dimple on the upper surface. Connected to an angular section of possible sediment disturbance	-	EMU_002006	Cable Route
70465	Mound	428808	5963862	A2	2.2	1.3	0.1	-	Possible object	-	EMU_006215	Cable Route
70466	Debris	428845	5963963	A2	4.2	1.6	0.5	-	Indistinct anomaly with associated magnetometer anomaly suggesting it is anthropogenic or ferrous material is in the vicinity	-	EMU_001988	Cable Route
70467	Debris	429239	5963784	A2	6.5	4.6	0.5	-	Distinct mound of material. Identified in SubZone 1 as a possible patch of boulders. New data suggests this may possibly be a mound of debris or a structure	-	EMU_007704	Cable Route
70468	Magnetic	429632	5963930	A2	-	-	-	5	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Possible small piece of buried ferrous debris.	60977	-	Cable Route
70469	Dark Reflector	430114	5963495	A2	1.0	1.0	0.6	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60981	-	Cable Route
70470	Dark Reflector	429734	5964271	A2	5.0	1.1	0.5	-	High reflectivity unusual shaped contact with partial shadow	-	EMU_001903	Cable Route
70471	Dark Reflector	430687	5963522	A2	9.0	1.5	0.5	-	Interpreted by Emu as a natural feature, dimensions are large so could possibly be non-ferrous debris.	-	EMU_001068	Cable Route





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70472	Dark Reflector	430431	5964439	A2	2.2	0.8	0.4	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60983	-	Cable Route
70473	Dark Reflector	430434	5964455	A2	2.2	0.7	0.2	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60984	-	Cable Route
70474	Dark Reflector	430607	5964422	A2	1.3	0.8	0.4	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60985	-	Cable Route
70475	Dark Reflector	430800	5964408	A2	2.8	0.7	0.6	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60987	-	Cable Route
70476	Dark Reflector	430947	5964465	A2	2.7	0.7	0.5	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60988	-	Cable Route
70477	Magnetic	430957	5964530	A2	-	-	-	7	Small but distinct magnetic anomaly without an associated sidescan sonar or multibeam bathymetry contact. Possible small piece of buried ferrous debris.	60990	-	Cable Route



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70478	Debris	431082	5964468	A2	1.7	0.7	0.5	-	Distinct irregular dark reflector with shadow and possible internal structure, but without an associated magnetic anomaly. Possible piece of non-ferrous debris.	60991	-	Cable Route
70479	Dark Reflector	430843	5964193	A2	3.8	0.4	0.7	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60992	-	Cable Route
70480	Dark Reflector	430885	5964195	A2	2.2	0.5	0.3	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60993	-	Cable Route
70481	Dark Reflector	430950	5964207	A2	3.3	0.2	0.4	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60994	-	Cable Route
70482	Debris	430758	5963987	A2	6.4	0.5	0.3	-	Short linear dark reflector with small shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	60995	-	Cable Route
70483	Dark Reflector	431341	5964498	A2	3.2	0.4	0.2	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	60999	-	Cable Route



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70484	Dark Reflector	431533	5964540	A2	3.0	1.9	0.5	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	61000	-	Cable Route
70485	Dark Reflector	431790	5964568	A2	2.4	0.8	0.4	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	61001	-	Cable Route
70486	Debris	431996	5963917	A2	3.7	1.5	0.6	-	Likely anchor with rope/chain still attached	-	EMU_003178	Cable Route
70487	Debris	432195	5965109	A2	4.2	2.5	0.6	-	Angular, almost rectangular object of unknown origin	-	EMU_003207	Cable Route
70488	Debris	432385	5965130	A2	2.3	1.7	0.0	-	Recorded as debris by Emu, no description provided	-	EMU_003251	Cable Route
70489	Debris	432576	5965033	A2	2.9	0.5	0.5	-	Distinct dark reflector with shadow and possible internal structure but no associated magnetic anomaly, possible piece of non-ferrous debris.	61005	-	Cable Route
70490	Dark Reflector	432603	5965027	A2	0.9	0.5	0.5	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	61006	-	Cable Route
70491	Dark Reflector	432621	5965031	A2	1.4	0.4	0.5	-	Distinct dark reflector with distinct shadow but without an associated magnetic anomaly. Could be natural or a piece of non-ferrous debris.	61007	-	Cable Route



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70492	Debris	432715	5964999	A2	2.7	1.0	0.7	-	Irregular dark reflector with irregular shadow but no associated magnetic anomaly. Possible piece of non-ferrous debris.	61008	EMU_007729	Cable Route
70493	Debris	433370	5964391	A2	2.9	1.3	0.5	-	Recorded as debris by Emu, no description provided	-	EMU_003421	Cable Route
70500	Debris	411509	5966311	A2	6.0	4.0	0.0	-	Object with distinct scour observed in the multibeam bathymetry and sidescan sonar data. Linear feature, probably a rope or cable seems attached or caught on it	-	EMU_000006	SZ1
70501	Debris	411968	5970479	A2	3.5	1.9	1.1	-	A trophy shaped contact with narrow high reflectivity area and variable shadow. Distinct height suggests anthropogenic origins	-	EMU_000034	SZ1
70502	Mound	412436	5973966	A2	12.9	3.7	0.4	-	A long raised area of seabed with distinct height and apparent dimpled top. Possible sedimentary or buried feature	-	EMU_000056	SZ1
70503	Mound	412592	5969820	A2	11.1	7.8	0.7	-	A distinct oval shaped mound with clear height and SE scour. Possible wreck structure	-	EMU_000061	SZ1
70504	Seafloor Disturbance	412699	5972237	A2	4.2	6.7	0.0	-	Discrete mottled area of lower reflectivity in a teardrop shape. Possibly anthropogenic	-	EMU_000069	SZ1
70505	Debris	413015	5970626	A2	4.6	3.0	0.2	-	Two parallel, linear reflectors.	-	EMU_000084	SZ1
70506	Debris	412982	5971467	A2	7.2	1.4	0.3	-	A curved and elongated reflector of unknown origin. Object may be partially buried	-	EMU_000087	SZ1
70507	Debris	413403	5968966	A2	7.2	6.2	0.0	-	A large patch of angular objects apparently with some overall structure, possible debris	-	EMU_000114	SZ1
70508	Debris	413267	5969605	A2	7.7	1.1	0.2	-	Several parallel, high reflectivity contacts with shadows	-	EMU_000122	SZ1



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70509	Debris	413276	5969604	A2	2.6	2.8	0.1	-	Several parallel, linear, shadow casting reflectors. Close (<25m) to a similar contact	-	EMU_000123	SZ1
70510	Debris	413281	5970693	A2	3.7	2.1	0.9	-	A large, shadow casting reflector with unusual distinct height. Part of the high reflectivity area is square and a narrow section protrudes from it. Two areas of very high reflectivity are associated with the square reflectors	-	EMU_000124	SZ1
70511	Debris	413376	5974648	A2	2.8	1.8	0.0	-	Anomaly of low reflectivity with no obvious object. Possible less reflective material	-	EMU_000130	SZ1
70512	Mound	413499	5970829	A2	7.3	3.9	0.0	-	Mound of low relief lying amongst sediment waves. Displays a clear linear edge. Site of possible archaeological interest due to its unusual character and size	-	EMU_000141	SZ1
70513	Mound	413466	5972982	A2	5.0	2.7	0.6	-	Smooth sided mound of unknown origin and possible archaeological interest One edge is subtle and the other distinctive	-	EMU_000152	SZ1
70514	Debris	413467	5972965	A2	4.3	1.3	0.4	-	Long shadow casting reflector with linear section of approximately constant height	-	EMU_000153	SZ1
70515	Debris	413485	5970778	A2	3.3	0.4	0.1	-	Possible debris, very narrow, linear reflector with distinct shadow	-	EMU_000159	SZ1
70516	Debris	413451	5968872	A2	4.6	0.9	0.1	-	Strongly linear contact with kind half way along. Apparently constant height	-	EMU_000165	SZ1
70517	Debris	413643	5976601	A2	8.7	2.8	1.2	-	Distinct anomaly with height. The size and texture suggest this may be an object of possible archaeological interest	-	EMU_000171	SZ1



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70518	Seafloor Disturbance	413534	5973794	A2	8.1	5.2	0.6	-	Oval shaped area of distinct angular reflectors lying by large sand wave. Possibly indicative of a partially exposed object. It may represent a structure of archaeological interest	-	EMU_000175	SZ1
70519	Mound	414035	5976621	A2	5.6	3.0	0.2	-	Localised raised area with point of height. Unusual morphology and uncertain origin	-	EMU_000193	SZ1
70520	Debris	413964	5974650	A2	2.5	1.7	0.4	-	A collection of high reflectivity contacts, several of which are aligned, forming an overall square shape. One section of the contact has a curvilinear section of anthropogenic appearance	-	EMU_000196	SZ1
70521	Debris	413954	5968755	A2	3.8	1.0	0.8	-	Possible debris object. Linear, rectangular appearance and distinct height	-	EMU_000201	SZ1
70522	Debris	414121	5975451	A2	3.5	2.5	0.0	-	A small, symmetrical area of lower reflectivity in the lee of a sediment wave. Possible low reflectivity debris object. Does not have morphology of ridge shadow	-	EMU_000209	SZ1
70523	Debris	414062	5972969	A2	3.2	0.4	0.0	-	An elongate, narrow area of very high reflectivity. Possibly a mast/pole made of metal.	-	EMU_000223	SZ1
70524	Seafloor Disturbance	414419	5975640	A2	9.3	8.8	0.0	-	Rounded area of low relief	-	EMU_000237	SZ1
70525	Debris	414406	5975419	A2	4.0	1.8	0.6	-	A particularly high reflectivity contact with adjoining narrow, shadow casting reflector. Angular nature of contact and dimensions suggest anthropogenic origins	-	EMU_000239	SZ1



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70526	Debris	415077	5968230	A2	5.9	3.3	0.5	-	Distinct anomaly amongst sand ripples. With distinct height and scouring. Possible structure of archaeological interest	-	EMU_000307	SZ1
70527	Debris	415236	5967480	A2	2.5	1.7	0.7	-	A well defined, strongly circular object with crisp shadow and apparent circular hole in the centre. Confidently suggested to be a large tyre	-	EMU_000312	SZ1
70528	Debris	415273	5980215	A2	3.8	3.1	0.0	-	A roughly circular area of low reflectivity. Possible piece of debris	-	EMU_000318	SZ1
70529	Debris	415629	5979881	A2	4.4	3.0	0.0	-	Broad area of lower reflectivity. Anomaly of unknown origin	-	EMU_000332	SZ1
70530	Debris	415699	5967813	A2	10.1	3.5	0.4	-	A small collection of angular objects. Possible patch of debris	-	EMU_000333	SZ1
70531	Debris	415992	5980566	A2	4.2	3.6	0.0	-	Oval area of low reflectivity, possible piece of debris	-	EMU_000354	SZ1
70532	Debris	416298	5975725	A2	5.9	2.3	0.5	-	Unusual low lying angular anomaly suggesting a large piece of debris or small structure	-	EMU_000381	SZ1
70533	Seafloor Disturbance	416580	5975231	A2	8.1	1.9	0.0	-	A large, roughly rectangular area of significantly lower reflectivity. Possible unusual scour, or object. Size and sharp edge of the anomaly also suggest an anthropogenic origin. No similar sedimentary features seen	-	EMU_000389	SZ1
70534	Mound	416987	5976190	A2	2.1	2.4	0.4	-	A small, low relief undulation with apparent angular shadow	-	EMU_000410	SZ1
70535	Debris	416852	5968964	A2	2.9	4.2	0.2	3	Elongated patch of anomalies associated with a magnetometer anomaly suggesting this a patch of debris	-	EMU_000416	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70536	Dark Reflector	417056	5978562	A2	9.2	2.0	0.2	-	Gross size boulder as recorded by Emu, though size suggests possible anthropogenic origins and archaeological interest.	-	EMU_000424	SZ1
70537	Debris	417155	5974842	A2	7.7	7.1	0.2	-	A strongly curvilinear segmented object with linear attachment. Constant width. Possible manifestation of a buried object. Within a scour depression	-	EMU_000428	SZ1
70538	Seafloor Disturbance	417367	5980638	A2	8.6	6.9	0.0	-	A rimed semicircle of low reflectivity with backing area of angular, higher reflectivity	-	EMU_000440	SZ1
70539	Debris	417230	5970469	A2	2.2	1.4	0.5	1	Discrete sidescan sonar anomaly with an associated magnetometer anomaly suggests this a piece of debris	-	EMU_000452	SZ1
70540	Debris	417302	5968965	A2	2.8	2.2	0.4	-	Two strongly rectangular, linear, narrow reflectors with constant height shadows. Possible anthropogenic debris	-	EMU_000454	SZ1
70541	Debris	417456	5974256	A2	2.9	1.3	0.0	-	A small area of low reflectivity with no corresponding shadow casting reflector, or apparent outer scour	-	EMU_000457	SZ1
70542	Debris	417719	5981387	A2	4.1	4.6	0.0	-	A large area of low reflectivity with no corresponding object/high reflector. Uncertain origin	-	EMU_000471	SZ1
70543	Debris	417703	5978200	A2	9.9	6.4	0.4	-	A large area of mottled high reflectivity interpreted as a mound of high reflectivity objects with shadows. Adjoining a long, strongly linear area of higher reflectivity. Possible debris with fishing gear	-	EMU_000474	SZ1





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70544	Debris	417958	5972999	A2	9.3	2.0	0.5	2	Area of material consisting of two large objects and attendant smaller objects within a scour depression. Associated magnetometer anomaly suggests this site is anthropogenic	-	EMU_000500	SZ1
70545	Wreck	418166	5968355	A2	16.4	10.7	0.4	-	Group of reflectors with height and parallel structure on the edge of a sediment wave. Possible wreck site	-	EMU_000513	SZ1
70546	Debris	418355	5975997	A2	5.1	1.7	0.1	1	Sidescan sonar anomaly of unknown origin with an associated magnetometer anomaly	-	EMU_000517	SZ1
70547	Debris	418369	5976017	A2	2.4	1.2	0.3	-	A very high reflectivity, blocky contact with significant size, and angular shape. Located 12m from another possible piece of debris	-	EMU_000524	SZ1
70548	Debris	418354	5976022	A2	6.4	3.5	0.3	-	A collection of rectangular shadow casting reflectors with apparent linear structure.	-	EMU_000525	SZ1
70549	Debris	418362	5975620	A2	6.5	1.7	0.2	-	A large, linear contact with approximately constant height. Possible anthropogenic debris	-	EMU_000526	SZ1
70550	Debris	418573	5967751	A2	3.1	4.0	0.5	-	A cluster of 4, high reflectivity shadow casting objects. Close to another object (<10m)	-	EMU_000542	SZ1
70551	Debris	418583	5967747	A2	4.7	1.7	0.4	-	A large triangular shaped area of slight reflectivity, interpreted as a flat reflector tilted towards fish path. Angular shadow and frontal reflector suggest anthropogenic origins	-	EMU_000543	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70552	Debris	418588	5968062	A2	4.2	2.4	0.8	-	Two strongly angular, linear, shadow casting reflectors. Each with distinct shadow. A large scour filled with coarser sediment is also apparent	-	EMU_000551	SZ1
70553	Debris	418680	5978661	A2	6.0	0.8	0.1	-	A long, narrow, linear contact with approximately constant shadow	-	EMU_000561	SZ1
70554	Debris	418865	5970400	A2	4.9	3.1	0.4	-	A large, strongly angular apparently flat object with approximately square edges. Appears tilted towards fish path. Casts a distinct, angular shadow. Possible anthropogenic debris	-	EMU_000572	SZ1
70555	Seafloor Disturbance	419078	5978851	A2	29.0	92.0	0.0	-	A large area of lower reflectivity with no reflector to cast a shadow. Inner edge is unusually straight and suggests anthropogenic origin	-	EMU_000592	SZ1
70556	Debris	419177	5974355	A2	3.2	1.7	0.3	-	A circular contact, with central area of high reflectivity and linear attachment. Possible anthropogenic debris	-	EMU_000595	SZ1
70557	Debris	419464	5967040	A2	2.9	2.7	1.4	-	A small area of higher reflectivity with a significant suggested height. Height by shadow would be far above anything expected for a boulder of these dimensions.	-	EMU_000609	SZ1
70558	Debris	419573	5975796	A2	3.2	4.9	0.0	-	A distinct area of low reflectivity suggests there is an object there. Uncertain origin but possible piece of debris	-	EMU_000618	SZ1
70559	Seafloor Disturbance	419578	5966154	A2	9.7	4.7	0.5	-	Discrete oval shaped patch with a point of height disturbing the sediment pattern and suggesting there is material partially buried	-	EMU_000632	SZ1



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70560	Debris	420082	5974822	A2	3.4	2.8	0.2	-	A squarish, bounded area of higher reflectivity near to an area of possible coarser sediment waves	-	EMU_000677	SZ1
70561	Debris	420109	5973919	A2	4.7	4.0	0.6	-	Two parallel, angular reflectors with shadow indicative of significant height	-	EMU_000681	SZ1
70562	Debris	420085	5966912	A2	5.0	2.8	0.3	-	A large, apparently flat topped shadow casting reflector with angular corners and unusual shadow	-	EMU_000692	SZ1
70563	Debris	420216	5965801	A2	4.0	2.6	0.4	-	A squarish area of reflectivity suggestive of a significant object. Height is also considerable	-	EMU_000701	SZ1
70564	Debris	420239	5965814	A2	5.0	2.0	0.0	-	A curvilinear anomaly with height near another possible structure. Possible piece of debris	-	EMU_000702	SZ1
70565	Debris	415557	5981240	A2	6.3	1.5	0.4	3	Elongated anomaly identified in eh sidescan sonar. Associated magnetometer anomaly suggests this is an anthropogenic object. The multibeam bathymetry data shows distinct scouring around the object	-	EMU_000787	SZ1
70566	Debris	415917	5980538	A2	3.2	1.0	0.4	-	Elongated reflector of unknown origin	-	EMU_000791	SZ1
70567	Dark Reflector	416182	5980520	A2	2.7	1.8	0.5	-	A small, high relief angular contact within a large scour depression. Recorded by Emu as a boulder, though angular nature could indicate an anthropogenic origin.	-	EMU_000793	SZ1
70568	Mound	416407	5981003	A2	4.3	2.6	0.0	-	Rounded reflector of unknown origin, slight rounded mound or piece of debris	-	EMU_000794	SZ1



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70569	Debris	420525	5975051	A2	3.3	1.1	0.2	-	Discrete anomaly identified in the sidescan sonar data. With a magnetometer anomaly associated with it, it may represent a object of anthropogenic origin	-	EMU_000812	SZ1
70570	Debris	420594	5968289	A2	6.7	4.9	0.3	-	A prominently square area of indistinct reflectivity. Sharp edges and shadow indicate square, thin, flat lying object. Possible metal panel	-	EMU_000832	SZ1
70571	Mound	420957	5972012	A2	9.1	4.1	0.2	-	Large, lozenge shaped area of high reflectivity with corresponding shadow. Possible raised mound	-	EMU_000851	SZ1
70572	Debris	414150	5975456	A2	4.0	2.0	0.5	-	A high reflectivity object with shadow associated with areas of low reflectivity and a narrow, curved shadow casting reflector. Possible anthropogenic debris. Extended area measures 14 x 5m	-	EMU_000859	SZ1
70573	Debris	425544	5971511	A2	5.4	5.1	0.0	-	Anomaly recorded as debris by EMU, no description provided.	-	EMU_000935	SZ1
70574	Debris	425609	5970498	A2	4.0	0.6	0.1	-	A long, narrow object with high reflectivity and partial shadow at one end. Possible debris	-	EMU_000965	SZ1
70575	Debris	425340	5973364	A2	7.2	1.6	0.0	-	Distinct anomaly possibly representing a piece of debris associated with a linear feature, rope or cable	-	EMU_000993	SZ1
70576	Debris	425254	5966265	A2	3.2	2.2	0.5	-	Three apparently parallel reflectors at close range to the fish. Little apparent shadow.	-	EMU_001041	SZ1
70577	Debris	425112	5966507	A2	4.4	0.4	0.2	-	Appears linear with variable shadow. High reflectivity contact	-	EMU_001140	SZ1



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70578	Mound	430765	5974886	A2	9.1	4.0	0.0	-	Apparent low relief rise in the seabed within an area of sedimentary variation and with a small, possibly associated shadow atop it	-	EMU_001157	SZ1
70579	Debris	424514	5974582	A2	5.3	1.3	0.0	-	Unusual feature of significantly less reflectivity than the surrounding seabed	-	EMU_001290	SZ1
70580	Debris	424528	5969315	A2	3.5	3.2	0.8	-	A strong, linear reflector with small shadow less protrusion	-	EMU_001332	SZ1
70581	Debris	424291	5971800	A2	8.1	3.9	0.4	-	One strong, shadow casting reflector and several smaller reflectors of variable strength	-	EMU_001359	SZ1
70582	Debris	424403	5972943	A2	13.8	7.9	0.6	-	Large anomaly producing a pattern on the scouring. It may represent a partially exposed structure	-	EMU_001362	SZ1
70583	Seafloor Disturbance	424227	5967182	A2	10.1	4.9	0.0	-	Oval shaped area of high reflectivity with small, low reflectivity. Possible buried object	-	EMU_001375	SZ1
70584	Debris	430574	5968898	A2	2.5	2.1	0.0	-	Horse shoe shaped undulation in the seafloor. Unknown origins, possible piece of debris	-	EMU_001391	SZ1
70585	Debris	424197	5970180	A2	2.9	1.9	0.0	-	Piece of debris in an area of seabed disturbance	-	EMU_001393	SZ1
70586	Debris	424093	5969849	A2	2.9	1.7	0.5	-	Distinct object with a slight angular element. Possible piece of debris	-	EMU_001423	SZ1
70587	Mound	423939	5973811	A2	12.8	1.4	0.2	-	Mound recorded by Emu, no description provided.	-	EMU_001433	SZ1
70588	Debris	424017	5968088	A2	3.8	2.2	0.0	-	Possible fishing gear object. Shadow less area of high reflectivity with attached linear strands of high reflectivity	-	EMU_001442	SZ1



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70589	Debris	423551	5968626	A2	4.8	2.5	0.6	-	Large, high relief contact within significant seabed disturbance. Cross shaped aspect	-	EMU_001506	SZ1
70590	Debris	423456	5970274	A2	6.0	2.2	0.2	-	Angular, serried reflectors.	-	EMU_001524	SZ1
70591	Debris	423415	5970338	A2	16.3	7.0	1.3	69	Distinct structure identified in the sidescan sonar, magnetometer and multibeam bathymetry datasets. Structure exhibits slight scouring suggesting it is only partially exposed. A large, stepped square object connects to a raised cylindrical structure. T	-	EMU_001549	SZ1
70592	Debris	423115	5974290	A2	5.1	0.4	0.2	1	A linear, very high reflectivity object with apparently constant height along its length	-	EMU_001585	SZ1
70593	Debris	422790	5971875	A2	4.4	1.5	0.6	-	A high reflectivity contact with one substantially higher section and another lower and of approximately constant height. Possible anthropogenic debris	-	EMU_001596	SZ1
70594	Debris	422670	5973283	A2	4.5	3.3	0.5	-	A group of parallel, extremely high reflectivity objects with defined boundaries. Possible anthropogenic debris	-	EMU_001616	SZ1
70595	Debris	422298	5969040	A2	4.5	2.3	0.5	-	An irregular shaped shadow casting reflector with protruding linear, constant height section. Possible anthropogenic debris	-	EMU_001676	SZ1
70596	Seafloor Disturbance	422024	5972498	A2	7.5	3.3	0.0	-	Seabed disturbance with raised central area. Uncertain origin	-	EMU_001732	SZ1
70597	Debris	421922	5968467	A2	6.5	14.1	0.8	-	Debris field of potential anthropogenic origin, one section with pronounced shadow	-	EMU_001745	SZ1



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70598	Mound	421827	5971535	A2	8.5	3.7	0.4	-	Low relief mound. small darker reflectors apparent	-	EMU_001756	SZ1
70599	Debris	421697	5966897	A2	5.1	3.2	0.3	-	A small, rounded contact with bands of high and low reflectivity. Possible anthropogenic debris	-	EMU_001776	SZ1
70600	Seafloor Disturbance	421550	5965765	A2	12.3	7.5	0.0	-	A mottled area of variable reflectivity in a localised, circular shaped area	-	EMU_001778	SZ1
70601	Seafloor Disturbance	421173	5974687	A2	12.9	6.9	0.8	-	Two rectangular areas raised and joined corner to corner. Apparently straight and angular. Possibly anthropogenic origin	-	EMU_001857	SZ1
70602	Debris	421156	5965933	A2	3.3	2.9	0.2	-	A rectangular, angled area of higher reflectivity. Possible anthropogenic debris	-	EMU_001861	SZ1
70603	Debris	425398	5969449	A2	7.2	9.9	0.1	-	Series of small reflectors with shadows. Unknown anomaly, possibly fishing gear related	-	EMU_001893	SZ1
70604	Dark Reflector	428770	5966154	A2	2.2	0.9	0.6	-	Small possible boulder with accompanying seafloor disturbance. May have caused a larger movement of sediment. Recorded by Emu as a boulder, though associated disturbance could indicate anthropogenic origin.	-	EMU_002002	SZ1
70605	Debris	428600	5968331	A2	18.0	1.3	0.5	-	Long, linear contact. Possible geological or modern debris such as a cable/pipe	-	EMU_002027	SZ1
70606	Debris	428394	5965759	A2	6.8	1.6	0.6	-	Possible debris. Several unusually large abnormal shaped objects in conjunction with a narrow reflector. Possible rope/chain associated with debris	-	EMU_002058	SZ1



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70607	Dark Reflector	428156	5969739	A2	11.2	1.9	0.5	-	Gross size boulder recorded by Emu, but size suggests it could be anthropogenic	-	EMU_002078	SZ1
70608	Debris	427946	5972209	A2	8.9	0.7	0.2	-	Large, irregular shaped object far larger than the mean object size. Unknown origin	-	EMU_002127	SZ1
70609	Dark Reflector	428103	5967144	A2	8.8	1.7	0.0	-	Anomaly appears to be two boulders lying next to each other or one large one. Recorded by Emu as a boulder, but size suggests it could be anthropogenic.	-	EMU_002138	SZ1
70610	Debris	427929	5974295	A2	4.2	1.1	0.0	-	Hard reflector and shadow, indicative of anthropogenic debris	-	EMU_002184	SZ1
70611	Seafloor Disturbance	427804	5966186	A2	28.8	6.1	0.0	-	Discrete seabed disturbance of unknown origin. Archaeological potential based on size	-	EMU_002210	SZ1
70612	Debris	427690	5971929	A2	4.6	3.9	0.0	-	Discrete rectangular object of possible archaeological interest	-	EMU_002231	SZ1
70613	Debris	427378	5968848	A2	2.1	0.4	2.1	-	Dispersed collection of high reflectivity objects	-	EMU_002263	SZ1
70614	Debris	426729	5965658	A2	2.4	0.8	1.0	-	Possible debris object. Unusual height for a boulder. Stark, defined shadow and significant seabed disturbance	-	EMU_002382	SZ1
70615	Debris	426719	5969797	A2	5.5	1.2	0.6	-	Large, very high reflectivity shadow casting object with sinuous appearance. Possible anthropogenic debris	-	EMU_002407	SZ1
70616	Debris	426395	5972436	A2	3.9	0.9	0.5	-	A large, high reflectivity shadow casting object. Includes a narrow section (0.2m) with long shadow. Possible anthropogenic debris	-	EMU_002436	SZ1





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70617	Debris	426170	5968981	A2	2.4	0.3	0.2	-	Three apparent contacts in a linear formation. Each with high reflectivity. Proximal to probable debris	-	EMU_002475	SZ1
70618	Debris	431006	5965603	A2	7.0	1.4	0.0	-	Curved linear feature of unknown origin	-	EMU_002512	SZ1
70619	Debris	411242	5966837	A2	5.5	3.7	0.1	-	Several connected high reflectivity areas with some structure and shadow.	-	EMU_002513	SZ1
70620	Mound	411360	5967068	A2	9.2	11.4	0.2	-	A large amorphous mound with overall angular appearance and scouring. Possible anthropogenic origin	-	EMU_002519	SZ1
70621	Debris	431033	5965509	A2	5.1	3.2	0.0	-	Possible piece of debris of unknown origin but lying in the vicinity of another possible anthropogenic anomaly	-	EMU_002529	SZ1
70622	Seafloor Disturbance	411809	5967841	A2	11.5	6.3	0.0	-	A rectangular shaped area of low, mottled reflectivity	-	EMU_002552	SZ1
70623	Dark Reflector	411939	5966079	A2	11.4	2.0	0.3	-	Recorded as a boulder by Emu, no description provided. Size suggests it could be anthropogenic.	-	EMU_002595	SZ1
70624	Debris	430842	5966627	A2	11.6	7.4	0.0	-	Group of reflectors arranged in an angular manner. Feature of unknown origin. Possibly geological	-	EMU_002605	SZ1
70625	Dark Reflector	411746	5966561	A2	10.2	4.4	0.0	-	Recorded as a boulder by Emu, no description provided. Size suggests it could be anthropogenic.	-	EMU_002613	SZ1



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70626	Debris	430882	5966041	A2	5.6	2.9	0.6	-	Distinct object on a patch of coarse material. Possible large boulder or possible large structure. Square aspect and some apparent structure lead to an anthropogenic categorisation.	-	EMU_002625	SZ1
70627	Debris	412043	5967166	A2	4.1	4.3	0.4	-	A flat fronted, flat topped, overall angular appearing object, with significant, defined, angular shadow and a connected seabed disturbance. Modern piece of debris possibly caught on an object of archaeological interest.	-	EMU_002632	SZ1
70628	Debris	431008	5970416	A2	8.0	2.5	0.0	-	Elongated low reflectivity anomaly of unknown origin. Possibly geological	-	EMU_002634	SZ1
70629	Debris	430844	5969784	A2	7.6	3.1	0.0	-	Elongated reflector with no height. Object of unknown origin, possibly geological or anthropogenic	-	EMU_002654	SZ1
70630	Dark Reflector	411975	5966378	A2	10.4	1.1	0.1	-	Recorded as a boulder by Emu, no description provided. Size suggests it could be anthropogenic.	-	EMU_002673	SZ1
70631	Dark Reflector	430878	5968714	A2	5.1	3.7	0.0	-	Patch of low reflectivity with linear features around it. Possibly rope caught on it. Included by WA due to possible anthropogenic component.	-	EMU_002674	SZ1
70632	Dark Reflector	412097	5966415	A2	8.5	4.1	0.0	-	Two boulders lying next to each other or a large boulder. Recorded by Emu as a boulder, but size suggests it could be anthropogenic.	-	EMU_002676	SZ1



