

East Anglia ONE North Offshore Windfarm

Appendix 16.2

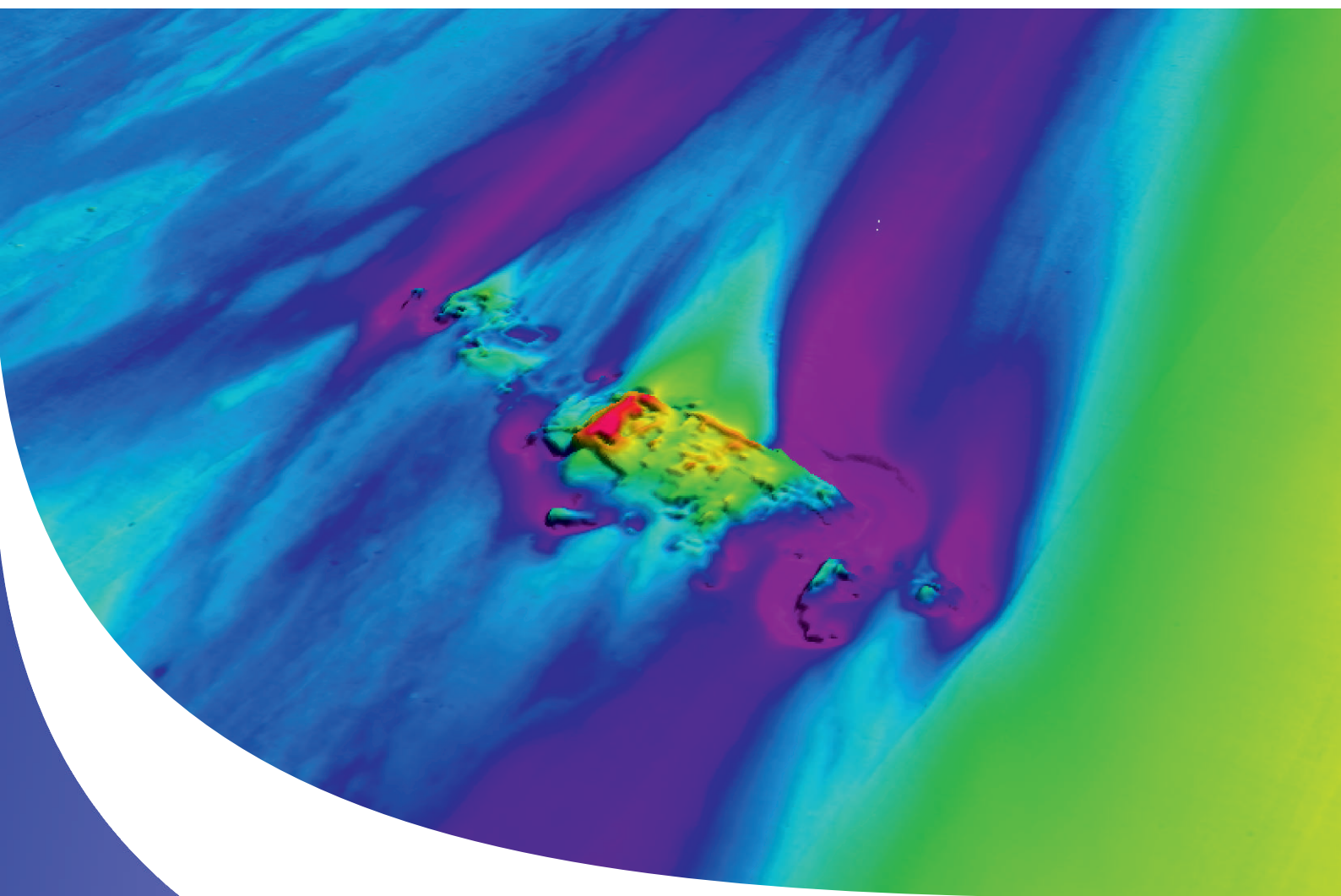
**East Anglia ONE North and East Anglia
TWO Offshore Windfarm Export Cable
Route Archaeological assessment of
geophysical data**

Preliminary Environmental Information
Volume 3
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East Anglia ONE North and East Anglia TWO Offshore Windfarm Export Cable Route

Archaeological Assessment of Geophysical Data



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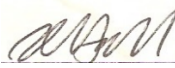
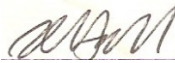
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Summary

Wessex Archaeology was commissioned by Royal HaskoningDHV, on behalf of ScottishPower Renewables, to undertake an archaeological assessment of geophysical data acquired from the East Anglia ONE North and East Anglia TWO Offshore Windfarms Export Cable Route (ECR). The assessment data comprised sidescan sonar, multibeam bathymetry and new sections of magnetometer and sub-bottom profiler data acquired in 2018, and historic magnetometer and sub-bottom profiler data acquired in 2011.

Wessex Archaeology has previously carried out four assessments of geophysical survey data covering various sections within the area of the ECR. The results of this current assessment have been compared to the results of the previous archaeological assessments.

A total of 24 anomalies were assigned the discrimination A1 (anthropogenic origin of archaeological interest), within the study area. Eight of these anomalies (**700218**, **7000244**, **700255**, **700262**, **700591**, **700786**, **70641** and **70645**) were classified as wrecks, two were debris fields (**70639** and **700835**), one seabed disturbance (**700600**) and 12 as items of debris (**700254**, **700263**, **700590**, **700605**, **700822-4**, **700829** and **700839-9**). One recorded wreck (**700565**) was assigned an A1 archaeological discrimination as, although it was not covered by the geophysical data, a large magnetic anomaly on the closest line of magnetometer data indicated the wreck's presence on the seabed.

A total of 846 anomalies have been discriminated as A2 (uncertain origin of possible archaeological interest), and two anomalies were assigned an A3 archaeological discrimination (**700563** and **700564**), which are known wrecks in the UKHO records that were not covered by the marine geophysical data looked at for this assessment.

Archaeological Exclusion Zones are recommended for the 26 A1 anomalies of high potential; eight identified wreck sites, three recorded wreck sites, one seabed disturbance, four debris fields (two associated wreck debris fields), three items of debris and the nine associated wreck debris. For any identified features not assigned an Archaeological Exclusion Zone, an avoidance strategy is recommended. Further work may be necessary to ascertain the precise nature and archaeological potential of individual features should avoidance prove unfeasible during future post-consent works.

The palaeogeographic features identified during this assessment include nine palaeochannels, a complex cut and fill and an area of dune features within the proposed ECR. These have all been given a P1 archaeological rating, which is defined as a feature of probable archaeological interest, either because of its palaeogeography or likelihood for producing palaeoenvironmental material. Some of these features have associated high amplitude reflectors which may be indicative of organic matter. A further 25 palaeogeographic features were identified within the ECR and given a P2 archaeological discrimination, which are features of possible archaeological interest.

Should further ground investigation work be undertaken within the study area, it is recommended that the archaeological contractor be consulted to advise on potential samples to be acquired for archaeological purposes, particularly from the interpreted dune feature (**780023**) and other identified units of archaeological interest identified within the data. It is also recommended that any future geotechnical logs from within the study area be made available for geoarchaeological assessment.

It is recommended that if any objects of possible archaeological interest are recovered during any groundwork operations, that they should be reported using the established Offshore Renewables Protocol for Archaeological Discoveries. This will establish whether the recovered objects are of archaeological interest and recommend appropriate mitigation measures.



Acknowledgements

Wessex Archaeology was commissioned by Royal HaskoningDHV, on behalf of ScottishPower Renewables. Data were provided by Bibby HydroMap Limited and Gardline Geosurvey Ltd.

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East Anglia ONE North and East Anglia TWO Offshore Windfarm Export Cable Route

Archaeological assessment of geophysical data

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology was commissioned by Royal HaskoningDHV, on behalf of ScottishPower Renewables, to undertake an archaeological assessment of geophysical data acquired over the East Anglia ONE North and East Anglia TWO Offshore Windfarm export cable route (ECR).
- 1.1.2 The survey area covers approximately 193 km² and is located between nearshore at Thorpe Ness and approximately 40 km offshore from the town of Lowestoft (Fig.1).
- 1.1.3 The report consists of an assessment of geophysical survey data comprising sub-bottom profiler (SBP), sidescan sonar (SSS), magnetometer and multibeam echosounder (MBES) data sets.
- 1.1.4 Wessex Archaeology has previously undertaken five archaeological assessments of geophysical data over the East Anglia Zone and associated export cable route corridors, three of which overlap in part with the proposed ECR.
- 1.1.5 The three previous assessments, summarised in Table 1, cross through, or overlap, with sections of the current ECR area and were undertaken in the years:
- 2011 (Wessex Archaeology 2011a), using geophysical survey data acquired by Gardline Geosurvey Limited (Gardline);
 - 2012 (Wessex Archaeology 2012) using geophysical survey data acquired by Gardline and EMU Limited. (EMU);
 - 2014 (Wessex Archaeology 2014) using data acquired by Coastline Surveys.
- 1.1.6 A fourth assessment was undertaken alongside this review for the East Anglia TWO Offshore windfarm (Wessex Archaeology *in prep*); this has also been referenced in the report (Table 1).
- 1.1.7 This report consists of an assessment of geophysical survey data acquired in 2018 by Bibby HydroMap Limited (Bibby), comprising SBP, SSS, magnetometer and MBES datasets.
- 1.1.8 The northern section of the ECR was covered by geophysical data acquired for the 2011 data assessments (Wessex Archaeology 2011a). As such, no new SBP and magnetometer was acquired for these sections; however, the 2011 data was reassessed alongside the new 2018 data.

Table 1 Summary of past reports overlapping with EA2

Document	Date	Reference	Wessex Archaeology report ref.
East Anglia ONE Offshore Windfarm, Preliminary Environmental Information Report	2011	Wessex Archaeology 2011a	74540
Chapter 17: Archaeology and Cultural Heritage, East Anglia ONE Offshore Windfarm, Environmental Statement, Volume 2: Offshore	2012	Wessex Archaeology 2012	74541
Chapter 17: Archaeology and Cultural Heritage, East Anglia THREE, Preliminary Environmental Information Volume 1 Revision B	2014	Wessex Archaeology 2014	74547
East Anglia TWO Offshore Windfarm; Archaeological Assessment of Geophysical Data	2018	Current document	117810

- 1.1.9 The study area is defined as the extents of the ECR boundary (Fig.1) as provided by the client on the 20 February 2018. Any geophysical anomalies identified outside of the defined study area are considered beyond the scope of this report and are not included in the results or gazetteer of anomalies.

1.2 Aims and objectives

- 1.2.1 The aim of this assessment is to identify any anomalies of archaeological potential within the ECR boundary, in order to further inform the planning process ahead of the proposed development scheme. This is to be undertaken through the following objectives:
- identify any buried palaeolandscape features of possible archaeological potential;
 - confirm the presence of known or previously located marine sites of archaeological potential and to comment on their apparent character;
 - identify, locate and characterise hitherto unrecorded marine sites of archaeological potential;
 - provide recommendations for archaeological mitigation.

1.3 Co-ordinate system

- 1.3.1 The survey data was acquired in WGS84 UTM31N, and the results are presented in the same coordinate projection.

2 METHODOLOGY

2.1 Data sources

- 2.1.1 A number of data sources were consulted during this assessment, including:
- Geophysical survey datasets acquired by Bibby and Gardline;
 - Recorded wreck and obstruction data acquired via the United Kingdom Hydrographic Office (UKHO);

- Relevant background mapping from the area (British Geological Survey (BGS) 1984 and 1991, admiralty charts received from UKHO);
- Past reports (Wessex Archaeology 2011a; 2012; 2014)
- Client supplied survey reports (Bibby 2018a, b, c, d, e and f; Gardline 2011a; 2011b; 2017; 2017b).

2.2 Geophysical data – technical specifications

- 2.2.1 Geophysical data were acquired by Bibby in 2018. The nearshore section of the ECR were surveyed by the survey vessel, MV *Lia*, whilst the offshore by the survey vessel MV *Kommandor Stuart*. The MV *Lia* acquired SSS, MBES, SBP and magnetometer data between 24 March to 13 May 2018. Line spacing and orientation varied depending on the section of the ECR, due to water depth and tidal currents. The MV *Kommandor Stuart* acquired SSS, MBES, SBP and magnetometer data between 15 March and 29 May 2018. Line spacing and orientation varied depending on the section of the ECR, due to water depth and tidal currents. Further details on the equipment used is in Table 2.
- 2.2.2 The SBP and magnetometer data used for the geophysical assessment in the northern section of the ECR were acquired by Gardline between 30 April and 24 September 2010 onboard the survey vessel M.V. *Confidante*. The primary survey lines were orientated 003°/183° with a line spacings of 75 m and cross lines run every 1500 m. The primary survey lines were run at 1000 m and orientated 000°/180° (Gardline 2011a). Further details on the equipment used is in Table 2.

Table 2 Summary of survey equipment

Survey Company	Survey Vessel	Data Type	Equipment	Data Format
Bibby	MV <i>Kommandor Stuart</i> (2018 Offshore)	MBES	Kongsberg 2040 (300kHz) (Simrad EA400 Dual Frequency single beam)	.txt
		SSS	Edgetech 4200 300-600 kHz with 701DL	.xtf
		SBP	GeoAcoustics GeoPulse 5430A Pinger Sub-Bottom Profiler with 2 x 2 Massa transducer array	.seg
		Mag.	Geometrics G882 Caesium Vapour Magnetometer	.xyz
		Positioning	C-NAV 3050 dGNSS or Long Range RTK	N/A
	MV <i>Lia</i> (2018 Nearshore)	MBES	Reson SeaBat 7125 SV2 dual head (215db and 8db) (Simrad EA400 dual frequency as single beam)	.txt
		SSS	Edgetech 4200 (300 / 600 kHz, 50 m or 75 m range)	.xtf
		SBP	GeoAcoustics GeoPulse Pinger (3.5kHz)	.seg
		Mag.	Geometrics G882 Caesium Vapour Magnetometer	.xyz
		Positioning	Applanix POS MV 320 Aided Inertial Navigation System	N/A

Gardline	MV <i>Confidante</i> (2010 survey)	SBP	Sub-tow boomer with 8-element and 20-element Benthos AQ-1 hydrophone streamers	.sgy
		Mag.	Geometrics G882	.xls
		Positioning	Fugero Starfix DGPS	N/A

2.3 Geophysical data – processing

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

Table 3 Software used for geophysical assessment

Dataset	Processing Software	Interpretation and rationalisation
SBP	CodaOctopus Survey Engine v5.5	ArcMap v10.5
MBES	QPS Fledermaus v7.7.5	
SSS	CodaOctopus Survey Engine v5.5 and v5.7	
Mag.	MagPick v3.25	

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

2.3.3 The SBP data were processed using CodaOctopus Survey Engine Seismic+ software. This software allows the data to be visualised with user selected filters and gain settings 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 sedimentary boundaries and shallow geological features that might be of archaeological interest.

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

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

2.3.6 For the 2018 SBP data acquired by Bibby, 25% of the lines were initially assessed. Where features of interest were identified, additional lines were then interpreted in order to more accurately map the extents of these features. For the areas covered by the 2011 Gardline data, 100% of the lines were assessed due to the line spacing.

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

- 2.3.8 The high frequency .xtf SSS data files were processed using CodaOctopus Survey Engine Sidescan+ software. This allowed the data to be replayed with various gain settings in order to optimise the quality of the images. The data were interpreted for any objects of possible anthropogenic origin. This involves creating a database of anomalies within Coda by tagging individual features of possible archaeological potential, recording their positions and dimensions, and acquiring an image of each anomaly for future reference.
- 2.3.9 A mosaic of the SSS is produced during this process to assess the quality of the sonar towfish positioning. This process allows the position of anomalies to be checked between different survey lines and for the positioning to be further refined if necessary.
- 2.3.10 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.
- 2.3.11 The magnetometer data were processed using Geometrics MagPick software in order to identify any discreet magnetic contacts which could represent buried metallic debris or structures such as wrecks.
- 2.3.12 The software enables both the visualisation of individual lines of data and gridding of data to produce a magnetic anomaly map. The data were first smoothed to eliminate any spiking. A trend was then fitted to the resulting data, and the trend values subtracted from the smoothed values. This was carried out to remove natural variations in the data (such as diurnal variation in magnetic field strength and changes in geology). The processed data were then gridded to produce a map of magnetic anomalies, and individual anomalies tagged based on the grid and individual profile lines. Images are taken in a similar process to that of the SSS data.
- 2.3.13 Magnetic anomalies have been classified as small magnetic anomalies 5 nT to 49 nT; medium sized magnetic anomalies of 50 nT to 99 nT and large magnetic anomalies of greater than 100 nT.