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70633	Debris	411961	5967463	A2	33.0	1.7	0.3	-	A series of reflectors separated by some sediment sections. A couple are smooth, but others are angular and connected by linear features. Possible largely buried debris, such as cable/chain/fishing gear	-	EMU_002692	SZ1
70634	Debris	430850	5972046	A2	17.7	9.6	0.4	-	Group of reflectors arranged in an angular manner. Objects of unknown origin, possibly forming part of a larger object	-	EMU_002722	SZ1
70635	Debris	430876	5971709	A2	7.5	1.2	0.2	-	Elongated object of unknown origin	-	EMU_002731	SZ1
70636	Dark Reflector	412313	5966484	A2	5.1	1.9	0.6	-	Possible boulder, with a thin, sinuous area of low reflectivity, possibly a rope/chain attached. Included by WA because of possible anthropogenic component.	-	EMU_002755	SZ1
70637	Debris	412355	5966612	A2	5.8	5.5	0.0	-	A curved area of lower reflectivity with narrow high reflectivity leading edge and some possible structure	-	EMU_002766	SZ1
70638	Debris	412512	5968091	A2	7.0	3.2	0.5	-	A large, smooth fronted object with some scour, irregular shadow and a strong linear reflector with minimal shadow. Possible anthropogenic debris	-	EMU_002780	SZ1
70639	Dark Reflector	431033	5972597	A2	2.4	1.2	0.0	-	Elongated object of unknown origin. Possibly geological. Included by WA due to elongated nature and uncertainty of Emu description.	-	EMU_002783	SZ1



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70640	Dark Reflector	412418	5966520	A2	9.0	1.0	0.2	-	Recorded as a boulder by Emu, no description provided. Size suggests it could be anthropogenic.	-	EMU_002793	SZ1
70641	Debris	412815	5969575	A2	7.7	6.2	0.3	-	A low, flat, squarish reflector with possible scour. Unknown origin	-	EMU_002808	SZ1
70642	Rope / Chain	431119	5968224	A2	6.2	0.1	0.0	-	Possible rope or chain	-	EMU_002810	SZ1
70643	Seafloor Disturbance	413384	5967296	A2	12.3	4.2	0.0	-	An isolated area of curved, parallel reflectors with no apparent cause. Unusual and possibly anthropogenic	-	EMU_002884	SZ1
70644	Debris	413657	5967420	A2	5.2	3.7	0.3	-	Anomaly of lower reflectivity, possible anthropogenic origin	-	EMU_002910	SZ1
70645	Debris	413765	5966358	A2	12.4	7.7	0.3	-	An area covered with parallel, linear reflectors with shadow. Surrounding seabed is entirely flat. Possible localised bed form area, but unlikely	-	EMU_002914	SZ1
70646	Debris	431196	5966450	A2	3.0	1.9	1.2	-	Angular object of unknown origin. Possible piece of debris	-	EMU_002915	SZ1
70647	Debris	413871	5966184	A2	4.2	0.5	0.5	-	A straight, thin, high reflectivity contact of constant width with straight, well defined shadow	-	EMU_002925	SZ1
70648	Debris	413921	5966027	A2	3.7	0.8	0.1	-	A straight edged, flat topped contact with minimal shadow	-	EMU_002926	SZ1
70649	Debris	414219	5966306	A2	2.8	0.6	0.6	-	A small, contained high reflectivity, narrow, linear object in the midst of an area of seabed disturbance and undulation	-	EMU_002936	SZ1
70650	Seafloor Disturbance	415820	5966911	A2	5.5	11.5	0.0	-	A series of 3 parallel areas of high reflectivity with possible shadow. Parallel to local sediment waves	-	EMU_002968	SZ1



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70651	Seafloor Disturbance	416809	5966175	A2	9.6	5.9	0.0	-	A subtle, strongly square shaped area of slightly lower reflectivity. Shape suggests anthropogenic origin	-	EMU_002986	SZ1
70652	Debris	418367	5966615	A2	2.5	3.3	0.8	-	A curved frontage, flat area with varied reflectivity and symmetrical shadow	-	EMU_003014	SZ1
70653	Debris	418843	5967302	A2	3.4	0.9	0.3	1	Object identified in the sidescan sonar and associated with a magnetometer anomaly indicating it is of anthropogenic origin	-	EMU_003025	SZ1
70654	Debris	419079	5967231	A2	7.8	6.5	0.5	-	A large, flat, angular object with distinct shadow. A linear object - possible rope/chain with small scour extends away from the object to each side	-	EMU_003029	SZ1
70655	Dark Reflector	419081	5967249	A2	2.4	1.0	0.2	-	Possible boulder but within 50m of debris object. Included b WA due to proximity to debris.	-	EMU_003030	SZ1
70656	Debris	419340	5966971	A2	4.0	1.3	0.1	1	Linear feature with an associated magnetometer anomaly likely to be a cable	-	EMU_003037	SZ1
70657	Debris	418021	5966825	A2	3.6	3.6	0.0	-	A small triangular area of uniform low reflectivity and no apparent shadow casting reflector	-	EMU_003046	SZ1
70658	Dark Reflector	431297	5971577	A2	2.4	0.8	0.4	-	One of two objects, possible boulders or pieces of debris. Recorded as a boulder by Emu, included by WA due to uncertainty of description.	-	EMU_003048	SZ1



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70659	Dark Reflector	431296	5971574	A2	3.6	1.3	0.3	-	One of two objects, possible boulders or pieces of debris. Recorded as a boulder by Emu, included by WA due to uncertainty of description.	-	EMU_003049	SZ1
70660	Rope / Chain	431275	5972277	A2	63.1	0.1	0.0	-	Linear feature, possible rope	-	EMU_003050	SZ1
70661	Rope / Chain	431319	5968253	A2	99.6	0.1	0.0	-	Linear feature, possible rope	-	EMU_003063	SZ1
70662	Debris	431533	5970475	A2	9.0	5.9	0.0	-	Possible structure	-	EMU_003092	SZ1
70663	Seafloor Disturbance	431645	5966144	A2	24.9	9.8	0.0	-	Large patch of reflectors of unknown origin	-	EMU_003099	SZ1
70664	Seafloor Disturbance	431526	5967703	A2	7.1	5.6	0.5	-	Rounded anomaly possibly anthropogenic	-	EMU_003102	SZ1
70665	Dark Reflector	431600	5972700	A2	3.2	1.6	0.5	-	possible boulder of angular character,. Alternatively possible piece of debris. Recorded as boulder by Emu, included by WA due to uncertainty of description.	-	EMU_003103	SZ1
70666	Dark Reflector	431544	5974491	A2	5.9	3.4	0.6	-	Object with rope caught or attached to it. Likely boulder and rope. Included by WA due to anthropogenic component.	-	EMU_003119	SZ1
70667	Debris	431642	5974995	A2	7.9	3.5	0.0	-	Distinct angular reflector, possible structure	-	EMU_003140	SZ1
70668	Debris	431643	5974671	A2	5.3	3.1	0.0	-	Discrete anomaly of unknown origin, possibly anthropogenic	-	EMU_003141	SZ1
70669	Debris	431618	5974625	A2	6.2	2.0	0.0	-	Angular feature of unknown origin	-	EMU_003142	SZ1
70670	Seafloor Disturbance	431666	5972823	A2	5.7	2.6	0.0	-	Rectangular anomaly of unknown origin	-	EMU_003146	SZ1
70671	Debris	431834	5968810	A2	3.4	1.6	0.0	-	Two parallel reflectors of unknown origin	-	EMU_003161	SZ1
70672	Seafloor Disturbance	431841	5965980	A2	10.1	7.0	0.0	-	Recorded as seafloor disturbance by Emu, no description provided.	-	EMU_003164	SZ1
70673	Mound	432028	5965899	A2	8.5	6.1	0.0	-	Mound partially visible. anomaly on the edge of the water column	-	EMU_003184	SZ1



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70674	Seafloor Disturbance	431937	5966130	A2	12.0	10.7	0.0	-	Patch of unknown origin. A linear reflector and a seafloor disturbance	-	EMU_003185	SZ1
70675	Debris	431996	5966077	A2	4.7	1.3	0.0	-	Elongated feature of unknown origin. Possible piece of debris situated near a seabed disturbance	-	EMU_003186	SZ1
70676	Rope / Chain	432213	5968582	A2	9.1	0.1	0.0	-	Rope or chain	-	EMU_003197	SZ1
70677	Debris	432101	5973878	A2	2.6	0.7	0.4	-	Possible piece of debris	-	EMU_003203	SZ1
70678	Rope / Chain	432157	5973826	A2	11.6	0.1	0.0	-	Possible rope or chain	-	EMU_003217	SZ1
70679	Debris	432162	5972184	A2	3.9	3.7	1.0	-	Angular anomaly, possible piece of debris	-	EMU_003218	SZ1
70680	Debris	432180	5972085	A2	8.8	5.7	0.1	-	Centre point of site, elongated feature and smaller reflectors with in. Long linear outline/feature measures 5 x 1 m	-	EMU_003219	SZ1
70681	Debris	432341	5967674	A2	8.2	1.0	0.0	-	Elongated and curved reflector of unknown origin. Line of boulders, debris, cable or edge of a site	-	EMU_003220	SZ1
70682	Debris	432270	5966693	A2	6.7	1.3	0.6	-	Patch of small reflectors, possible debris or boulders	-	EMU_003222	SZ1
70683	Debris	432218	5965678	A2	12.5	5.2	0.5	-	Patch of small reflectors of unknown origin. possible piece of debris or boulders	-	EMU_003223	SZ1
70684	Seafloor Disturbance	432266	5966161	A2	30.8	12.4	0.0	-	Faint oval outline	-	EMU_003230	SZ1
70685	Debris	432421	5970520	A2	3.1	1.9	0.2	-	Angular anomaly of unknown origin. largest of a group of anomalies.	-	EMU_003232	SZ1
70686	Debris	432390	5972011	A2	3.6	2.4	0.0	-	Circular feature likely to be a piece of debris	-	EMU_003233	SZ1
70687	Debris	432550	5970865	A2	7.3	1.9	0.0	-	Elongated reflector of unknown origin	-	EMU_003246	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70688	Debris	432531	5970860	A2	3.5	1.8	0.3	-	One of two elongated reflectors of unknown origin and possible pieces of debris	-	EMU_003247	SZ1
70689	Debris	432501	5970005	A2	6.4	1.2	0.3	-	Elongated piece of debris, possible cable	-	EMU_003249	SZ1
70690	Rope / Chain	432637	5974275	A2	100.6	0.1	0.0	-	Possible rope or chain	-	EMU_003282	SZ1
70691	Seafloor Disturbance	432628	5973780	A2	26.1	16.1	0.0	-	Thin oval outline of unknown origin. Linear feature or outline of large object/site	-	EMU_003283	SZ1
70692	Seafloor Disturbance	432643	5971647	A2	10.6	2.7	0.0	-	Thin linear and oval outline of a feature of unknown origin. Possibly geological	-	EMU_003284	SZ1
70693	Debris	432674	5967955	A2	2.3	1.1	0.4	-	Distinct object of unknown origin	-	EMU_003288	SZ1
70694	Rope / Chain	432569	5973691	A2	74.2	0.1	0.0	-	Rope or chain	-	EMU_003292	SZ1
70695	Debris	432718	5974232	A2	4.3	1.7	0.0	-	Angular piece of debris or boulder. Anomaly with hardly any detail	-	EMU_003293	SZ1
70696	Rope / Chain	432676	5969285	A2	19.4	0.1	0.0	-	Possible rope or chain	-	EMU_003307	SZ1
70697	Rope / Chain	432785	5967556	A2	66.2	0.1	0.0	-	Possible rope or chain	-	EMU_003308	SZ1
70698	Dark Reflector	432767	5967553	A2	2.4	1.0	0.2	-	Piece of debris or boulder with linear feature (rope) associated with it. Recorded as boulder by Emu, included by WA due to possible anthropogenic component.	-	EMU_003309	SZ1
70699	Debris	432916	5965895	A2	2.3	1.5	0.6	-	Sharp edged, highly reflective object with stark shadow.	-	EMU_003333	SZ1
70700	Rope / Chain	433005	5972669	A2	17.0	0.1	0.0	-	Possible rope or cable producing a seabed disturbance	-	EMU_003342	SZ1
70701	Debris	433009	5974826	A2	3.7	2.0	0.0	-	Bright reflector with no visible object. Anomaly of unknown origin	-	EMU_003354	SZ1
70702	Debris	432945	5971678	A2	3.2	2.4	0.0	-	Linear feature, possible piece of debris	-	EMU_003356	SZ1





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70703	Debris	432980	5971226	A2	5.3	3.1	0.1	-	Outcrop or structure. Not enough detail to discern, parallel, narrow high reflectivity objects	-	EMU_003357	SZ1
70704	Debris	433220	5967995	A2	23.9	9.1	1.1	-	Suspected fishing gear	-	EMU_003367	SZ1
70705	Debris	433082	5972762	A2	8.4	14.0	0.0	-	Fishing gear suspended in the water column	-	EMU_003369	SZ1
70706	Debris	433195	5972810	A2	12.5	4.4	0.0	-	Angular anomaly of unknown origin, possibly fishing gear.	-	EMU_003370	SZ1
70707	Debris	433075	5972934	A2	8.8	3.3	0.0	-	Likely fishing gear in the water column	-	EMU_003371	SZ1
70708	Debris	433089	5973195	A2	17.9	1.0	0.0	-	Likely fishing gear	-	EMU_003372	SZ1
70709	Debris	433207	5973223	A2	21.5	5.6	0.0	-	Likely fishing gear	-	EMU_003373	SZ1
70710	Rope / Chain	433208	5974879	A2	81.2	0.0	0.0	-	Possible rope or chain	-	EMU_003374	SZ1
70711	Debris	433157	5967866	A2	15.9	5.1	0.1	-	Patch of small rounded objects, possible pieces of debris	-	EMU_003385	SZ1
70712	Mound	433174	5967818	A2	6.5	2.3	0.3	-	Patch of slight relief, possible mound	-	EMU_003386	SZ1
70713	Debris	433167	5974723	A2	5.9	2.2	0.3	-	Fairly low relief of this irregular object, possible piece of debris. Uncertain origin	-	EMU_003392	SZ1
70714	Debris	433250	5971286	A2	2.8	1.3	0.4	-	Angular object likely to be a piece of debris	-	EMU_003415	SZ1
70715	Debris	433231	5970679	A2	4.3	3.9	0.0	-	Possible piece of debris but unclear.	-	EMU_003416	SZ1
70716	Debris	433585	5975369	A2	4.4	3.4	0.4	-	Distinct and unusual anomaly likely to be anthropogenic and of archaeological interest	-	EMU_003443	SZ1
70717	Debris	433632	5975542	A2	10.2	0.0	0.0	-	Linear feature situated across a trawl scar	-	EMU_003444	SZ1
70718	Debris	433717	5968190	A2	3.0	2.0	0.7	-	Elongated and angular object possibly a piece of debris	-	EMU_003458	SZ1



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70719	Seafloor Disturbance	433827	5971169	A2	15.1	5.3	0.0	-	Three anomalies outlining an oval shape, possible anthropogenic origin	-	EMU_003476	SZ1
70720	Debris	433756	5974539	A2	10.5	6.9	0.6	-	Likely structure or piece of debris of unknown origin	-	EMU_003485	SZ1
70721	Rope / Chain	433955	5966348	A2	23.8	1.0	0.2	-	Linear feature, possible piece of cable, rope or fishing gear	-	EMU_003491	SZ1
70722	Debris	433988	5968540	A2	2.7	1.8	0.1	-	One of two distinct objects likely to represent pieces of debris.	-	EMU_003497	SZ1
70723	Debris	434002	5969674	A2	3.8	3.2	0.2	-	Large rounded anomaly of unknown origin. possible piece of debris	-	EMU_003499	SZ1
70724	Rope / Chain	433982	5974715	A2	87.3	0.0	0.0	-	Possible rope, chain or cable	-	EMU_003522	SZ1
70725	Debris	433952	5968583	A2	5.7	5.3	0.2	-	Patch of debris or boulders	-	EMU_003525	SZ1
70726	Debris	433984	5968543	A2	9.8	4.4	0.4	-	Patch of material , possible debris or boulders	-	EMU_003526	SZ1
70727	Debris	434143	5966155	A2	5.5	1.5	0.3	-	Elongated object possible piece of debris such a portion of cable	-	EMU_003529	SZ1
70728	Rope / Chain	434123	5965662	A2	56.9	0.7	0.0	-	Linear feature, possible rope, chain or cable	-	EMU_003530	SZ1
70729	Debris	434069	5965808	A2	4.7	1.1	0.3	-	thin and elongated reflector, possible piece of debris.	-	EMU_003540	SZ1
70730	Debris	434050	5965779	A2	16.6	1.6	0.0	-	Elongated reflector of possible anthropogenic origin	-	EMU_003541	SZ1
70731	Rope / Chain	434174	5972608	A2	13.2	0.7	0.0	-	Linear feature, probably a rope, cable or chain	-	EMU_003549	SZ1
70732	Debris	434392	5969685	A2	2.0	1.7	0.6	-	Possible piece of debris	-	EMU_003563	SZ1
70733	Debris	434246	5966495	A2	6.1	4.7	0.0	-	Thin reflector forming an angular outline of a possible structure	-	EMU_003572	SZ1
70734	Rope / Chain	434289	5966283	A2	60.3	0.0	0.0	-	Rope or chain	-	EMU_003573	SZ1
70735	Dark Reflector	434483	5969341	A2	3.2	2.3	0.5	-	Large object or patch of objects likely tot be boulders	-	EMU_003591	SZ1



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70736	Debris	434721	5968117	A2	3.6	2.1	0.1	-	Faint angular reflector, possible piece of debris	-	EMU_003621	SZ1
70737	Debris	434733	5965431	A2	11.6	4.8	0.3	-	Series of small reflectors with height aligned and forming a curved outline. Possible linear feature or underlying structure	-	EMU_003623	SZ1
70738	Debris	434831	5971741	A2	9.5	4.0	0.3	-	Almost rectangular shaped anomaly possibly representing a wreck structure or large piece of debris	-	EMU_003632	SZ1
70739	Debris	434762	5972575	A2	10.8	7.4	0.4	-	Anomaly formed by angular reflectors. anomaly of unknown origin but possibly debris	-	EMU_003645	SZ1
70740	Rope / Chain	434721	5973587	A2	20.2	0.0	0.0	-	Rope or chain	-	EMU_003647	SZ1
70741	Debris	434762	5974594	A2	11.1	1.8	0.2	19	Elongated and rectangular shaped anomaly with associated magnetometer anomaly. Possible piece of debris	-	EMU_003648	SZ1
70742	Debris	434862	5970811	A2	4.2	2.4	0.0	-	Oval reflector of unknown origin	-	EMU_003670	SZ1
70743	Debris	434856	5970138	A2	3.0	2.2	0.0	-	Angular object likely to be a piece of debris	-	EMU_003671	SZ1
70744	Debris	434855	5970127	A2	2.5	0.5	0.1	-	Elongated object likely to be a piece of debris. It lies approximately 9m away from another piece of debris	-	EMU_003672	SZ1
70745	Rope / Chain	434868	5969849	A2	41.8	0.0	0.0	-	Rope or chain	-	EMU_003674	SZ1
70746	Debris	437281	5969202	A2	3.8	0.9	0.2	-	Straight reflector with shadow and scour, potentially of anthropogenic origin	-	EMU_003728	SZ1
70747	Debris	437260	5967802	A2	3.4	0.6	0.1	-	Straight, hard reflector; potentially of anthropogenic origin	-	EMU_003730	SZ1
70748	Debris	437266	5966209	A2	3.3	0.5	0.0	-	Angular reflector, potentially indicative of anthropogenic debris	-	EMU_003733	SZ1



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70749	Debris	437288	5965709	A2	3.4	0.4	0.7	-	Hard, straight reflector with pronounced shadow, potentially of anthropogenic origin	-	EMU_003734	SZ1
70750	Dark Reflector	437525	5965355	A2	6.3	0.8	0.3	-	Straight, hard reflector with pronounced shadow and smaller reflector within the shadow. Potentially anthropogenic debris. Recorded as boulder by Emu but described as debris.	-	EMU_003741	SZ1
70751	Debris	437504	5973668	A2	2.5	0.3	0.1	-	Two parallel reflectors with associated shadow, unusual in surrounding seabed. Potentially of anthropogenic origin	-	EMU_003755	SZ1
70752	Debris	437466	5977370	A2	4.7	7.6	0.2	-	Potential anthropogenic debris - pear-shaped reflector with associated shadow	-	EMU_003768	SZ1
70753	Debris	437491	5977152	A2	27.1	0.1	0.0	-	Linear feature with sections of reflectivity. Potentially of anthropogenic origin	-	EMU_003782	SZ1
70754	Debris	437495	5974589	A2	4.3	0.5	0.2	-	Curvilinear reflector potentially of anthropogenic origin	-	EMU_003784	SZ1
70755	Debris	437460	5974329	A2	3.8	0.4	0.1	-	Irregular reflector with some shadow, potentially anthropogenic debris	-	EMU_003785	SZ1
70756	Mound	437573	5973696	A2	3.5	3.5	0.4	-	Object almost blending with surrounding: mound or object with growth on	-	EMU_003815	SZ1
70757	Debris	437545	5970864	A2	3.1	1.2	0.3	-	Two small objects with attendant reflectors suggesting debris. Circular overall appearance.	-	EMU_003821	SZ1
70758	Debris	437598	5969323	A2	2.8	2.2	0.9	-	Distinct, angular object of unknown origin. Probably a piece of debris	-	EMU_003823	SZ1
70759	Debris	437749	5967618	A2	3.2	2.2	0.4	-	Angular object and possible piece of debris	-	EMU_003834	SZ1



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70760	Debris	437690	5967188	A2	2.4	1.6	0.2	-	Rounded object, possible piece of debris	-	EMU_003835	SZ1
70761	Debris	437656	5966265	A2	2.4	1.2	0.7	-	Possible piece of debris amongst small boulders	-	EMU_003839	SZ1
70762	Debris	437667	5966284	A2	2.4	0.9	0.3	-	Possible piece of debris	-	EMU_003841	SZ1
70763	Debris	440910	5979051	A2	5.1	2.0	0.8	-	Anomaly recorded as debris by EMU, no description provided.	-	EMU_003844	SZ1
70764	Debris	437644	5968256	A2	18.5	0.5	0.0	-	Intermittent linear feature of unknown origin. Possibly cable	-	EMU_003870	SZ1
70765	Debris	437922	5971998	A2	3.0	1.7	0.4	-	Small object with a distinct angular shadow. Possible piece of debris	-	EMU_003898	SZ1
70766	Mound	437772	5965309	A2	9.2	3.2	0.4	-	Distinct elongated mound situated across sand ripples. Likely to represent an object of anthropogenic origin and possible archaeological interest.	-	EMU_003913	SZ1
70767	Debris	435068	5967113	A2	4.1	0.6	0.5	-	Elongated object, possible piece of debris	-	EMU_003927	SZ1
70768	Debris	435294	5974139	A2	5.5	3.4	0.0	-	Angular anomaly and possibly a piece of debris	-	EMU_003938	SZ1
70769	Debris	435262	5971423	A2	2.7	1.5	0.2	-	Anomaly recorded as debris by EMU, no description provided.	-	EMU_003946	SZ1
70770	Debris	435161	5969459	A2	3.1	2.9	0.1	-	Two elongated objects arranged perpendicular manner suggest these may be pieces of debris	-	EMU_003951	SZ1
70771	Debris	435311	5970697	A2	4.7	2.3	0.3	-	Thin outlines suggest the presence of an angular piece of debris	-	EMU_003978	SZ1
70772	Debris	435346	5969621	A2	2.0	1.5	0.0	-	Round object of unknown origin and likely to be anthropogenic material	-	EMU_003992	SZ1



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70773	Dark Reflector	435489	5971668	A2	2.4	1.2	0.4	-	Possible boulder. linear feature is attached/caught no it. May be the anomaly is part of it. Not clear. Recorded as boulder by Emu, included by WA due to possible anthropogenic component.	-	EMU_004009	SZ1
70774	Debris	435715	5966606	A2	9.0	4.4	0.3	-	Elongated anomaly with a point of height and surrounded by other smaller anomalies. Possible structure and surrounding debris. Alternatively patch of boulders	-	EMU_004023	SZ1
70775	Debris	435752	5966693	A2	15.5	2.6	0.3	-	Elongated anomaly with multiple points of height. Unknown origin but possible piece of debris. Alternatively series of boulders	-	EMU_004024	SZ1
70776	Debris	435604	5973651	A2	3.4	1.8	0.2	-	Angular anomaly of unknown origin and possible piece of debris	-	EMU_004038	SZ1
70777	Debris	435679	5969261	A2	4.3	1.9	0.2	-	An elongated and angular anomaly forming right angles may represent a structure or piece of debris	-	EMU_004059	SZ1
70778	Debris	435888	5974356	A2	2.6	1.2	1.0	-	Thin and elongated object may represent a piece of debris	-	EMU_004068	SZ1
70779	Debris	435889	5972752	A2	2.5	0.7	0.3	-	Angular reflector possibly associated to a linear feature	-	EMU_004070	SZ1
70780	Debris	435803	5969241	A2	3.9	2.1	0.4	-	Possible piece of debris	-	EMU_004074	SZ1
70781	Seafloor Disturbance	435770	5968363	A2	9.6	7.0	0.0	-	Area of seabed with parallel reflectors. Slightly different from surrounding seabed. possible debris	-	EMU_004077	SZ1
70782	Debris	435934	5969777	A2	2.2	1.1	0.0	-	Angular anomaly; possible piece of debris	-	EMU_004090	SZ1
70783	Debris	436154	5966995	A2	2.4	2.4	0.0	-	Angular object, possible piece of debris	-	EMU_004150	SZ1



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70784	Debris	436290	5967166	A2	7.0	1.3	0.9	-	thin and curved anomaly likely to be a piece of cable/chain/fishing gear.	-	EMU_004151	SZ1
70785	Debris	436424	5974428	A2	7.5	6.7	0.4	-	Patch of material of unknown origin. possible debris or boulders	-	EMU_004207	SZ1
70786	Debris	436472	5975917	A2	7.0	5.8	0.3	-	Mix of reflectors form a patch of material of unknown origin. Likely debris	-	EMU_004211	SZ1
70787	Debris	436480	5975929	A2	3.4	0.8	0.5	-	Distinct oval anomaly of unknown origin but lying amongst other reflectors likely to represent pieces of debris. Area measures 9 m NS x 14m E-W	-	EMU_004212	SZ1
70788	Debris	436456	5974610	A2	3.8	1.5	0.0	-	Angular object of unknown origin and possible piece of debris.	-	EMU_004238	SZ1
70789	Debris	436561	5976991	A2	4.9	2.9	0.3	-	Distinct irregular anomaly of low relief and texture. Possible piece of debris	-	EMU_004246	SZ1
70790	Debris	436679	5969125	A2	6.9	1.5	0.4	-	Possible structure or large boulder. Included by WA as classified as debris by Emu.	-	EMU_004291	SZ1
70791	Debris	436775	5976290	A2	6.0	3.1	0.5	-	The anomaly is almost like a mound but the object is partially exposed with distinct angular edge and height. possible piece of debris.	-	EMU_004323	SZ1
70792	Debris	436746	5975276	A2	8.7	4.0	0.6	-	Distinct anomaly of unknown origin. possible piece of debris	-	EMU_004326	SZ1
70793	Mound	436902	5975170	A2	5.2	3.3	0.4	-	Low relief object with no detail other than it is shadow. Object of unknown origin	-	EMU_004327	SZ1



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70794	Debris	436826	5973625	A2	6.9	2.5	0.6	-	Unusual anomaly rectangular in shape and little detail. Low relief and appears almost buried. The object may be larger than what's visible	-	EMU_004332	SZ1
70795	Debris	436822	5973040	A2	14.2	0.8	0.4	-	Series of small anomalies aligned. Possible exposed cable	-	EMU_004333	SZ1
70796	Debris	436973	5966152	A2	7.6	4.5	0.5	-	'V' shaped reflector of 2 converging, high reflectivity, linear objects with stark heights. Some scour.	-	EMU_004361	SZ1
70797	Debris	436971	5966964	A2	7.2	1.9	0.3	-	Broad and long anomaly likely to be a structure	-	EMU_004370	SZ1
70798	Debris	436869	5968793	A2	14.9	11.3	0.4	-	Isolated patch of mottled, higher reflectivity, possibly coarser material. Some areas of lower reflectivity suggest variation in the material.	-	EMU_004376	SZ1
70799	Debris	436916	5972735	A2	6.2	4.4	0.9	-	Oval shaped reflector formed by a thin edge with height. Possible piece of debris or structure	-	EMU_004385	SZ1
70800	Debris	437006	5974818	A2	6.4	3.0	0.2	-	A linear, high reflectivity contact with stark shadow. Shadow suggests upright section at one end	-	EMU_004389	SZ1
70801	Seafloor Disturbance	437098	5975986	A2	9.8	3.7	0.1	-	Triangular shaped area with a hard reflector at one end. Possibly geological. Description of irregular shape suggests possible anthropogenic origin.	-	EMU_004410	SZ1
70802	Debris	437097	5971637	A2	3.5	1.7	0.5	-	Distinctly segmented object with very high, solid reflectivity and angular shadow	-	EMU_004422	SZ1





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70803	Debris	437006	5971493	A2	2.2	2.0	0.3	-	Distinct anomaly, square shaped with higher reflectivity edge and sharp right angle	-	EMU_004423	SZ1
70804	Debris	436965	5970489	A2	2.1	1.2	0.4	-	Smallest of two reflectors possible pieces of debris	-	EMU_004425	SZ1
70805	Debris	436969	5970487	A2	9.5	4.2	0.0	-	Elongated reflector with strong thin edge and a separate anomaly likely to be associated	-	EMU_004426	SZ1
70806	Debris	437101	5967484	A2	2.8	1.6	0.4	-	Possible piece of debris.	-	EMU_004437	SZ1
70807	Debris	437226	5966186	A2	6.9	0.7	0.4	-	Piece of linear debris, possible cable	-	EMU_004445	SZ1
70808	Debris	437242	5967202	A2	1.4	5.8	0.1	-	Linear/elongated feature of unknown origin. Possible piece of debris	-	EMU_004448	SZ1
70809	Debris	437098	5967661	A2	2.9	1.8	0.1	-	Anomaly showing a right angle, possibly indicative of a possible piece of debris	-	EMU_004449	SZ1
70810	Debris	437095	5967592	A2	40.1	0.1	0.0	-	Linear feature, potentially anthropogenic in origin but likely modern	-	EMU_004450	SZ1
70811	Rope / Chain	437204	5967898	A2	33.5	0.1	0.0	-	Two linear features forming a V shape on the seabed, potentially rope/chain	-	EMU_004451	SZ1
70812	Debris	437197	5970009	A2	4.1	0.6	0.3	-	Straight but intermittent reflector, potentially indicative of anthropogenic debris	-	EMU_004461	SZ1
70813	Debris	437072	5971355	A2	4.7	1.3	0.2	-	Potential anthropogenic debris; irregular angular reflectors with pronounced shadows	-	EMU_004463	SZ1
70814	Debris	437063	5974194	A2	3.3	0.8	0.0	-	Straight reflector with no discernible shadow. Potentially anthropogenic debris	-	EMU_004468	SZ1



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70815	Debris	437065	5975559	A2	3.1	2.1	0.9	-	Potential anthropogenic debris: hard, angular reflector with pronounced shadow.	-	EMU_004476	SZ1
70816	Debris	437230	5976677	A2	4.4	1.0	0.1	-	Straight reflector; evidence of scour but little discernable height. Potentially of anthropogenic origin	-	EMU_004482	SZ1
70817	Debris	437235	5976675	A2	2.6	1.7	0.0	-	Angular reflector, potentially in association with 5889 and of anthropogenic origin	-	EMU_004483	SZ1
70818	Debris	437199	5977166	A2	4.2	0.5	0.4	-	Potential anthropogenic debris; long straight reflector with irregular shadow	-	EMU_004484	SZ1
70819	Debris	437361	5970003	A2	4.4	0.6	0.0	-	Straight, high reflectivity object.	-	EMU_004506	SZ1
70820	Debris	437251	5972038	A2	3.2	0.7	0.0	-	Straight but irregularly-shaped reflector; potentially of anthropogenic origin	-	EMU_004512	SZ1
70821	Dark Reflector	437255	5974784	A2	6.6	0.8	0.4	-	Straight, soft reflector with associated shadow; potentially of anthropogenic origin. Possible boulder. Recorded as a boulder by Emu but described as debris.	-	EMU_004558	SZ1
70822	Debris	440896	5975781	A2	5.4	2.1	0.7	-	Potential anthropogenic debris, irregular reflection and pronounced shadow	-	EMU_004567	SZ1
70823	Debris	440864	5972945	A2	10.0	1.0	0.1	-	Potential anthropogenic debris, irregular and angular linear reflection	-	EMU_004568	SZ1
70824	Debris	440930	5964771	A2	4.4	0.5	0.3	-	Linear feature of hard reflectivity, potentially of anthropogenic origin	-	EMU_004573	SZ1
70825	Debris	441050	5965337	A2	5.2	4.1	1.2	-	Potential anthropogenic debris, potential partially buried due to low reflectivity	-	EMU_004574	SZ1



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70826	Dark Reflector	440947	5967156	A2	8.4	2.9	0.1	-	Two parallel reflective features, no discernable height. Possible boulder, reef or geological outcrop. Recorded as boulder by Emu, but size suggests it could be anthropogenic.	-	EMU_004575	SZ1
70827	Debris	440963	5971812	A2	3.2	0.6	0.2	-	Hard reflector with pronounced shadow.	-	EMU_004576	SZ1
70828	Debris	441155	5974850	A2	8.2	0.6	0.1	-	Potential anthropogenic debris, soft 'figure of 8' reflector with no discernable height	-	EMU_004578	SZ1
70829	Debris	441088	5975407	A2	5.8	1.0	0.3	-	Linear reflector with pronounced shadow of potential anthropogenic origin	-	EMU_004580	SZ1
70830	Dark Reflector	440940	5976225	A2	9.5	1.2	0.5	-	Recorded as a boulder by Emu, no description provided. Size suggests it could be anthropogenic.	-	EMU_004581	SZ1
70831	Seafloor Disturbance	441162	5967841	A2	9.0	4.7	0.0	-	Area of seabed disturbance with several points of high reflectivity. Potentially representing anthropogenic debris	-	EMU_004592	SZ1
70832	Seafloor Disturbance	441228	5968308	A2	7.9	4.4	0.0	-	Area of seabed disturbance breaking sediment pattern. Possible anthropogenic debris	-	EMU_004600	SZ1
70833	Debris	441321	5976795	A1	2.3	0.6	0.5	-	Potential debris associated with wreck	-	EMU_004604	SZ1
70834	Seafloor Disturbance	441404	5965086	A2	7.1	2.7	0.0	-	Area of seabed disturbance, potentially representing anthropogenic debris	-	EMU_004608	SZ1
70835	Mound	441368	5976895	A2	8.6	6.3	0.0	-	Mound of unknown origin. Potentially representing anthropogenic debris	-	EMU_004619	SZ1



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70836	Debris	443557	5971019	A2	4.4	0.4	0.1	-	Potential anthropogenic debris, irregular reflector with pronounced scour	-	EMU_004634	SZ1
70837	Debris	443588	5973639	A2	2.0	0.7	0.2	-	Potential anthropogenic debris, angular reflector	-	EMU_004636	SZ1
70838	Wreck	443544	5966583	A1	29.5	8.7	0.9	-	Two elongated reflectors with a group of right-angular reflectors at one end suggest this may be a wreck structure, broken up and partially buried. Some localised scour. Likely to be a wreck site, though no wreck is previously recorded in this area.	-	EMU_004643	SZ1
70839	Seafloor Disturbance	443668	5966950	A2	6.6	3.9	0.0	-	Area of seabed disturbance with a series of small reflectors, potentially representing anthropogenic debris	-	EMU_004644	SZ1
70840	Debris	443943	5971268	A2	7.1	4.7	0.0	-	Potential anthropogenic debris, unusual and broadly geometric reflector	-	EMU_004662	SZ1
70841	Debris	443919	5969198	A2	3.5	0.7	0.4	-	Potential anthropogenic debris, hard straight reflector with pronounced shadow	-	EMU_004665	SZ1
70842	Debris	443890	5966606	A2	2.9	0.8	0.2	-	Potential anthropogenic debris, linear reflector with pronounced shadow	-	EMU_004667	SZ1
70843	Debris	444501	5967068	A2	7.5	0.8	0.0	-	Potential anthropogenic debris, cross track linear reflector	-	EMU_004684	SZ1
70844	Debris	445137	5971359	A2	4.7	1.1	0.5	-	Elongated sidescan sonar anomaly with associated magnetometer anomaly suggesting this is a piece of debris	-	EMU_004719	SZ1
70845	Seafloor Disturbance	445345	5967340	A2	23.2	18.9	0.5	-	Unusual shape on the seabed. Unknown origin	-	EMU_004726	SZ1



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70846	Debris	445741	5971112	A2	2.4	1.3	0.4	-	Small sidescan sonar anomaly with associated magnetometer anomaly suggesting this is a piece of debris or there is one in the vicinity	-	EMU_004741	SZ1
70847	Debris	441823	5966188	A2	3.6	0.6	0.1	-	Potential anthropogenic debris, irregular reflector	-	EMU_004748	SZ1
70848	Debris	441826	5967349	A2	3.3	1.4	0.3	-	Potential anthropogenic debris, curvilinear reflector with shadow	-	EMU_004751	SZ1
70849	Debris	441826	5967367	A2	4.8	0.7	0.1	-	Potential anthropogenic debris, curvilinear reflector	-	EMU_004752	SZ1
70850	Debris	441820	5968067	A2	6.0	3.0	0.5	-	Potential anthropogenic debris, linear reflectors with pronounced shadow. Two angular, offset reflectors with significant shadow are apparent	-	EMU_004754	SZ1
70851	Debris	441833	5971071	A2	5.5	8.9	0.4	-	Potential anthropogenic debris, irregular soft reflector	-	EMU_004770	SZ1
70852	Debris	441882	5969570	A2	6.2	2.4	0.5	-	Potential anthropogenic debris	-	EMU_004772	SZ1
70853	Debris	441860	5967264	A2	6.0	4.2	0.9	-	A large, soft-edged angular reflector, pronounced shadow, could represent a partially buried feature. Possible flat topped signature	-	EMU_004773	SZ1
70854	Debris	442222	5966509	A2	3.5	2.4	0.1	-	Potential anthropogenic debris, angular reflector with no discernable height	-	EMU_004780	SZ1
70855	Debris	442196	5974818	A2	20.7	3.8	0.3	-	Distinct patch of reflectors, possibly representing a patch of debris	-	EMU_004783	SZ1
70856	Debris	443521	5968766	A2	4.0	0.6	0.7	-	Area of slightly raised reflectivity and pronounced, globular shadow. Height is significant	-	EMU_004813	SZ1



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70857	Debris	442880	5972160	A2	4.8	0.7	0.4	-	A long, narrow curvilinear reflector with irregular shadow. Intersects local sediment waves	-	EMU_004839	SZ1
70858	Debris	443222	5964499	A2	4.3	0.7	0.1	-	Potential anthropogenic debris	-	EMU_004851	SZ1
70859	Debris	444611	5964670	A2	3.1	2.9	0.3	-	Two parallel reflectors with shadow between, describing a square shape overall	-	EMU_004860	SZ1
70860	Rope / Chain	441380	5967620	A2	8.2	0.5	0.3	-	Linear feature, likely modern debris, possibly chain or rope	-	EMU_004870	SZ1
70861	Debris	445960	5967179	A2	3.0	0.6	0.1	-	Isolated possible boulder.	-	EMU_004893	SZ1
70862	Debris	445962	5970610	A2	4.8	0.8	0.3	-	Potential anthropogenic debris, narrow, angular reflector with pronounced shadow	-	EMU_004896	SZ1
70863	Debris	444706	5968036	A2	4.0	5.7	0.1	-	Irregular area of reflectivity, potentially of anthropogenic origin	-	EMU_004914	SZ1
70864	Debris	446559	5965821	A2	5.5	1.2	0.3	-	Potential area of reflectivity suggesting anthropogenic debris	-	EMU_004927	SZ1
70865	Debris	442590	5968970	A2	6.4	4.3	0.5	-	One straight and one irregular reflector, potentially of anthropogenic origin	-	EMU_004958	SZ1
70866	Debris	442609	5969161	A2	3.8	0.7	0.3	-	Two parallel linear reflectors with shadow	-	EMU_004959	SZ1
70867	Debris	442635	5970502	A2	2.8	0.2	0.5	-	Isolated strong, angular reflector	-	EMU_004966	SZ1
70868	Debris	442673	5968709	A2	3.7	2.6	0.0	-	Curved area of mottled reflectivity without shadow	-	EMU_004968	SZ1
70869	Debris	444300	5966981	A2	5.5	0.1	0.0	-	Isolated straight feature with height, potentially of anthropogenic origin	-	EMU_004982	SZ1
70870	Debris	444406	5969511	A2	4.9	5.7	0.5	-	Possible debris field, no individual contact larger than 2m	-	EMU_004984	SZ1
70871	Debris	442799	5972764	A2	4.4	0.2	0.1	-	Very straight, elongate reflector with shadow. Possible pole/mast.	-	EMU_004989	SZ1



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70872	Rope / Chain	442659	5972101	A2	7.2	0.3	0.0	-	Straight reflector with little height, potentially anthropogenic debris, likely chain/rope	-	EMU_004990	SZ1
70873	Debris	442790	5972105	A2	9.2	3.5	0.0	-	Potential debris field	-	EMU_004991	SZ1
70874	Mound	445737	5969776	A2	12.6	1.9	0.6	-	Isolated mound, curved edge may suggest it's an anthropogenic site	-	EMU_005006	SZ1
70875	Debris	446506	5966502	A2	2.1	0.8	1.3	-	Small angular anomaly with disproportionate height compared to its other dimensions	-	EMU_005053	SZ1
70876	Debris	446991	5965024	A2	2.1	0.8	0.3	-	Potential anthropogenic debris, distance between reflector and shadow may indicate a boxy construction	-	EMU_005073	SZ1
70877	Debris	443975	5973685	A2	4.7	0.7	0.4	-	Strong, elongate reflector with pronounced shadow	-	EMU_005170	SZ1
70878	Mound	440972	5972106	A2	4.2	3.5	0.0	-	Mound shaped object described by shadow	-	EMU_005173	SZ1
70879	Debris	442677	5968675	A2	4.6	0.4	0.0	-	Curvilinear, high reflectivity contact	-	EMU_005177	SZ1
70880	Debris	441594	5967774	A2	3.2	1.0	0.3	-	Two reflectors, one curvilinear in shape with pronounced shadow, the other angular.	-	EMU_005180	SZ1
70881	Dark Reflector	441948	5971138	A2	2.6	1.2	1.0	-	Sidescan sonar anomaly with associated magnetometer anomaly suggests this is a piece of debris or one lies in close proximity. Recorded as boulder by Emu, but described as debris.	-	EMU_005205	SZ1
70882	Debris	441950	5977451	A2	18.4	3.0	0.3	-	Elongated patch of reflectors of unknown origin identified in a featureless seabed. Possible piece of debris	-	EMU_005213	SZ1
70883	Debris	442362	5964893	A2	3.8	1.8	0.6	-	Strong, irregular reflector with pronounced shadow	-	EMU_005223	SZ1



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70884	Debris	443223	5974652	A2	6.4	4.0	0.8	-	Debris or object casting a shadow. Dark area of reflectivity in surrounding seabed	-	EMU_005246	SZ1
70885	Debris	440798	5978064	A2	2.5	1.0	0.2	-	Small, high reflectivity object with sharp, angular aspect.	-	EMU_005274	SZ1
70886	Debris	440678	5975782	A2	5.1	0.8	0.5	-	Recorded as debris by Emu, no description provided	-	EMU_005278	SZ1
70887	Debris	440617	5978964	A2	2.2	0.5	0.9	-	Displays an exceptional apparent height to length ratio and square shape	-	EMU_005335	SZ1
70888	Dark Reflector	440462	5978592	A2	2.5	0.5	0.2	-	Curved reflector of unknown origin. Possible piece of debris. Recorded as boulder by Emu, described as debris.	-	EMU_005364	SZ1
70889	Debris	440499	5976187	A2	5.4	0.3	0.4	-	Unusual, thin, shadow-casting object. Could also be object of high reflectivity (non-sedimentary)	-	EMU_005387	SZ1
70890	Debris	440259	5971935	A2	2.4	0.5	0.1	1	Segmented object with several small, distinct, parallel reflectors. Possible rib like structure	-	EMU_005401	SZ1
70891	Debris	440268	5973152	A2	4.3	0.1	1.3	-	Square-shaped object with surrounding mottled reflectivity suggesting a debris field around a central body	-	EMU_005426	SZ1
70892	Debris	440344	5970442	A2	3.7	0.7	0.1	-	Elongated mound with associated magnetometer anomaly suggesting this may represent a man-made structure	-	EMU_005437	SZ1
70893	Debris	440155	5970081	A2	4.0	1.1	0.4	-	One high-reflectivity shadow-casting object with two adjacent high-reflectivity shadow less objects	-	EMU_005438	SZ1





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70894	Debris	440132	5968024	A2	5.5	0.8	0.1	-	Anthropogenic debris? Angular features and distinct shadow zones suggesting prominent features at N and S extremities of contact	-	EMU_005444	SZ1
70895	Debris	440332	5967548	A2	3.4	0.7	0.4	-	Parallel features of high reflectivity separated by a very straight shadow	-	EMU_005445	SZ1
70896	Debris	440220	5977972	A2	3.5	2.0	0.7	-	Angular area of reflectivity with angles and bright shadow.	-	EMU_005491	SZ1
70897	Dark Reflector	440197	5978117	A2	9.0	0.3	0.3	-	Boulder field. Recorded as boulder by Emu, large dimensions suggest possibly anthropogenic.	-	EMU_005492	SZ1
70898	Debris	440228	5978408	A2	3.9	0.8	0.4	-	Two parallel lines of high reflectivity, connected to a larger object at one end, with strong shadows especially at the southern end	-	EMU_005494	SZ1
70899	Debris	439888	5978143	A2	4.5	4.6	0.6	-	Three angular, en echelon objects with significant height, and surrounding mottled area	-	EMU_005530	SZ1
70900	Debris	439976	5977748	A2	2.2	1.6	0.3	-	Small rectangular reflector with angular shadow	-	EMU_005532	SZ1
70901	Mound	439996	5977746	A2	4.1	3.4	0.0	-	Faint reflector with defined angular shadow	-	EMU_005533	SZ1
70902	Debris	439872	5969476	A2	3.0	0.4	0.3	-	Strong reflector with linear feature attached - although this could be distortion	-	EMU_005540	SZ1
70903	Debris	439847	5966091	A2	2.6	0.6	0.1	-	Reflector with right-angles suggesting possible debris	-	EMU_005545	SZ1
70904	Debris	439667	5964748	A2	5.6	0.4	0.3	-	Curvilinear feature with clearly defined shadows of differential length	-	EMU_005581	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70905	Debris	439647	5968593	A2	6.5	0.8	0.2	-	Object of unknown origin. Possible piece of debris	-	EMU_005584	SZ1
70906	Debris	439632	5972963	A2	2.3	1.1	0.1	-	Sidescan sonar anomaly with associated magnetometer anomaly suggesting this is piece of debris or there is one in close proximity	-	EMU_005591	SZ1
70907	Debris	439686	5972268	A2	4.3	0.5	0.3	-	Curvilinear object of significant size. Partially shadow casting	-	EMU_005604	SZ1
70908	Debris	439695	5972116	A2	3.7	0.8	0.2	-	Semi-circular reflector with crescent-shaped shadow	-	EMU_005605	SZ1
70909	Debris	439830	5968625	A2	4.2	1.0	0.4	-	Strong reflector - with even curves either side - and an angular shadow	-	EMU_005614	SZ1
70910	Debris	439716	5968309	A2	4.4	0.8	0.4	-	Strong reflector with inconsistent shadow suggesting material of anthropogenic origin	-	EMU_005629	SZ1
70911	Debris	439556	5974909	A2	2.6	1.7	0.4	-	Angular object with prominent, angular shadow	-	EMU_005636	SZ1
70912	Debris	439460	5966286	A2	2.7	0.3	0.0	-	Strong, linear reflector with minimal shadow. Possible debris	-	EMU_005665	SZ1
70913	Debris	439489	5964959	A2	2.5	0.1	0.1	-	Linear reflector with even shadow. Possible debris	-	EMU_005672	SZ1
70914	Seafloor Disturbance	439382	5977252	A2	6.7	8.8	0.0	-	A strong shadow zone with no apparent reflective edges. unclear origin	-	EMU_005681	SZ1
70915	Debris	439385	5966463	A2	4.8	0.3	0.1	-	Linear feature of equal width along its length with parallel, contiguous shadow zone. Possible pole/mast	-	EMU_005712	SZ1
70916	Debris	439422	5966844	A2	3.1	0.8	0.1	-	Linear feature with parallel straight edges (along longest sides) and indented edges (shorter sides). Possibly anthropogenic debris	-	EMU_005713	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70917	Debris	439422	5966851	A2	8.6	5.2	0.1	-	Several strong reflectors linked to a distorted series of reflectors and shadows. Possibly debris	-	EMU_005714	SZ1
70918	Debris	439306	5975965	A2	11.2	8.4	0.5	-	A series of reflectors possibly either debris or boulder in origin	-	EMU_005734	SZ1
70919	Debris	439216	5965892	A2	5.0	0.2	0.2	-	Very linear shadow with a narrow reflector suggesting some form of linear debris	-	EMU_005742	SZ1
70920	Debris	439235	5965342	A2	3.6	0.3	0.1	-	Linear feature with slight curve at one end. Strong reflector with visible shadow zone	-	EMU_005767	SZ1
70921	Debris	439122	5967613	A2	8.0	0.0	0.0	-	Linear feature with prominent curves, reflectors and shadow running its entire length	-	EMU_005811	SZ1
70922	Mound	439008	5977132	A2	5.5	5.4	0.0	-	Large object comprising a strong reflector, several unevenly-shaped shadows and some coarser material	-	EMU_005835	SZ1
70923	Debris	438928	5973885	A2	3.5	0.4	0.2	-	Strong, peculiarly-shaped reflector with shadow.	-	EMU_005907	SZ1
70924	Debris	438763	5977007	A2	3.1	0.8	0.2	-	Two largely-parallel linear reflectors almost perpendicular to the track, with strong shadows. Possibly debris or two boulders clustered together	-	EMU_005914	SZ1
70925	Debris	438744	5977374	A2	25.3	0.0	0.0	-	Two thin, linear, dark reflectors connected by scour	-	EMU_005953	SZ1
70926	Dark Reflector	438570	5976469	A2	3.1	1.1	1.2	-	Very strong reflector with distinct, angular shadow. Height in excess of 1m. Recorded as boulder by Emu, but large shadow and irregular description suggests possible anthropogenic origin.	-	EMU_005978	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70927	Debris	438521	5967450	A2	8.1	5.2	1.3	-	An agglomeration of strong reflectors and shadows with significant height. Possibly debris	-	EMU_006006	SZ1
70928	Debris	419808	5965976	A2	4.3	2.3	0.0	-	Discrete angular reflector. Possible piece of debris	-	EMU_006028	SZ1
70929	Debris	419640	5966402	A2	3.8	1.7	0.3	-	Angular reflector, possible piece of debris	-	EMU_006031	SZ1
70930	Debris	438306	5970291	A2	2.8	0.5	0.2	-	Strong, curvilinear reflector with visible signs of scour yet very fine shadow zone	-	EMU_006038	SZ1
70931	Debris	438433	5972515	A2	4.9	1.9	1.7	-	Very strong and angular reflector with significant shadow zone. Height measured as 1.65m	-	EMU_006040	SZ1
70932	Debris	438275	5973494	A2	6.8	5.6	0.0	-	Distinct complex anomaly comprising faint reflectors and large, bright shadow zones. Possible piece of debris	-	EMU_006058	SZ1
70933	Mound	438274	5969533	A2	2.7	4.1	0.0	-	Mound-like structure indicated by weak, flat appearing curved-frontage reflector with a prominent, curved shadow	-	EMU_006065	SZ1
70934	Seafloor Disturbance	438014	5965530	A2	6.8	6.3	0.0	-	Oval area containing banded rings of high and low reflectivity	-	EMU_006104	SZ1
70935	Mound	447453	5967752	A2	12.0	9.4	0.2	-	Tear shaped mound of unknown origin. Linear feature may be associated with it	-	EMU_006154	SZ1
70936	Mound	446695	5968164	A2	3.0	1.5	0.2	-	Small mound, possible object	-	EMU_006155	SZ1
70937	Debris	437884	5971228	A2	4.2	2.5	0.2	-	Distinct anomaly identified in the sidescan sonar and multibeam bathymetry datasets. Possible structure	-	EMU_006157	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70938	Mound	438214	5971305	A2	4.7	2.3	0.3	-	Oval shaped object of unknown origin. Identified in the sidescan sonar and multibeam bathymetry datasets	-	EMU_006158	SZ1
70939	Mound	439609	5973829	A2	4.5	3.5	0.2	-	Possible object. Close to wreck site ad possible wreck debris	-	EMU_006159	SZ1
70940	Dark Reflector	447847	5965579	A2	12.0	10.0	0.1	-	Object with scour identified in the sidescan sonar and multibeam bathymetry datasets. Likely to represent a boulder. Recorded as boulder by Emu, but large enough to be identified by multibeam bathymetry so possibly anthropogenic.	-	EMU_006161	SZ1
70941	Dark Reflector	446846	5964205	A2	11.0	4.0	0.1	-	Object with scour identified in the sidescan sonar and multibeam bathymetry datasets. Likely to represent a boulder. Recorded as boulder by Emu, but large enough to be identified by multibeam bathymetry so possibly anthropogenic.	-	EMU_006163	SZ1
70942	Mound	445085	5965926	A2	7.3	4.7	0.3	-	Distinct object amongst sand waves	-	EMU_006164	SZ1
70943	Mound	444915	5964478	A2	9.2	5.0	0.3	-	Distinct curved mound. Possible object/structure	-	EMU_006165	SZ1
70944	Debris	439861	5974021	A2	2.9	1.8	1.2	-	Object within a large depression/scour identified in the sidescan sonar and multibeam bathymetry datasets	-	EMU_006167	SZ1
70945	Mound	439459	5974250	A2	4.0	2.0	0.2	-	Possible piece of debris	-	EMU_006168	SZ1
70946	Mound	437429	5974972	A2	7.3	5.5	0.3	-	Distinct rounded object. Possible piece of debris	-	EMU_006169	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70947	Debris	438393	5976817	A2	4.0	3.7	0.3	-	Distinct angular object identified in isolation in the sidescan sonar and multibeam bathymetry datasets	-	EMU_006170	SZ1
70948	Mound	435886	5977080	A2	6.3	3.1	0.5	-	Distinct elongated mound identified in eh sidescan soar and multibeam bathymetry datasets. Suggest to be a mound of material of possible anthropogenic origin and archaeological interest	-	EMU_006172	SZ1
70949	Debris	434484	5970742	A2	10.1	5.0	0.1	-	Identified as a single object in the sidescan measuring 4m x 1.5m x 1m but as a possible extended site in the multibeam bathymetry dataset. Coincides with recorded Seazone obstruction.	-	EMU_006174, 1081457, 27710402 (Seazone)	SZ1
70950	Mound	434466	5971876	A2	4.0	4.0	0.5	-	Round object with scour	-	EMU_006175	SZ1
70951	Mound	431584	5972013	A2	2.7	1.5	0.1	-	Isolated mound of unknown origin	-	EMU_006177	SZ1
70952	Debris	433699	5974730	A2	8.8	6.4	0.1	-	Isolated anomaly of unknown origin. Slight mound in the multibeam bathymetry data and amorphous shape in the sidescan sonar. It may represent an object of anthropogenic origin. Possible structure	-	EMU_006178	SZ1
70953	Mound	433169	5969734	A2	6.4	5.5	0.4	-	Isolated mound of unknown origin on top or protruding from a sand wave	-	EMU_006179	SZ1
70954	Mound	432677	5972689	A2	7.5	5.0	0.2	-	Angular feature of unknown origin, possible piece of debris	-	EMU_006180	SZ1
70955	Mound	431809	5970399	A2	3.7	3.6	0.0	-	Possible object	-	EMU_006182	SZ1
70956	Mound	431583	5970390	A2	5.2	2.8	0.0	-	Possible object with two distinct heights	-	EMU_006183	SZ1
70957	Mound	430585	5973209	A2	4.8	4.5	0.2	-	Possible object	-	EMU_006184	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70958	Debris	430061	5970875	A2	4.7	3.8	0.2	-	Distinct round mound identified in the multibeam bathymetry data and verified in eh sidescan sonar data as a round object likely to be a piece of debris	-	EMU_006185	SZ1
70959	Mound	432852	5971805	A2	7.5	4.5	0.1	-	Possible object	-	EMU_006186	SZ1
70960	Mound	435901	5965776	A2	5.0	5.0	0.1	-	Possible object	-	EMU_006188	SZ1
70961	Debris	439335	5969074	A2	3.8	3.4	0.2	-	Object of unknown origin identified in the sidescan sonar as an elongated object. Verified in the multibeam bathymetry as an anomaly lying between sand waves	-	EMU_006189	SZ1
70962	Mound	439315	5966660	A2	16.4	2.4	0.1	-	Linear mound	-	EMU_006190	SZ1
70963	Mound	439256	5966583	A2	7.4	2.8	0.2	-	Elongated mound	-	EMU_006191	SZ1
70964	Mound	439241	5965359	A2	13.0	3.5	0.3	-	Elongated mound, possible object	-	EMU_006192	SZ1
70965	Wreck	436282	5965805	A1	14.2	4.8	0.8	42	Two steep sided, proximal mounds likely to represent a metal wreck structure. Sidescan sonar imagery shows a structured, angular, anthropogenic object partially buried. Possible two ends of a shipwreck with centre buried and associated debris. Corresponds with known live wreck location. Magnetic anomaly suggests at least partial ferrous construction.	-	EMU_004146, EMU_006193, EMU_006194, 1081423, 27710858 (Seazone)	SZ1
70966	Mound	436478	5968145	A2	2.7	2.5	0.2	-	Recorded as mound by Emu but no description provided.	-	EMU_006195	SZ1
70967	Mound	435902	5965396	A2	6.7	5.0	0.3	-	Recorded as mound by Emu but no description provided.	-	EMU_006196	SZ1
70968	Mound	435891	5965962	A2	5.0	2.6	0.1	-	Recorded as mound by Emu but no description provided.	-	EMU_006198	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70969	Mound	435896	5965876	A2	3.2	1.7	0.2	-	Recorded as mound by Emu but no description provided.	-	EMU_006199	SZ1
70970	Mound	435791	5966041	A2	2.0	1.6	0.1	-	Recorded as mound by Emu but no description provided.	-	EMU_006200	SZ1
70971	Mound	435396	5965625	A2	3.0	2.6	0.1	-	Recorded as mound by Emu but no description provided.	-	EMU_006201	SZ1
70972	Debris	435486	5965478	A2	3.0	2.3	0.2	-	Angular object of unknown origin identified in the sidescan sonar data. Verified in the multibeam bathymetry data as a mound. It may represent a piece of debris of archaeological interest	-	EMU_006202	SZ1
70973	Mound	435373	5965260	A2	8.5	4.5	0.2	-	Recorded as mound by Emu but no description provided.	-	EMU_006203	SZ1
70974	Debris	429108	5965765	A2	3.7	1.7	0.2	-	Distinct isolated mound identified in the multibeam bathymetry data corresponding to a possible piece of debris identified in the sidescan sonar data.	-	EMU_006210	SZ1
70975	Mound	426951	5968773	A2	0.0	0.0	0.0	-	Recorded as mound by Emu but no description provided.	-	EMU_006218	SZ1
70976	Mound	426848	5969479	A2	6.8	2.8	0.3	-	Recorded as mound by Emu but no description provided.	-	EMU_006220	SZ1
70977	Mound	426260	5967275	A2	3.8	1.8	0.2	-	Object of unknown origin but size and angularity suggest this may be an object of anthropogenic origin and archaeological interest. Anomaly identified both in the sidescan sonar and multibeam bathymetry datasets	-	EMU_006222	SZ1





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
70978	Debris	426164	5969027	A2	5.6	2.3	0.3	-	Distinct angular object with internal detail suggests is anthropogenic in origin and of archaeological interest. Identified in the sidescan and multibeam bathymetry datasets	-	EMU_006223	SZ1
70979	Debris	425479	5970164	A2	5.0	4.5	0.3	-	An elongated anomaly identified in the sidescan sonar and multibeam bathymetry datasets. Its size and detail suggest this may be a site anthropogenic in origin and of archaeological interest.	-	EMU_006228	SZ1
70980	Mound	428722	5967851	A2	26.0	3.4	0.2	-	Elongated mound of unknown origin	-	EMU_006230	SZ1
70981	Mound	430345	5972613	A2	10.0	9.0	0.2	-	A small, smooth sided mound on otherwise featureless seabed.	-	EMU_006232	SZ1
70982	Mound	430331	5972633	A2	13.0	8.6	0.2	-	A small, smooth sided mound on otherwise featureless seabed.	-	EMU_006233	SZ1
70983	Mound	430317	5972642	A2	7.0	5.6	0.1	-	A small, smooth sided mound on otherwise featureless seabed.	-	EMU_006234	SZ1
70984	Dark Reflector	428778	5974235	A2	7.2	4.0	0.2	-	A segmented, rectangular appearing object with significant surrounding scour. Recorded as boulder by Emu, but description and size suggest it could be anthropogenic.	-	EMU_006235	SZ1
70985	Mound	429089	5974926	A2	6.5	5.0	0.2	-	A small, smooth sided mound on otherwise featureless seabed.	-	EMU_006236	SZ1
70986	Mound	444948	5970575	A2	3.1	1.8	0.1	-	Possible object	-	EMU_006246	SZ1
70987	Mound	445462	5969615	A2	4.1	2.3	0.2	-	Possible object	-	EMU_006247	SZ1
70988	Mound	445956	5968653	A2	7.2	3.0	0.2	-	Possible object	-	EMU_006248	SZ1
70989	Mound	446141	5968895	A2	15.7	10.0	0.3	-	Curved edge/outline of a possible structure	-	EMU_006249	SZ1