2.4 Geophysical data – data quality

- 2.4.1 Once processed, the geophysical data sets were individually assessed for quality and their suitability for archaeological purposes and rated using the following criteria (Table 4).

Table 4 Criteria for assigning data quality rating

Data quality	Description
Good	Data which are clear and unaffected or only slightly affected by weather conditions, sea state, background noise or data artefacts. Seabed datasets are suitable for the interpretation of upstanding and partially buried wrecks, debris fields, and small individual anomalies. The structure of wrecks is clear, allowing assessments on wreck condition to be made. Subtle reflectors are clear within SBP data. These data provide the highest probability that anomalies of archaeological potential will be identified.
Average	Data which are moderately affected by weather conditions, sea state and noise. Seabed datasets are suitable for the identification of upstanding and partially buried wrecks, the larger elements of debris fields and dispersed sites, and larger individual anomalies. Dispersed and/or partially buried wrecks may be difficult to identify. Interpretation of continuous reflectors in SBP data is problematic. These data are not considered to be detrimentally affected to a significant degree.

Data quality	Description
Below Average	Data which are affected by weather conditions, sea state and noise to a significant degree. Seabed datasets are suitable for the identification of relatively intact, upstanding wrecks and large individual anomalies. Dispersed and/or partially buried wrecks, or small isolated anomalies may not be clearly resolved. Small palaeogeographic features, or internal structure may not be resolved in SBP data.
Variable	This category contains datasets where the individual lines range in quality. Confidence of interpretation is subsequently likely to vary within the study area.

- 2.4.2 The quality of the SBP data has been rated as 'Variable' using the above criteria. Occasional blanking, likely due to weather and sea state, was observed on some lines. Interference was seen on some lines as well as limited penetration due to the hard substrate in the area, which occasionally made the following of horizons challenging. However, in general the majority of the data were considered as suitable for archaeological assessment.
- 2.4.3 The MBES data were rated as 'Average' using the above criteria. The data quality and resolution of 0.5 m was found to be of a good standard, in a few cases minor artefacts were identified within the data. These were not deemed to affect the interpretation and therefore the data were deemed suitable for archaeological assessment of objects and debris over 1 m in size.
- 2.4.4 The SSS data have been rated as 'Variable' using the above criteria table. Some lines were of good quality; however, a few were more affected by sea state and strong currents, causing motion artefacts and slight offsets in the data. The data coverage enabled a good examination of the seabed and enabled positional accuracy to be assessed. In general, the data are considered as suitable for archaeological assessment.
- 2.4.5 The 2018 magnetometer data have been rated as 'Good' using the above criteria table. Minor spiking was identified on a couple of lines and the data were influenced slightly by the background geology, however the data are considered suitable for archaeological assessment.
- 2.4.6 The 2010 magnetometer data have been rated as 'Good' using the above criteria table. It should be noted that, within the northern section of the ECR due to the 1000 m line spacing, some areas have not been covered by magnetometer data and, as such, it is possible that there are ferrous features that have not been identified during this phase of assessment.

Table 5 Summary of data quality

Survey Details			Data Quality			
Operator and Year	Area	Vessel	SBP	MBES	SSS	Mag.
Bibby, 2018	ECR	MV <i>Lia</i> / MV <i>Kommandor Stuart</i>	Variable	Average	Variable	Good
Gardline, 2010	ECR	MV <i>Confidante</i>	Good	N/A	N/A	Good

2.5 Geophysical data – anomaly grouping and discrimination

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

- 2.5.2 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 UKHO record and multiple SSS anomalies.
- 2.5.3 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 (Table 6).

Table 6 Criteria discriminating relevance of identified features to proposed scheme

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

- 2.5.4 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 PALAEOGEOGRAPHIC ASSESSMENT

3.1 Geological baseline and archaeological potential

- 3.1.1 The following is an overview of the geological and archaeological history of the wider region from the Pleistocene to the Holocene marine transgression. This is based on a range of secondary sources, including academic papers, geological information (e.g. BGS mapping), and previous work undertaken by Wessex Archaeology from the East Anglia Zone and the wider region. This serves as a baseline for the palaeogeographic assessment, and aids in producing a stratigraphy for the study area, assigning archaeological potential to identified units. The background geology and archaeological potential have previously been reported on in earlier phases of assessment (Wessex Archaeology 2011a; Wessex Archaeology 2012; Wessex Archaeology 2014); however, it has been updated here to include the latest information and findings.
- 3.1.2 The ECR is situated within the southern North Sea Basin. The environment within the study area is currently fully marine, and a shallow marine basin has existed in the approximate location of the North Sea since the Early Tertiary (although the exact location and extent has altered over time), which is reflected in the geology of the region (Cameron *et al.* 1992).

- 3.1.3 The recent geological history of the southern North Sea is directly linked to glacial/interglacial cycles experienced by the area during the Pleistocene (2.5 million – 10 ka), which resulted in large areas of the southern North Sea being periodically exposed as a terrestrial environment. This is represented in the geological record, with distinct terrestrial landscape features being present, interspersed with deposits of marine and glacially derived sediments. Due to this fluctuating glacial cycle, the corresponding rises and falls in eustatic sea level, and major reconfigurations of the landscape during the last million years, the archaeological record is phased between periods of occupation and long periods of hiatus when environmental conditions or high sea levels restricted access to Britain (Fig. 2). These changes in relative sea level are recorded as Marine Isotope Stages (MIS).
- 3.1.4 The background geology of the study area is dominated by Tertiary deposits (Red Crag Formation), overlain by a series of Pleistocene deposits, ranging in age from the Lower Pleistocene (Westkapelle Ground Formation) to the Late Ipswichian / Early Devensian (Brown Bank Formation). These were deposited in a range of environments, from terrestrial to marine, and it is the terrestrial sediments, deposited during periods of low relative sea level, that are of the highest archaeological potential.
- 3.1.5 The southern North Sea off the east coast of East Anglia is known to contain relatively well preserved palaeolandscape features such as fluvial channels, created during periods of sea level lowstand but while the landscape was still free of ice. 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, bison, horse etc.).
- 3.1.6 The discovery of actual human artefacts, such as hand axes and worked bone, is a rarer occurrence, but artefacts have been recovered. Reported finds from offshore activity have, to date, produced a range of early prehistoric lithic artefacts indicating early prehistoric activity in submerged palaeolandscapes from Lower, Middle, and Upper Palaeolithic periods (Tizzard *et al.* 2014; 2015; Wessex Archaeology 2011b; 2013b), with notable collections of more recent Mesolithic artefacts from submerged palaeolandscape contexts (Momber *et al.* 2011; Wessex Archaeology 2013b).

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

- 3.1.7 Prior to the Anglian glaciation, an extensive estuarine/deltaic landscape existed at the location of the current North Sea basin. This landscape, the Ur-Frisia delta (Cameron *et al.* 1992), drained many major European rivers, including the Bytham/Ingham palaeo-river (Rose 2009; Westaway 2009), the palaeo-Thames-Medway system, which drained northwards through Essex and East Anglia (Bridgland 1994), as well as the Rhine (Hijma *et al.* 2012).
- 3.1.8 At this time a chalk ridge along the axis of the Weald-Artois high, between southeast England and northern France, separated the North Sea and the English Channel into two distinct basins. Any river systems northeast of the ridge flowed northwards across the North Sea basin to the Ur-Frisia delta, whilst those southwest of the ridge flowed along the English Channel towards the Atlantic.
- 3.1.9 The pre-Anglian period represents a significant amount of the Lower Palaeolithic (c. 970,000 to 300,000 BP, >MIS 9). The earliest direct evidence for hominin activity in the UK has been identified at the Lower Palaeolithic sites of Happisburgh, on the Norfolk coast, and Pakefield, on the Suffolk coast, which date from c. 900,000 and 700,000 BP respectively (Parfitt *et al.* 2005; 2010). These sites would have been situated on the edge of an extensive landscape of low-lying estuaries, major river systems, plains and rolling hills.

It was a rich, diverse and productive landscape like any contemporary example, and should not be considered as a temporary land-bridge or intermittent linkage to continental Europe (Coles 1998).

3.1.10 Whilst the archaeology at Pakefield was created during a more Mediterranean climate, around MIS 17 (Fig. 2), the remains at Happisburgh Site 3 are indicative of colder-than-present conditions at the edge the boreal zone (Candy *et al.* 2011), indicating that earlier hominins were capable of surviving in conditions previously thought to be too harsh for habitation (Parfitt *et al.* 2010).

3.1.11 The importance of these sites is international, as they are currently unique at this latitude for this early date (Wessex Archaeology 2013b). Cohen *et al.* (2012) have highlighted the North Sea basin as a key region for understanding Pleistocene hominins within a northerly, coastal environment. The east of England, particularly East Anglia, but also the southeast of England, are important regions for Lower Palaeolithic archaeology in the last 500,000 years during MIS 13 and 11 (Hoxnian interglacial, Fig. 2) (Wymer 1999; Pettitt and White 2012).

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

3.1.12 The Anglian glacial period was the most extensive glaciation of the Pleistocene and saw ice sheets extending further south than at any time in the past 2.5 million years (Fig. 3). The exact southern extent of the Anglian glaciation is currently debated, although a series of enclosed bathymetric deeps identified within multibeam echo sounder data, most notably two large features located between the Shipwash and Inner Gabbard sand banks offshore Felixstowe, Suffolk, have been interpreted as being glacial in origin. This suggests at least a lobe of ice may have extended further south than the established main ice sheet limit (Emu 2009).

3.1.13 The advancing ice sheets gradually pushed the courses of major rivers, including the Thames-Medway system, further south, until they eventually reached their approximate current positions. During this period the study area will have been covered by ice, and the climate around the remaining ice-free areas of the UK would have been too cold for hominin habitation.

3.1.14 During deglaciation and retreat of the ice sheet at the end of the Anglian, it is thought that the emptying of an ice-dammed lake within the North Sea created a volume of water large enough to breach the chalk ridge along the Weald-Artois high. This connected the North Sea to the English Channel, incising the Lobourg Channel off the Kent coast and some of the English Channel palaeovalleys in the process (Gupta *et al.* 2017; Hamblin *et al.* 1992). This initial catastrophic breaching of the Weald-Artois ridge is thought to have been followed by further erosive events leading to the permanent breaching of the English Channel approximately 150 kya (Hijma *et al.* 2012). However, the precise timing and mechanism of breaching is still under debate.

3.1.15 The breaching of Weald-Artois ridge had a major impact on the palaeogeography of Britain, turning Britain from an island at times of high sea level, to a peninsula of Europe when sea levels dropped. In periods associated with lower sea levels since the Anglian, the Lobourg Channel is likely to have formed the main drainage route of the major northern European rivers flowing into the dry North Sea Basin (Cameron *et al.* 1992). During periods of lowered sea levels, these river systems, including the Thames, Medway, Great Ouse, and palaeo-Yare, extended across these now submerged landscapes, resulting in cyclical deposition of associated terrace and flood plain deposits laid down in relation to relative sea level (Wessex Archaeology 2010).

- 3.1.16 As the area off East Anglia, including the study area, has only experienced at the most one glacial advance during the Pleistocene, these palaeolandscape features from periods of low relative sea level are more likely to be preserved here rather than further north (approximately north of the north Norfolk coast), where they have been removed during the subsequent Saalian and Devensian glacial advances. Any surviving Pleistocene deposits are likely to have been reworked or redeposited to a certain extent during subsequent marine transgressions (Hamblin *et al.* 1992), but some are likely to survive on the seabed.
- 3.1.17 During the interglacial periods between the Anglian and Devensian glaciations (Hoxnian and Ipswichian), warmer climate conditions meant the UK was again available to be recolonised by hominin communities. The foreshore, cliffs and hinterland at Clacton-on Sea (Essex) comprise an important Middle Pleistocene site and is a designated geological Site of Special Scientific Interest (SSSI). Channel sediments from the area are also an important site for the Lower Palaeolithic Clactonian flint industry, and have yielded a rare wooden spear alongside lithic artefacts. The site dates from the Hoxnian interglacial period (MIS 11, c. 423,000 - 380,000 BP, Fig. 2) (Sumbler 1996; Bridgland *et al.* 1999), and the type site for the Hoxnian (the Hoxne Brick Pit) is located a relatively short distance inland outside of Diss, Suffolk.
- 3.1.18 Artefactual evidence from Clacton suggests two phases of lithic technology; earlier Clactonian pebble tools in the earlier warming phase of MIS 11 (Fig. 2), and Acheulean-type tools in the later cooling phase of the Hoxnian, suggesting that at the same site two different groups of hominins were producing tools (Pettitt and White 2012).
- 3.1.19 During the Saalian glaciation (MIS 10, Fig. 2) there was a hiatus in hominin activity in Britain (Pettitt and White 2012). When hominins returned, *H. neanderthalensis*, they brought a new lithic technology: the Levallois prepared core technique developing from MIS 9, c. 300,000 BP (Scott and Ashton 2011). They were hunters adapted to a 'mammoth steppe' environment (Ashton and Lewis 2002).
- 3.1.20 The international importance of Early Middle Palaeolithic archaeology in the southern North Sea is highlighted by the numerous sites preserved within the Thames river terraces (White *et al.* 2006; Scott *et al.* 2011) and, in particular, by the submerged prehistoric Levallois lithic assemblage from marine aggregates licence Area 240 in the palaeo-Yare catchment. Over 120 artefacts have now been recovered from this locale, some of which are identifiable as Levallois, with many recovered from *in situ* or near *in situ* contexts (Tizzard *et al.* 2014; 2015; Wessex Archaeology 2013b; 2013c).
- 3.1.21 The substantial, mixed assemblage of handaxes also recovered from Area 240 may be of older Lower Palaeolithic origin (e.g. >MIS 9, Fig. 2), or may date to the Later Middle Palaeolithic when technologically similar artefacts were made (c. MIS 3, Fig. 2) (Boismier *et al.* 2012). However, based on palaeoenvironmental and sedimentological evidence an Early Middle Palaeolithic date is most likely (Tizzard *et al.* 2015).
- 3.1.22 Palaeogeographically, Area 240 is one of the most northerly Neanderthal sites in northwest Europe and of primary archaeological importance for defining Middle Palaeolithic potential and the contemporary palaeogeography across the southern North Sea basin (Tizzard *et al.* 2014). The site highlights the archaeological potential of preserved Pleistocene fluvial deposits within the southern North Sea.

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

- 3.1.23 Deterioration of the climate during the Late Pleistocene resulted in the most recent glaciation of the North Sea during the Devensian period. Currently there is no definitive evidence of a hominin presence in Britain during MIS 5 (Lewis *et al.* 2011).
- 3.1.24 Within the context of early prehistory and submerged palaeogeography, however, substantial areas of the southern North Sea basin would have been dry land during the warming and cooling limbs of the various sub-stages (MIS 5a to 5e, Fig. 2). Recent analysis has suggested that eight relatively brief phases of human activity within the UK are represented by the existing Upper Palaeolithic archaeological record (Jacobi and Higham 2011), with six occurring before the Devensian glacial maximum. Therefore, the potential exists for human activity to have occurred in Doggerland, the area of exposed terrestrial environment within the southern North Sea basin, during and after the Devensian glaciation.
- 3.1.25 Again, East Anglia provides early evidence for Neanderthal recolonisation of Britain after the hiatus between MIS 6 to 4, around 60,000 BP (Fig. 2). The Lynford Quarry material highlights a new lithic technology visually similar to Lower Palaeolithic Acheulean lithics, so-called Mousterian of Acheulean Tradition handaxes and tools (Boismier *et al.* 2012).
- 3.1.26 Climatically, MIS 3 was significantly colder than now but did not attain the glacial conditions of later or earlier glacial periods (e.g. MIS 6 or 2, Fig. 2) (Pettitt and White 2012). For the Neanderthals that may have occupied the region at this time, surviving in Doggerland during this period may have been subject to a variety of technological and cultural adaptations (White 2006).