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70990	Debris	417699	5974675	A2	4.2	1.8	0.4	-	Discrete isolated anomaly of unknown origin. Possible debris	-	EMU_006250	SZ1
70991	Mound	418649	5971122	A2	8.0	4.5	0.2	-	Asymmetrical, linear feature. One side particularly steep	-	EMU_006251	SZ1
70992	Mound	418768	5969747	A2	22.0	8.0	0.1	-	A large linear raised area. Parallel to a sediment ridge	-	EMU_006252	SZ1
70993	Mound	419308	5970427	A2	3.5	3.5	0.1	-	A small circular object in the centre of a depression between sediment ridges	-	EMU_006253	SZ1
70994	Mound	419741	5968367	A2	6.2	7.0	0.3	-	Distinct mound identified repeatedly in the multibeam bathymetry and sidescan sonar datasets. Possibly anthropogenic and of archaeological interest	-	EMU_006255	SZ1
70995	Mound	416516	5979875	A2	4.0	2.0	0.1	-	A very small local rise in the seabed.	-	EMU_006257	SZ1
70996	Mound	416704	5980177	A2	11.0	6.0	0.2	-	Roughly circular mound	-	EMU_006258	SZ1
70997	Mound	417640	5975042	A2	10.0	5.0	0.1	-	Possible geological mound	-	EMU_006260	SZ1
70998	Mound	417818	5975884	A2	15.0	5.0	0.3	-	Linear seeming mound, possible anthropogenic.	-	EMU_006261	SZ1
70999	Mound	417899	5980354	A2	8.0	8.0	0.2	-	A large raised mound with a small central depression	-	EMU_006262	SZ1
71000	Mound	418712	5975820	A2	9.0	7.0	0.1	-	Recorded as mound by Emu but no description provided.	-	EMU_006264	SZ1
71001	Mound	419322	5976090	A2	8.0	5.0	0.2	-	Small, linear mound	-	EMU_006266	SZ1
71002	Mound	425418	5976904	A2	34.0	12.0	0.2	-	A large mound, approximately stretched diamond shape. Rather angular	-	EMU_006271	SZ1
71003	Dark Reflector	440045	5966840	A2	4.4	4.0	0.1	-	Small, steep sided object within a scour depression. Recorded as boulder by Emu but description suggests possible anthropogenic origin.	-	EMU_006274	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71004	Mound	440503	5968653	A2	3.2	3.0	0.1	-	A small, smooth sided mound on otherwise flat seabed	-	EMU_006275	SZ1
71005	Mound	440617	5978981	A2	6.0	6.0	0.2	-	Recorded as mound by Emu but no description provided.	-	EMU_006281	SZ1
71006	Mound	440751	5978328	A2	13.0	11.0	0.3	-	A steep sided, high relief mound with linear aspect	-	EMU_006282	SZ1
71007	Wreck	441288	5976774	A1	36.7	124.8	2.5	-	Possible metal wreck, two points of height, steep sided protrusions above the seabed suggesting a broken up/partially buried wreck. Wreck is appears broken into separate sections, minimal debris field. Corresponds with recorded wreck location.	-	EMU_006283, 1081454, 27710860 (Seazone)	SZ1
71008	Wreck	439746	5973882	A1	35.0	15.0	1.2	96	A broken up wreck. Sidescan sonar indicates one end is significantly more intact and proud of the seabed. Strong angular reflectors amidships and curved stem visible. Magnetic anomaly suggests significant ferrous content of structure. Associated with previously recorded wreck location.	-	EMU_006284, EMU_007377, 1081430, 27710851 (Seazone)	SZ1
71009	Mound	440786	5973996	A2	12.5	7.0	0.3	-	An angular, sharp sided rise interpreted as anthropogenic debris	-	EMU_006285, EMU_006287	SZ1
71010	Mound	441936	5972802	A2	8.5	7.0	0.2	-	A circular, smooth-sided raised area identified in the multibeam bathymetry. It may indicate the presence of a buried object such as a structure. Corresponds with a discrete anomaly identified in the sidescan sonar data	-	EMU_006288	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71011	Mound	429555	5966886	A2	5.0	3.0	0.2	-	Recorded as mound by Emu but no description provided.	-	EMU_006289	SZ1
71012	Mound	414736	5967753	A2	12.0	8.0	0.2	-	Long, linear mound with central protrusion	-	EMU_006290	SZ1
71013	Magnetic	419730	5965850	A2	0.0	0.0	0.0	5	Unknown origin	-	EMU_006330	SZ1
71014	Magnetic	441355	5970615	A2	0.0	0.0	0.0	9	Unknown origin	-	EMU_006417	SZ1
71015	Magnetic	411750	5970795	A2	0.0	0.0	0.0	12	Unknown origin	-	EMU_006421	SZ1
71016	Magnetic	436925	5976550	A2	0.0	0.0	0.0	6	Unknown origin	-	EMU_006557	SZ1
71017	Magnetic	415560	5979480	A2	0.0	0.0	0.0	5	Unknown origin	-	EMU_006627	SZ1
71018	Magnetic	417035	5971830	A2	0.0	0.0	0.0	59	Near oil well head or associated debris	-	EMU_007493	SZ1
71019	Magnetic	419030	5966830	A2	0.0	0.0	0.0	7	Unknown origin	-	EMU_007512	SZ1
71020	Mound	445964	5969118	A2	22.9	1.8	0.0	-	High reflectivity mound with scour. Higher relief than surrounding sediment features	-	EMU_007615	SZ1
71021	Dark Reflector	436833	5977082	A2	10.2	5.4	0.3	-	Isolated possible boulder, on sediment feature. Recorded as boulder by Emu, size suggests possible anthropogenic origin.	-	EMU_007616	SZ1
71022	Debris	435995	5966667	A2	6.1	1.6	0.6	-	Lone, sub-angular anomaly with long, thin shadow at one end. Possible scour enhancing anomaly	-	EMU_007624	SZ1
71023	Mound	437915	5976996	A2	4.0	4.0	0.6	-	Smooth sided raised anomaly. Not visible on the sidescan sonar because it was situated on the system blind spot.	-	EMU_007636	SZ1
71024	Debris	435887	5977081	A2	7.0	6.0	1.0	-	Gentle, low relief mound	-	EMU_009107	SZ1
71025	Recorded Obstruction	416367	5968281	A3	-	-	-	-	Location of recorded obstruction, not identified by Emu in their geophysical data.	-	1081289 (Seazone)	SZ1
71026	Recorded Obstruction	422847	5969826	A3	-	-	-	-	Location of recorded obstruction, not identified by Emu in their geophysical data.	-	27581205 (Seazone)	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71027	Recorded Obstruction	431880	5972080	A3	-	-	-	-	Location of recorded obstruction, not identified by Emu in their geophysical data.	-	1081290 (Seazone)	SZ1
71028	Recorded Wreck	438489	5967732	A3	-	-	-	-	Location of a recorded unnamed wreck, not identified by Emu in their geophysical data.	-	1081425 (Seazone)	SZ1
71029	Recorded Obstruction	440317	5966956	A3	-	-	-	-	Location of two recorded obstruction, approx. 10m apart and possibly referring to the same object. Not identified by Emu in their geophysical data.	-	1081476, 27710392 (Seazone)	SZ1
71030	Recorded Obstruction	443668	5966270	A3	-	-	-	-	Location of recorded obstruction, not identified by Emu in their geophysical data.	-	27710364 (Seazone)	SZ1
71031	Recorded Obstruction	443721	5966278	A3	-	-	-	-	Location of recorded obstruction, not identified by Emu in their geophysical data.	-	1081456 (Seazone)	SZ1
71032	Debris	419258	5965736	A2	8.0	7.2	0.4	-	A narrow area of linear, high reflectivity with some shadow and three small, distinct high reflectivity objects next to it. Possible debris/buried debris	-	EMU_003039	SZ1
71033	Debris	421000	5965731	A2	3.4	2.4	0.4	-	A flat, low relief reflector with shadow indicative of an angular profile	-	EMU_001883	SZ1
71034	Debris	421379	5965727	A1	5.0	4.0	0.3	1	A discrete object 5m from wreck contact 71033 was identified in the multibeam bathymetry data. This is likely to be wreck debris. The magnetometer anomaly may be a signature corresponding to this piece of debris or the metal wreck itself	-	EMU_006269	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71035	Wreck	421407	5965706	A1	105.7	18.6	4.0	2483	Distinct wreck site. Acoustic and magnetic signatures suggest this is a metal wreck with several large flat sections, some of which appear to be the result of outwards collapse. Associated with a recorded wreck site.	-	EMU_001806, 1081196, 27710850 (Seazone)	SZ1
71036	Debris	421381	5965629	A1	3.1	2.4	0.0	-	Possible debris, indistinct area of shadow less higher reflectivity in proximity (60m away) to wreck 71035.	-	EMU_001835	SZ1
71037	Debris	421393	5965638	A1	2.7	0.4	0.2	-	A linear, high reflectivity contact with partial shadow. Proximity to wreck 71035 (45m) and morphology suggest contact is anthropogenic debris	-	EMU_001833	SZ1
71038	Debris	421404	5965658	A1	2.3	0.6	0.5	-	A small, rounded reflector, with shadow in close proximity (30m) to wreck contact 71035	-	EMU_001834	SZ1
71039	Debris	421486	5965708	A1	2.5	0.5	0.3	-	Possibly related to shipwreck 71035 within 40 m. A curved, high reflectivity object with shadow	-	EMU_001785	SZ1
71040	Magnetic	421535	5965715	A2	-	-	-	23	Near wreck 71035 and possibly associated	-	EMU_006328	SZ1
71041	Seafloor Disturbance	422250	5964229	A2	6.5	1.1	0.0	-	Curved reflector with associated shadow. Anomaly of unknown origin	-	EMU_001671	SZ1
71042	Debris	422636	5964951	A2	3.2	0.9	0.2	1	Linear feature with an associated magnetometer anomaly. Likely to be a piece of cable	-	EMU_001651	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71043	Debris	423152	5965388	A2	3.3	1.7	0.2	1	Discrete anomaly identified in the sidescan sonar data. With an associated magnetometer anomaly this is probably a piece of debris	-	EMU_001562	SZ1
71044	Debris	423428	5965101	A2	5.8	2.5	0.7	-	A large, angular reflector. Unknown origin	-	EMU_001551	SZ1
71045	Seafloor Disturbance	425366	5964128	A2	7.4	3.5	0.0	-	Angular patch of seabed with no distinct object but possibly representing a partially exposed structure	-	EMU_000976	SZ1
71046	Mound	425826	5963717	A2	3.0	1.5	0.2	-	Elongated object with slight scour to the NW	-	EMU_006226	SZ1
71047	Debris	425904	5963851	A2	4.2	3.9	0.3	1	Anomaly of unknown origin with a slight magnetic signature	-	EMU_000879	SZ1
71048	Debris	426045	5963753	A2	6.2	2.7	0.0	-	Irregular area of reflectivity with possible associated scour, potentially indicative of anthropogenic debris	-	EMU_002480	SZ1
71049	Mound	425802	5965585	A2	4.0	2.3	0.2	-	Object of unknown origin	-	EMU_006224	SZ1
71050	Mound	426595	5964958	A2	21.0	9.0	0.3	-	Most prominent point of a possible larger feature. Either a cable or an outline of a structure	-	EMU_006231	SZ1
71051	Debris	426745	5964799	A2	4.5	1.9	0.5	1	Elongated anomaly of unknown origin with a slight magnetic signature	-	EMU_002370	SZ1
71052	Magnetic	426655	5964680	A2	-	-	-	5	Unknown origin, Small piece of debris or natural feature, due to higher Grid Value	-	EMU_007599	SZ1
71053	Magnetic	426836	5964698	A2	-	-	-	7	Unknown origin, Small piece of debris or natural feature, due to higher Grid Value	-	EMU_006842	SZ1



WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71054	Debris	427199	5964378	A2	4.4	0.5	0.1	-	Possible partially buried debris object. Strongly linear signature with apparent shadow	-	EMU_002302	SZ1
71055	Seafloor Disturbance	428206	5965523	A2	10.8	6.0	0.2	-	Area of seabed disturbance breaking sediment pattern	-	EMU_006216	SZ1
71056	Debris	427886	5965083	A2	7.9	1.5	0.0	-	Apparent linear objects parallel to one another.	-	EMU_002171	SZ1
71057	Mound	428404	5964545	A2	5.6	4.1	1.2	-	Possible mound in an area of featureless seabed. Anomaly of unknown origin	-	EMU_002054	SZ1
71058	Debris	428216	5964180	A2	3.5	1.0	0.2	-	A collection of several angular appearing shadow casting reflectors	-	EMU_002109	SZ1
71059	Debris	429003	5964446	A2	2.7	0.9	1.4	-	Two curvilinear reflectors, one with significant and pronounced shadow. Potentiality of anthropogenic origin. Corresponds with recorded obstruction.	-	EMU_001976, 1081301, 27710400 (Seazone)	SZ1
71060	Seafloor Disturbance	431043	5965477	A2	35.1	10.2	0.0	-	Series of reflectors with no height	-	EMU_002520	SZ1
71061	Debris	430954	5965394	A2	2.8	1.8	0.5	-	Possible piece of debris. Square shape	-	EMU_002895	SZ1
71062	Debris	431037	5964895	A2	5.1	4.6	0.0	-	Oval shaped feature of unknown origin	-	EMU_002938	SZ1
71063	Debris	431034	5964782	A2	4.4	2.0	0.0	-	Angular, high reflectivity object, possibly a piece of debris	-	EMU_002946	SZ1
71064	Debris	434072	5965215	A2	3.5	1.7	0.2	-	Angular object with smaller objects around it likely to represent a large piece of debris	-	EMU_003542	SZ1
71065	Debris	434129	5965107	A2	5.8	2.2	0.2	-	Patch of material, possible debris with elongated seafloor disturbance. Alternatively, patch of boulders	-	EMU_003531	SZ1





WA_ID	Classification	Easting	Northing	Archaeological Discrimination	L (m)	W (m)	H (m)	Magnetic Amplitude (nT)	Description	Sources	External References	Area
71066	Mound	434113	5964961	A2	14.4	4.0	0.2	-	An elongated feature formed two points of height may suggest a partially buried structure	-	EMU_006187	SZ1
71067	Rope / Chain	434048	5964944	A2	15.0	0.8	0.1	-	Rope	-	EMU_003493	SZ1
71068	Seafloor Disturbance	434889	5965040	A2	8.7	4.4	0.0	-	Patch of higher reflectivity and a small object. Unknown origin	-	EMU_003689	SZ1
71069	Wreck	414540	5981438	A1	23.5	12.9	0.4	308	Large structure identified in the sidescan sonar data. Strongly angular with flat, square sections. It has a corresponding magnetometer signature and bathymetric scouring suggesting this is a likely wreck site that is only partially exposed. No associated Seazone record, located approx. 260m outside of the SZ1 boundary.	-	EMU_000777	SZ1
71070	Wreck	411107	5965586	A1	22.9	6.5	2.5	2	Shipwreck, metal hulled, structure amidships, defined hull shape. Collapsed and broken at one end. Upright. Some debris field. Identified in sidescan sonar and multibeam bathymetry data sets. Coincides with a known wreck location believed to be the wreck of the <i>Perseus</i> , a trawler lost in 1915. Located approx. 390m outside of the SZ1 boundary.	-	EMU_008032, 1081190, 27710763 (Seazone)	SZ1

### Notes

1. Co-ordinates are in WGS84 UTM31N
2. Positional accuracy for Cable Route estimated  $\pm 20$ m
3. Positional accuracy for SZ1 unknown, but expected to be  $\pm 20$ m or better



## 8 APPENDIX II – PALAEOGEOGRAPHIC FEATURES OF ARCHAEOLOGICAL POTENTIAL

WA ID	Name / Classification	Archaeological Discrimination	Description	Sources
75000	Channel	P1	Large, poorly defined feature due to data quality and number of shallow multiples. Large channel complex characterised by irregular internal structure of numerous sub-parallel reflectors. Probably multiple phases of cut and fill, though extents of individual features uncertain. Probable channel complex from the offshore course of the River Humber. Contains area of gas blanking indicating the presence of organic material. Depth Range: 1.6m - 20.4m BSB.	65000, 65001
75001	Channel	P1	Complex shallow channel feature orientated NNE-SSW crossing the cable route. Comprises two features which merge part way across the route: a distinct, smaller channel feature characterised by a single phase of unstructured fill, and a less distinct, broader feature characterised by numerous dipping internal reflectors. Possible Holocene fluvial channel. Depth Range: 0.3m - 8.0m BSB.	65003
75002	Channel	P2	Possible poorly defined channel feature only identified on two lines. Single phase of acoustically unstructured fill, possible Holocene channel though feature is uncertain. Depth Range: 0.6m - 8.1m BSB.	65004
75003	Simple Cut and Fill	P2	Small, shallow simple cut and fill feature only identified along two very closely spaced lines, single phase of acoustically unstructured fill. Feature is cut into BDK, and possibly represents the remains of an eroded channel system. Depth Range: 0.2m - 1.8m BSB.	65005
75004	Channel	P1	Possible simple cut and fill feature cut into BDK, single phase of acoustically unstructured fill. Could be the remnants of an eroded channel system, or more recent seabed sediment deposited within depressions. Appearance of feature differs along its length. Depth Range: 0.5m - 4.2m BSB.	65009
75005	Channel	P2	Large distinct channel feature cut through BDK into the underlying bedrock. Two distinct phases of fill, both containing faint internal reflectors and separated by a distinct reflector. Possible channel containing BCT sediments. Depth Range: 0.5m - 16.5m BSB.	65013
75006	Channel	P1	Poorly defined cut and fill feature cut into BDK, identified on a number of survey lines. Fill is poorly defined, but is generally chaotic though possibly comprises two phases of fill in some places. Could be the remnants of an eroded Holocene channel system, and is possibly related to nearby features 75007 and 75008. Depth Range: 0.7m - 7.2m BSB.	65014



WA ID	Name / Classification	Archaeological Discrimination	Description	Sources
75007	Channel	P1	Small, simple cut and fill cut into BDK only identified on two survey lines, single phase of fill characterised by poorly defined internal reflectors. Possible remnants of an eroded Holocene channel system, possibly related to 75006 and 75008. Depth Range: 0.8m - 5.1m BSB.	65015
75008	Simple Cut and Fill	P2	Possible poorly defined, small, simple cut and fill cut into BDK, though only identified on one survey line. Single phase of fill characterised by poorly defined sub-parallel reflectors. Possible remnants of an eroded Holocene channel system, possibly related to 75006 and 75007, though could be a localised accumulation of recent seabed sediment. Depth Range: 0.6m - 2.4m BSB.	65016
75009	Erosion Surface	P2	Distinct layer of sediment deposited within the base and on the western side of Silver Pit, characterised by numerous sub-parallel internal reflectors. Possible erosion surface overlain by BCT deposits. Occasional areas of sand wave features identified within the base suggest some reworking of upper surface of the unit may have occurred. Depth Range: 0.3m - 9.7m BSB.	65019
75010	Channel	P1	Possible poorly defined broad, shallow cut and fill feature cut into BDK. Strong internal reflector identified on one survey line. Could be the remnants of a Holocene fluvial system or an infilled depression. Depth Range: 0.4m - 4.8m BSB.	65023
75011	Erosion Surface	P2	Distinct layer of sediment characterised by numerous sub-parallel internal reflectors, deposited within a large seabed depression which forms a small extension of the Silver Pit. Possible erosion surface overlain by BCT deposits. Depth Range: 0.3m - 9.7m BSB.	65025
75012	Erosion Surface	P2	Distinct layer of sediment deposited within the base and on the western side of Silver Pit, characterised by numerous sub-parallel internal reflectors. Possible erosion surface overlain by BCT deposits. Depth Range: 0.5m - 12.8m BSB.	65029
75013	Erosion Surface	P2	Distinct layer of sediment deposited within the base and on the eastern side of Silver Pit, characterised by numerous sub-parallel internal reflectors. Layer is much less extensive than observed on the eastern side. Possible erosion surface overlain by BCT deposits. Upper surface of northern extent reworked into isolated sand waves. Depth Range: 0.3m - 9.7m BSB.	65030
75014	Channel	P1	Distinct cut and fill feature cut into BDK, mainly orientated along the survey line direction. Fill characterised by numerous sub-parallel internal reflectors, possible more than one phase of fill though this is uncertain. Feature pinches out to the north, but precise southern extent is uncertain due to relatively poor data quality. Possible remains of an eroded Holocene channel system. Depth Range: 0.5m - 14.8m BSB.	65031



WA ID	Name / Classification	Archaeological Discrimination	Description	Sources
75015	Channel	P1	Cut and fill feature cut into BDK, orientated approximately NNE-SSW and cutting across most of the proposed cable route. Base is generally poorly defined, and the feature is usually observed as a change in seismic character. Single phases of fill characterised by numerous dipping sub-parallel reflectors. Possible Holocene fluvial channel. Depth Range: 0.9m - 10.4m BSB.	65032
75016	Channel	P1	Relatively small, approximately N-S trending cut and fill feature cut into BDK. Base is generally well defined and feature is characterised by a generally unstructured fill with intermittent internal reflectors. Possible second phase of shallow fill in the deepest section of the feature. Possible Holocene fluvial channel. Depth Range: 0.8m - 10.1m BSB.	65033
75017	Channel	P2	Generally well defined, NE-SW trending cut and fill feature cut into BDK. Characterised by a strong basal reflector and single phase of acoustically unstructured fill. Could be a small, Late Devensian deglaciation channel or a Holocene fluvial channel. Depth Range: 0.6m - 9.3m BSB.	65034
75018	Channel	P1	Shallow, WNW-ESE trending cut and fill feature cut into BDK. Base is poorly defined, and feature is generally identified by a change in seismic character. Single phase of fill characterised by numerous sub-parallel internal reflectors. Possible Holocene fluvial channel. Depth Range: 1.5m - 7.8m BSB.	65036
75019	Simple Cut and Fill	P2	Simple cut and fill feature identified cutting into BDK, though only identified on one survey line. Base is poorly defined, though fill is characterised by numerous steeply dipping sub-parallel reflectors. Possible remnants of an eroded Holocene fluvial channel system. Depth Range: 1.1m - 5.5m BSB.	65037
75020	Channel	P1	Large, meandering complex cut and fill feature cut into BDK. Base is well defined, and fill differs along the length of the feature. The SW end is characterised by a single, acoustically structureless fill, while a second later fill characterised by numerous sub-parallel dipping reflectors is visible in the NE end. Possible Holocene fluvial channel. Depth Range: 0.5m - 8.4m BSB.	65038
75021	Channel	P1	Poorly defined cut and fill feature cut into BDK, identified on a number of survey lines. Base is poorly defined, but fill is characterised by numerous sub-parallel reflectors. Possible Holocene fluvial channel. Depth Range: 1.1m - 10.4m BSB.	65039
75022	Channel	P1	Very shallow cut and fill feature trending NE-SW across the proposed cable route. Generally characterised by a strong basal reflector and a single phases of fill of faint sub-parallel internal reflectors. Possible Holocene fluvial channel. Depth Range: 1.0m - 6.9m BSB.	65044

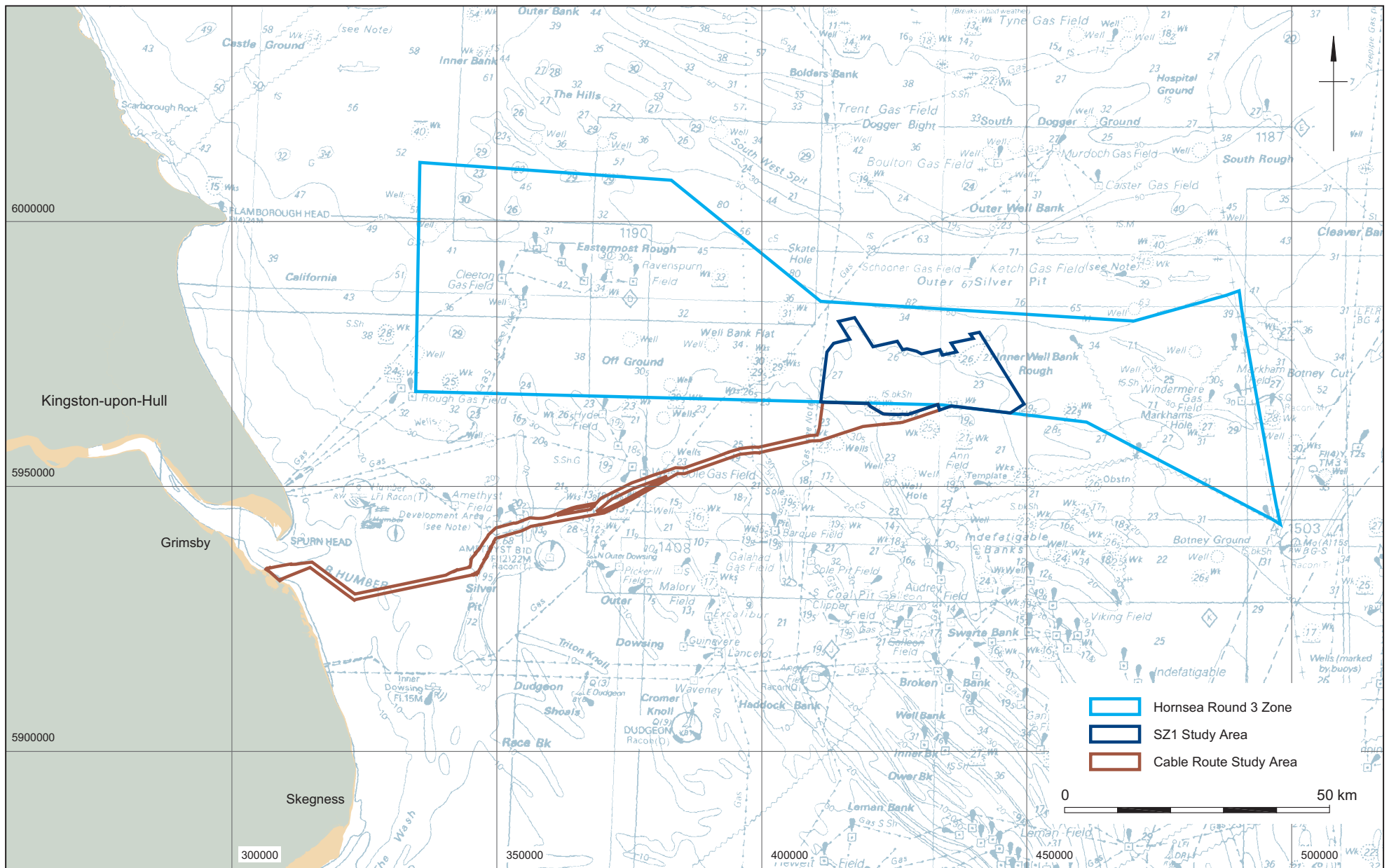


WA ID	Name / Classification	Archaeological Discrimination	Description	Sources
75023	Channel	P1	Very small, shallow cut and fill feature trending NNE-SSW across the proposed cable route. Generally characterised by a strong basal reflector and a single phases of fill of faint sub-parallel internal reflectors. Feature pinches out to the SSW. Possible remains of an eroded Holocene fluvial system. Depth Range: 0.4m - 7.0m BSB.	65045
75024	Erosion Surface	P2	Thick, distinct layer of sediment deposited within the base and on the western side of Sole Pit, characterised by numerous sub-parallel internal reflectors. Possible erosion surface overlain by BCT deposits. Depth Range: 0.7m - 19.0m BSB.	65048
75025	Erosion Surface	P2	Thick, distinct layer of sediment deposited within the base and on the eastern side of Sole Pit, characterised by numerous sub-parallel internal reflectors. Possible erosion surface overlain by BCT deposits. Depth Range: 0.3m - 10.4m BSB.	65049
75026	Infilled Depression	P2	NNW SSE trending cut and fill feature cut into BDK, characterised by a single phases of fill characterised by poorly defined sub-parallel internal reflectors. Possible Holocene fluvial channel. However, feature is located in the base of a seabed depression and could be filled with more recent sediment. Depth Range: 0.5m – 4.2m BSB.	65053
75027	Channel	P1	Long, curvilinear cut and fill feature cut into BDK trending approximately N-S, the character of which alters along its length. The northern section is wider and more complex, splitting into two distinct channels in two areas and possibly originally also included features 75028 and 75029. The fill in this area is characterised by dipping sub-parallel internal reflectors, with evidence for more than one phase of fill (though the delineation between the fills is difficult to place exactly). To the south, and for most of its length, the feature narrows to a single, smaller channel, initially comprising two phases of acoustically similar fill, and eventually just one. The channel eventually pinches out to the south. Probably Holocene fluvial channel. Depth Range: 0.5m - 10.4m BSB.	65058
75028	Simple Cut and Fill	P2	Small, shallow simple cut and fill feature cut into BDK identified on two survey lines. Single phase of fill characterised by sub-parallel internal reflectors. Possibly a Holocene fluvial channel related to channel features 75027 and 75029. Depth Range: 0.7m - 9.1m BSB.	65059
75029	Channel	P1	Possible, poorly defined cut and fill feature cut into BDK. Characterised by poorly defined sub-parallel internal reflectors. Possibly a Holocene channel, possibly related to 75027 and 75028, though could be a geometric effect created by the general position of the feature between two sand waves. Depth Range: 1.0m – 8.3m BSB.	65061




WA ID	Name / Classification	Archaeological Discrimination	Description	Sources
75030	Simple Cut and Fill	P2	Cut and fill feature cut into BDK, though only identified along one survey line. Base of feature is difficult to determine as it could contain one or two phases of fill. Possible remains of an eroded Holocene channel system, possibly originally connected with feature 75031. Depth Range: 0.8m - 3.5m BSB.	65063
75031	Channel	P1	Generally distinct, curvilinear cut and fill feature cut into BDK, trending approximately E-W. Comprises a single fill characterised by well defined sub-parallel internal reflectors, though the feature becomes much less distinct to the east and west before pinching out. Possible Holocene fluvial channel. Depth range: 0.2m - 7.5m BSB.	65064
75032	Channel	P1	Very long, curvilinear series of cut and fill feature cut into BDK and trending approximately NNW-SSE. The features are generally well defined, and are characterised by an often chaotic fill suggesting numerous separate cut and fill episodes, though in some areas two distinct phases of cut and fill are visible separated by a prominent sub-horizontal reflector. Probably a complex Northwards draining Holocene fluvial system, with two tributaries in addition to the main channel having been identified. Depth Range: 0.5m - 10.2m BSB.	65076
75033	Channel	P1	Long, curvilinear cut and fill feature cut into BDK trending approximately NNW-SSE, the character of which alters along its length. The northern section is wider and more complex, and is characterised by two distinct phases of fill. The lower fill is acoustically unstructured, while the upper is characterised by numerous sub-parallel reflectors. To the south the feature becomes smaller and just contains the upper fill. The channel eventually splits into two smaller features before pinching. Probably a Holocene fluvial channel. Depth Range: 0.6m - 8.8m BSB.	65082





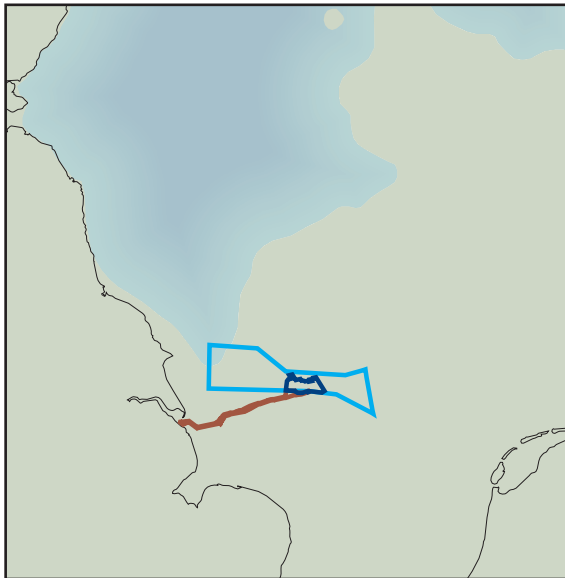
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- SZ1 Study Area
- Cable Route Study Area

0 50 km

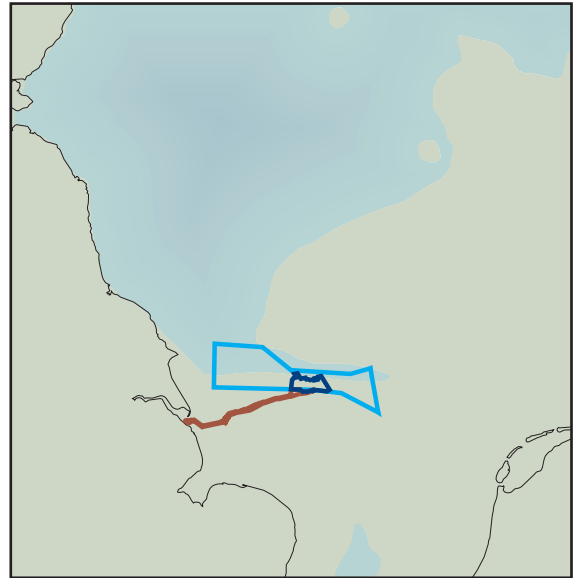
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Study Area Location

Figure 1



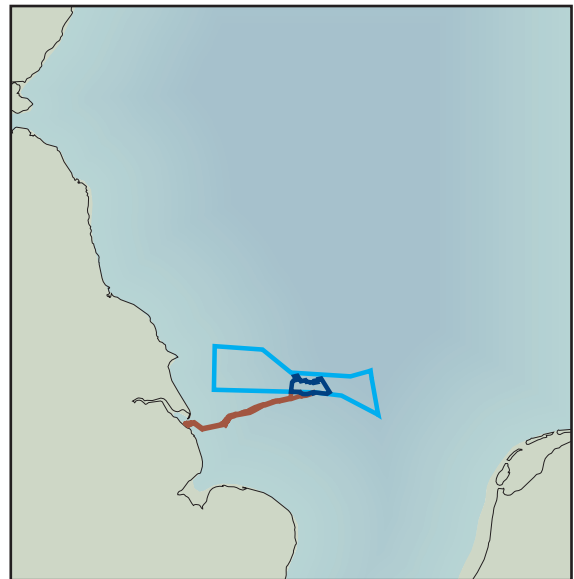
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B. 9000 BP



C. 8000 BP



D. 7000 BP

-  Hornsea Round 3 Zone
-  SZ1 Study Area
-  Cable Route Study Area



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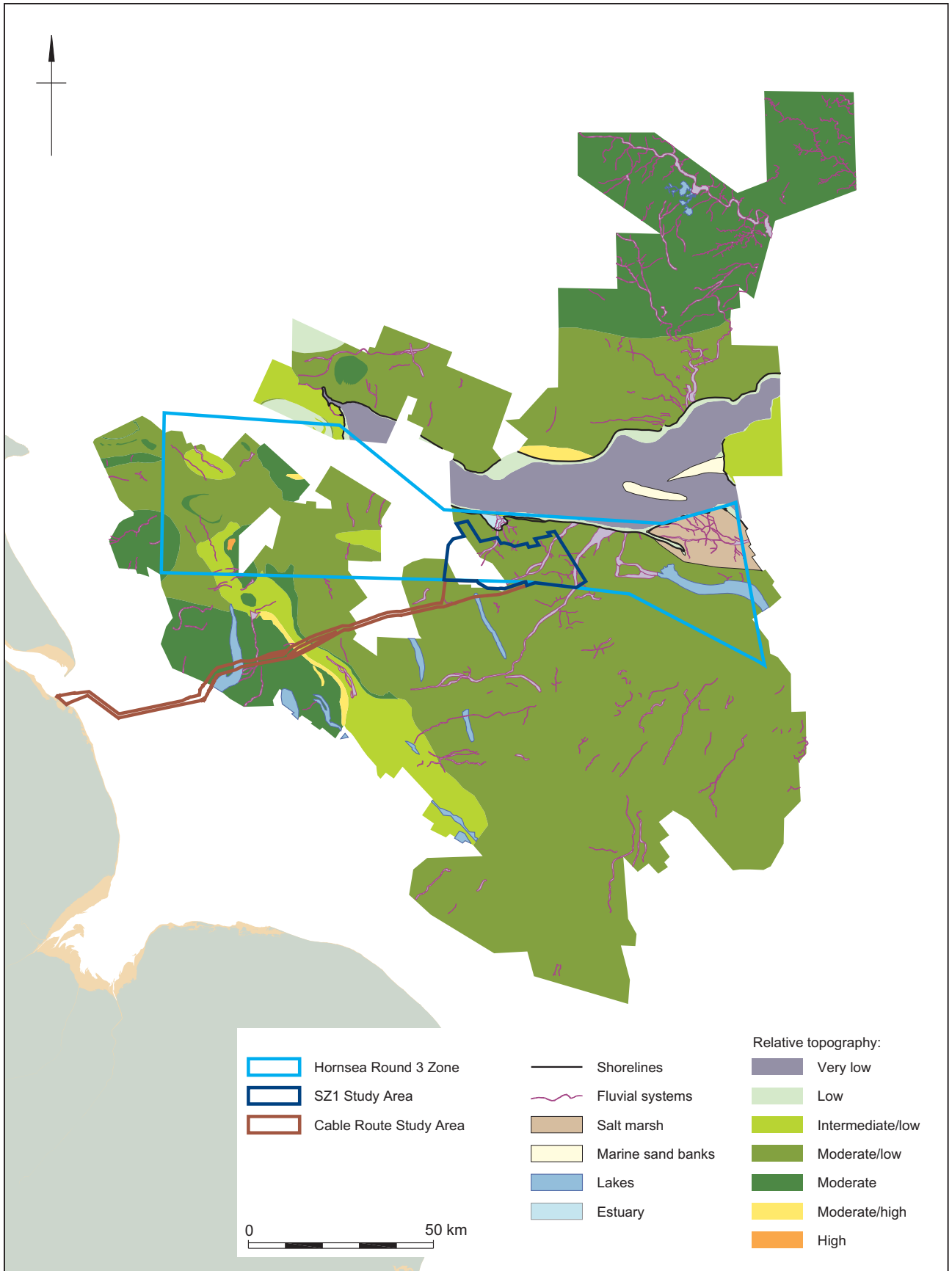
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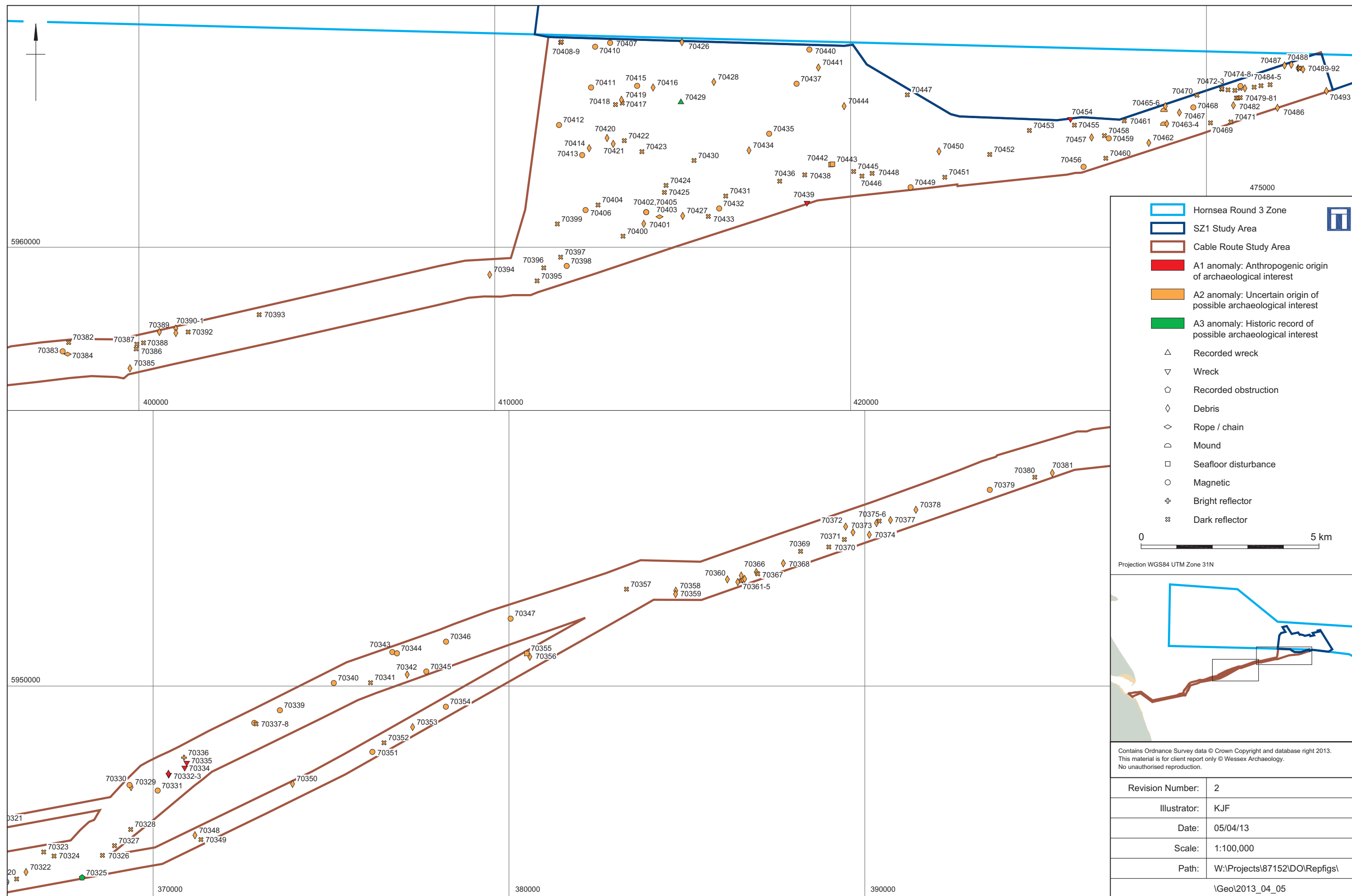
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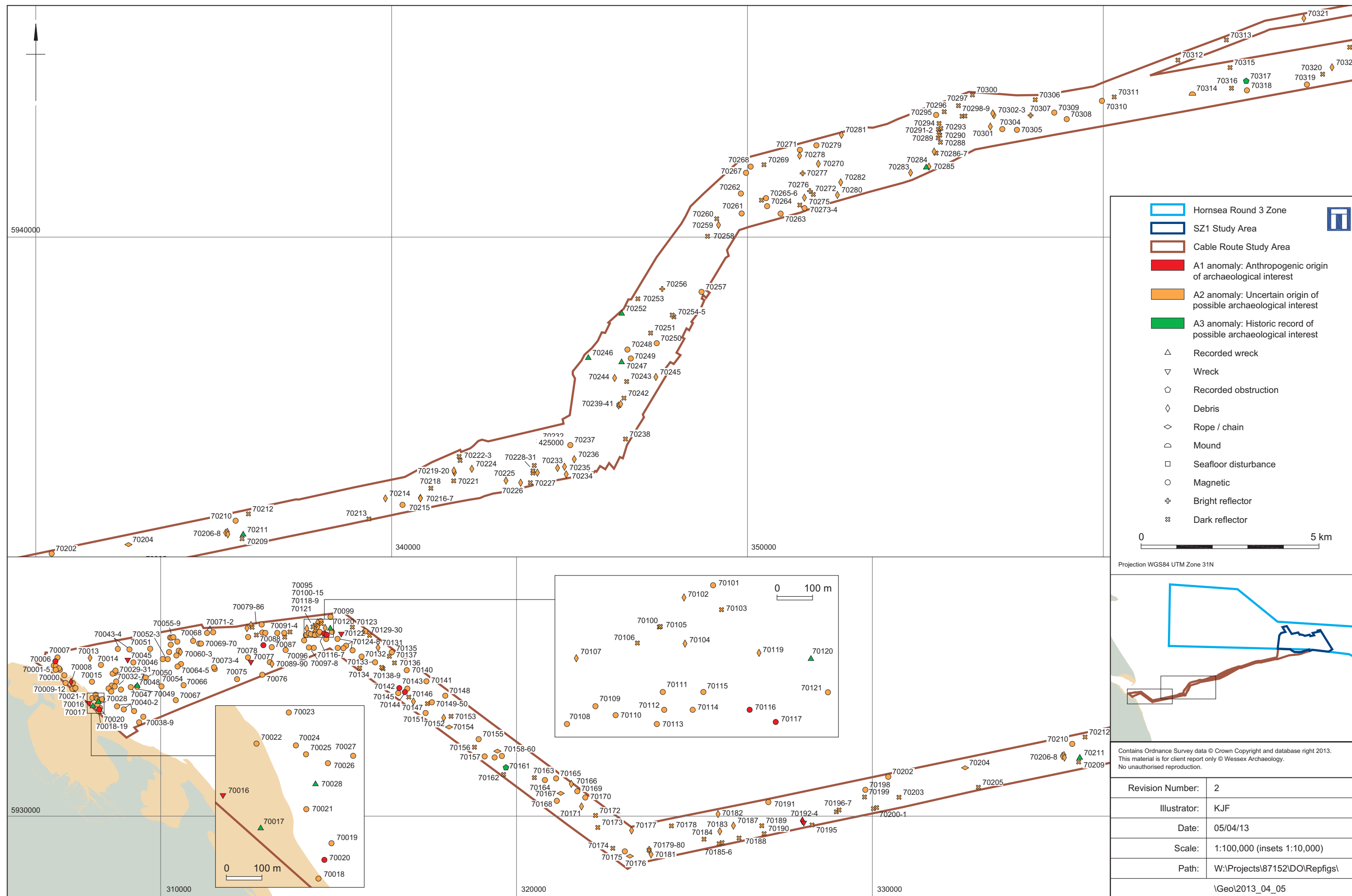
Relationship of the Study Areas to the NSPP

Figure 3



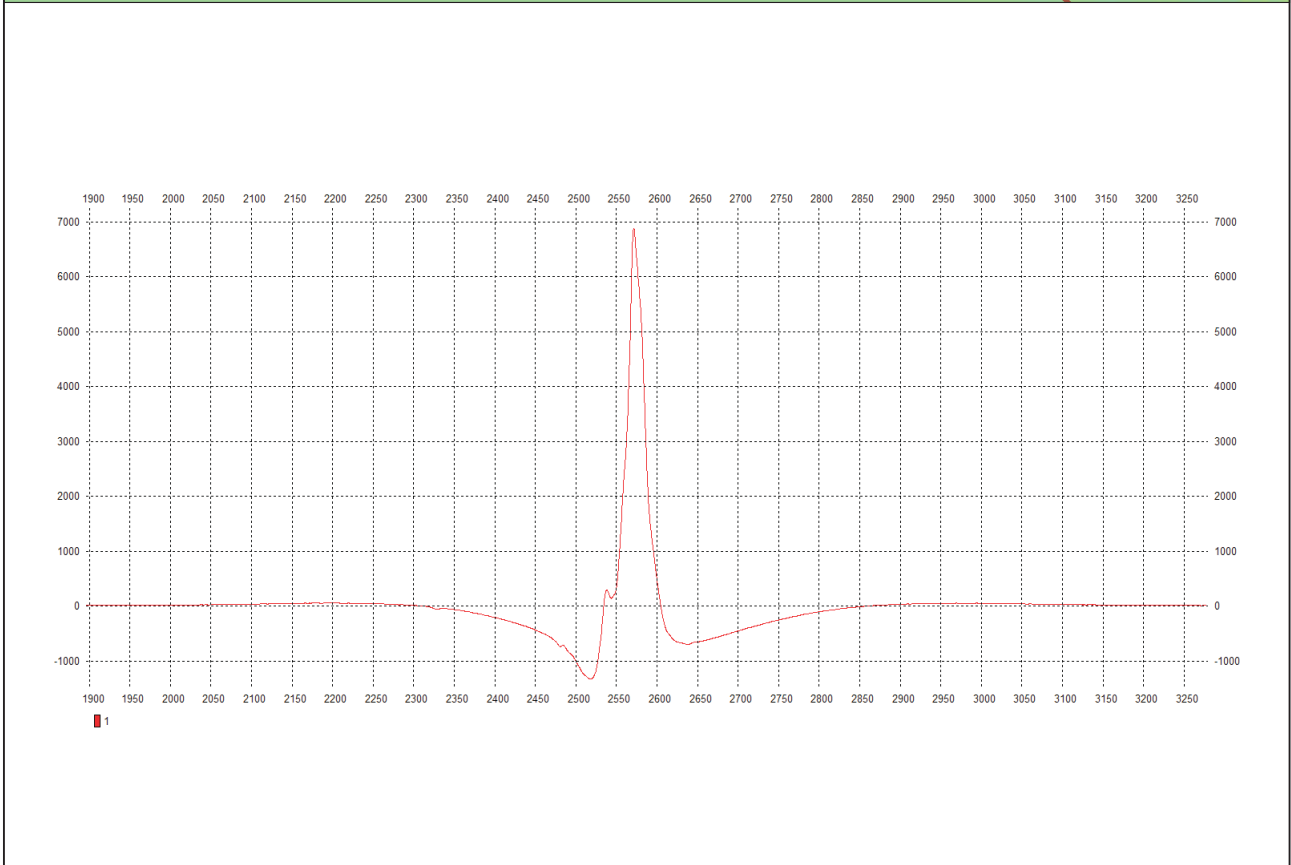
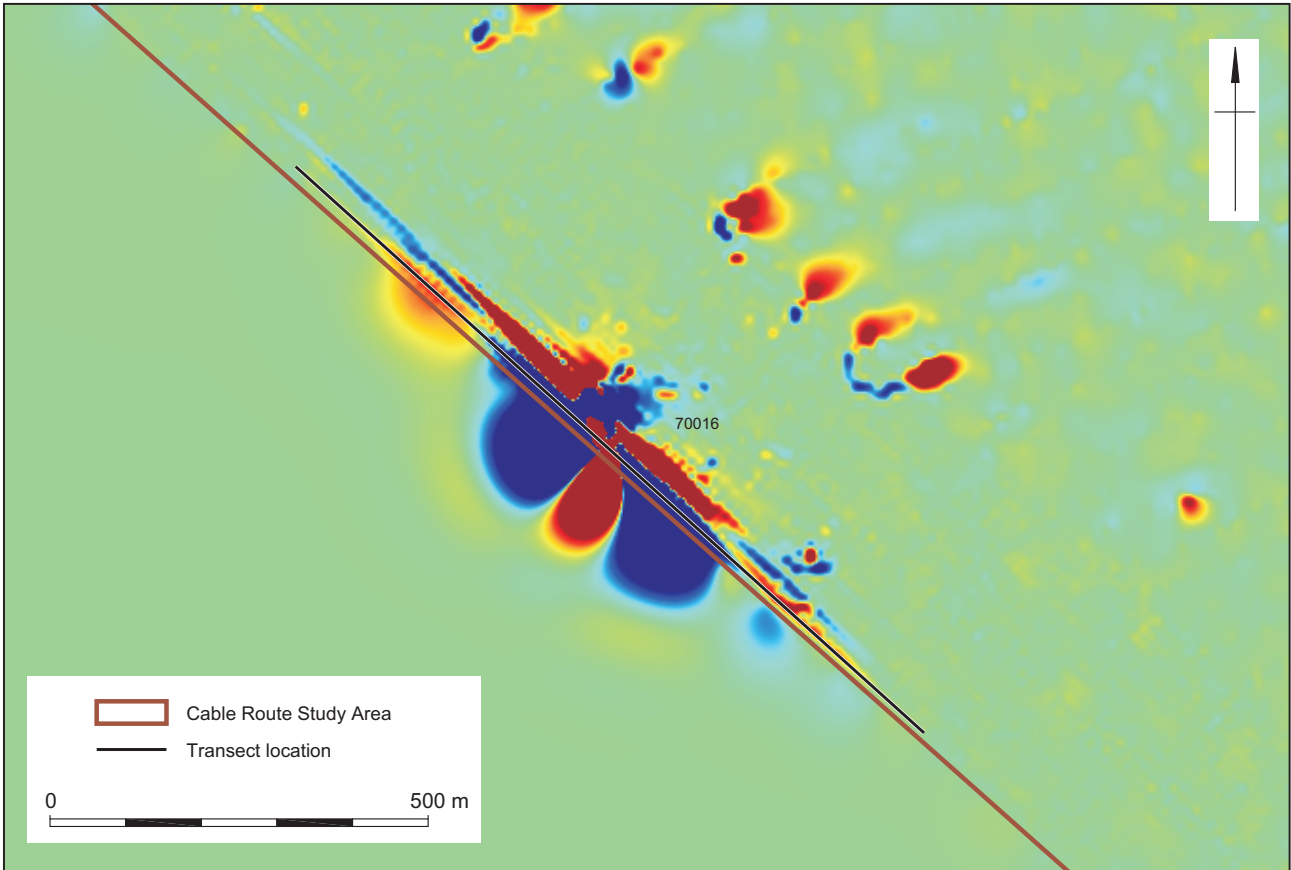
Seabed Features of Archaeological Potential (Cable Route)


Figure 4



Seabed Features of Archaeological Potential (Cable Route)

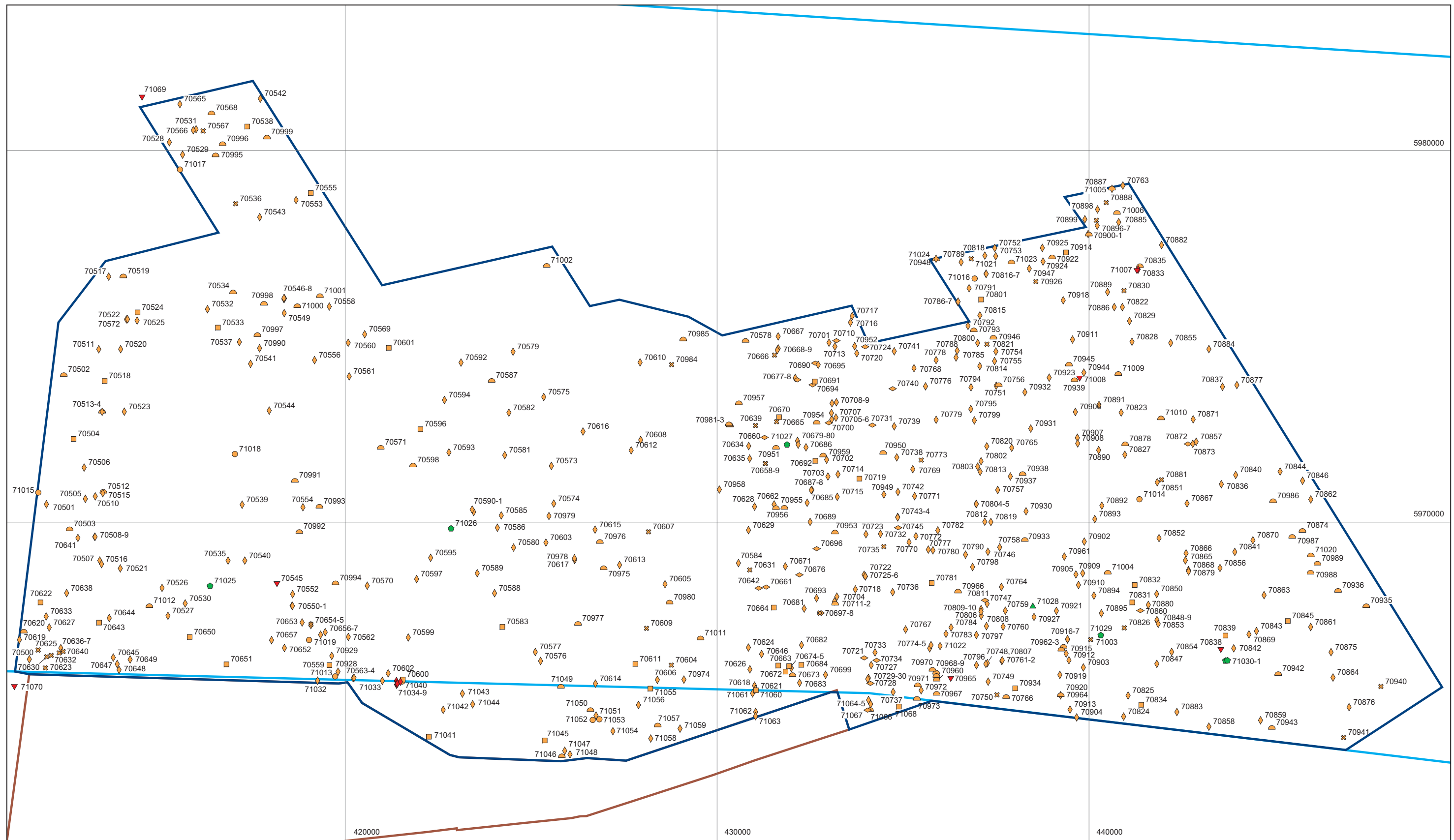
Figure 5



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Magnetometer Data Example across Wreck 70016

Figure 6



- |                        |  |                      |                      |
|------------------------|--|----------------------|----------------------|
| Hornsea Round 3 Zone   | A1 anomaly: Anthropogenic origin of archaeological interest      | Recorded wreck       | Mound                |
| SZ1 Study Area         | A2 anomaly: Uncertain origin of possible archaeological interest | Wreck                | Seafloor disturbance |
| Cable Route Study Area | A3 anomaly: Historic record of possible archaeological interest  | Recorded obstruction | Magnetic             |
|                        |  | Debris               | Bright reflector     |
|                        |  | Rope / chain         | Dark reflector       |

Projection WGS84 UTM Zone 31N

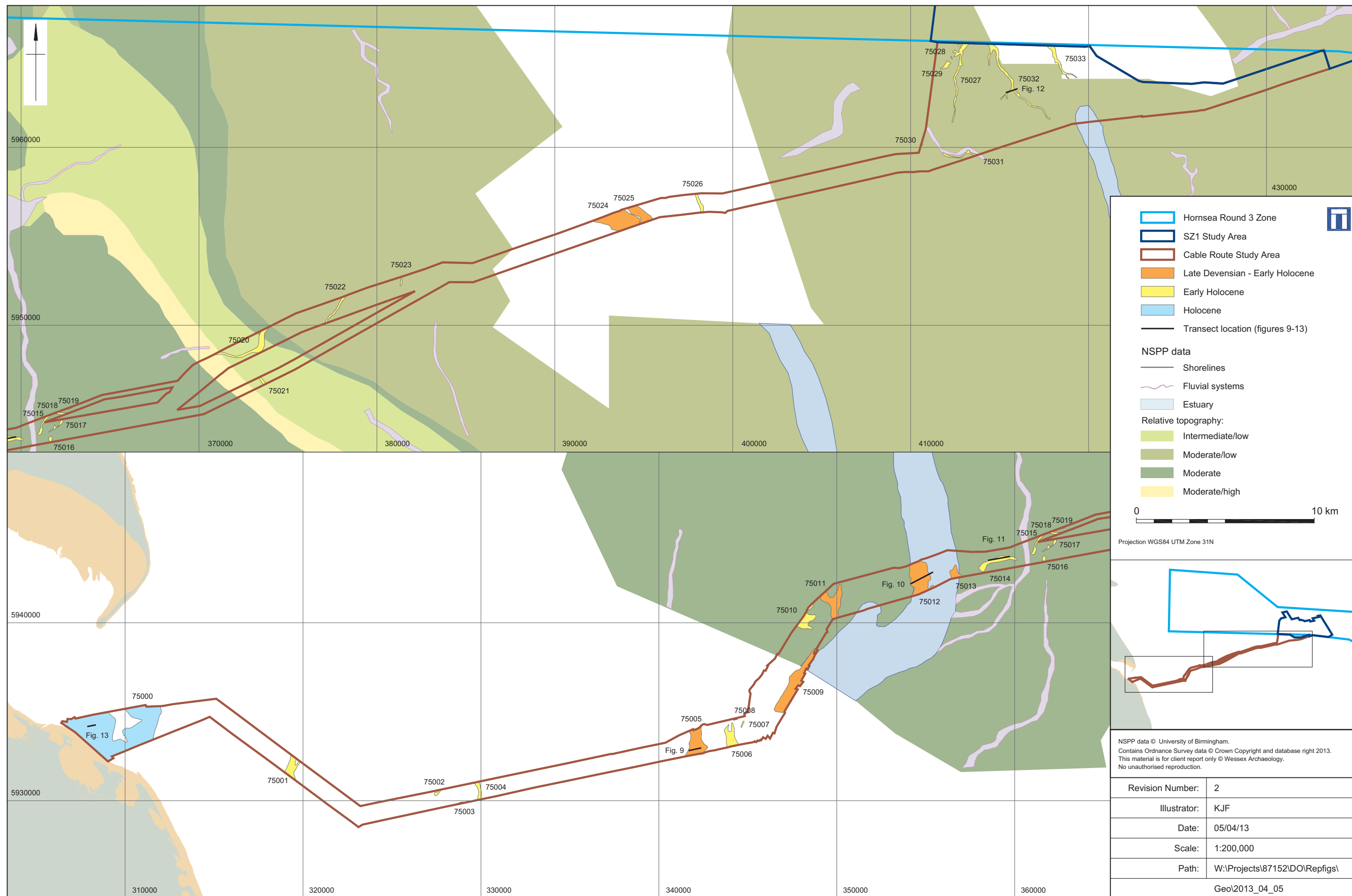
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Seabed Features of Archaeological Potential (SZ1)

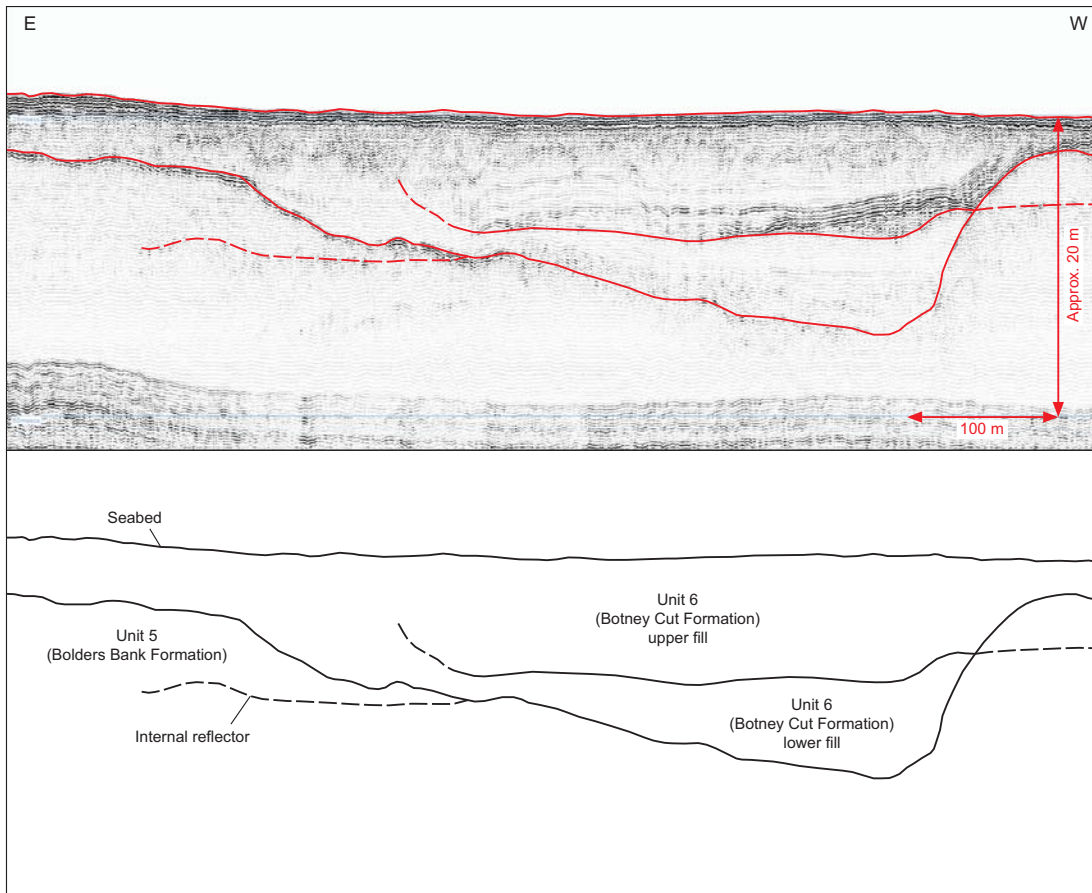
Figure 7





Palaeolandscape Features of Archaeological Potential (Cable Route)