Post-Late Glacial Maximum and early Holocene (18,000 – 6000 BP; MIS 2 – 1)

- 3.1.27 Following the Devensian glacial maximum, ice sheet retreat once again left significant areas of the southern North Sea exposed as a terrestrial environment, with deposition of fluvially derived sediments continuing from the Late Pleistocene into the Early Holocene.
- 3.1.28 In the Early Upper Palaeolithic, at the end of the Late Pleistocene, there was a transition period for hominins. Neanderthals died out around 40,000 BP, and modern humans then colonised Doggerland, arriving in Britain around 34,000 BP (Jacobi and Higham 2011; Bicket and Tizzard 2015). Archaeological evidence for this period is relatively sparse, but submerged palaeolandscapes provide key contextual evidence for recovered artefacts and provides a background landscape within which to place these human communities.
- 3.1.29 During the LGM, the environment within the southern North Sea was relatively poor for human colonisation, and was situated at the north-western extents of possible habitation. However, there was increasing human exploitation after 15,000 BP. Humans at this time were hunting game, such as mammoth and deer, and evidence of these animals has been reported through marine aggregate dredging, and the associated reporting requirements (Bicket and Tizzard 2015).
- 3.1.30 The onshore archaeological record of Upper Palaeolithic activity is relatively sparse, and offshore locations may provide unique and important context for coastal and lowland human activity during this period (Wessex Archaeology 2013c). For example, a Maglemosian harpoon artefact from trawled peat in the early 20th century was subsequently radiocarbon dated to around 12,000 years ago (Housely 1991), and archaeological and palaeoenvironmental material has been reported from North Sea contexts for over a century (Reid 1913; Godwin and Godwin 1933).

- 3.1.31 The Mesolithic period began in the early Holocene. Around 10,000 BP, sea levels were still more than 60 m below current levels, and during this period, an extremely large area of the southern North Sea and English Channel was dry land, suitable for human occupation. Evidence of this environment has been identified from the foreshore at Jaywick, Essex, where layers of peat dating from the Early Holocene are present along with a preserved land surface from which Mesolithic artefacts have been recovered (Wilkinson and Murphy 1995).
- 3.1.32 Considerable attention has been paid to Mesolithic Doggerland in the last decade (Gaffney *et al.* 2007; Tappin *et al.* 2011) and the geoarchaeology (Boomer *et al.* 2007), submerged forests (Hazell 2008), and palaeo-river systems around the current North Sea coast (Wessex Archaeology 2013b; Limpenny *et al.* 2011; EMU 2009). Increasingly, a maritime perspective has developed for understanding the early prehistoric archaeological record, where coasts, estuaries and wetlands are key landscape elements (Ransley *et al.* 2013).
- 3.1.33 It is clear from numerous research and development-led investigations that postglacial marine transgression has not destroyed Pleistocene and Holocene palaeogeography by default (Wessex Archaeology 2013c). Areas of preserved palaeogeographic features do remain, and detailed reconstructions of palaeoenvironments and palaeogeography can be achieved for large parts of the North Sea basin (Tappin *et al.*, 2011; Limpenny, 2011; Dix and Sturt, 2011). By the early Holocene, Mesolithic hunter-fisher-gatherers in Doggerland were active in a familiar ecosystem of mixed deciduous woodland with oak, elm, alder and lime populated by deer and a wide variety of other mammals (Tappin *et al.* 2011).
- 3.1.34 However, between 7,000 and 5,000 BP, much of the land was inundated by eustatically driven sea level change (Bicket and Tizzard 2015), and by 6,000 BP sea level was only approximately 7 m below the present level (Cameron *et al.* 1992). Around this time, Britain became an island again (Coles 1998). Settlements at the time were often transitory and seasonal, and therefore leave little trace in the archaeological record, however, new types of stone tools were introduced during this period. It is possible that the now submerged environment of which the study area was a part was occupied up until the final marine transgression between 7,000 and 5,000 BP.
- 3.1.35 The marine transgression resulted in the deposition of sands, gravels and muds, which represent the modern marine sediment but can also incorporate reworked sediment from the underlying Pleistocene deposits. Holocene seabed features of note within the wider area are the sand banks known as the Great Yarmouth Banks, located off the Norfolk coast to the north of the study area. These are a system of ridges of reworked outwash sediments from the last glaciation, formed and maintained by tidal meander channels. These mostly overlie the pre-glacial Pleistocene sediments.

Post the Holocene marine transgression, the archaeological potential of the southern North Sea, including the study area, shifts to the maritime history of the UK which is presented in Appendix 1 and summarised in Section 3.

3.2 Palaeogeographic assessment results

- 3.2.1 A number of palaeogeographic features of archaeological potential have been identified within the study area. These features are discussed below, individually described in gazetteer format in Appendix 1, and their distribution is illustrated in Figure 3.
- 3.2.2 The identified geology within the study area has been divided into 5 phases, as described below:

Table 7 Shallow stratigraphy of the study area

Unit	Unit Name	Geophysical Characteristics ⁽¹⁾	Sediment Type ⁽²⁾	Archaeological Potential
8	Holocene Seabed Sediments (post-transgression) (Marine Isotope Stage (MIS) 1)	Generally observed as a veneer or thickening into large sand wave and bank features. Boundary between surficial sediments and underlying units not always discernible.	Gravelly sand with shell fragments, sand waves and ripples indicate sediment is mobile.	Considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites and other cultural heritage.
7	Holocene Sediments (Pre-transgression) (MIS 2 to 1)	Small shallow infilled channels with either seismically transparent fill, or fill characterised by sub-parallel internal reflectors. Can contain high amplitude reflectors or areas of acoustic blanking which may indicate organic matter such as peat	Fluvial, estuarine and terrestrial.	Potential to contain <i>in situ</i> and derived archaeological material, and palaeoenvironmental material.
6	Brown Bank Formation (Late Ipswichian to Lower Devensian) (MIS 5d to 3)	Observed largely as a deposit infilling hollows or channels; however on occasion seen as broad blanket deposit. Fill is generally either acoustically transparent or characterised by sub-horizontal layered reflectors.	Clayey silty sand deposited in an intertidal / lagoon environment.	<i>In situ</i> Lower Palaeolithic artefacts may be protected. Middle Palaeolithic <i>in situ</i> and derived artefacts may be associated dependent on the age of the fill. Palaeoenvironmental information. Basal contact may cover old land surfaces.
5	Lower Brown Bank (Lower Devensian) (MIS 5e to 5d)	Observed at the base of the BNB formation. Characterised by low relief basal and either an acoustically transparent or well-layered fill.	Silty sand and sandy silt, possible fluvial, intertidal or shallow marine deposits.	<i>In situ</i> Lower Palaeolithic artefacts may be protected. Middle Palaeolithic <i>in situ</i> and derived artefacts may be associated particularly with channel edges dependent on the age of the fill. Palaeoenvironmental information.

Unit	Unit Name	Geophysical Characteristics ⁽¹⁾	Sediment Type ⁽²⁾	Archaeological Potential
4	Yarmouth Roads Formation (Lower to Middle Pleistocene) (MIS 62 to 13)	Thick unit characterised by layered sub-parallel internal reflectors. Top of unit generally a well-defined regional erosion surface.	Silty sand with occasional layers of clay. Generally becoming silty, lagoonal clay with depth. Sediments deposited as part of delta complex.	Possibility of <i>in situ</i> finds in later part of formation if not eroded. Contemporaneous with terrestrial Cromer Forest Bed Formation (Pakefield and Happisburgh). Has been found to contain plant debris, wood and peat in some areas of possible palaeoenvironmental importance. Potential greatest where associated with river valleys.
3	Smith's Knoll Formation (Lower Pleistocene) (MIS 65 to 63)	Acoustically unstructured unit with some faint subparallel reflectors.	Fine grained, glauconitic marine sand with some silty clay.	Pre-Earliest occupation of the UK
2	Westkapelle Ground Formation (Lower Pleistocene) (MIS 103 to 63)	Acoustically unstructured unit with a generally faint basal reflector.	Deltaic silty clays and sands.	Pre-Earliest occupation of the UK
1	Red Crag Formation (Late Pliocene)	Acoustically unstructured unit with some parallel internal reflectors.	Glauconitic marine sands	Pre-Earliest occupation of the UK
⁽¹⁾ Based on geophysical data				
⁽²⁾ Based on borehole data and Cameron <i>et al.</i> , (1992)				

3.2.3 The above stratigraphy is a combination of the all the interpreted shallow geological units from across the three study areas (East Anglia ONE North, East Anglia TWO and the East Anglia ONE North and East Anglia TWO Offshore Windfarm Export Cable Route). The entire stratigraphy was not identified in any one single study area; as such, the exact number of units present will differ depending on the area.

3.2.4 The lower (oldest) identified unit (Unit 1) is expected to be present, either directly below the seabed (BSB) or beneath a unit of modern marine sediments, throughout much of the ECR. This unit is thought to comprise glauconitic marine sands. Along the ECR, particularly the northern and central sections, deposits of Westkapelle Ground formation (Unit 2) is present, overlaying Unit 1. Both these units pre-date the earliest occupation of the UK and, as such, is unlikely that they contain any archaeological artefacts or palaeoenvironmental material archaeological interest.

3.2.5 Two interpreted Brown Bank (BNB) Formation (Unit 6) channels are interpreted in the furthest offshore branches of the ECR. Channel **75582**, which is identified in the

southernmost branch of the ECR, is interpreted as a relatively broad BNB channel, orientated NNW – SSE, cutting into the top of Unit 1. Channel **780022** is a slightly narrower BNB channel, orientated NNE – SSW, identified in the northern branch of the ECR. Both the features are seen to have numerous subparallel internal reflectors indicating well-layered fill. Channel feature **780022** appears to have different phases of fill, indicating multiple phases of deposition, and has therefore been classified as a complex channel.

- 3.2.6 Within **780022**, an area of poorly developed possible dune features have been identified (**780023**), situated just above the base of Unit 6 (Figure 3b). The features are seen to have relatively acoustically chaotic fill, with some dipping internal reflectors. The feature is interpreted as being possibly terrestrial in origin, however there is the possibility of them being subaqueous in formation. If terrestrial, it suggests they formed during a significant period of aerial exposure and may protect a buried land surface. As such, these features are classified as of high archaeological potential. The BNB Formation is generally interpreted as a lagoon deposit (Cameron *et al.* 1992). However, the number of internal reflectors suggests it may have a much more complex history, including changes of sediment input and potential periods of drying out/exposure. If this is the case, these surfaces could be of high archaeological potential as they would represent buried land surfaces. The archaeological potential of the BNB Formation is variable depending on its depositional environment. Where there are channel features infilled with Brown Bank formation (Unit 5), the potential is considered higher as these may indicate a former terrestrial landscape, and the areas immediately around the channel edges could have formed the focus for past human activity. The archaeological potential of the BNB Formation in these areas is interpreted to be relatively high, with the possibility of derived artefacts, and some *in situ* Lower and middle Palaeolithic artefacts. Seven more channel features were identified stratigraphically situated directly above, and cutting into, the top of either Unit 1 (**75404**, **75405**, **780010**, **780033** and **780034**) or Unit 2 (**780028** and **780043**). These are likely to have been formed during the periods of low sea level, when the area would have been exposed as a terrestrial landscape. The largest of these features is a relatively long, meandering channel system, measuring approximately 18 km, and orientated north-east to south-west. This is seen on the SBP data as an acoustically chaotic feature with a generally indistinct basal reflector, however in some areas the feature has a higher amplitude basal reflector with some disturbance to lower horizons, possibly indicating the presence of gaseous organic matter.
- 3.2.7 Two of these features (**75404** and **75405**) were identified during a previous phase of assessment (Wessex Archaeology 2012), however not on the most recent data set. This is likely due to differences in survey equipment, as well as changes in line spacing and orientation. As both of these features are close to channel features identified in the latest phase of data assessment (**75582** and **780010**), it is possible that they are related. However, as this cannot be confirmed, the features have been retained as possible archaeology based on their previous interpretation.
- 3.2.8 These features represent former terrestrial landscapes and, as such, the sediments associated with these features are deemed to be of high archaeological potential. This is due to the fact they could contain *in situ* or derived anthropogenic artefacts and preserved palaeoenvironmental material.
- 3.2.9 One complex cut and fill (**780026**), with a distinct basal reflector and multiple phases of fill, is seen on SBP data to cause some slight disturbance to lower horizons. It is possible that this is indicative of increased gas content caused by the microbial breakdown of organic matter within the feature, which suggests that this feature is more likely to contain material

of palaeoenvironmental interest. As such, this feature has also been assigned an P1 archaeological discrimination.

- 3.2.10 Features **780012-20**, **780024-5**, **780027**, **780029-32** and **780035** are thought to likely be of a similar age as the channels described above. However, as they could not be traced any distance as coherent palaeochannels, they are interpreted as simple cut and fill features. It is possible that they are the remnants of eroded palaeochannel systems but, as their nature is less certain, they are considered of lower archaeological potential.
- 3.2.11 Features **780013-9** are a series of shallow simple cut and fills, which appear to be in line with each other, and orientated WSW to ESE. On the SBP data, these features are quite poorly defined and, on occasion, difficult to discern. However, as the features are seen as a group, it is possible that they represent a relict channel system and, as such, have been retained as features of potential archaeological interest.
- 3.2.12 One feature has been identified as an infilled depression (**780011**). This is seen on the SBP data as a relatively broad, shallow infilled depression sat above the top of Unit 1. The feature has a relatively distinct basal reflector and acoustically quiet fill, which may indicate a fine-grained sediment deposited in a low-energy environment.
- 3.2.13 Two units of BNB (**780024** and **780025**) have been identified in the northern branch of the ECR. As previously mentioned, the archaeological potential of the BNB Formation is interpreted as being relatively high due to its complex history and potential historic periods of drying out/exposure. However, as the origins of these deposits are less certain in comparison to the BNB channels identified in other areas of the ECR (features **75582** and **780022**) they are considered as lower archaeological potential.
- 3.2.14 Seven features (**780036-42**) have been interpreted as acoustic blanking. These are all identified in the nearshore section of the ECR and are either at, or just below, the seabed. A majority of these are small pockets, however one broad area (**780036**) is seen running north to south across the ECR. On the SBP data, these features appear to be within a unit of well-layered sediments, possibly Holocene in date (Unit 6), identified just BSB; however, due to this unit's acoustic similarities with the underlying Westkapelle formation (Unit 2), it is difficult to differentiate between the two possible units.
- 3.2.15 Features **780036-42** are identified on the SBP data as an acoustically chaotic layer which causes acoustic blanking of the lower horizons. It might be that this is caused by a unit of coarse sediments, such as gravel. However, as acoustic blanking is also indicative of the presence of gas, it is possible that these areas represent a layer containing organic matter, such as peat. As such, the features have been retained as features of potential archaeological interest.
- 3.2.16 Unit 8 is a modern marine sediment deposited since the Holocene marine transgression. The unit is described by BGS as gravelly sands (BGS 1984) and is likely present as a thin veneer across much of the site, although this is not always clearly visible on the SBP data. In areas across the site, Unit 8 thickens into large sand waves.
- 3.2.17 Due to its age and depositional environment, Unit 8 is not considered of archaeological potential in itself. However, in areas of mobile sediment, Unit 8 has the potential to periodically bury seabed archaeological sites such as shipwrecks and associated debris.

4 SEABED FEATURES ASSESSMENT

4.1 Introduction

- 4.1.1 The geophysical data were assessed to identify features of archaeological potential relating to maritime and aviation activity.
- 4.1.2 Seabed features identified during previous phases of interpretation (Wessex Archaeology 2011a; 2012; 2014) have been re-assessed and updated if seen in the latest dataset. Features that were in previous assessments, but not during this phase of interpretation, have been retained as a precaution, as it is possible that they may have been buried by mobile sediments since the previous data were acquired.

4.2 Seabed features assessment results

- 4.2.1 The results of this assessment are collated in gazetteer format detailed in Appendix 2, and illustrated in Figures 6 - 8.
- 4.2.2 A total of 874 features have been identified as being of possible archaeological potential within the study area and are discriminated as shown in Table 8.