Figure 8



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Date: 06/03/12

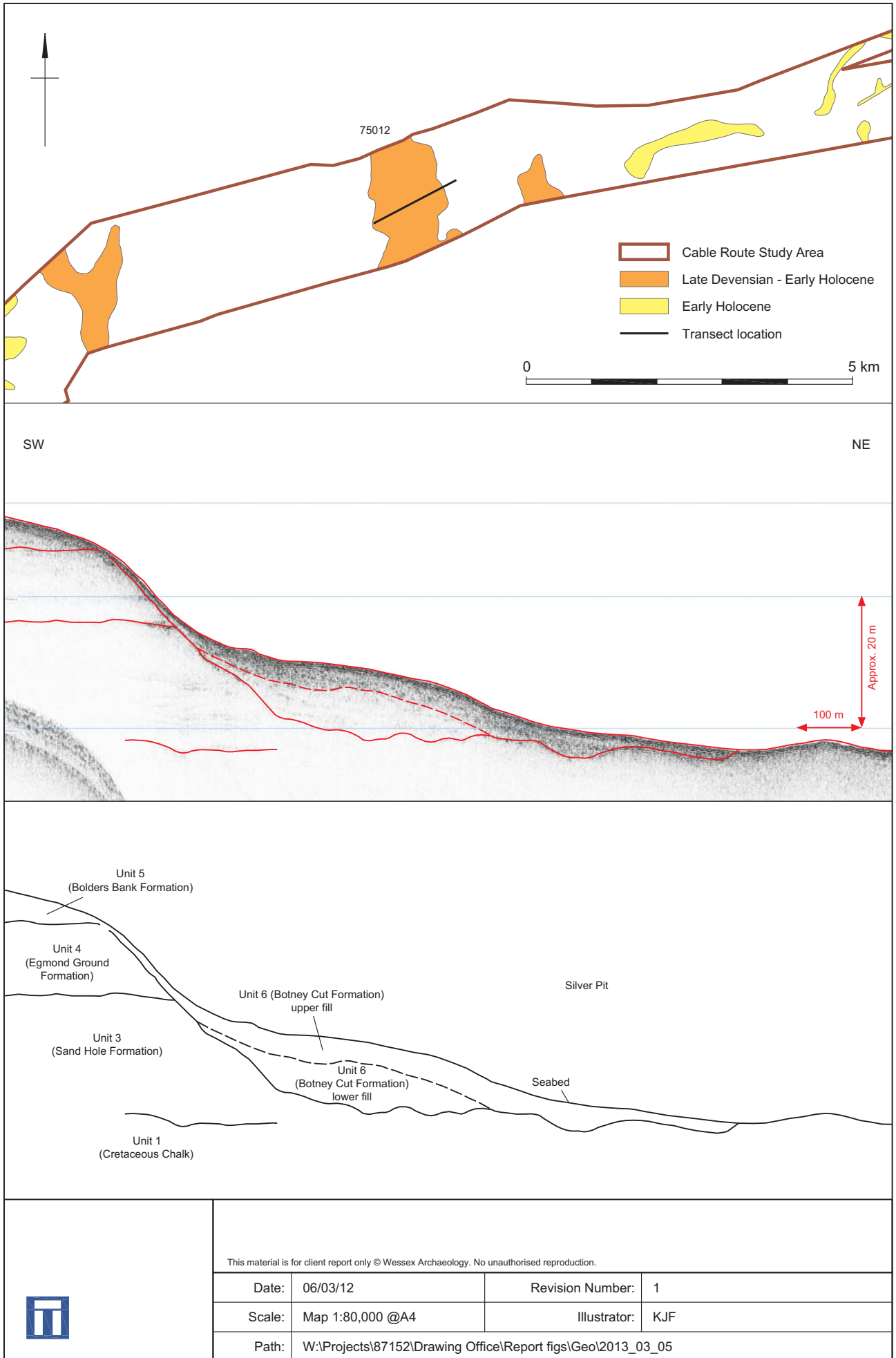
Revision Number: 1

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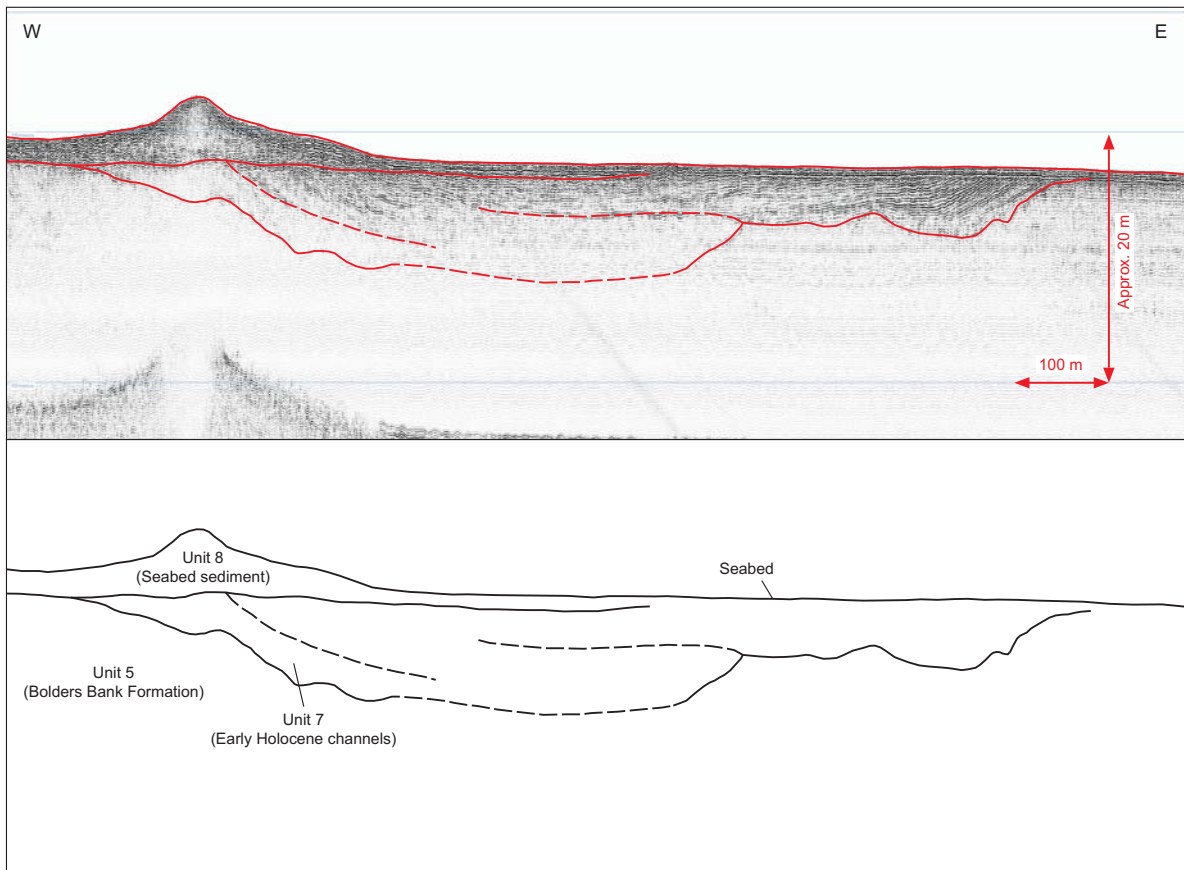
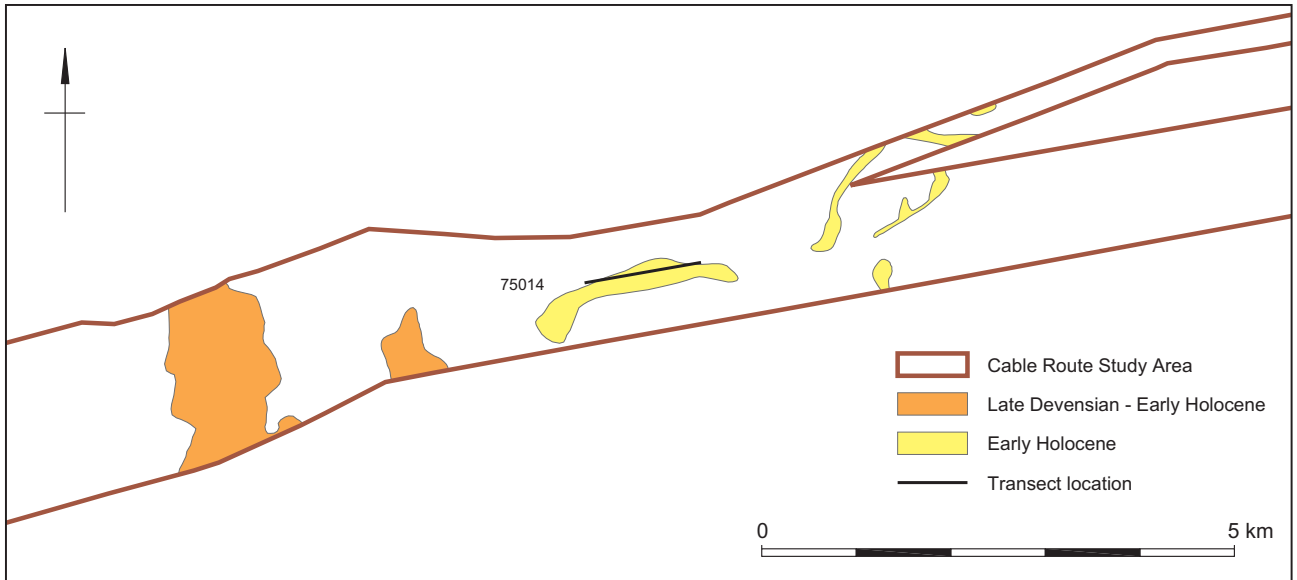




Seismic Data Example of Feature 75012

Figure 10



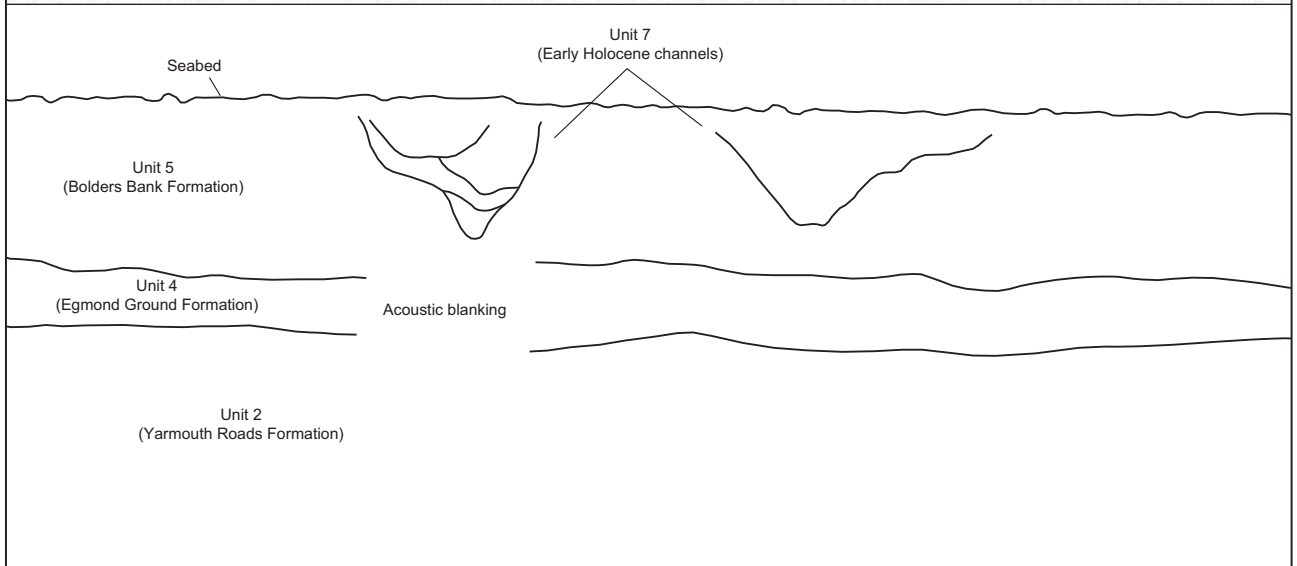
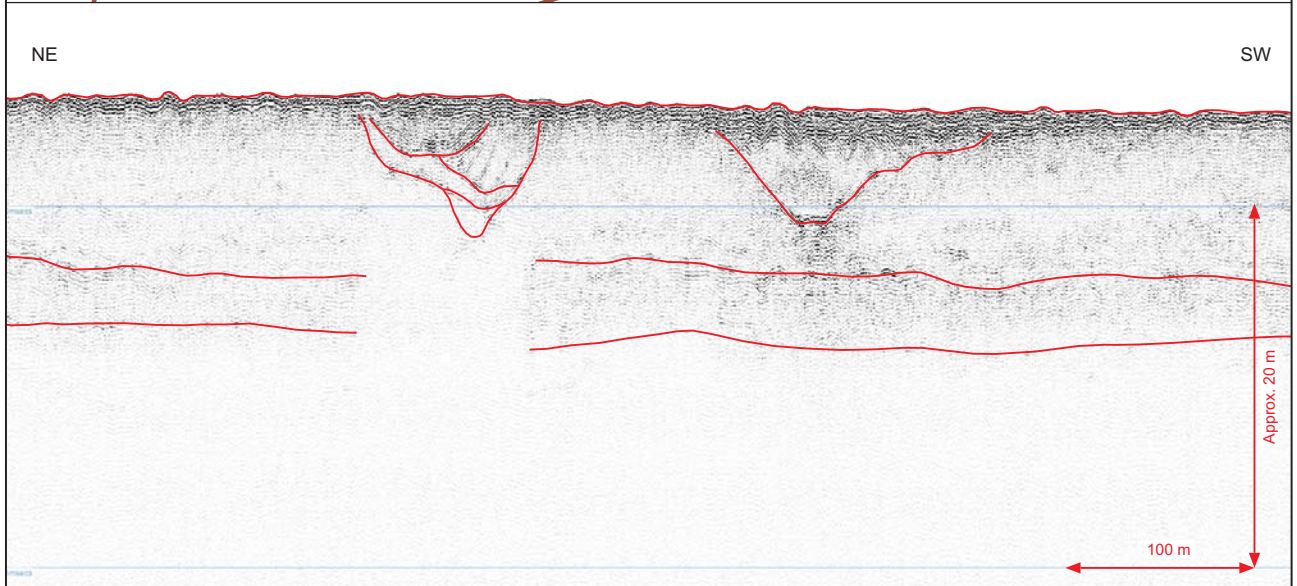
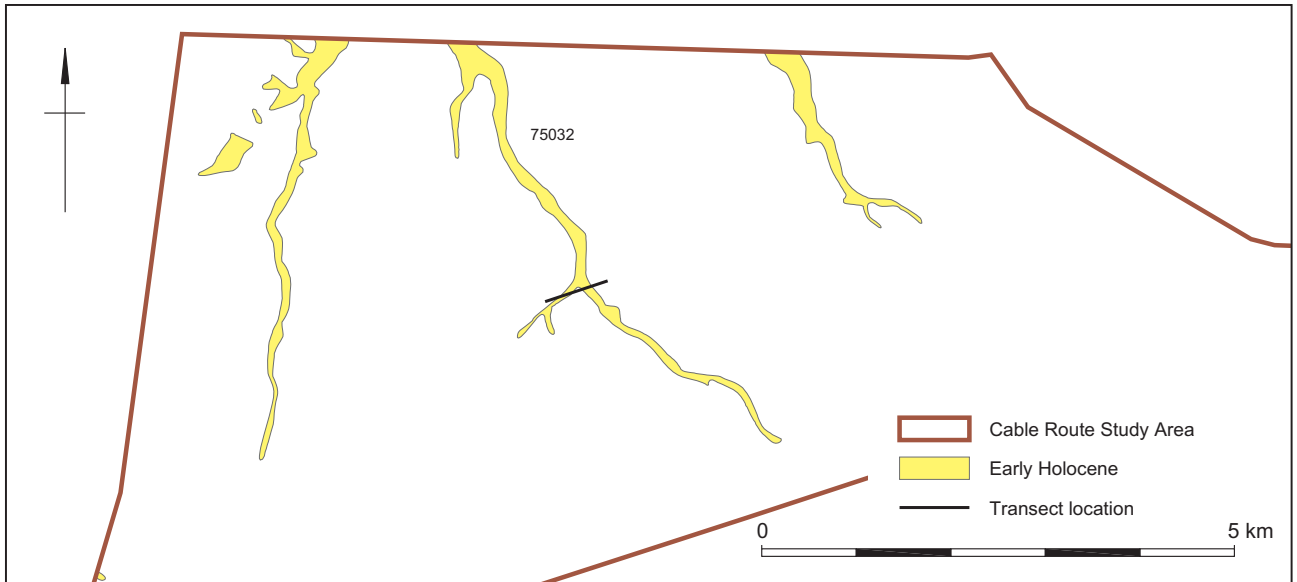



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Seismic Data Example of Feature 75014

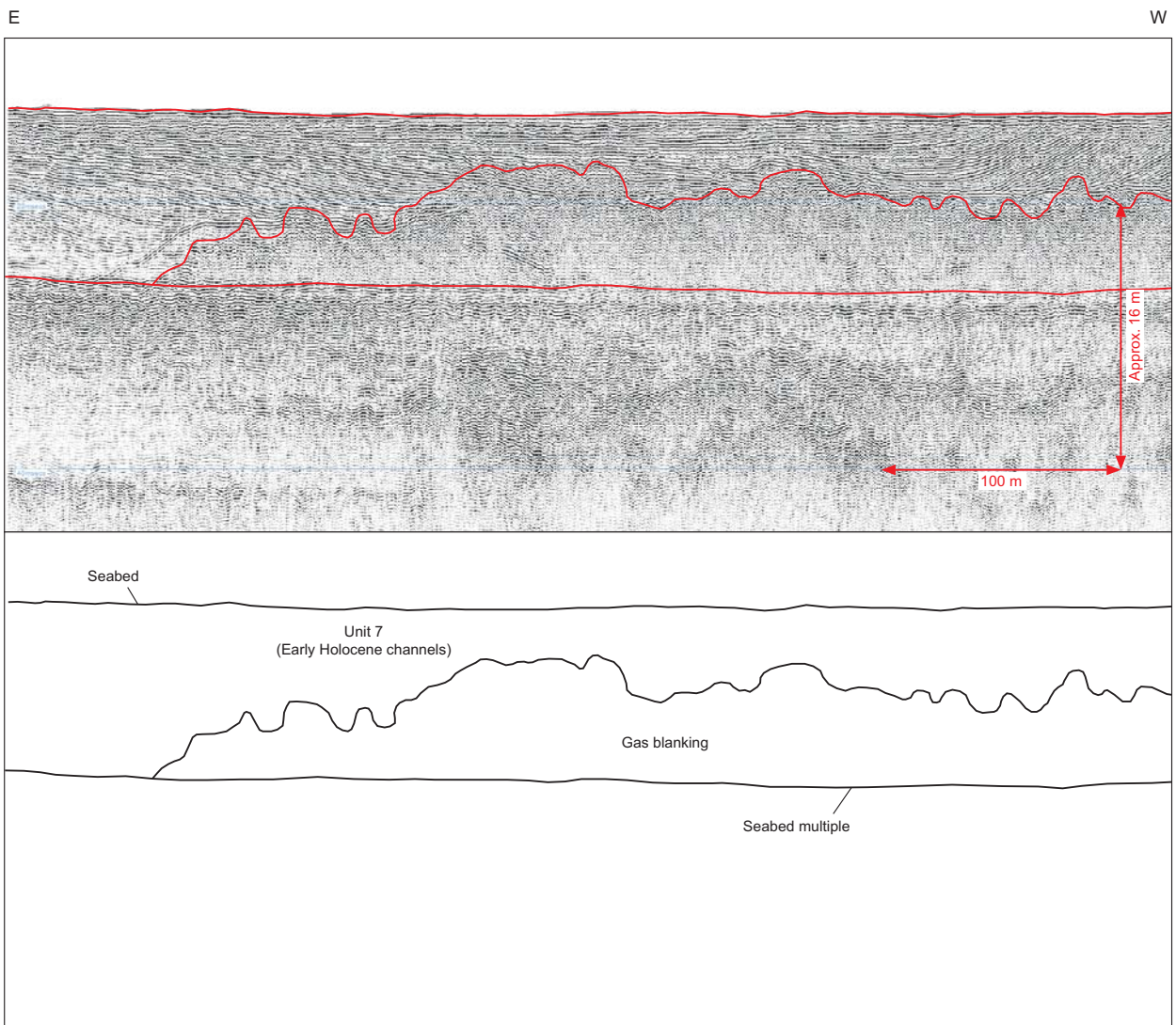
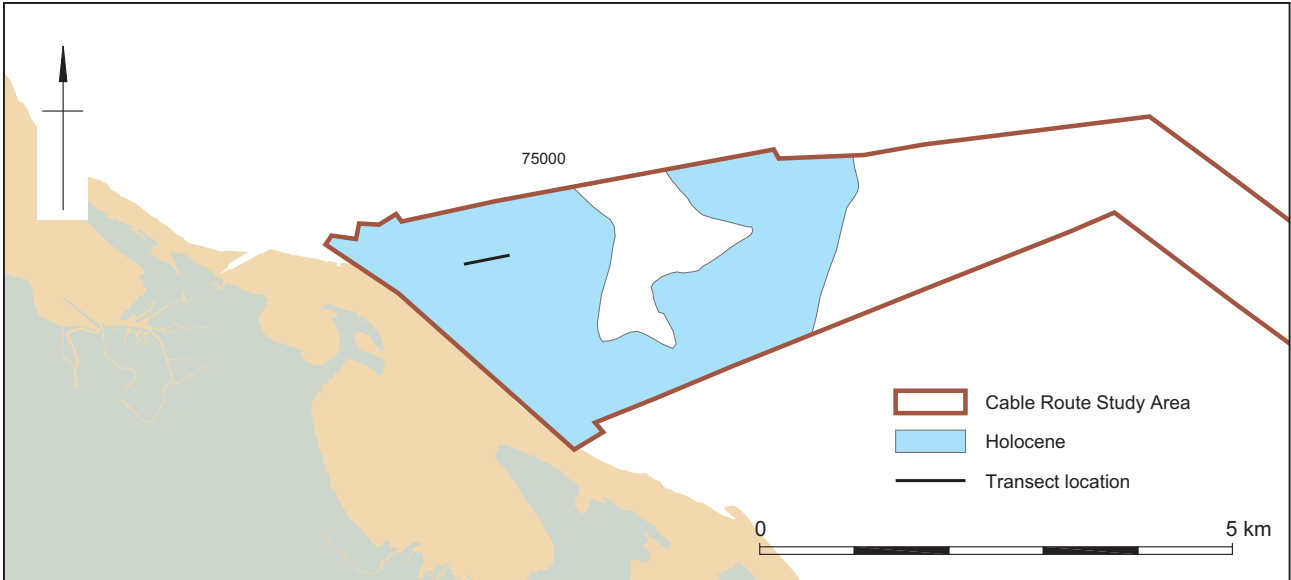
Figure 11



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	Scale:	Map 1:80,000 @A4	Illustrator:	KJF
	Path:	W:\Projects\87152\Drawing Office\Report figs\Geo\2013_03_05		

Seismic Data Example of Feature 75032

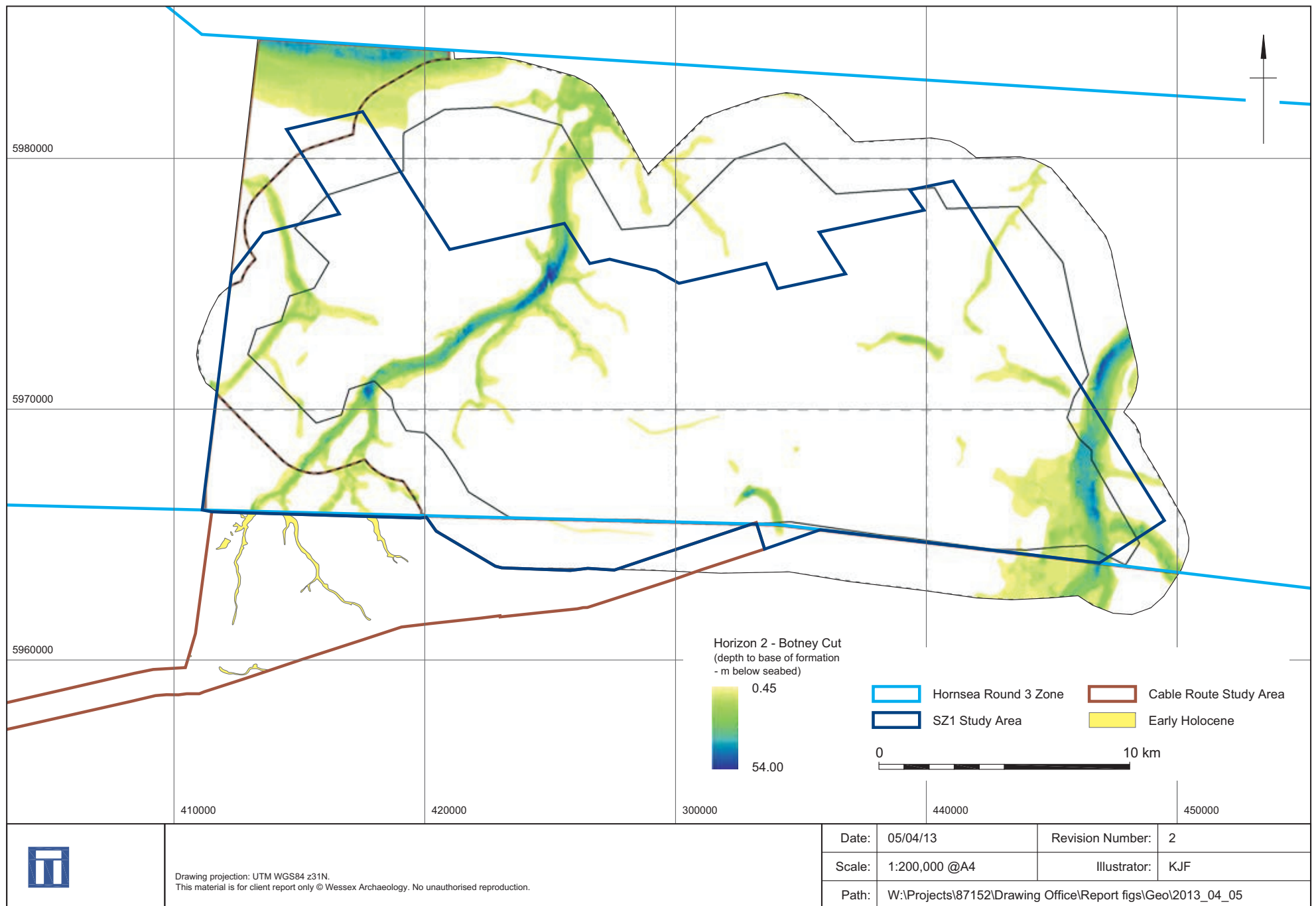
Figure 12



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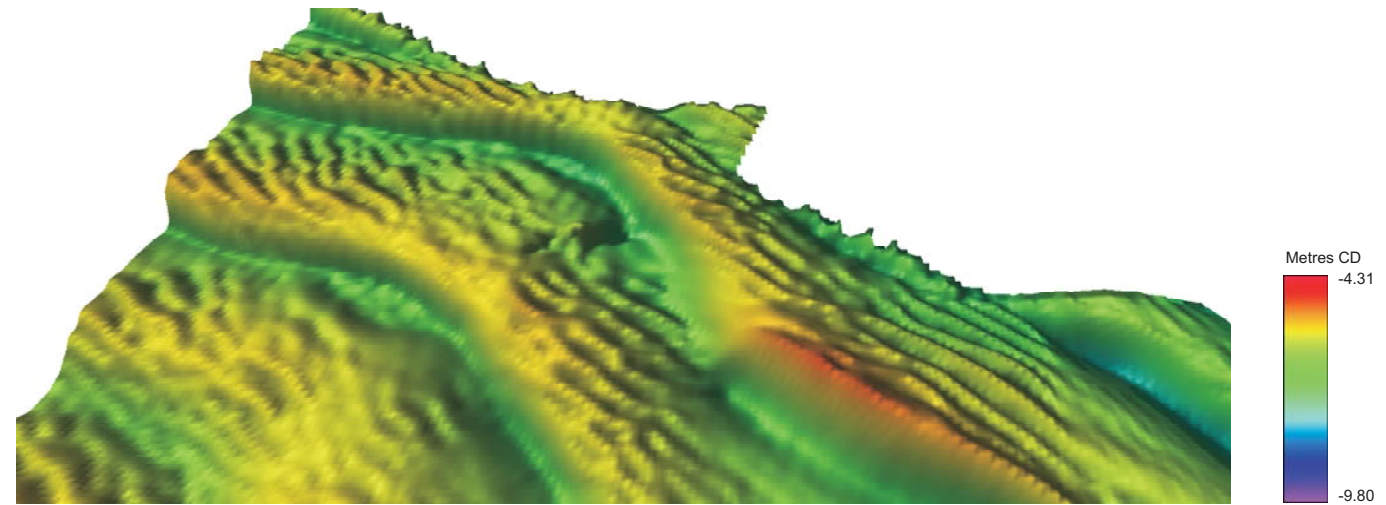
Shallow Palaeogeographic Features within SZ1 (From PMSS 2011)

Figure 14

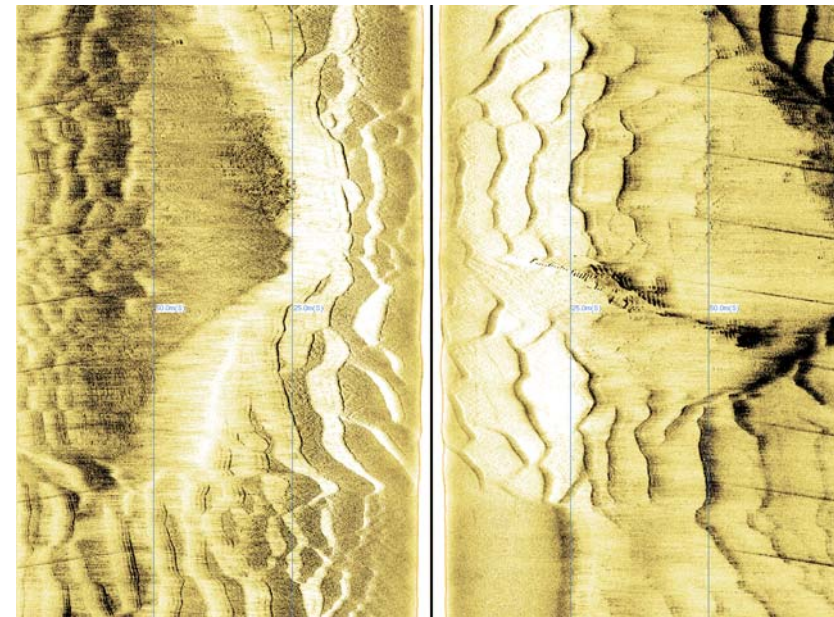
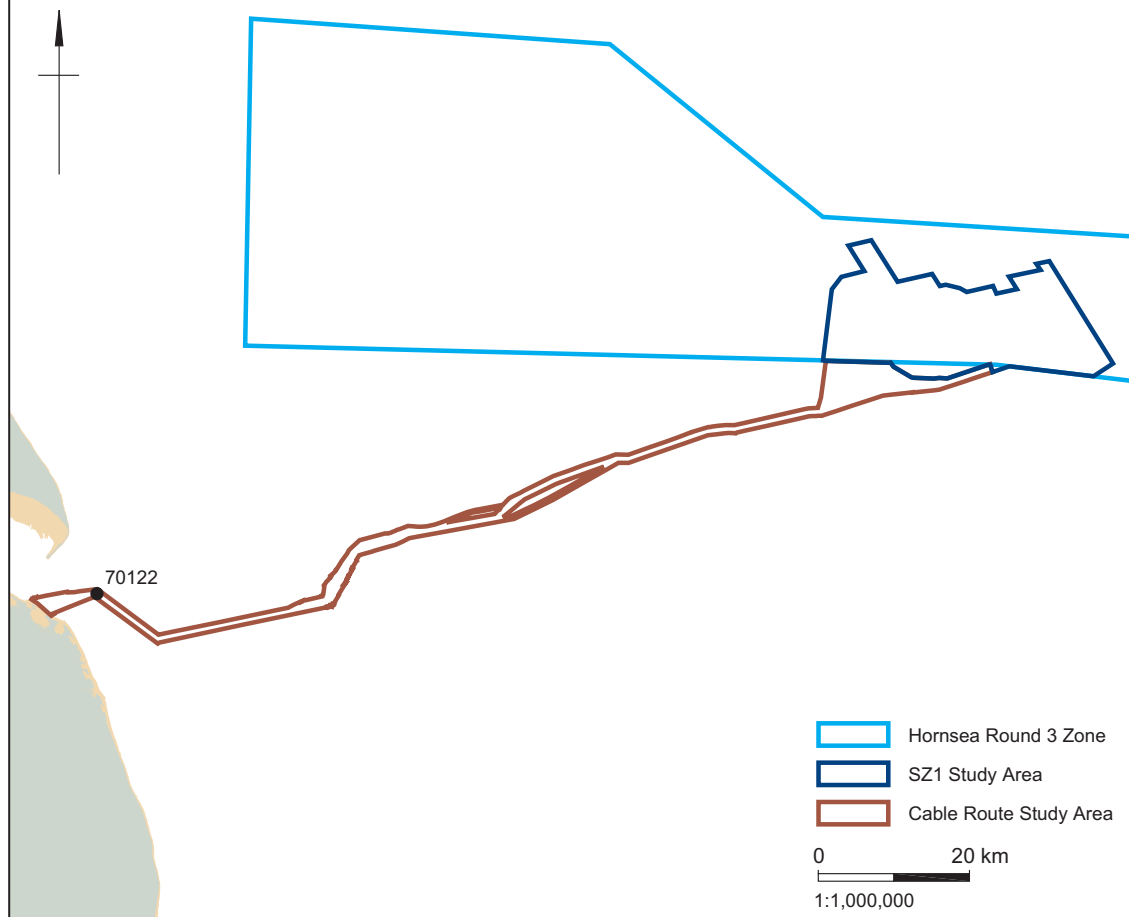


## Wreck 70122 - Unidentified Wreck

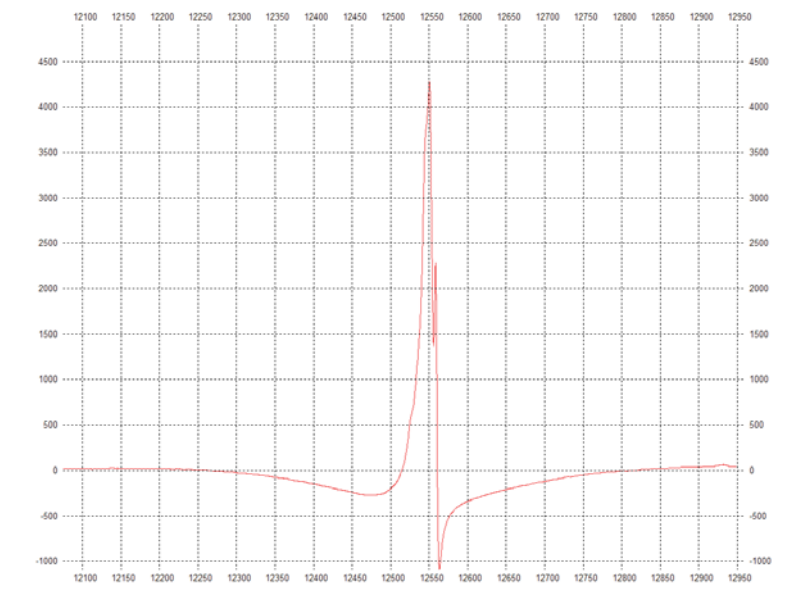
<b>Location</b>		315075 E, 5935126 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>		High		
<b>Geophysical survey dimensions and notes</b>		Dimensions: 54.3m x 15.8m x 0.8m. Elongate low mound located in an area of sand waves, orientated NE-SW. Sidescan sonar shows an irregular outline with numerous short, parallel dark reflectors indicating structure. Associated with a very large, distinct magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Unknown		
	<b>Construction</b>	Unknown, but magnetic anomaly suggests steel hull		
	<b>Dimensions</b>	Original dimensions unknown		
	<b>Shipyard</b>	Unknown		
<b>Loss</b>	<b>Cause</b>	Unknown		
<b>Extent of Survival</b>		The wreck is almost completely buried by sand waves, found by multibeam bathymetry data in consecutive years to migrate over time. Difficult to assess due to burial, but the wreck appears at least partially intact with a large coherent structure. Not associated with a known wreck record so potentially previously unrecorded, though could be the <i>Vasco</i> which was not identified at the recorded location approximately 345m NW.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile



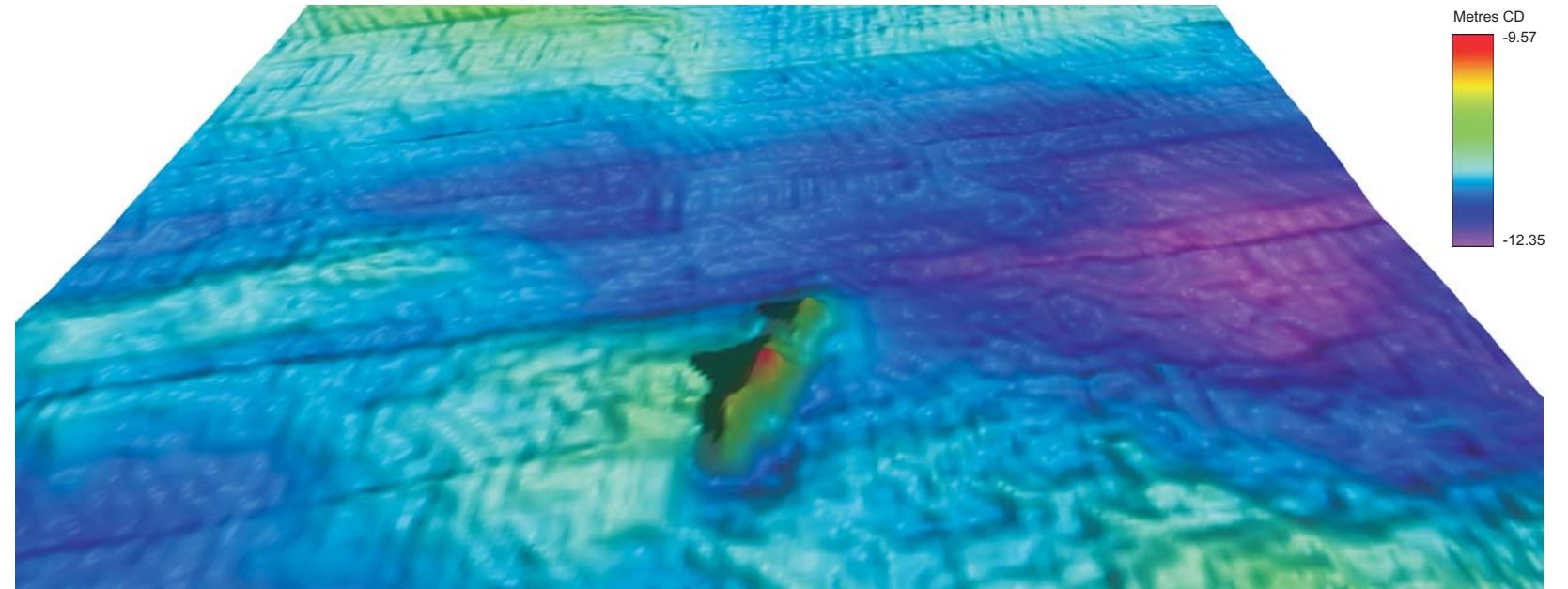
Projection WGS84 UTM Zone 31N  
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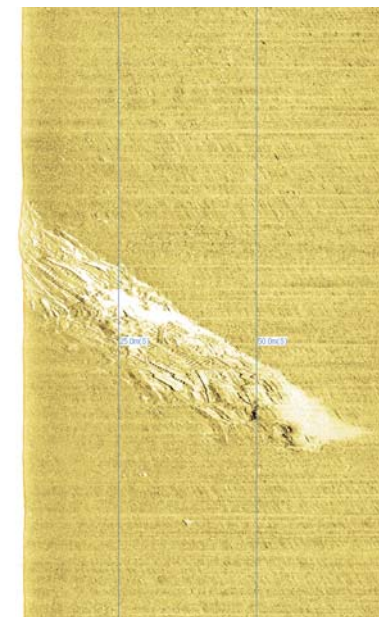
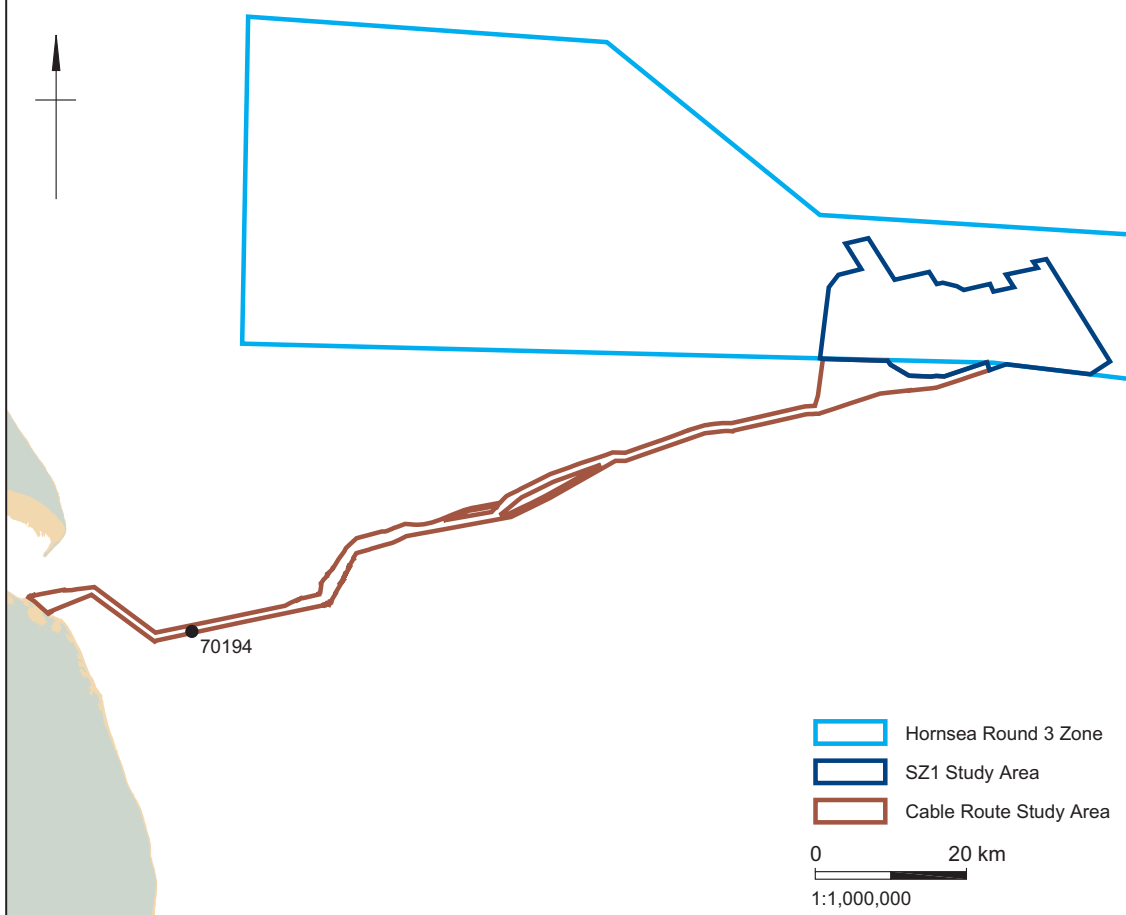


## Wreck 70194 - SS Ravonia

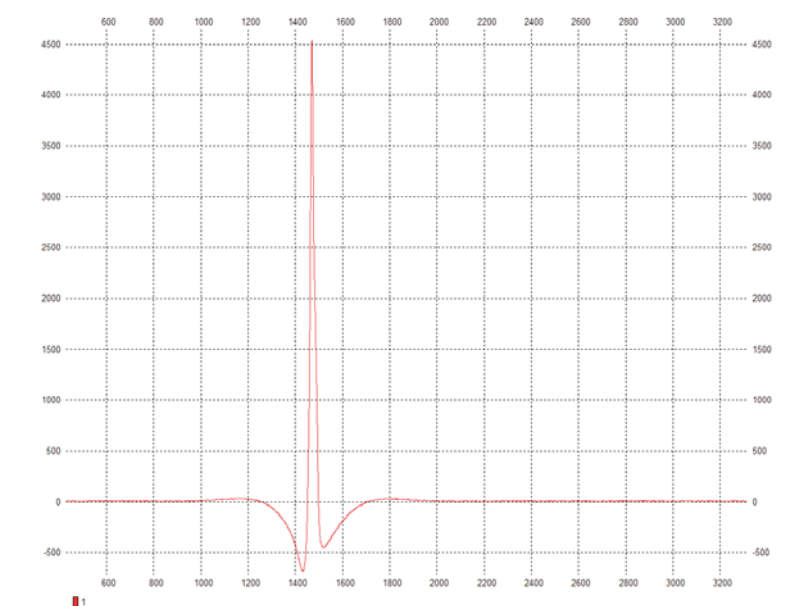
<b>Location</b>		328072 E, 5929813 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>		High		
<b>Geophysical survey dimensions and notes</b>		Dimensions: 109.1m x 42.3m x 2.0m. Distinct, elongate mound orientated approximately NE-SW in an area of generally featureless seabed. Linear reflectors running the length of the wreck and shorter, transverse reflectors suggest structure. Highest part of the wreck is towards the centre. Associated with a very large magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Steam cargo ship		
	<b>Construction</b>	813 grt, steel hull, triple expansion engine		
	<b>Dimensions</b>	56.8m x 9m		
	<b>Shipyard</b>	Williamson R. & Son, Workington		
<b>Loss</b>	<b>Cause</b>	Lost during transit from Sunderland to Cowes following a collision with the HMT trawler <i>Eroicon</i> , 23/09/1944		
<b>Extent of Survival</b>		The wreck appears as a mound of debris rather than a coherent structure, though parallel reflectors suggest that some structure is still visible. Generally featureless seabed suggests it is unlikely to be covered by sand on a regular basis. Recorded as possibly a section of the SS <i>Ravonia</i> , though the measured dimensions are much larger than the original size of this vessel suggesting it could be a different wreck entirely.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile



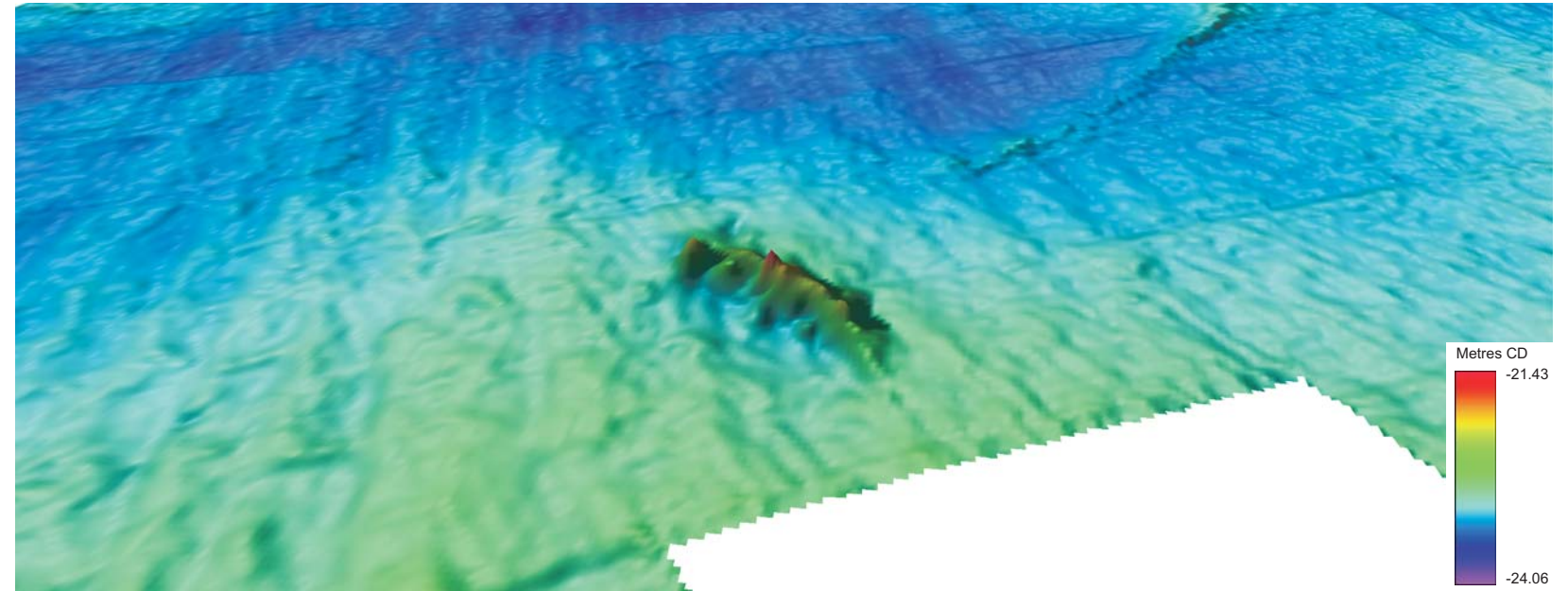
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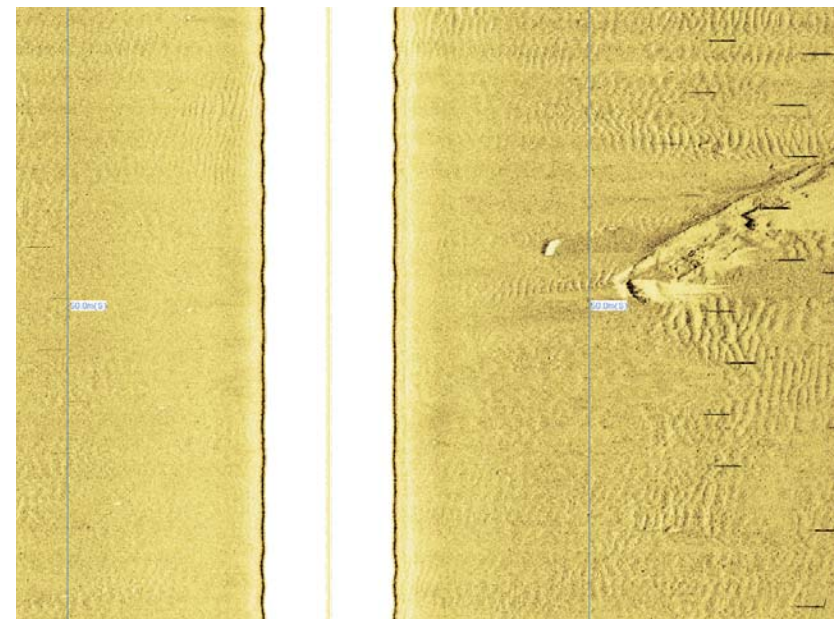
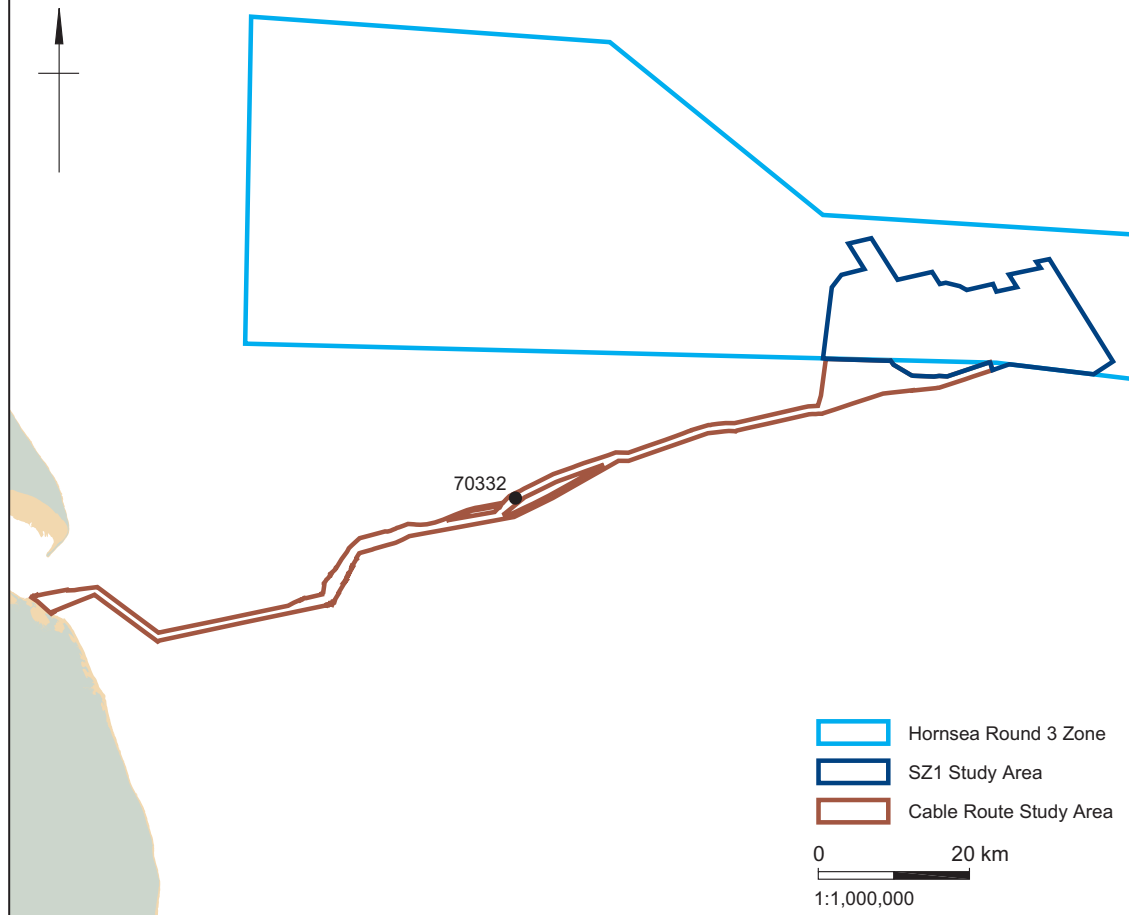


# Wreck 70332 - SS Nieuwland

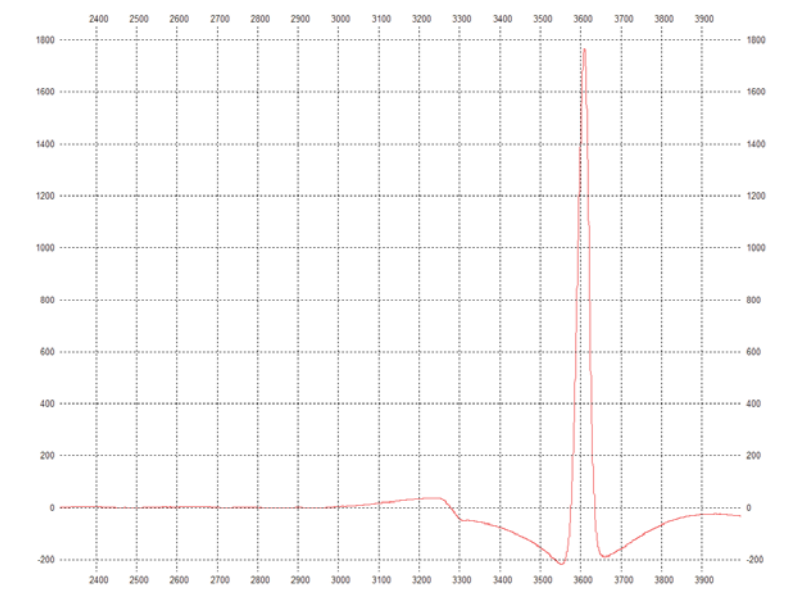
<b>Location</b>	370438 E, 5947503 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>	High		
<b>Geophysical survey dimensions and notes</b>	imensions: 56.1m x 36.0m x 1.6m. Irregular, slightly curved, elongate mound orientated approximately NW-SE. Area of irregular dark reflectors outlined by long, linear dark reflectors with at least two distinct high points visible on sidescan sonar. One elongate dark reflector visible a short distance from main structure. Associated with a very large magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Steam cargo ship	
	<b>Construction</b>	Unknown, but magnetic anomaly suggests steel hull	
	<b>Dimensions</b>	65.6m x 10.0m	
	<b>Shipyard</b>	Osbourne, Graham & Co. Ltd., North Hylton (Sunderland)	
<b>Loss</b>	<b>Cause</b>	Mined and sunk during transit from Goole to Harlingen, 03/10/1914	
<b>Extent of Survival</b>	General faint vessel outline visible in the geophysical data, the structure appears upright but generally quite badly broken up. The vessel high points could represent remaining coherent structure. Sand ripples in the vicinity indicate it is probably partially buried. One distinct piece of separate debris identified, but no significant debris field.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile



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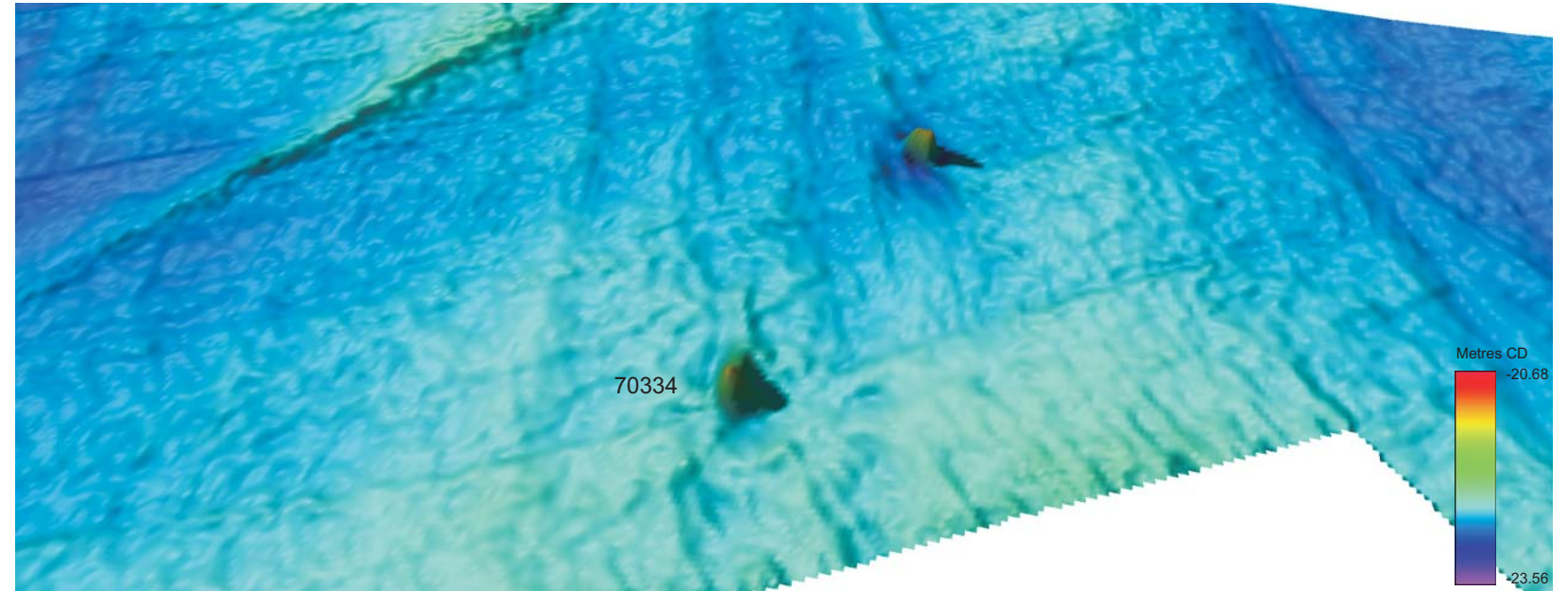
Date: 05/04/13      Revision Number: 1      Illustrator: KJF