Table 8 Anomalies of archaeological potential within the study area

Archaeological discrimination	Quantity	Interpretation
A1	26	Anthropogenic origin of archaeological interest
A2	846	Uncertain origin of possible archaeological interest
A3	2	Historic record of possible archaeological interest with no corresponding geophysical anomaly
Total	874	

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

Table 9 Anomalies of archaeological potential within the study area

Anomaly classification	Definition	Number of anomalies
Wreck	Areas of coherent structure including wrecks of ships, submarines and some aircraft (where coherent structure survives)	8
Debris field	A discrete area containing numerous individual debris items that are potentially anthropogenic, and can include dispersed wreck sites for which no coherent structure remains	14
Debris	Distinct objects on the seabed, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin	85
Seabed disturbance	An area of disturbance without individual, distinct objects. Potentially indicates wreck debris or other anthropogenic features buried just below the seabed.	17
Rope/chain	Curvilinear dark reflectors, often with a small amount of height, indicating rope or chain (if ferrous)	26
Bright reflector	Individual objects or areas of low reflectivity, characteristic of materials that absorb acoustic energy, such as waterlogged wood or synthetic materials. Precise nature is uncertain	13

Anomaly classification	Definition	Number of anomalies
Dark reflector	Individual objects or areas of high reflectivity, displaying some anthropogenic characteristics. Precise nature is uncertain	165
Mound	A mounded feature with height not considered to be natural. Mounds may form over wreck sites or other debris.	3
Magnetic	No associated seabed surface expression, and have the potential to represent possible buried ferrous debris or buried wreck sites	540
Recorded Wreck	Position of a recorded wreck at which previous surveys have identified definite seabed anomalies, but for which no associated feature has been identified within the current data set.	3
Total		874

- 4.2.4 Within the ECR, a total of 26 anomalies have been assigned A1 archaeological discrimination, which are defined as features of anthropogenic origin of archaeological interest. Included within this discrimination are magnetic anomalies of greater than 1000 nT, as due to the size of the magnetic anomaly they are thought to be of potential anthropogenic origin. Of these, eight have been classified as wrecks (**700218**, **700244**, **700255**, **700262**, **700591**, **700786**, **70641** and **70645**), one a recorded wreck (**700565**), one seabed disturbance (**700600**), two debris fields (**700257** and **70639**), two associated debris fields (**700258** and **700835**), three items of debris (**700263**, **700590** and **700605**) and nine as associated wreck debris (**700254**, **700822**, **700822-4**, **700829**, **700836-9**).
- 4.2.5 Feature **70641** (Wreck Sheet 1) is a small and well-contained known wreck of the fishing vessel *St Patrick* (UKHO 10350), measuring approximately 25.0 x 8.0 x 2.5 m in the geophysical data, and situated amongst small bedforms. In the MBES data the wreck is clearly visible as an oval mound, orientated approximately north to south. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. The *St Patrick*, a fishing vessel measuring 21.0 x 5.5 x 2.4 m, sank following an explosion on 5 June 1976. The wreck was first recorded in this position in 1982, with subsequent surveys confirming the location in 2017. There was no clear spread of debris in the surrounding area, one item was identified **700829** within close proximity to the wreck.
- 4.2.6 Feature **70645** (Wreck Sheet 2) is a large dispersed known wreck of the steamship, the *Groenlo* (UKHO 10357), measuring 107.1 x 49.8 x 2.1 m in the geophysical data and situated amongst large bedforms. The MBES data show that the wreck is a collection of large items orientated mainly east to west, in a large area of scour surrounded by bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the features are comprised ferrous material, or if there are further items of debris buried nearby. The *Groenlo* was a steamship built in 1926 by N V Boele's, Bolnes, it was torpedoed on 24th November 1941 *en route* from Hartlepool for London with a cargo of coal. The wreck was first recorded in this position in 1959, with subsequent surveys confirming the location in 2017. There are some items of associated debris (**700836-9**) and a debris field (**700835**) identified in the MBES and SSS data, mainly located within or on the edge of an area of scour and appear associated with the wreck.
- 4.2.7 Feature **700218** (Wreck Sheet 3) is a large and much dispersed known wreck of the steamship the *Jim* (UKHO 10313), measuring 85.7 x 46.9 x 2.5 m in the geophysical data, with an associated magnetic anomaly of 31,220 nT, located amongst an area of large

bedforms. The MBES data show the wreck as a collection of mounds and features with relief, generally orientated approximately north to south. The *Jim* was a steamship built in 1908 by J. Crown & Sons Ltd., it was sunk on passage from Goole to Dieppe on 31 October 1941 with the circumstances of loss unclear, but it is assumed to either have been sunk by a German midget submarine or by a sea mine. The wreck was first recorded in this position in 2015, with subsequent surveys confirming the location in 2016 and 2017. The wreck appears upright and fairly compact but deteriorated, with minimal superstructure remaining. There appears to be a slight dispersal of debris still within close proximity over an area of flat seabed; there is potential for some burial of items.

- 4.2.8 Feature **700244** (Wreck Sheet 4) is a large broken up known wreck of the *Mangara* (UKHO 10325), measuring 72.1 x 20.8 x 2.3 m in the geophysical data, with an associated magnetic anomaly of 9,392 nT, located amongst an area of rough and uneven seabed. The MBES data show the wreck as a collection of two to three mounds and features with relief, generally orientated approximately north-east to south-west. The *Mangara*, an 1821-ton steamship built by A. Stephen & Sons, was torpedoed by UB-16 on the 28 July 1915 *en route* from Bilbao to West Hartlepool with a cargo of 2400 tons of iron ore. The wreck was first recorded in this position in 1917, with subsequent surveys confirming the location in 1985 and 2017. The wreck appears upright and dispersed. It is very degraded, although still with considerable height, and occasionally buried indicating potential for some debris dispersal.
- 4.2.9 Feature **700255** (Wreck Sheet 5) is an upright and generally intact known wreck of the *Alastair* (UKHO 10331), measuring 53.4 x 17.2 x 5.9 m in the geophysical data, with an associated magnetic anomaly of 9,152 nT, located in an area of relatively flat and featureless seabed. The MBES data show a clear superstructure of the wreck orientated approximately north to south. The *Alastair*, a 366-ton steamship, built in 1902 by J. Duthrie & Sons Ltd., struck two mines on 6 November 1915 and sank with the loss of seven lives. The wreck was first recorded in this position in 1966, with subsequent surveys confirming the location in 1985 and 2016. The wreck is upright as largely intact, with a partially collapsed section at one end, likely the bow. A few minor items are visible outside the hull outline on the surrounding seabed in the SSS, which suggests debris items are mainly confined to the superstructure. One such item was identified as associated debris (**700254**).
- 4.2.10 Feature **700262** (Wreck Sheet 6) is an unidentified wreck (UKHO 87913), measuring 25.0 x 8.0 x 0.8 m in the geophysical data, with an associated magnetic anomaly of 228 nT, located amongst depressions and bedforms. The MBES data show the low laying outline of the hull in a depression, likely scour, with some potential faint internal structures; the orientation is approximately north-west to south-east. The unknown wreck was first recorded by a geophysical survey in 2016, with subsequent surveys confirming the location in 2017. The low laying relief of the wreck indicates partial burial, with the full extent unconfirmed, no clear associated items of debris were present, but the magnetic association indicates that either the vessel or cargo is ferrous in origin.
- 4.2.11 Feature **700591** (Wreck Sheet 7) is a large upright known wreck of the *Magdapur* (UKHO 10321), measuring 162.0 x 40.0 x 4.1 m in the geophysical data, with an associated magnetic anomaly of 21,605 nT, located amongst flat and slightly textured seabed. The MBES data show some structure with mounds and features of the vessel, orientated approximately north-west to south-east, amongst sediment build up and scour. The *Magdapur*, an 8641-ton steamship built in 1921 by Lithgows Ltd., struck a mine laid by German aircraft *en route* from South Shields to Southampton, sinking with the loss of six lives in 1939. The wreck was first recorded in 1962, with subsequent surveys confirming the position in 1972, 1985 and 2017. The wreck is upright and largely intact but broken, some

bow and stern collapse is visible. Only a few reflectors are visible outside the hull outline on the surrounding seabed which suggests most debris items are confined to the superstructure.

- 4.2.12 Feature **700786** (Wreck Sheet 8) is an upright known wreck of the *Mascotte* (UKHO 10338), measuring 41.1 x 8.3 x 2.3 m in the geophysical data, located amongst an area of mobile bedforms. There is a possible association with a magnetic anomaly (112 nT; **700787**), however, as the wreck location is outside of the ECR there is no magnetic or MBES coverage directly over the position to confirm this association. The wreck is orientated approximately north-east by south-west. The *Mascotte*, a 1097-ton steamship built in 1885 by Ramage and Ferguson, was sunk by a mine laid by a U-6 whilst *en route* from Rotterdam to Leith on 3 September 1916, with the loss of one life. The wreck was first recorded in 1916, with the general position identified in 1977 by the skipper of *Michelle Louisa*. It was observed, and the bell removed, in 1991. The position was confirmed during survey in 1993 and swept clear in 2001. Subsequent surveys in 2016 showed the wreck as intact and partially buried and the position was updated. The wreck appears upright and compact, with clear superstructure. Any debris may be buried, but none is current seen around the wreck site.
- 4.2.13 Feature **70639** (Wreck Sheet 9) is an area of debris that appears linked to an unknown wreck (UKHO 10674), measuring 46.6 x 6.1 x 0.4 m in the geophysical data, located in an area of mobile bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. The MBES data does not show the distributed debris amongst the bedform. It is to be noted that there is an area of outcropping bedrock approximately 140 m north of the UKHO location, orientated approximately north to south, perpendicular to the bedform crest. There are a number of small debris items also associated but located separately to the main debris field, **700822-4**. The wreck was located in 1982 by HMS Bulldog and was noted to be almost completely buried. It was not located during mine hunting in 1997. During a survey in 2010, the wreck was recorded as buried by an east to west sand wave, aligned north to south and without apparent structure or debris. This indicated the wreck is regularly covered and uncovered by the mobile sediments. The wreck extent and status are still unconfirmed as no structure is seen at this time. Only a debris field can be identified in the current data. The main body of the wreck is likely to either be partially buried or widely distributed if not intact due to the presence of mobile sediment bedforms.
- 4.2.14 Feature **700257** (Wreck Sheet 10) is a low laying debris field of linear items, measuring 40.0 x 19.0 x 0.5 m in the geophysical data, with an associated magnetic anomaly of 290 nT, located in an area of flat seabed. There is currently no associated UKHO record. The MBES data shows a low laying mound with slight scour, orientated approximately NNE to SSW. There is associated ferrous debris (**700258**) located approximately 70 m south-west (within the ECR) and appears of similar form, with items of linear appearance and ferrous content located on an area of flat seabed. It is not known if this area of debris relates to a wreck or lost cargo, therefore until further information is available the extent of survival is unable to be confirmed.
- 4.2.15 Feature **700263** is a distinct angular object identified in the SSS, measuring 9.1 x 4.0 x 0.2 m, with an associated magnetic anomaly of 2,613 nT, located in an area of relatively flat seabed with bedforms nearby. The MBES data shows the item as a slight mound with scour. The debris currently has no associated UKHO record, but is located approximately 100 m from an unknown wreck (**700262**, UKHO 87913). It is not clearly related but due to its proximity, it may be associated debris. Due to the size of the magnetic anomaly the item is likely highly ferrous and therefore of anthropogenic origin.

- 4.2.16 Feature **700590** (Wreck Sheet 11) is a collection of partially buried debris, measuring 13.3 x 13.1 x 1.6 m in the geophysical data. With an associated magnetic anomaly of 4,091 nT, located in an area of flat seabed, with some erosional bedforms. The MBES data shows the debris is clearly visible with two main mounds present, orientated approximately north-west to south-east, within an area of scour with some scour extending in a south-east direction for between 60 m to 130 m. It is not clear if the items seen in the data are the full extent of the feature. There is currently no associated UKHO record; the debris is located approximately 500 m from the nearby known wreck (**700591**, UKHO 10321), but it is not clearly associated. Due to the size of the magnetic anomaly the item is likely highly ferrous and therefore of anthropogenic origin.
- 4.2.17 Feature **700605** (Wreck Sheet 12) is a large item of debris, measuring 10.0 x 6.9 x 4.9 m in the geophysical data, located in an area of flat featureless seabed. There is some magnetic variance of 60 nT likely associated with the item, however due to the features position between two magnetometer lines, the magnetic signal is quite broad, and the amplitude is likely to be underestimated. The MBES data shows either a complex single item or possibly two objects, the larger to the east and a smaller or extension of the item to the south-west. The item(s) is located within a depression or scour, the edges of which appear to be steep in places. The item appears anomalous and anthropogenic, as there is no outcropping bedrock seen in the local area. The debris currently has no associated UKHO record, but is located approximately 560 m from the nearby known wreck (**700255**, UKHO 10331), although it is not clearly associated.
- 4.2.18 Feature **700600** is a small rounded indistinct seabed disturbance in the SSS and MBES data, located in an otherwise flat and featureless seabed. There is no clear debris identifiable but it is associated with a very large magnetic anomaly (1,519 nT) indicating anthropogenic origin. The seabed disturbance currently has no associated UKHO record, but is located approximately 780 m from known wreck (**700591**, UKHO 10321). This feature has been assigned an A1 archaeological discrimination due to the size of the magnetic response.
- 4.2.19 Feature **700565**, is identified as a recorded wreck (UKHO 87914) as the geophysical data does not cover the site location. However, a large magnetic anomaly of 558 nT was identified at the data extent nearest to the site, approximately 44 m south-east of the UKHO position. This has been deemed as associated, indicating the wreck is either constructed of ferrous material or loaded with ferrous cargo; due to the distance the magnetic anomaly is not a true representation of the total ferrous content. As there is partial data, the wreck has been classified as an A1 rather than an A3, as there is confirmation of presence. The wreck was identified in 2017 during a survey by Gardline, but the origin is unknown. The wreck is described in the UKHO records with dimensions of 54.3 x 16.2 x 1.0 m, orientated 166/346°, as moderately well-defined and is broken into two main segments. No further details can be provided on extent or status from the current assessed data.
- 4.2.20 As in Table 9, a total of 846 anomalies have been assigned an A2 discrimination, which is defined as features of uncertain origin, but of possible archaeological interest; see Appendix 2 for full list of anomalies.
- 4.2.21 Of these A2 anomalies, ten have been identified as debris fields. These are defined as discrete areas containing numerous individual debris items that are potentially anthropogenic and can include dispersed wreck sites for which no coherent structure remains.

- 4.2.22 A total of three out of the ten debris fields have an associated magnetic anomaly (**700207**, **700266** and **700723**). The largest of these was anomaly **700266**, identified as a large spread of possible debris objects, over ten distinct small items, one linear, and a number of smaller straight and rounded items, covering an area of 45.7 x 42.8 m. The debris field had an associated magnetic anomaly of 305 nT situated on a sandy area of the seabed; more may be buried within the extent.
- 4.2.23 The remaining seven debris fields appear to not have an associated magnetic anomaly (**700227**, **700667**, **700794**, **700804**, **700892**, **700981** and **700984**). However, due to the magnetometer line spacing, it is not possible to discern whether this is related to their distance from the magnetometer lines ran, or the material of the debris. As such, the possibility remains for some of the other debris fields to also contain ferrous material. The largest of these, anomaly **700981**, was identified as a spread of possible debris objects, measuring 26.1 x 13.3 m, that consisted mainly irregularly shaped bright reflectors (largest 4.2 x 1.3 m) and one dark reflector (3.8 x 0.6 m) situated amongst bedforms.
- 4.2.24 From the A2 anomalies, a total of 73 were identified as debris, which are defined as objects visible on the seabed, generally exhibiting height or with evidence of structure, that are considered potentially anthropogenic in origin based on their form or associated magnetic anomaly.
- 4.2.25 Of these 73 anomalies, 32 have an associated magnetic anomaly (for full list see Appendix 2). The smallest was anomaly **700212**, a small, rounded dark reflector measuring 1.2 x 0.5 m with an apparent hollow in its centre and an associated magnetic anomaly of 14 nT. The largest anomalies were **700238**, a large oval shaped mound, measuring 10.7 x 2.8 x 2.4 m, with an associated magnetic anomaly of 24 nT, and anomaly **700239**, a narrow linear item with no clear height, measuring 9.7 x 0.5 m, amongst the bedforms and an associated magnetic anomaly of 23 nT.
- 4.2.26 The remaining 41 debris items have no associated magnetic anomaly (for full list see Appendix 2). However, due to the magnetometer line spacing, it is not possible to discern whether this is related to their distance from the magnetometer lines ran, or the material of the debris. As such, the possibility remains for some of the other items of debris to also contain ferrous material. The largest of these was anomaly **700962**, a poorly defined linear dark reflector with a faint shadow measuring 15.9 x 1.9 x 0.2 m, the feature is in the same formation as the natural bedforms, however appears anomalous and isolated compared to surrounding features.
- 4.2.27 Five items of debris (**77919**, **70037**, **72336**, **77929** and **78173**) were identified in both historic and recent data. Three of the debris items (**70012**, **70241** and **72331**) were only identified in the historic data (Wessex Archaeology 2011a; 2010) and were not visible in the recent data. It is possible that this is due to burial by mobile sediments and, as such, the features have been retained as potential archaeology based on the previous interpretation.
- 4.2.28 A total of 16 features have been classified as seabed disturbances (for full list see Appendix 2). These are defined as an area of disturbance without individual, distinct objects, which may indicate wreck debris or other anthropogenic features buried just below the seabed. One anomaly has an associated magnetic anomaly (135 nT), **700242**, this was noted as an indistinct seabed disturbance, measuring 15.5 x 6.3 m located amongst the bedforms.
- 4.2.29 One seabed disturbance (**78170**) was identified in both the historic (Wessex Archaeology 2014) and recent datasets. Four seabed disturbances (**78167**, **70242**, **72340** and **73169**) were only identified in the historic data (Wessex Archaeology 2011a; 2012; 2014) and were

not seen in the recent data. It is possible that this is due to burial by mobile sediments and, as such, the features have been retained as potential archaeology based on the previous interpretation

- 4.2.30 A total of 26 anomalies have been classified as rope/chain (for full list see Appendix 2). These are defined as curvilinear dark reflectors, often with a small amount of height, indicating a rope or chain (if ferrous).
- 4.2.31 Only five of these anomalies have an associated magnetic anomaly (**700198**, **700253**, **700568**, **700571** and **73163**), possibly suggesting that they are more likely to be lengths of chain. The largest ferrous item, **73163**, was identified as a series of magnetic anomalies (maximum of 67 nT) running approximately 303 m north-west to south-east amongst bedforms; at the south-west end of the feature a linear item was visible, measuring 30.5 x 0.7 x 0.1 m and orientated the same as the magnetic anomalies. This anomaly was identified in 2012 (Wessex Archaeology 2012), however the full extent was not identified. The feature is of a great length that indicates it may be part of a section of cable or chain; as it is currently uncertain of origin it has been retained as of archaeological potential.
- 4.2.32 A total of 21 items of rope/chain were identified without an associated magnetic anomaly. However, due to the magnetometer line spacing, it is possible that some of the features may have an associated magnetic anomaly that was not detected on this magnetometer dataset. If lengths of rope, the features may not be of archaeological potential in themselves, but they may be attached to archaeological features (e.g. anchors) or be snagged on mostly buried debris not visible in the SSS or MBES data. The largest anomaly, **700217**, was identified as a distinct and linear dark reflector measuring 57.9 x 0.8 m on an area of flat seabed with less defined sections indicating partial burial present across its extent. A defined rounded dark reflector was seen at the southern end measuring approximately 1.5 x 1.5 x 0.1 m.
- 4.2.33 A total of 13 anomalies have been classified as bright reflectors (for full list see Appendix 2), which are defined as individual objects or areas of low reflectivity, characteristic of materials that absorb acoustic energy, such as waterlogged wood or synthetic materials. These ranged from the smallest item, anomaly **700803**, a bright elongate reflector measuring 2.0 x 1.4 m was identified amongst bedforms, to the largest, anomaly **700903**, an irregular bright reflector, possibly an item coiled upon itself measuring 8.7 x 3.2 m located amongst bedforms.
- 4.2.34 Two bright reflectors (**73160** and **78166**) were only identified in the historic data (Wessex Archaeology 2012; 2014) and not in the recent data. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.
- 4.2.35 A total of 165 anomalies have been classified as dark reflectors, which are defined as individual objects or areas of high reflectivity that display some anthropogenic characteristics, although their precise nature is uncertain (for full list see Appendix 2). These range from the smallest item, anomaly **78174**, a distinct anomaly with a rounded shadow measured 0.7 x 0.4 x 0.3 m, to the largest item, anomaly **700247**, an indistinct slightly curvilinear item running perpendicular to the bedform crests, measuring 24.2 x 1.2 m.
- 4.2.36 Four dark reflectors (**78184**, **78176**, **78175** and **72342**) were identified in both the historic (Wessex archaeology 2012; 2014) and recent datasets. A total of 14 dark reflectors identified in the historic data (Wessex Archaeology 2011a; 2012; 2014) were not identified in the recent data, such as anomaly **78174**. It is possible that this is due to burial by mobile

sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.

- 4.2.37 Three anomalies have been classified as mounds (**700640**, **700699** and **78155**) which are mounded features with height, not considered to be natural. Mounds may form over wreck sites or other debris. These ranged from the smallest, anomaly **700640**, measuring 13.5 x 7.3 x 0.5 m, to the largest, anomaly **78155**, measuring 26.0 x 6.5 x 0.5 m. Anomaly **78155** was identified in both historic (Wessex Archaeology 2014) and recent data.
- 4.2.38 The remaining 540 A2 anomalies have features are magnetic anomalies with no associated seabed surface expression, which have the potential to represent possible buried ferrous debris, or ferrous debris lying flat on the seabed. These magnetic anomalies range in size from 5 nT (**78052** and **78049**) to 672 nT (**700450**) (for full list see Appendix 2).
- 4.2.39 Where historic data for the northern section of the ECR has been re-reviewed in line with the 2018 datasets, for consistency, the interpretation has been reviewed and updated alongside the new datasets using any new information on the surrounding seabed. A total of 18 historic magnetic anomalies have been reassessed and been determined as not of archaeological potential (**70010**, **70011**, **70031**, **70033**, **70034**, **70035**, **70086**, **70084**, **70158**, **77944**, **77998**, **72338**, **72339**, **72337**, **78003**, **72343**, **72345** and **72341**).
- 4.2.40 As discussed in Section 2.4, due to the magnetometer line spacing over the north-west section, it cannot be guaranteed that all ferrous items have been identified within the ECR.
- 4.2.41 Two features (**700563** and **700564**) have been given an A3 discrimination as recorded wrecks within the ECR. This is defined as a historic record of possible archaeological interest with no corresponding geophysical anomaly. Both of these UKHO positions are outside of the extent of the geophysical data, but within the ECR.
- 4.2.42 Feature **700563** is identified as an unknown wreck (UKHO 87912), outside the extent of the current geophysical data, but identified during a MBES survey undertaken by Gardline in 2017. The wreck is described in the UKHO records with dimensions of 9.4 x 2.8 x 0.5 m, orientated 045/255°, as moderately well-defined and remains in one piece. No further details can be provided on extent or status.
- 4.2.43 Feature **700564** is identified as known wreck, the *Ocean Pride* (UKHO 10324) outside the extent of the current geophysical data but identified during a MBES survey undertaken by Gardline in 2017. The wreck location was initially taken from the sinking position as seen from the beach at Sizewell in 1972, a search in 1983 failed and was amended to dead, until located by MBES survey in 2017. The wreck is described in the UKHO records with dimensions of 25.9 x 21.4 x 2.1 m, orientated 174/354°, as moderately defined and probably in two sections.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Palaeogeographic features

- 5.1.1 The assessment of the geophysical data within the study area resulted in a total of 36 features of palaeogeographic interest. These are summarised as follows:
- a total of 11 features were assigned an P1 archaeological rating;
 - a total of 25 features were assigned an P2 archaeological rating.

- 5.1.2 As terrestrial features interpreted as being deposited during periods of known human occupation of the UK, those features given a P1 archaeological rating are considered of high archaeological potential. Those features with a P2 discrimination are considered of medium archaeological potential, partly due to the uncertainty of features formation and fill. Geoarchaeological work would aid in refining the interpretation, particularly for the areas of acoustic blanking (features **780036-42**), and therefore help determine the archaeological potential of the area.
- 5.1.3 Should further ground investigation work be undertaken within the study area, it is recommended that the archaeological contractor be consulted to advise on potential samples to be acquired for archaeological purposes, particularly from the interpreted dune feature (**780023**) and other identified units of archaeological interest identified within the data. It is also recommended that any future geotechnical logs from within the study area be made available for geoarchaeological assessment.
- 5.1.4 Furthermore, it is recommended that any samples acquired containing material of archaeological potential, particularly those within the interpreted Pleistocene/early Holocene features, be made available for geoarchaeological assessment.

5.2 Seabed features

- 5.2.1 The assessment of the geophysical data within the study area resulted in a total of 874 anomalies identified as being of possible archaeological interest. These are summarised as follows:
- a total of 26 were assigned an A1 archaeological rating;
 - a total of 846 were assigned an A2 archaeological rating;
 - two items, both recorded wrecks, were assigned an A3 archaeological discrimination.
- 5.2.2 As features of high archaeological potential, it is recommended that Archaeological Exclusion Zones (AEZs) are implemented around all 26 A1 anomalies.
- 5.2.3 For the eight wrecks, an AEZs of 50 m around the wrecks extents is recommended (Table 10). The recorded wreck (**700565**) was recommended an AEZ of 100 m, as the location of the wreck was not able to be confirmed using the geophysical data due to partial coverage in the nearshore.
- 5.2.4 For the four debris fields, one (**70639**) was recommended an AEZ of 100 m as the location of the wreck itself was not identified and debris was identified amongst the bedforms. Two (**700257** and **700835**) were recommended an AEZs of 50 m; one (**700257**) as a possible wreck with an unconfirmed spread of debris, the second as a large collection of associated wreck debris. One (**700258**) was recommended an AEZ of 15 m as associated to a larger area of debris.
- 5.2.5 One seabed disturbance (**700600**) was recommended an AEZ of 15 m, as precaution due to the large magnetic anomaly associated.
- 5.2.6 A total of 12 items of debris, three (**700263**, **700590** and **700605**) separate items and nine associated wreck debris, were recommended an AEZ of 15 m. However, in all bar one (**700822**) cases of associated wreck debris the areas were already covered by the wreck's recommended AEZ.

Table 10 Recommended AEZs within the study area

ID	Classification	Original Assessment (report ref.)	Centre point (approx.) (WGS84 UTM31N)		Archaeological Discrimination	Type
			Easting	Northing		
700563	Recorded Wreck	117810	406008	5783583	A3	100 m buffer around UKHO point
700564	Recorded Wreck	117810	406038	5784901	A3	100 m buffer around UKHO point
700565	Recorded Wreck	117810	406127	5783160	A1	100 m buffer around UKHO point
70641	Wreck	117810, 74540	430250	5796405	A1	50 m buffer around current feature extent
70645	Wreck	117810, 74540	431268	5798215	A1	50 m buffer around current feature extent
700218	Wreck	117810	407392	5782532	A1	50 m buffer around current feature extent
700244	Wreck	117810	410382	5785290	A1	50 m buffer around current feature extent
700255	Wreck	117810	413082	5787765	A1	50 m buffer around current feature extent
700262	Wreck	117810	408286	5783060	A1	50 m buffer around current feature extent
700591	Wreck	117810	411648	5783222	A1	50 m buffer around current feature extent
700786	Wreck	117810	416532	5790383	A1	50 m buffer around current feature extent
70639	Debris field	117809, 74540	429622	5797407	A1	100 m buffer around current feature extent
700257	Debris Field	117810	411763	5788611	A1	50 m buffer around current feature extent
700835	Debris field	117810	431208	5798167	A1	50 m buffer around current feature extent
700258	Debris Field	117810	411768	5788539	A1	15 m buffer around centre point
700254	Debris	117810	413082	5787727	A1	15 m buffer around centre point
700263	Debris	117810	408289	5783167	A1	15 m buffer around centre point
700590	Debris	117810	411428	5783615	A1	15 m buffer around current feature extent
700605	Debris	117810	413543	5788077	A1	15 m buffer around current feature extent
700822	Debris	117810	429487	5797383	A1	15 m buffer around centre point
700823	Debris	117810	429573	5797373	A1	15 m buffer around centre point
700824	Debris	117810	429585	5797375	A1	15 m buffer around centre point
700829	Debris	117810	430247	5796406	A1	15 m buffer around centre point
700836	Debris	117810	431225	5798178	A1	15 m buffer around centre point
700837	Debris	117810	431228	5798179	A1	15 m buffer around centre point
700838	Debris	117810	431237	5798179	A1	15 m buffer around centre point
700839	Debris	117810	431245	5798189	A1	15 m buffer around centre point
700600	Seabed disturbance	117810	411596	5782442	A1	15 m buffer around current feature extent



- 5.2.7 For features assigned an A2 archaeological discrimination rating, no AEZs are recommended at this time. However, avoidance is recommended with further mitigation to be implemented (e.g. high resolution geophysical survey, visual inspection (divers or ROV)) if they are proposed to be directly impacted by development in the future.
- 5.2.8 It is recommended that if any objects of possible archaeological interest are recovered during any groundwork operations, that they should be reported using the established Offshore Renewables Protocol for Archaeological Discoveries (ORPAD, The Crown Estate 2014). This will establish whether the recovered objects are of archaeological interest and recommend appropriate mitigation measures.

6 REFERENCES

- Ashton, N, and Lewis, S 2002 Deserted Britain: Declining Populations in the British Late Middle Pleistocene. *Antiquity* 76, 388–396
- Bicket, A and Tizzard, L 2015 A Review of the Submerged Prehistory and Palaeolandscapes of the British Isles, *Proceedings of the Geologist's Association* Volume 126, Issue 6, p.643-663
- Boismier, W, Gamble, C, and Coward, F 2012 Neanderthals among Mammoths: Excavations at Lynford Quarry, Norfolk, UK. English Heritage
- Boomer, I, Waddington, C, Stevenson, T, and Hamilton, D 2007 Holocene Coastal Change and Geoarchaeology at Howick, Northumberland, UK. *The Holocene* 17(1), 89–104.
- Bibby HydroMap Limited 2018 a Project Execution & Quality Plan: 2018-008 East Anglia One North and Two Geophysical and Benthic Survey – MV Kommandor Stuart Report Ref. 2018-008 unpubl rept
- Bibby HydroMap Limited 2018 b Project Execution & Quality Plan: 2018-008 East Anglia One North and Two Geophysical and Benthic Survey – MV Lia Report Ref. 2018-008 unpubl rept
- Bibby HydroMap Limited 2018 c East Anglia One North and Two Geophysical and Benthic Survey, Volume 1 – Operations Report Report Ref. REP-F-015 Rev 4; Scottish Power Renewables Document No. EA2-DEV-REP-IBR-000718 unpubl rept
- Bibby HydroMap Limited 2018 d East Anglia One North and Two Geophysical and Benthic Survey, Volume 2 - Processing and Data Quality Report Ref. REP-F-019 Rev 2; Scottish Power Renewables Document No. EA2-DEV-REP-IBR-000719 unpubl rept
- Bibby HydroMap Limited 2018 e East Anglia One North and Two Geophysical and Benthic Survey, Volume 3 – Area A Results Report Ref. REP-F-004 Rev 1; Scottish Power Renewables Document No. EA2-DEV-REP-IBR-000720 unpubl rept
- Bibby HydroMap Limited 2018 f East Anglia One North and Two Geophysical and Benthic Survey, Volume 4 – Area B Results Report Ref. REP-F-004 Rev 1; Scottish Power Renewables Document No. EA2-DEV-REP-IBR-000721 unpubl rept
- Bridgland, D R 1994 The Pleistocene of the Thames. In Bridgeland, D (ed.) *Quaternary of the Thames*. London, Geological Conservation Review Series No. 7., Chapman and Hall
- British Geological Survey 1984 Flemish Bight 52°N - 02°E Quaternary Geology. 1: 250 000 Series, Crown Copyright
- British Geological Survey 1991 East Anglia 52°N - 00°E Quaternary Geology. 1: 250 000 Series, Crown Copyright
- Cameron, T D J, Crosby, A, Balson, P S, Jeffery, D H, Lott, G K, Bulat, J and Harrison, D J 1992 The Geology of the Southern North Sea. British Geological Survey United Kingdom Offshore Regional Report, London, HMSO
- Candy, I, Silva, B and Lee, J 2011 Climates of the Early Middle Pleistocene in Britain: Environments of the Earliest Humans in Northern Europe. In Ashton N, Lewis, S G, and

Stringer, C (eds.) The Ancient Human Occupation of Britain. Vol. 14, 11–22, Amsterdam, Netherlands, Elsevier B.V.