Path: W:\Projects\87152\Drawing Office\Report figs\Geo\2013\_04\_05

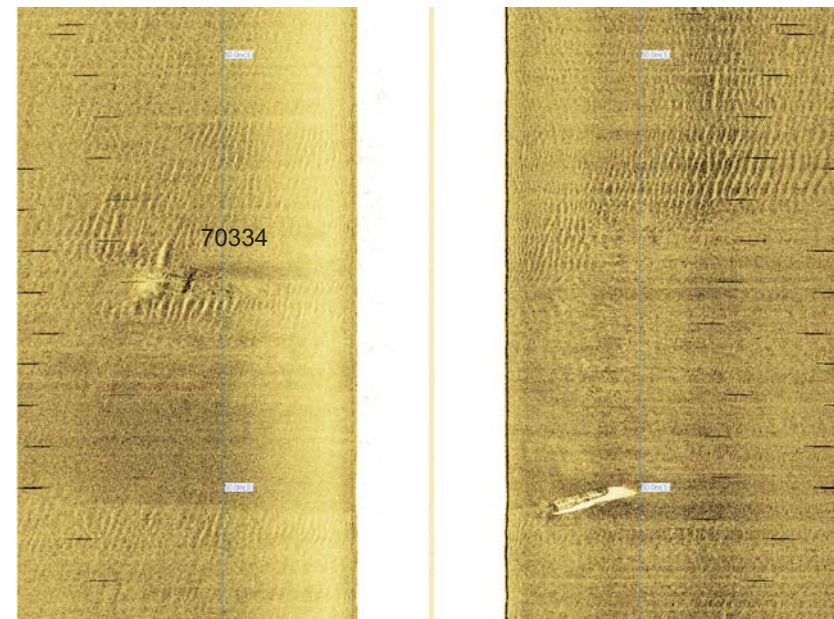
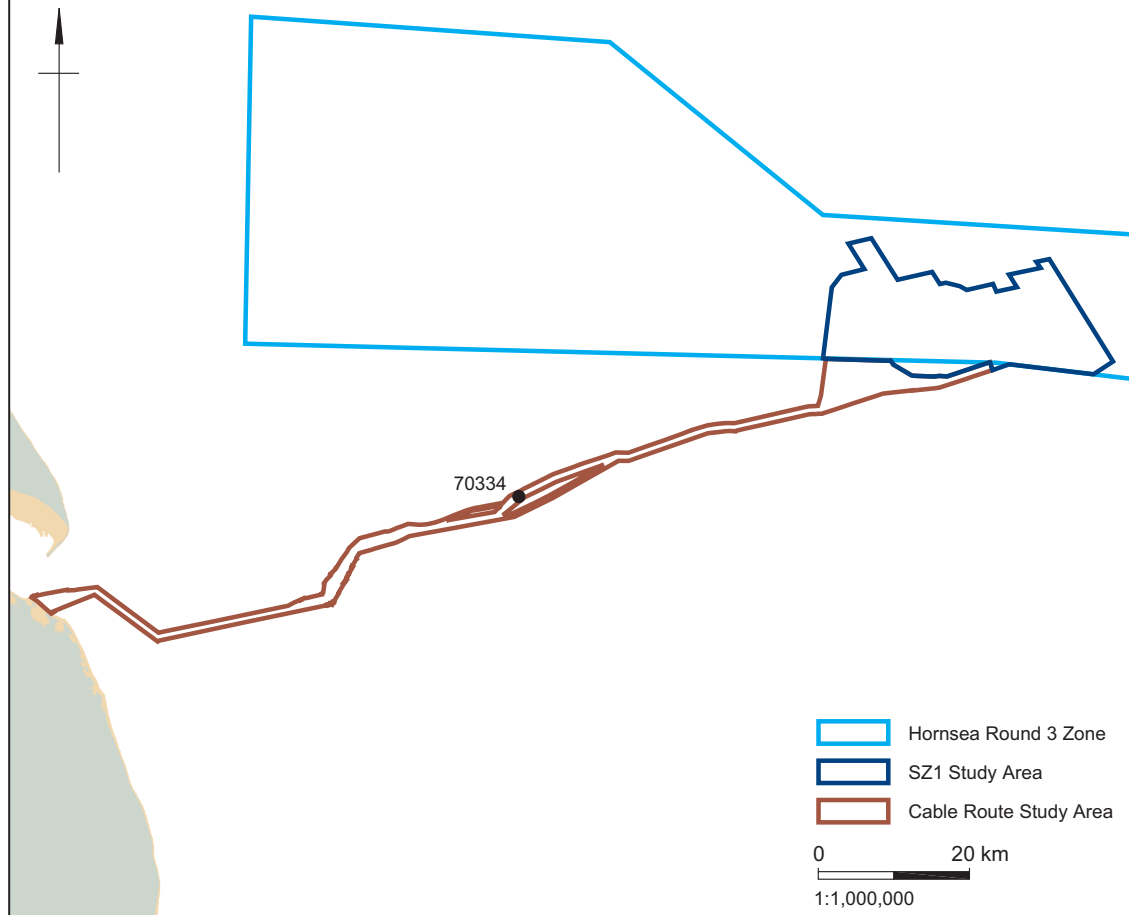


## Wreck 70334 - Unidentified Wreck

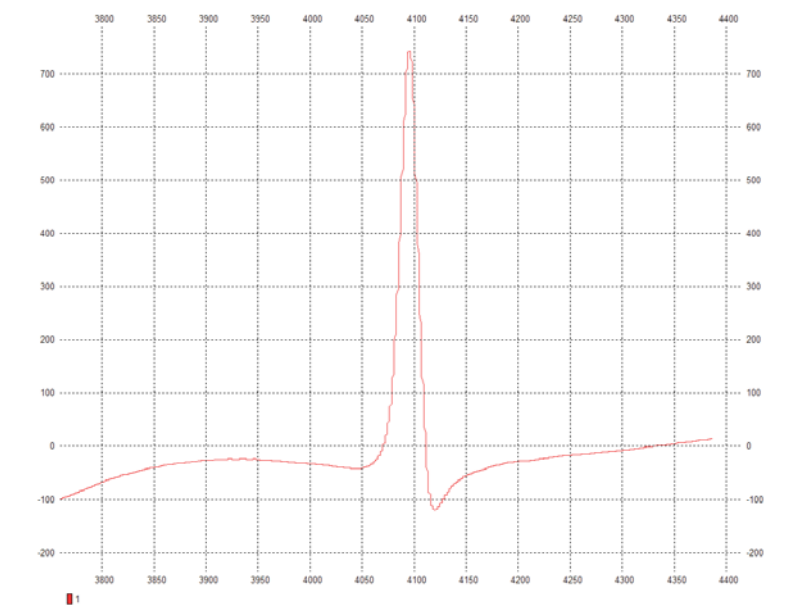
<b>Location</b>	370887 E, 5947705 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>	High		
<b>Geophysical survey dimensions and notes</b>	imensions: 33.1m x 14.4m x 2.7m. Small but distinct mound identified by multibeam bathymetry, though wreck is very poorly defined in sidescan sonar. No distinct structure visible, and surrounding sand ripples suggest it is at least partially buried. Associated with a large magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Unknown	
	<b>Construction</b>	Unknown, but magnetic anomaly suggests steel hull	
	<b>Dimensions</b>	Unknown	
	<b>Shipyard</b>	Unknown	
<b>Loss</b>	<b>Cause</b>	Unknown	
<b>Extent of Survival</b>	Structure is very poorly defined, and possibly represents a mound of debris rather than a coherent structure. Large magnetic anomaly suggests significant ferrous debris, and it is likely that the structure is at least partially buried. Not associated with a previously recorded wreck, though it could be part of wreck 70335 located approximately 145m NE.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile



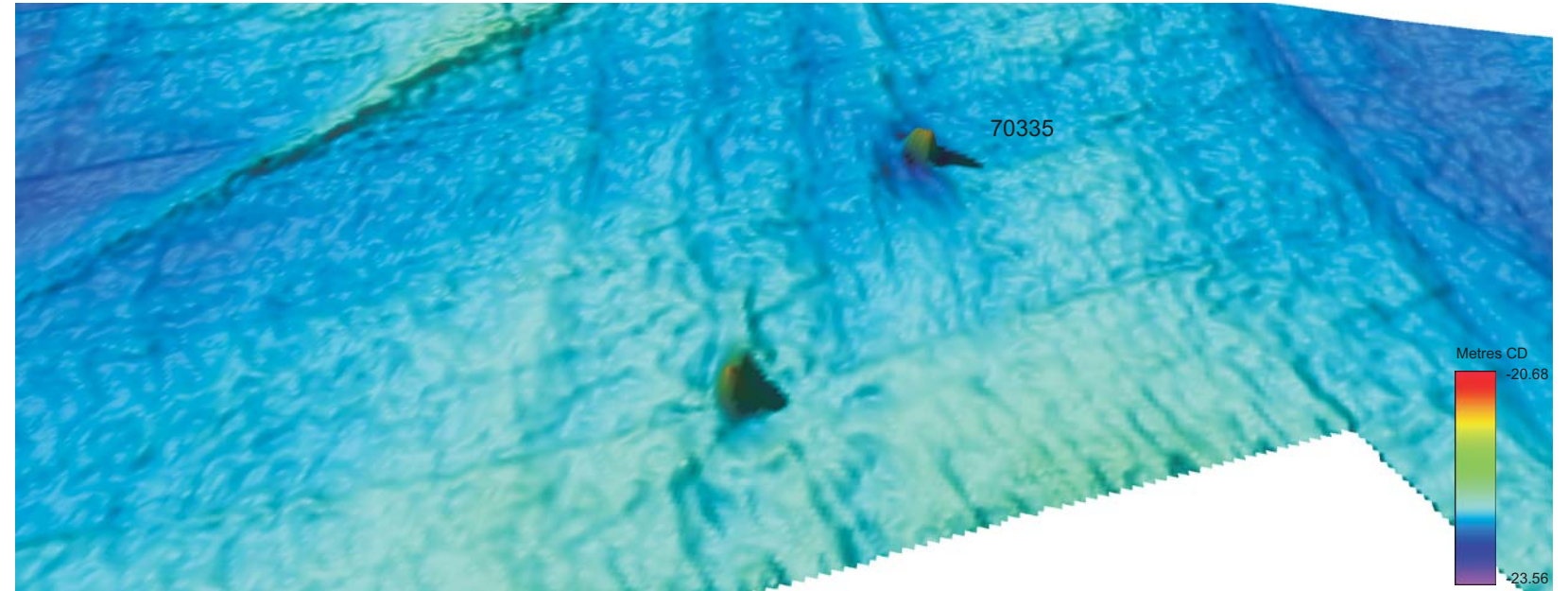
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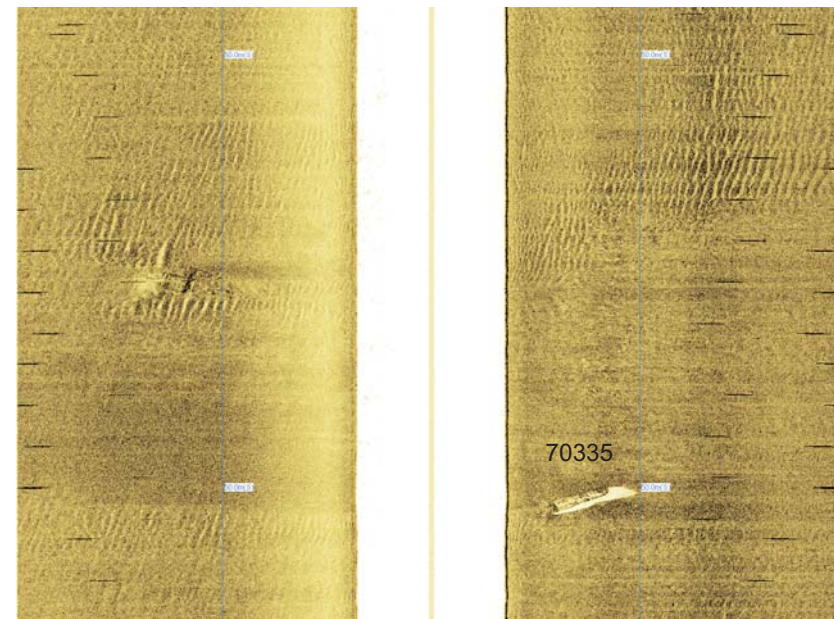
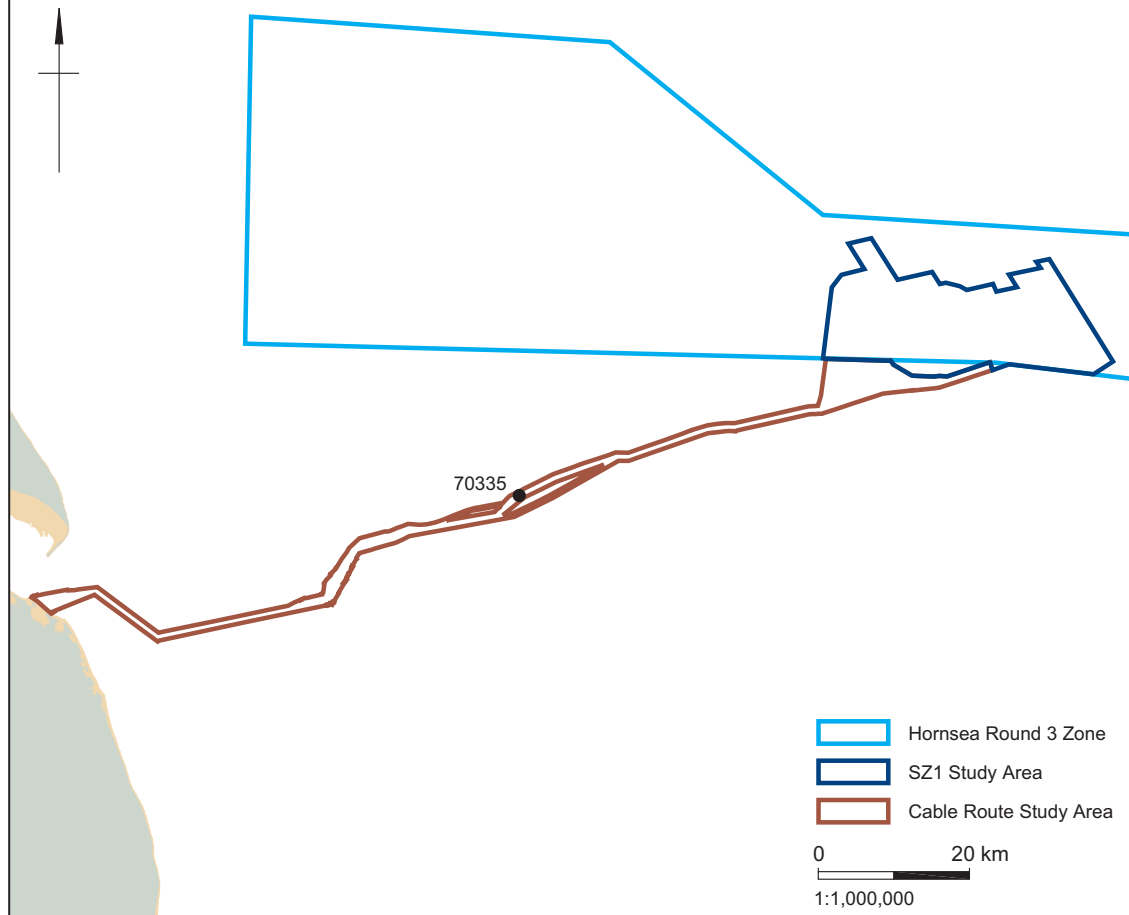


## Wreck 70335 - Unidentified Wreck

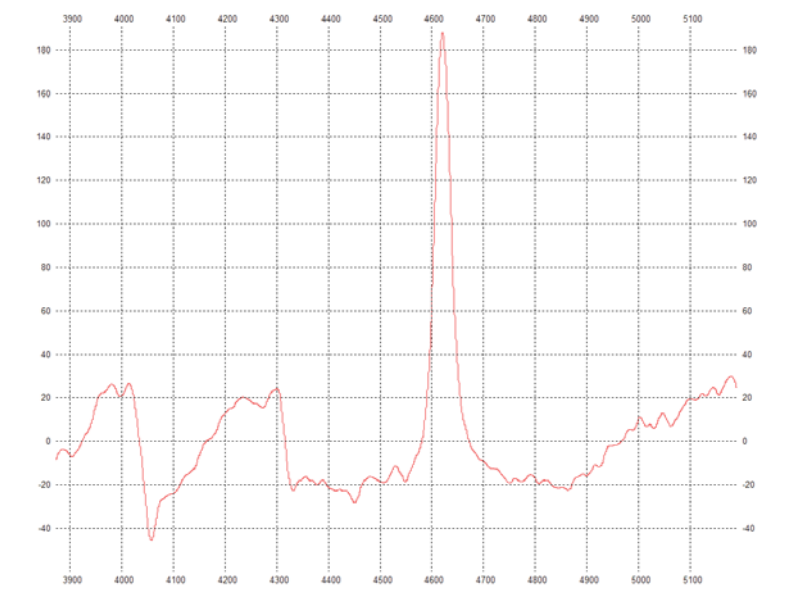
<b>Location</b>		370945 E, 5947842 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>		High		
<b>Geophysical survey dimensions and notes</b>		Dimensions: 14.5m x 6.6m x 2.6m. Small mound on multibeam bathymetry data, but distinct wreck on sidescan sonar data with height and possible structure visible. Associated with a large magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Unknown		
	<b>Construction</b>	Unknown, but magnetic anomaly suggests steel hull		
	<b>Dimensions</b>	Unknown		
	<b>Shipyard</b>	Unknown		
<b>Loss</b>	<b>Cause</b>	Unknown		
<b>Extent of Survival</b>		Appears upright and fairly intact with some visible structure. Seabed is generally featureless, so is unlikely to become completely buried. Previously recorded but unidentified, the record states it is possibly only a "portion" of a vessel. Other portion may be anomaly 70334 located 145m SW.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile



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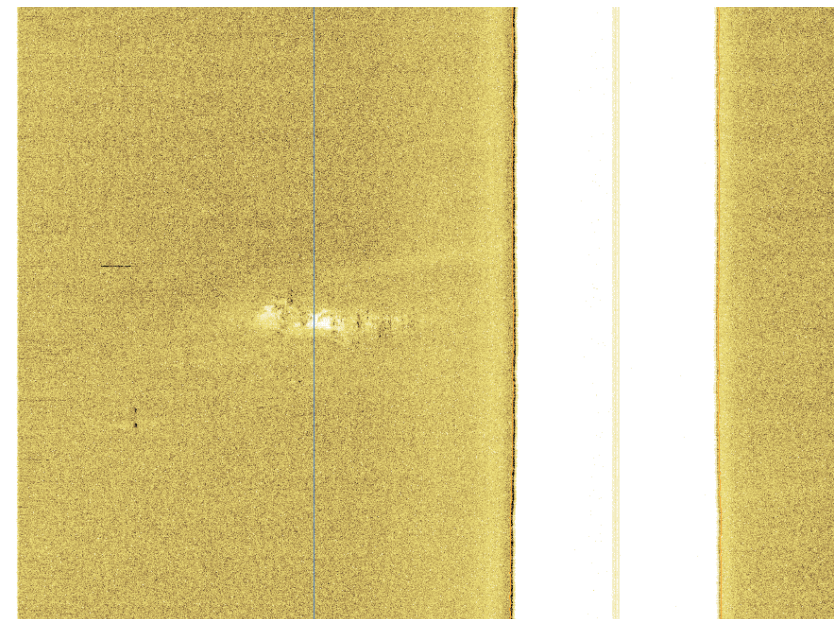


## Wreck 70439 - Unidentified Wreck

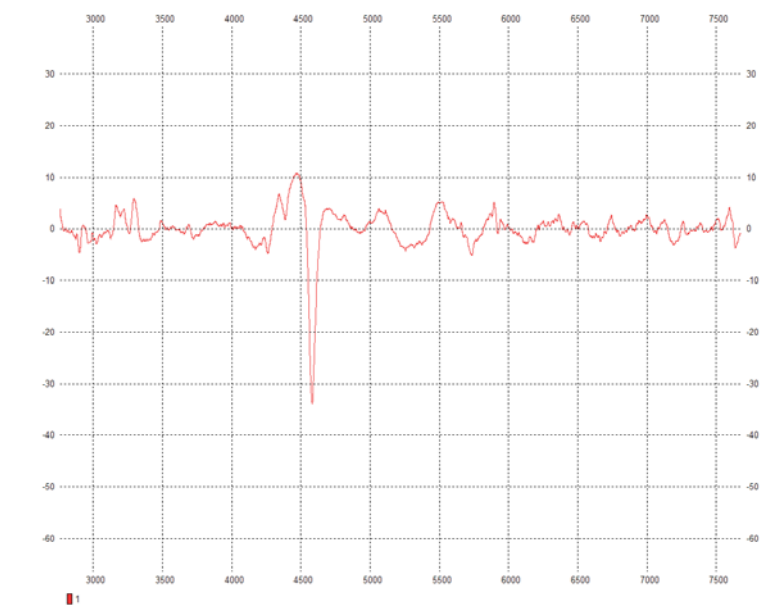
<b>Location</b>		418774 E, 5961246 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>		High		
<b>Geophysical survey dimensions and notes</b>		Dimensions: 27.9m x 8.2m x 1.5m. Distinct elongate mound identified by multibeam bathymetry. Very poorly defined by sidescan sonar, appearing as an elongate area of seafloor disturbance and low reflectivity on a generally featureless seabed. Associated with a medium magnetic anomaly.		
<b>Build</b>	<b>Type</b>	Unknown		
	<b>Construction</b>	Unknown, but magnetic anomaly suggests partially steel, partially wooden		
	<b>Dimensions</b>	Unknown		
	<b>Shipyard</b>	Unknown		
<b>Loss</b>	<b>Cause</b>	Unknown		
<b>Extent of Survival</b>		No structure identified by sidescan sonar, and the wreck is likely to be badly broken up and more of a mound of debris than a coherent structure. Magnetic anomaly suggests some ferrous content, but not enough for an entire steel hull so vessel is possibly partially wooden in construction. Located at the position of a recorded but unidentified wreck.		



Multibeam image facing North, x10 vertical exaggeration



Sidescan sonar



Magnetometer profile

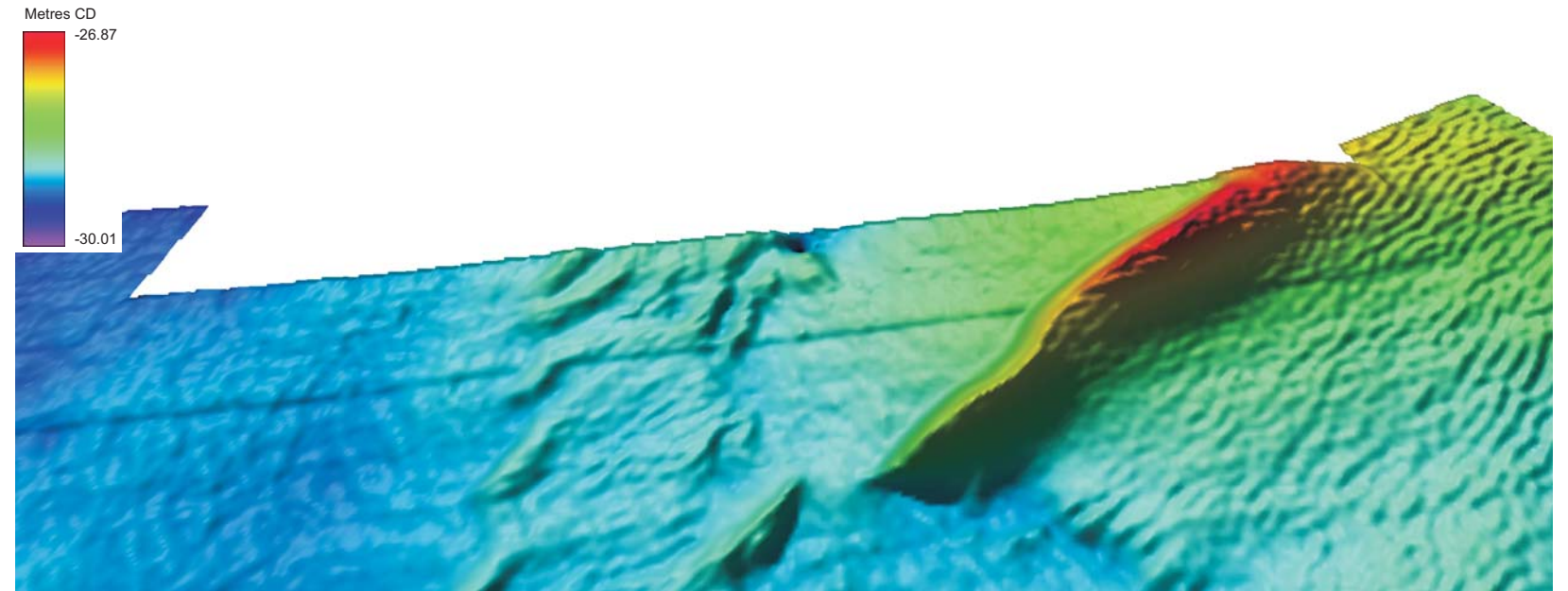


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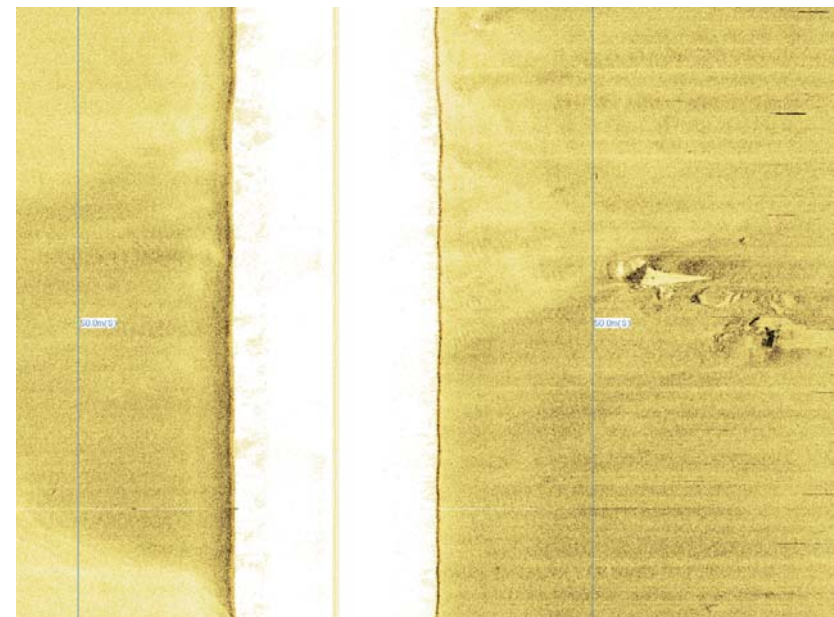
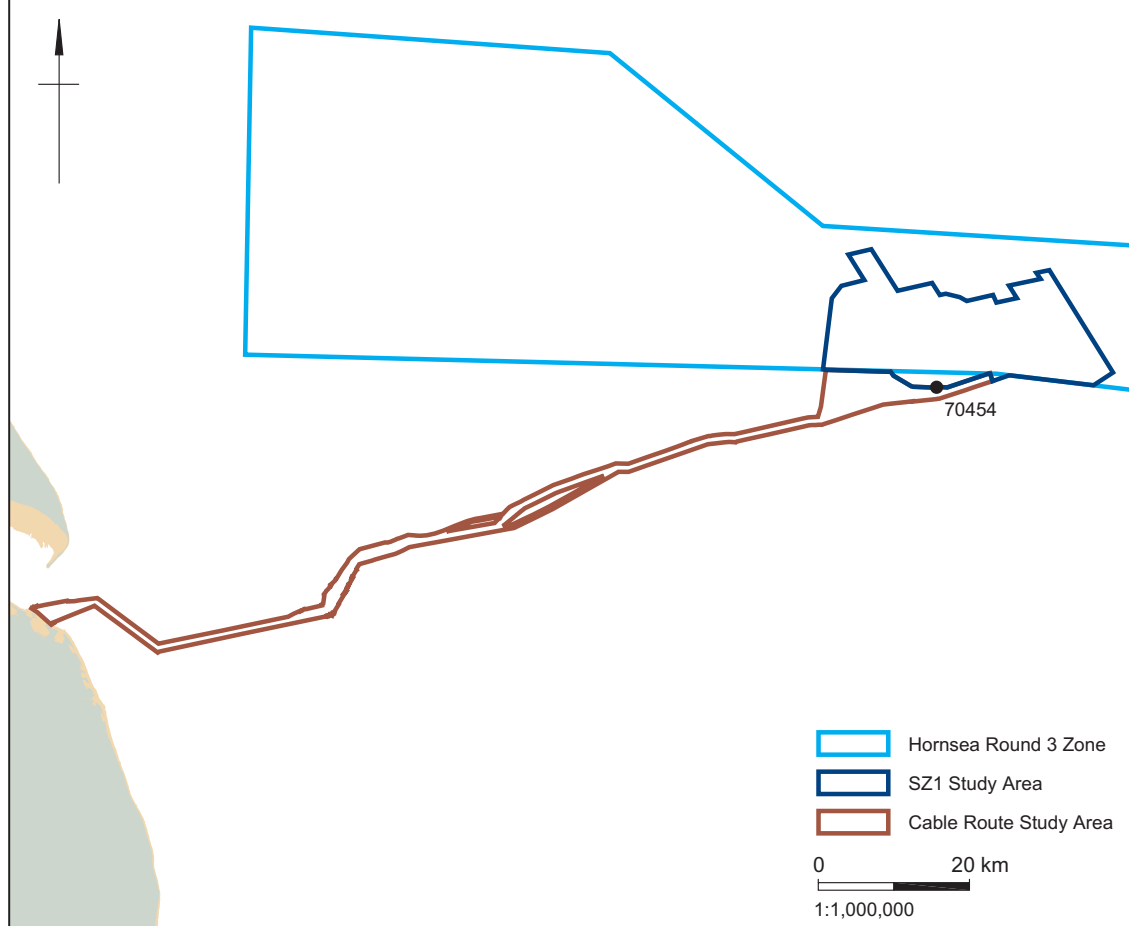
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## Wreck 70454 - Unidentified Wreck

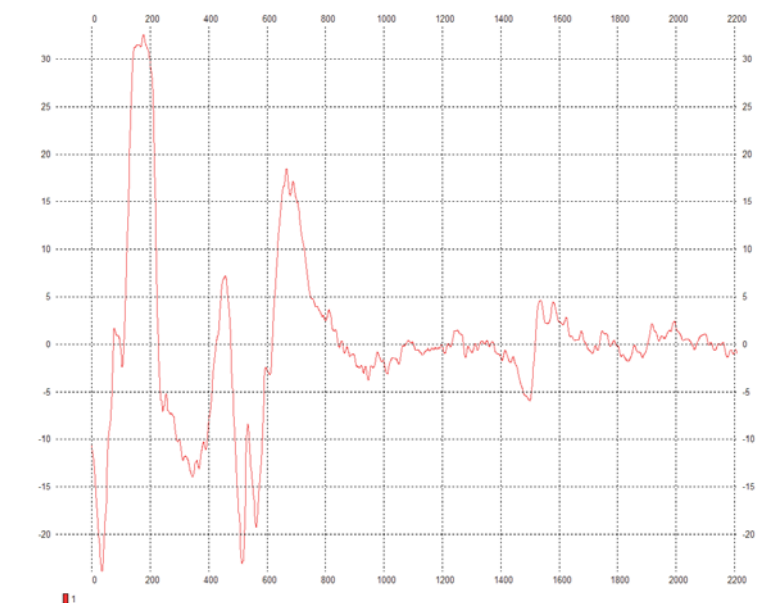
<b>Location</b>	426180 E, 5963601 N (UTM31N)	<b>Area</b>	Cable Route
<b>Archaeological Importance</b>	High		
<b>Geophysical survey dimensions and notes</b>	Dimensions: 65.1m x 27.2m x 3.7m. Elongate area of irregular dark reflectors identified by sidescan sonar, with at least two larger and more distinct anomalies with obvious height. Mostly located outside of the coverage of the multibeam bathymetry data, though a possible scour at the southern edge is visible. Possibly associated with a medium magnetic anomaly, but the anomaly is broad, irregular, and located approximately 100m away so this is uncertain.		
<b>Build</b>	<b>Type</b>	Unknown	
	<b>Construction</b>	Unknown	
	<b>Dimensions</b>	Unknown	
	<b>Shipyard</b>	Unknown	
<b>Loss</b>	<b>Cause</b>	Unknown	
<b>Extent of Survival</b>	No distinct coherent structure is visible, and the wreck appears badly broken up and partially buried. The possible magnetic anomaly suggests some ferrous material is present, though this is uncertain. Located at the position of a previously recorded but unnamed wreck.		



Multibeam image facing North, x10 vertical exaggeration. Most of wreck located outside of the multibeam bathymetry coverage



Sidescan sonar



Magnetometer profile

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