Cohen, K M, MacDonald, K, Joordens, J C A, Roebroeks, W and Gibbard, P L 2012 The Earliest Occupation of North-West Europe: a Coastal Perspective. *Quaternary International* 271, 70-83

Coles, B 1998 Doggerland: a speculative survey. *Proceedings of the Prehistoric Society* 64, 45-81

Dix, J and Sturt, F 2011 The Relic Palaeo-landscapes of the Thames Estuary. Southampton, University of Southampton for MALSF

East Anglia ONE 2012. Environmental Statement Volume 2- Offshore- Archaeology and Cultural Heritage, East Anglia Offshore Wind, Chapter 17

Emu Ltd. 2009 Outer Thames Estuary Regional Environmental Characterisation. MALSF, Crown Copyright 2009, ISBN 978-00907545-28-9

Gaffney, V, Thomson, K and Fitch, S 2007 Mapping Doggerland: The Mesolithic Landscapes of the Southern North Sea. Oxford, Archaeopress

Gardline Geosurvey Ltd. 2011a East Anglia Offshore Wind Geophysical Survey, Areas A and B, April to September 2010, Operations Report. Great Yarmouth, unpubl report, ref: 8402.4

Gardline Geosurvey Ltd. 2011b East Anglia Offshore Wind Geophysical Survey, Area B, April to August 2010, Survey Report. Great Yarmouth, unpubl report, ref: 8402.2

Gardline Geosurvey Ltd. 2017 East Anglia Two Geophysical Survey, Survey Report. Great Yarmouth, unpubl report ref.11003.2

Gardline Geosurvey Ltd. 2017b East Anglia Two Geophysical Survey, Operations Report. Great Yarmouth, unpubl report ref.11003.1

Godwin, H, and Godwin, M E 1933 British Maglemose Harpoon Sites. *Antiquity* 7, 36–48

Gupta, S, Collier, J S, Garcia-Moreno, D, Oggioni, F, Trentesaux, A, Vanneste, K, De Batist, M, Camelbeeck, T, Potter, G, Van Vliet, B, and Arthur, J C R 2017 Two-Stage Opening of the Dover Strait and the Origin of Island Britain. *Nature Communications* 8, 15101

Hamblin, R J., Crosby, A, Balson, P S, Jones, S M, Chadwick, R A, Penn, I E and Arthur, M J 1992 The Geology of the English Channel. British Geological Survey United Kingdom Offshore Regional Report, London HMSO

Hazell, Z J 2008 Offshore and Intertidal Peat Deposits, England — A Resource Assessment and Development of a Database. *Environmental Archaeology* 13(2), 101–110

Hijma, M P, Cohen, K M, Roebroeks, W, Westerhoff, W E and Busschers, F S 2012 Pleistocene Rhine-Thames Landscapes: Geological Background for Hominin Occupation of the Southern North Sea Region. *Journal of Quaternary Science* 27(1), 17–39

Housley, R A 1991 AMS Dates from the Late Glacial and Early Postglacial in North-West Europe: A Review. In Barton, N, Roberts, A J, and Roe, D A (eds.) *The Late Glacial in North-*

West Europe: Human Adaptation and Environmental Change at the End of the Pleistocene. London, Council for British Archaeology, 25-36

Jacobi, R, and Higham, T 2011 The Later Upper Palaeolithic Recolonisation of Britain: New Results from AMS Radiocarbon Dating. In Ashton N, Lewis, S G, and Stringer, C (eds.) The Ancient Human Occupation of Britain. Vol. 14, 223–247, Amsterdam, Netherlands, Elsevier B.V.

Lewis S G, Ashton N and Jacobi, R 2011 Testing Human Presence during the Last Interglacial (MIS 5e): A Review of the British Evidence, In Ashton N, Lewis, S G, and Stringer, C (eds.) The Ancient Human Occupation of Britain. Vol.14, 125-247, Amsterdam, Netherlands, Elsevier

Limpenny, S E, Barrio Froján, C, Cotterill, C, Foster-Smith, R L, Pearce, B, Tizzard, L, Limpenny, D L, Long, D, Walmsley, S, Kirby, S, Baker, K, Meadows, W J, Rees, J, Hill, J, Wilson, C, Leivers, M, Churchley, S, Russell, J, Birchenough, A C, Green, S L and Law, R J 2011 The East Coast Regional Environmental Characterisation. MEPF

Momber, G, Tomalin, D, Scaife, R, Satchell, J and Gillespie, J 2011 Mesolithic Occupation at Bouldner Cliff and the Submerged Prehistory Landscapes of the Solent. CBA Report 164, Council for British Archaeology

Parfitt, S A, Ashton, N M, Lewis, S G, Abel, R L, Coope, G R, Field, M H, Gale, R, Hoare, P G, Larkin, N R, Lewis, M D, Karloukovski, V, Maher, B A, Peglar, S M, Preece, R C, Whittaker, J E, and Stringer, C B 2010 Early Pleistocene Human Occupation at the Edge of the Boreal Zone in Northwest Europe. *Nature* 466(7303), 229–33

Parfitt, S A, Barendregt, R W, Breda, M, Candy, I, Collins, M J, Coope, G R, Durbidge, P, Field, M H, Lee, J R, Lister, A M, Mutch, R, Penkman, K E H, Preece, R C, Rose, J, Stringer, C B, Symmons, R, Whittaker, J E, Wymer, J, and Stuart, A J 2005 The Earliest Record of Human Activity in Northern Europe. *Nature* 438(7070), 1008–12

Pettitt, P, and White, M J 2012 The British Palaeolithic: Human Societies at the Edge of the Pleistocene World. Abingdon, Routledge

Reid, C 1913 Submerged Forests. London, Cambridge University Press

Rose, J 2009 Early and Middle Pleistocene Landscapes of Eastern England. *Proceedings of the Geologists' Association* 120(1), 3-33

Scott, B, and Ashton, N 2011 The Early Middle Palaeolithic: The European Context. In Ashton, N, Lewis, S G, and Stringer, C (eds.) The Ancient Human Occupation of Britain. Volume 14, 91–112, Amsterdam, Netherlands, Elsevier B.V. Sumbler, M. G., 1996, British Regional Geology; London and the Thames Valley, London: HMSO

Scott, B, Ashton, N, Lewis, S G, Parfitt, S, and White, M, 2011 Technology and Landscape Use in the Early Middle Palaeolithic of the Thames Valley. In Ashton N, Lewis, S G, and Stringer, C (eds.) The Ancient Human Occupation of Britain. Volume 14, 67-89, Amsterdam, Netherlands, Elsevier B.V.

Tappin, D R, Pearce, B, Fitch, S, Dove, D, Gearey, B, Hill, J M, Chambers, C, Bates, R, Pinnion, J, Diaz Doce, D, Green, M, Gallyot, J, Georgiou, L, Brutto, D, Marzialetti, S, Hopla, E, Ramsay, E, and Fielding, H 2011 The Humber Regional Environmental Characterisation. British Geological Survey Open Report OR/10/54

- Tizzard, L, Bicket, A R, Benjamin, J, and De Loecker, D 2014 A Middle Palaeolithic Site in the Southern North Sea: Investigating the Archaeology and Palaeogeography of Area 240. *Journal of Quaternary Science* 29, 698–710
- Tizzard, L, Bicket, A. R, Benjamin, J and De Loecker, D 2015 A Middle Palaeolithic Site in the Southern North Sea: Investigating the Archaeology and Palaeogeography of Area 240. Salisbury, Wessex Archaeology Monograph no 35
- Wessex Archaeology 2010 Appendix III-IV: Technical Report: Archaeology, in ERM 2010, Thames Estuary Dredging Association, Marine Aggregate Regional Environmental Assessment. Salisbury, unpubl report, ref: 66061.04
- Wessex Archaeology 2011a East Anglia ONE Offshore Windfarm, Preliminary Environmental Information Report, Volume 2, unpubl rept
- Wessex Archaeology 2011b Seabed Prehistory: Site Evaluation Techniques (Area 240). Salisbury, unpubl report, ref: 70754.04
- Wessex Archaeology 2012 Chapter 17: Archaeology and Cultural Heritage, East Anglia ONE Offshore Windfarm, Environmental Statement, Volume 2: Offshore, unpubl rept
- Wessex Archaeology 2013b Audit of Current State of Knowledge of Submerged Palaeolandscapes and Sites. Salisbury, unpubl report, ref: 84570.01
- Wessex Archaeology 2013c Palaeo-Yare Catchment Assessment. Salisbury, unpubl report, ref: 83740.04
- Wessex Archaeology 2014 Chapter 17: Archaeology and Cultural Heritage, East Anglia THREE, Preliminary Environmental Information Volume 1 Revision B, unpubl rept
- Wessex Archaeology *in prep* East Anglia TWO Offshore Windfarm; Archaeological Assessment of Geophysical Data, Salisbury, unpubl report, ref: 117810.01
- Westaway, R 2009 Quaternary Vertical Crustal Motion and Drainage Evolution in East Anglia and Adjoining Parts of Southern England: Chronology of the Ingham River Terrace Deposits. *Boreas* 38(2), 261-284
- Wilkinson, T J and Murphy, P L 1995 The Archaeology of the Essex Coast, Volume I: The Hullbridge Survey. East Anglian Archaeology Report No. 71, Essex County Council
- White, M 2006 Things to Do in Doggerland when you're Dead: Surviving OIS3 at the North-western-Most Fringe of Middle Palaeolithic Europe. *World Archaeology* 44(April), 0–28
- Wymer, J J 1999 The Lower Palaeolithic Occupation of Britain. Wessex Archaeology and English Heritage



APPENDICES

Appendix 1 Palaeogeographic features of archaeological potential

ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
75582	Channel	P1	A broad channel feature with a distinct basal reflector is identified directly BSB or beneath a veneer of modern marine sediments, cut into the interpreted RCG ground, orientated NNW - SSE. Unit fill is well layered and characterised by numerous subparallel reflectors and is interpreted as being a BNB channel. As the channel deepens towards the north the basal reflector becomes difficult to discern sand, as such, the depth range may be underestimated. The feature corresponds with a channel features 75403, 75580 and 75582 (Wessex Archaeology 2012 and 2014), and erosion surface 75402 (Wessex Archaeology 2012). The boundaries of the feature vary slightly between the three data assessments, likely due to differences in equipment, line spacing and line orientation and, as such, the features have been merged based on the newest dataset. Depth range: 0.2m - 28.5m BSB.	Devensian	74541, 74547, 117810
75404	Channel	P1	Small section of a north to south trending channel with a single phase of acoustically transparent and unstructured fill and overlain by a thin veneer of seabed sediment was identified in the East Anglia ONE palaeogeographic assessment (Wessex Archaeology 2012), however was not identified during this assessment of the geophysical data, likely due to differences in equipment, survey line spacing and orientation. Depth Range: 1.6m - 10.0m BSB.	Unknown	74541
75405	Channel	P1	Small section of a north to south trending channel with a single phase of acoustically transparent and unstructured fill and overlain by a thin veneer of seabed sediment was identified in the East Anglia ONE palaeogeographic assessment (Wessex Archaeology 2012). The feature was not identified during this phase of geophysical data assessment, likely due to differences in equipment, survey line spacing and orientation. Feature is possibly related to nearby channel feature 780010 identified during the latest phase of data assessment however, as this is not certain, the features have not been grouped together. Age of fill unknown. Depth Range: 1.7m - 15.6m BSB.	Unknown	74541
780010	Channel	P1	Small, shallow channel feature identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG. The feature has a distinct basal reflector and acoustically quiet fill, which may indicate that it is a fine-grained deposit. Possibly related to nearby channel feature 74540, which was identified during the 2012 data assessment however not seen on the most recent data set. Feature is orientated east to west. Depth Range: 0.4 - 5.1 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780011	Infilled depression	P2	A relatively broad, shallow infilled depression, orientated east to west, identified directly BSB or beneath a veneer of modern marine sediments, above the interpreted RCG formation. Feature has a distinct basal reflector and relatively acoustically quiet fill, which may indicate a fine-grained fill. Depth range: 0.5 - 5.9 m BSB.	Unknown	117810
780012	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and some faint subparallel internal reflectors. Depth range 1.0 - 4.5 m BSB.	Unknown	117810
780013	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and some possible faint subparallel internal reflectors. Feature appears to be running WSW to ENE, in line with features 780013 - 780017, which is seen to bisect towards the east. It is possible that these features are all part of the same relict channel system however, this cannot be confirmed. Depth range 0.6 - 5.3 m BSB.	Unknown	117810
780014	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a relatively distinct basal reflector and some possible faint subparallel internal reflectors. Feature appears to be in line with features 780013 - 780017 and are possible all part of the same relict channel system however this cannot be confirmed. Depth range 0.7 - 3.5 m BSB.	Unknown	117810
780015	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and some possible faint subparallel internal reflectors. Feature appears to be running WSW to ENE, in line with features 780013 - 780017, which is seen to bisect towards the east. It is possible that these features are all part of the same relict channel system however, this cannot be confirmed. Depth range 0.5 - 4.6 m BSB.	Unknown	117810
780016	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and some possible faint subparallel internal reflectors. Feature appears to be running WSW to ENE, in line with features 780013 - 780017, which is seen to bisect towards the east. It is possible that these features are all part of the same relict channel system however, this cannot be confirmed. Depth range 0.8 - 4.5 m BSB.	Unknown	117810
780017	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and some possible faint subparallel internal reflectors. Feature appears to be running WSW to ENE, in line with features 780013 - 780017, which is seen to bisect towards the east. It is possible that these features are all part of the same relict channel system however, this cannot be confirmed. Depth range 0.7 - 2.5 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780018	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and acoustically quiet fill. Feature is close to features 780013 - 780017 and may be related, however this cannot be confirmed. Depth range 0.7 - 2.5 m BSB.	Unknown	117810
780019	Simple cut and fill	P2	A small, simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a faint basal reflector and acoustically quiet fill. Feature is close to features 780013 - 780017 and may be related however, this cannot be confirmed. Depth range 1.0 - 3.0 m BSB.	Unknown	117810
780020	Simple cut and fill	P2	A small simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature is shallow with a faint basal reflector. Some possible subparallel reflectors. Depth range: 0.7 - 3.3 m BSB.	Unknown	117810
780022	Complex Channel	P1	An interpreted BNB channel identified directly BSB or beneath a veneer of modern marine sediments, orientated NNE - SSW, cut into the top of the interpreted WK formation. Feature has a distinct, occasionally undulating basal reflector and possibly more than one phase of fill, indicating multiple phases of deposition. Some possible dune features are identified within (780023). Depth range 1.0 - 18.5 m BSB.	Devensian	117810
780023	Dune features	P1	Possible relict dune features identified above the base of, and beneath a unit of interpreted BNB formation (Feature 780022), possibly indicative of terrestrial land formations, however may also be subaqueous in formation. If terrestrial, it suggests they formed during a significant period of aerial exposure and may protect a buried land surface. The unit fill is relatively acoustically quiet. Depth range: 3.7 - 10.9 m BSB.	Unknown	117810
780024	Base of BNB	P2	Unit of BNB identified directly BSB or beneath a veneer of modern marine sediments, sat above the top of the interpreted WK formation. Feature has a distinct basal reflector and more than one phase of fill, indicating multiple phases of deposition. Depth range: 0.4 - 26.9 m BSB.	Devensian	117810
780025	Base of BNB	P2	Unit of BNB identified directly BSB or beneath a veneer of modern marine sediments, sat above the top of the interpreted WK formation. Feature has a distinct basal reflector and well-layered unit fill. Possibly related to nearby 780024 BNB formation. Depth range: 1.8 - 23.7 m BSB.	Devensian	117810
780026	Complex cut and fill	P1	Complex cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into top of interpreted RCG formation. Unit fill is acoustically chaotic with more than one phase of fill. Feature has a strong basal reflector and some slight disturbance to lower horizons, possibly indicating the presence of some gaseous organic matter such as peat. Depth range: 0.6 - 7.2 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780027	Simple cut and fill	P2	Possible simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted WK formation. Basal reflector not particularly distinct however feature has relatively acoustically chaotic fill. Depth range: 0.7 - 6.7 m BSB.	Unknown	117810
780028	Channel	P1	Channel feature identified directly BSB or beneath a veneer of modern marine sediments, cut into top of RCG/WK formation. Basal reflector not always distinct, however occasionally high amplitude with slight disturbance to lower horizons which may indicate the possible presence of gaseous organic matter. Unit fill is relatively acoustically chaotic. In the channel's central section, the feature appears to widen, and the base is harder to discern. It is possible that this represents an area of overspill or a wider section of channel. Channel meanders orientated approximately north-east to south-west. Depth range: 0.1 - 7.9 m BSB.	Unknown	117810
780029	Simple cut and fill	P2	A small, shallow simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the interpreted RCG formation. The feature has a faint, poorly defined basal reflector and slightly acoustically chaotic fill. It is possible that this is related to nearby channel feature 780028, however, as this cannot be confirmed, this has been retained as a separate feature. Depth range: 0.7 - 3.1 m BSB.	Unknown	117810
780030	Simple cut and fill	P2	A shallow unit identified directly BSB or beneath a veneer of modern marine sediments, above the interpreted RCG formation. Feature has a distinct basal reflector and well layered fill indicating that it was deposited in a low energy environment. It is possible that this an infilled depression, or an area of overspill related to nearby channel feature 780028. Depth range: 0.4 - 6.2 m BSB	Unknown	117810
780031	Simple cut and fill	P2	A shallow unit identified directly BSB or beneath a veneer of modern marine sediments, above the interpreted RCG formation. Feature has a distinct basal reflector and well layered fill indicating that it was deposited in a low energy environment. It is possible that this an infilled depression, or an area of overspill related to nearby channel feature 780028. Depth range: 0.7 - 3.0 m BSB	Unknown	117810
780032	Simple cut and fill	P2	A simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature has a relatively distinct basal reflector and slightly acoustically chaotic fill with some subparallel reflectors. Depth range: 1.1 - 5.4 m BSB.	Unknown	117810
780033	Channel	P1	A channel identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted BNB formation. Feature has a poorly defined basal reflector and acoustically chaotic fill. The channel is orientated approximately north-west to south-east and meanders slightly. Depth range: 0.5 - 6.8 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780034	Channel	P1	Channel identified directly BSB or beneath a veneer of modern marine sediments, cut into interpreted RCG formation, orientated north-west to south-east. Feature has a relatively distinct basal reflector which is occasionally chaotic, which may indicate the presence of gaseous organic matter, however may also just be a coarser grained deposit. Depth range: 0.6 - 5.5 m BSB.	Unknown	117810
780035	Simple cut and fill	P2	A small simple cut and fill identified directly BSB or beneath a veneer of modern marine sediments, cut into the top of the interpreted RCG formation. Feature is shallow with no discernible basal reflector however is characterised by acoustically chaotic sediment. Depth range: 0.8 - 4.8 m BSB.	Unknown	117810
780036	Acoustic blanking	P2	A broad area of acoustic blanking, orientated north to south. Feature is identified close to and occasionally at the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the possible well-layered unit, it is difficult to discern a distinct boundary between the two units. Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this unit represents a layer of gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 0.1 - 4.9 m BSB.	Unknown	117810
780037	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary between the two units. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this feature represents gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 0.4 - 9.5 m BSB.	Unknown	117810
780038	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary between the two units. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this feature represents gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 6.5 - 8.5 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780039	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary between the two units. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this feature represents gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 1.4 -4.4 m BSB.	Unknown	117810
780040	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary between the two units. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this feature represents gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. 1.5 - 2.6 m BSB.	Unknown	117810
780041	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary of the well layered unit. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this unit represents a layer of gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 0.9 - 2.6 m BSB.	Unknown	117810
780042	Acoustic blanking	P2	A small area of acoustic blanking identified close to the seabed, possibly within a well-layered unit BSB above the interpreted WK formation. Due to the acoustic similarities between the WK formation and the well-layered unit, it is difficult to discern a distinct boundary between the two units. Feature is close, and likely related to a broad area of similar acoustic blanking (Feature 780036). Possibly a layer of coarse sediments close to the surface causing acoustic blanking of lower horizons however, as acoustic blanking is indicative of the presence of gas, it may be that this feature represents gaseous organic matter such as peat. As such, the feature has been retained as a unit of potential archaeological interest. Depth range: 0.6 - 2.0 m BSB.	Unknown	117810



ID number	Classification	Archaeological discrimination	Description	Age	Report Ref.
780043	Complex channel	P1	A small complex channel identified below an upper unit, likely to be modern marine sediments, cut into the top of the interpreted WK formation. Feature is orientated WNW - ESE and has a relatively distinct basal reflector and more than one phase of fill. Depth range: 0.6 - 5.5 m BSB.	Unknown	117810



Appendix 2 Seabed features of archaeological potential

ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700197	Debris	407623	5784594	A2	5.3	0.9	-	73	A small parallel defined linear object with no discernible height, suggesting potential burial, located within an area of flat seabed. Associated with a medium magnetic anomaly, covering a broad area, that indicates a ferrous item of debris with the full extent unknown.	117810	-
700198	Rope/ Chain	406152	5781263	A2	7.9	0.4	-	39	A very straight and long linear dark reflector object located on a outcropping bedrock. There is a small magnetic anomaly associated with this feature indicating ferrous material is present. Likely a length of chain.	117810	-
700199	Debris	407037	5783188	A2	1.5	0.2	-	31	A small magnetic anomaly identified in the magnetic data, with an elongate dark reflector with no apparent height seen at the same location. This may be a ferrous item of debris. Located amongst an area of bedforms, indicating potential for partial burial. Located close to a number of magnetic anomalies that appear to follow a linear trend (700466 , 700467).	117810	-
700200	Debris	406667	5782627	A2	1.3	1.0	-	327	A very small angular object with no discernible shadow within an area of outcropping geology and sediment bed forms. There is a large magnetic anomaly associated with this object indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700201	Debris	406972	5783278	A2	1.7	0.6	0.4	89	A small slightly rounded dark reflector with a broad shadow in an area of sediment bed forms. This object is associated with a medium sized magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700202	Debris	406611	5782760	A2	3.2	1.8	0.9	53	Rounded dark reflector with a large tapering shadow with significant height off the seabed. This anomaly is possibly associated with a magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700203	Magnetic	406797	5783388	A2	-	-	-	31	Small positive monopolar magnetic anomaly seen in the magnetic data. No clear surficial surface expression in the SSS or MBES data, however located close to an area of outcropping bedrock. Possibly ferrous debris which is either buried or has no clear surface expression.	117810	-
700204	Debris	405883	5781632	A2	1.2	0.8	0.3	88	A small and elongated rounded dark reflector object with a bright, rounded shadow and with slight scour, possibly in a depression. This object is associated with a magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700205	Dark reflector	405846	5781446	A2	1.2	0.5	0.2	-	A small and rounded dark reflector object with a rounded shadow located within an area of flat seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700206	Dark reflector	405820	5781376	A2	1.7	0.7	0.3	-	A small and rounded dark reflector with a rounded shadow situated in an area of complex outcrop and bed forms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700207	Debris field	406648	5783304	A2	31.6	16.2	2.2	223	Cluster of three large objects with very distinct shadows on a rough and uneven area of seabed with outcropping geology. This possible debris field is associated with a magnetic anomaly indicating ferrous material is present. This is a possible ferrous debris field	117810	-
700208	Debris	406540	5783643	A2	2.0	1.3	0.3	79	A small and rounded dark reflector object with a bright and tapered shadow within a complex area of outcropping geology. This object is associated with a medium sized magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700209	Magnetic	405656	5781690	A2	-	-	-	65	A negative monopolar magnetic anomaly appears broad and isolated in the magnetic data. Nothing present in the SSS or MBES data. Located amongst an area of bedforms. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700210	Dark reflector	406994	5784684	A2	3.4	1.9	-	-	An elongated dark reflector object with no shadow in an area of flat seabed. This object has significant scouring associated. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700211	Magnetic	406846	5784492	A2	-	-	-	39	A sharp asymmetric dipolar magnetic anomaly identified in the magnetic data. Located amongst an area of fairly flat seabed and likely boulders. Not clear item identified in the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700212	Debris	406667	5784042	A2	1.2	0.5	-	14	A small, rounded dark reflector that is possibly hollow in its centre situated on an area of textured seabed. There is a small magnetic anomaly associated with this feature indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700213	Debris	406636	5784172	A2	4.9	0.6	0.2	-	A distinct and isolated straight dark reflector object in an area of flat seabed with slight height off the seabed. This is a possible non-ferrous item of debris	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700214	Magnetic	406577	5784491	A2	-	-	-	57	A sharp asymmetric dipolar magnetic anomaly identified in the magnetic data. Located amongst an area of fairly flat seabed with minor bedforms. An indistinct elongate item with slight height (1.4 x 0.7 x 0.1 m) was seen in the same location, however appears natural with similar items nearby and not clearly linked to the magnetic data so has not been associated at this time. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700215	Debris	406165	5783996	A2	1.3	0.3	-	85	A very small but distinct dark reflector isolated on a flat and even area of the seabed. There is a medium sized magnetic anomaly associated with this object indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700216	Dark reflector	406572	5780633	A2	2.5	0.6	0.5	-	A distinct and rounded dark reflector object with a bright oval shadow, the object has some sediment build up surrounding it and is in a depression. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700217	Rope/ Chain	407361	5782267	A2	57.9	0.8	0.0	-	A distinct and linear dark reflector stretching across a flat area of seabed, with less defined sections indicating buried in parts across its extent. A defined rounded dark reflector was seen in the SSS data, and also identified in MBES data as a small mound, is located at the southern end measuring approximately 1.5 x 1.5 x 0.1 m. Nothing was clearly identified in the magnetic data, indicating that the item likely a length of rope with a non-ferrous item attached.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700218	Wreck	407392	5782532	A1	85.7	46.9	2.5	31220	A very large and dispersed wreck situated within bedforms on the seabed. Detailed interior can be seen including likely structure such as slats and deck items, numerous items, seen as dark reflectors, with and without apparent height are visible within the wreckage. Two large objects with large shadows are possibly boilers and one end of either the bow or stern looks to be intact. The wreck has significant height off the seabed with sediment build up on its east side. The wreck is orientated in a north to south direction. There are very large magnetic anomalies associated with this wreck indicating ferrous material is present or a ferrous construction. In the MBES data this wreck is clearly visible as a very large oval mounded feature with internal linear structural feature visible, in the centre of the wreck 2-3 large rounded mounds are discernible. This wreck is recorded in the UKHO as <i>Jim</i> (UKHO 10313) a steamship built in 1908 by J Crown & Sons LTD, Sunderland. The vessel had two boilers and a triple expansion engine with original dimensions of 117.3 x 15.2 x 8.5 m	117810	UKHO 10313
700219	Debris	407362	5782407	A2	1.7	0.1	-	-	A small and indistinct linear item of debris with no discernible height. This is an isolated object on a flat area of seabed and possible non-ferrous item of debris	117810	-
700220	Debris	406687	5780993	A2	1.2	1.2	-	124	A small but distinct rounded dark reflector object with no apparent height off the seabed, situated on a very flat and even area. There is a large magnetic anomaly associated with this object indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700221	Debris	406671	5780992	A2	6.6	1.7	0.4	-	A long and distinct dark reflector object with slight height off the seabed located in a very sandy and even area of seabed and is situated 11 m east of a similar anomaly. The object displays possible scour on all sides and may be an item of non-ferrous debris	117810	-
700222	Debris	407192	5782289	A2	2.6	1.9	0.2	17	A slightly angular dark reflector object within an area of complex outcropping bedrock. There is a small magnetic anomaly associated with this feature indicating ferrous material is present. This is a possible ferrous item of debris	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700223	Debris	407290	5782491	A2	4.7	1.4	0.2	-	A very distinct linear dark reflector within flat sediment but proximal to some outcropping geology. This feature is visible in the MBES data as a slight rectangular mound within a depression. Nothing is clearly identified in the magnetic data, so appears to an item of non-ferrous debris. This feature is situated 95 m southwest of a wreck site (700218 , UKHO 10313) and may be debris linked to the wreck.	117810	-
700224	Debris	406659	5780995	A2	2.4	1.7	0.4	127	A distinct dark reflector object with a long, tapered shadow, situated in a slight depression on a featureless area of the seabed. This object has a large magnetic anomaly associated indicating ferrous material is present. In the MBES data this is visible as a small rounded mound within a depression and is situated 11 m west of a similar anomaly. This is a possible ferrous item of debris	117810	-
700225	Debris	406775	5781383	A2	1.7	0.3	-	15	A small magnetic anomaly identified in the magnetic data with slight surficial expression identified as an elongate dark reflector with no apparent height but slight scour, indicating potential for partial burial. This may be a ferrous item of debris.	117810	-
700226	Dark reflector	406480	5780770	A2	4.5	1.0	0.2	-	A slightly elongated dark reflector exhibiting slight scour and in a depression with slight height. This object is located in an area of flat seabed and is slightly visible as a mound in the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700227	Debris field	407763	5783549	A2	24.6	14.2	0.1	-	A large area of dark reflector objects, some with height within a flat and even area of the seabed. There are some small angular and linear objects visible. In the MBES data a number of small mounds can be seen. This is a possible non-ferrous debris field	117810	-
700228	Debris	406926	5781942	A2	4.0	0.9	0.8	60	A distinct dark reflector with a long and tapered shadow and significant height off the seabed. This object is situated close to some small bed forms and adjacent to a textured area of outcrop and is visible as a slight mound in the MBES. There is a medium sized magnetic anomaly associated within this object indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700229	Rope/Chain	406768	5781733	A2	15.8	0.3	0.1	-	A long, thin and distinct linear dark reflector with an apparent mound (approximately 2 x 2 x 0.1 m) on northern end of the linear feature. Orientated in a north-east to south-west direction in a flat area of the seabed. Nothing was present in the magnetic data, indicating non-ferrous. Likely a rope with a partially buried item at one end.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700230	Debris	407075	5782513	A2	4.5	0.5	0.5	15.0	An elongated dark reflector object with a complex shadow situated within an area of bed forms. There is a small magnetic anomaly possibly associated with this. This is a possible ferrous item of debris	117810	-
700231	Debris	406696	5781739	A2	2.8	1.4	-	19	Small square dark reflector object that slightly stands out within an area of complex outcropping geology and sediment. There is a magnetic anomaly associated with this feature indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700232	Debris	407208	5781613	A2	13.0	0.8	-	-	A long linear dark reflector object within an area of flat sediment. The feature is orientated in an east to west orientation on the seabed and has some possible sediment build-up to the north. This is a possible non-ferrous item of debris	117810	-
700233	Magnetic	407606	5782402	A2	-	-	-	41	A sharp asymmetric dipolar magnetic anomaly identified in the magnetic data. An item was identified in the SSS data as an indistinct dark reflector with bright shadow and scour measuring 3.2 x 0.8 x 0.3 m, however at this time it appeared natural so has only been mentioned. Item of possibly ferrous debris which is either buried or has no surface expression.	117810	-
700234	Dark reflector	407543	5782280	A2	4.0	0.4	0.2	-	A distinct elongated rounded reflector with a slight shadow in an area of flat seabed visible as a small depression in the MBES. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700235	Magnetic	407877	5783356	A2	-	-	-	91.66	Complex asymmetric dipolar magnetic anomaly, indicating potentially more than one item. No clear item(s) identified in the SSS or MBES data, however some dark angular reflectors with no apparent height were present amongst the bedforms but likely linked to the natural bedforms. Item possibly ferrous debris which is either buried or has no surface expression.	117810	-
700236	Dark reflector	406110	5780709	A2	4.2	3.7	0.1	-	A medium sized dark reflector irregular object within an area of flat but undulating seafloor. This feature is possibly partially buried or broken up. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700237	Debris	406389	5781424	A2	2.2	0.4	0.5	15	A small and rounded dark reflector object with a long, straight shadow and significant height off the seabed. This object has a small magnetic anomaly associated with it indicating ferrous material is present. This is a possible ferrous item of debris	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700238	Debris	406681	5781945	A2	10.7	2.8	2.4	24	A large oval shaped mound with a very long tapered shadow and significant height off the seabed. In the MBES this is clearly visible as an oval mound with slight peak, appears larger and more defined than the surrounding natural mounds of likely outcropping bedrock. There is a small magnetic anomaly possibly associated with this feature indicating ferrous material is present. This may be a ferrous item of debris.	117810	-
700239	Debris	407438	5783674	A2	9.7	0.5	0.0	23	A very long, thin and indistinct straight linear object lying perpendicular to the bedforms in a north to south direction. This object is associated with a small magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700240	Magnetic	406380	5781344	A2	-	-	-	16	A sharp asymmetric dipolar magnetic anomaly identified in the magnetic data. No clear corresponding item identified in the SSS or MBES data, as located amongst an area of partially buried, outcropping bedrock with a number of possible boulders. Possibly ferrous debris which is either buried or has no defined surface expression amongst the bedrock.	117810	-
700241	Debris	406868	5782556	A2	2.4	0.8	0.1	10	A small and angular dark reflector with a slight shadow within a complex area of bed forms. This object is associated with a small magnetic anomaly indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700242	Seabed disturbance	406700	5782514	A2	15.5	6.3	0.0	135	A large cluster of dark reflector patches within some large sand waves that are possibly buried by fine sands. There is a large magnetic anomaly possibly associated with this feature indicating ferrous material is present. This may be a ferrous seabed disturbance or possibly a natural feature close to a magnetic anomaly	117810	-
700243	Magnetic	407269	5783592	A2	-	-	-	36	Complex asymmetric dipole identified in the magnetic data, located close to a second item (700523). Nothing clearly associated on the SSS or MBES data. Located in an area of partially buried outcropping bedrock. Possibly ferrous debris which is either buried or has no clear surface expression amongst the bedrock.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700244	Wreck	410382	5785290	A1	72.4	20.8	2.3	9392	A very large and dispersed wreck orientated in a northeast to southwest direction and possibly broken into two pieces. A large number of distinct dark reflector objects are visible with significant height, angular objects and linear pieces are discernible in the wreckage. The wreck is situated on a rough and uneven area of the seabed and outcropping geology. The wreck appears to be very degraded though still with significant height. In the MBES data the wreck is visible as an alignment of uneven mounds, there appear to be a number of small but deep depressions around the edge of the wreck up to 3 m deep. There is a possible boiler visible in the centre of the wreck standing at 2.3 m. There is a very large magnetic anomaly associated with this vessel indicating a possible ferrous construction or cargo. This wreck is recorded in the UKHO database as the <i>Mangara</i> steamship that was sunk in 1915 by the torpedo by the UB-16, its cargo is record as being 2400 tons of iron ore. The original vessel dimensions are 79.2 x 11.3 x 5.2 m.	117810	UKHO 10325
700245	Bright reflector	409067	5782181	A2	8.1	2.6	-	-	A large, distinct and elongated bright reflector with a dark reflector along the features back edge. Possibly a natural depression however has the potential of being a non-ferrous item of debris	117810	-
700246	Seabed disturbance	408603	5780512	A2	26.0	7.2	0.2	-	A large oval shaped area of angular bright reflectors and indistinct dark reflectors that appears to be buried by fine sediments. This feature looks slightly anomalous to the surrounding textured seabed. This is a possible non-ferrous seabed disturbance	117810	-
700247	Dark reflector	409315	5781836	A2	24.2	1.2	0.0	-	A very indistinct slightly curvilinear dark reflector object running perpendicular to the trend of the bed forms on this area of the seabed, it is possible partially buried by fine sediments. This feature is faintly visible in the MBES data as an elongated mound. This may be a natural feature or non-ferrous debris	117810	-
700248	Dark reflector	410799	5784291	A2	2.9	0.8	0.3	-	An angular dark reflector object with a small pointed shadow, this object is isolated on a textured area of the seabed, with some minor scour. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700249	Dark reflector	410282	5782864	A2	3.8	0.6	0.5	-	A medium sized square dark reflector object situated within a linear bed form. This object is distinct and isolated on the seabed and faintly visible in the MBES data as a small square mound. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700250	Bright reflector	411072	5784533	A2	8.3	2.5	-	-	A distinct and medium sized slightly angular bright reflector object situated on a sandy and even area of the seabed. this object is visible in the MBES data as an irregularly shaped slight depression. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700251	Bright reflector	411298	5784562	A2	3.1	1.0	-	-	A distinct bright reflector object isolated in an area of featureless seabed. This is faintly visible in the MBES data as a rounded depression. Possibly natural however has the potential of being a non-ferrous item of debris	117810	-
700252	Debris	411194	5783840	A2	4.6	4.3	-	-	A medium sized and distinct rectangular dark reflector within an area of scour with no discernible height. This object is faintly seen in the MBES data as a small mound within a depression. This is possibly non-ferrous debris	117810	-
700253	Rope/ Chain	413511	5789128	A2	35.3	0.3	0.1	15.0	A faint, indistinct curvilinear dark reflector with very light height that appears to be partially buried by sediment in places. This object has a small magnetic anomaly possible associated indicating ferrous material is present. This is a possible length of chain.	117810	-
700254	Debris	413082	5787727	A1	2.5	0.6	0.5	-	Small dark reflector with a non-tapering squared shadow and linear dark reflector extending from item to nearby wreck (700255 , UKHO 10331). No clear magnetic anomaly identified, however due to proximity to the large anomaly of the wreck it may not be clearly visible. Likely a rope and item that may be linked to the wreck or related to an item that has been snagged on the wreck (fishing gear). Feature treated with high risk to ensure safety of feature and wreck.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700255	Wreck	413082	5787765	A1	53.4	17.2	5.9	9152	A distinct outline of a wreck that appears to be upright and relatively well intact in the SSS data, however with some disintegration at the bow. The vessel has numerous dark reflectors surrounding it, some of which are linear, which is likely to be associated wreck debris. A linear dark reflector with an object (700254) with height at one end can be seen extending from the ships stern which may be an anchor and chain. The wreck is orientated in a north-northeast to south-southwest direction on a relatively flat area of the seabed. In the MBES data this wreck has clear superstructure preserved on one half of the ship and appears intact on a featureless area of the seabed. There is a very large magnetic anomaly associated with this wreck indicating a ferrous construction or cargo. This wreck is recorded in the UKHO data as <i>Alastair</i> (UKHO 10331), a 366-ton steamship built in 1902 with one boiler and a triple expansion engine. The vessel had build dimensions of 44.2 x 7.3 x 3.4 m and was sunk in 1915 when it struck two mines	117810	UKHO 10331
700256	Debris	411636	5788100	A2	6.4	0.3	0.0	-	A distinct straight linear dark reflector object with a slight shadow but no height off the seabed, this object is isolated on a sandy and even area of the seabed. This is a possible non-ferrous linear item of debris	117810	-
700257	Debris Field	411763	5788611	A1	40.0	19.0	0.5	290	Distinct series of dark and bright reflectors, most linear. These items do not appear to have any distinct form or structure but do appear to have associated complex magnetic variance of up to 290 nT. Located outside of the ECR area, however retained due to proximity. Nearby ferrous debris (700258) appears of similar form but is located within the ECR area.	117810	-
700258	Debris Field	411768	5788539	A1	18.5	13.7	0.1	421	Two, straight linear items of debris situated next to one another on a flat area of the seabed, these objects are distinct and make up a possible debris field. There is a large magnetic anomaly associated with these features indicating ferrous material is present. These items are located close to a larger collection of ferrous debris located outside of the ECR cable route (700257), and due to the similarity in nature are thought to be associated.	117810	-
700259	Rope/ Chain	411375	5787721	A2	33.5	0.8	0.1	-	A long, thin and curvilinear intermittent dark reflector with slight height off the seabed. This feature is a possibly partially buried or broken up length of rope isolated on a sandy and even area of the seabed. No clear association with magnetic variance, indicating non-ferrous debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700260	Seabed disturbance	409955	5785060	A2	17.7	6.0	0.0	-	A large spread of partially buried linear dark reflector objects in an area of otherwise fairly flat seabed. This is a non-ferrous seabed disturbance possibly containing a buried debris feature	117810	-
700261	Debris	409579	5785382	A2	6.5	5.0	2.5	-	A very distinct rounded dark reflector object with a large tapered shadow and significant height off the seabed. This object is isolated and situated in an area of small bed forms with some scour on one side. In the MBES data this is clearly visible as a substantial mound within a depression, the depression measures 15.5 x 13 m. The is a possibly non-ferrous item of debris	117810	-
700262	Wreck	408286	5783060	A1	25.0	8.0	0.8	228	An outline of a medium sized wreck with no discernible height which suggests that potentially the structure is poorly degraded or is buried by sediment. The wreck has been identified in an area of bed forms which may also mask its extent. The wreck has some possible associated scour, approximately 25 x 23 m, and is orientated in a north-west to south-east direction on the seabed. It is to be noted that the area includes some seabed disturbances nearby, no clear items of debris have been identified. In the MBES data the hull of the vessel is clearly distinguished with some possible faint internal structures still standing, though this is unclear, and the wreck has low relief. There is a large magnetic anomaly associated with this wreck indicating a ferrous construction or cargo. This is recorded in the UKHO database as an unknown wreck (UKHO 87913) identified by geophysical survey in 2016.	117810	UKHO 87913
700263	Debris	408289	5783167	A1	9.1	4.0	0.2	2613	A very distinct angular object alongside a narrow linear object with a small shadow and height off the seabed, possibly in a slight depression. This object has a very large magnetic associated with it indicating substantial ferrous material is present and likely ferrous debris. This object is faintly visible in the MBES data as a slight mound within a depression with very little height off the seabed. This item is located approximately 100 m from an unknown wreck (700262, UKHO 87913), it is not clearly related but due to its proximity, an association cannot be ruled out.	117810	-
700264	Magnetic	408265	5783258	A2	-	-	-	107	A positive monopolar magnetic anomaly identified in the magnetic data. Nothing clearly defined in the SSS or MBES data. Possible seabed disturbance and mound with scour seen nearby but not clearly linked. Likely ferrous debris which is either buried or has no clear surface expression.	117810	



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700265	Debris	407357	5781482	A2	3.5	1.6	0.0	150.0	An elongated dark reflector object with a slight depression isolated on a sandy and even area of the seabed, the object appears to be buried. There is a large magnetic anomaly associated with this feature indicating ferrous material is present. This is a possibly partially buried piece of ferrous debris	117810	-
700266	Debris field	408022	5783044	A2	45.7	42.8	0.2	305.0	A large spread of possible debris objects situated on a sandy area of the seabed, more may be buried within the extents. Over ten distinct but small dark reflectors objects with shadows, there is a linear reflector visible with smaller straight and rounded objects surrounding it. This feature has a large magnetic anomaly associated indicating ferrous material is present. This area of possible objects is situated in a large depression in the MBES data with small mound features within in measuring approximately 3 x 2 m maximum. This is a possible ferrous debris field	117810	-
700267	Magnetic	414475	5790668	A2	-	-	-	32	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700268	Magnetic	413781	5789378	A2	-	-	-	49	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700269	Magnetic	413397	5789131	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700270	Magnetic	413385	5788499	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700271	Magnetic	412893	5788498	A2	-	-	-	214	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700272	Magnetic	412400	5788610	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700273	Magnetic	411740	5788476	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700274	Magnetic	411998	5788440	A2	-	-	-	43	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700275	Magnetic	412425	5788419	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700276	Magnetic	413285	5788043	A2	-	-	-	195	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700277	Magnetic	413104	5787998	A2	-	-	-	84	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700278	Magnetic	413064	5787892	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700279	Magnetic	412933	5787849	A2	-	-	-	38	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700280	Magnetic	413115	5787635	A2	-	-	-	130	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700281	Magnetic	412634	5788156	A2	-	-	-	41	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700282	Magnetic	411275	5788065	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700283	Magnetic	411466	5787765	A2	-	-	-	50	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700284	Magnetic	411736	5787406	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700285	Magnetic	411813	5787428	A2	-	-	-	13	Small and broad magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700286	Magnetic	412609	5787279	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700287	Magnetic	412708	5787356	A2	-	-	-	117	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700288	Magnetic	412772	5787491	A2	-	-	-	38	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700289	Magnetic	412587	5787088	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700290	Magnetic	412649	5787070	A2	-	-	-	89	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700291	Magnetic	412681	5787116	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700292	Magnetic	411208	5787098	A2	-	-	-	41	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700293	Magnetic	411623	5786761	A2	-	-	-	215	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700294	Magnetic	411779	5786771	A2	-	-	-	26	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700295	Magnetic	411904	5786666	A2	-	-	-	37	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700296	Magnetic	412543	5786854	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700297	Magnetic	412288	5786406	A2	-	-	-	57	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700298	Magnetic	412576	5786440	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700299	Magnetic	412696	5786713	A2	-	-	-	120	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700300	Magnetic	412158	5786384	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700301	Magnetic	412172	5786312	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700302	Magnetic	412074	5786324	A2	-	-	-	30	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700303	Magnetic	412231	5785808	A2	-	-	-	82	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700304	Magnetic	410905	5786039	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700305	Magnetic	410515	5786033	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700306	Magnetic	410280	5786338	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700307	Magnetic	409845	5786277	A2	-	-	-	32	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700308	Magnetic	410923	5785954	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700309	Magnetic	410695	5785801	A2	-	-	-	53	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700310	Magnetic	410421	5785690	A2	-	-	-	52	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700311	Magnetic	410049	5785719	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700312	Magnetic	409745	5785416	A2	-	-	-	238	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700313	Magnetic	409804	5785439	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700314	Magnetic	410897	5785422	A2	-	-	-	36	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700315	Magnetic	411114	5785385	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700316	Magnetic	410855	5784576	A2	-	-	-	75	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700317	Magnetic	412005	5785200	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700318	Magnetic	411800	5784756	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700319	Magnetic	410995	5784067	A2	-	-	-	44	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700320	Magnetic	411102	5783345	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700321	Magnetic	409940	5784853	A2	-	-	-	70	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700322	Magnetic	409985	5784848	A2	-	-	-	43	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700323	Magnetic	408540	5784896	A2	-	-	-	32	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700324	Magnetic	408672	5784829	A2	-	-	-	52	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700325	Magnetic	408916	5784685	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700326	Magnetic	409156	5784735	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700327	Magnetic	410617	5782852	A2	-	-	-	104	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700328	Magnetic	410573	5782756	A2	-	-	-	83	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700329	Magnetic	410547	5782680	A2	-	-	-	250	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700330	Magnetic	410525	5782632	A2	-	-	-	279	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700331	Magnetic	410459	5782508	A2	-	-	-	76	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700332	Magnetic	409936	5781112	A2	-	-	-	38	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700333	Magnetic	409660	5781252	A2	-	-	-	80	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700334	Magnetic	409551	5781605	A2	-	-	-	54	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700335	Magnetic	409560	5781263	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700336	Magnetic	409657	5782193	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700337	Magnetic	409026	5782610	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700338	Magnetic	408121	5780996	A2	-	-	-	35	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700339	Magnetic	407806	5780303	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700340	Magnetic	408669	5782308	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700341	Magnetic	407965	5780891	A2	-	-	-	70	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700342	Magnetic	408657	5782415	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700343	Magnetic	408833	5782912	A2	-	-	-	42	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700344	Magnetic	408667	5783163	A2	-	-	-	48	Small magnetic anomaly identified on the magnetometer data, possibly two separate ferrous features. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700345	Magnetic	408816	5783589	A2	-	-	-	131	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700346	Magnetic	409008	5783538	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data, possibly two separate ferrous features. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700347	Magnetic	408523	5783327	A2	-	-	-	71	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700348	Magnetic	407308	5780763	A2	-	-	-	52	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700349	Magnetic	407121	5780469	A2	-	-	-	54	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700350	Magnetic	407530	5781628	A2	-	-	-	49	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700351	Magnetic	407772	5782358	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700352	Magnetic	406807	5780401	A2	-	-	-	63	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700353	Magnetic	408259	5783586	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700354	Magnetic	408226	5783653	A2	-	-	-	208	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700355	Magnetic	407704	5782500	A2	-	-	-	48	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700356	Magnetic	407650	5782501	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700357	Magnetic	407761	5782755	A2	-	-	-	228	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700358	Magnetic	407490	5782246	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700359	Magnetic	406672	5780589	A2	-	-	-	50	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700360	Magnetic	406666	5780769	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700361	Magnetic	406945	5781313	A2	-	-	-	45	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700362	Magnetic	406992	5781389	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700363	Magnetic	407080	5781683	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700364	Magnetic	407170	5781806	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700365	Magnetic	407319	5781967	A2	-	-	-	89	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700366	Magnetic	407314	5782077	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700367	Magnetic	407318	5782205	A2	-	-	-	308	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700368	Magnetic	407548	5782160	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700369	Magnetic	407852	5783047	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700370	Magnetic	407740	5783017	A2	-	-	-	112	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700371	Magnetic	407863	5783165	A2	-	-	-	257	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700372	Magnetic	408234	5784344	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700373	Magnetic	408221	5784558	A2	-	-	-	66	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700374	Magnetic	407429	5782695	A2	-	-	-	51	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700375	Magnetic	407591	5783047	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700376	Magnetic	407590	5783089	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700377	Magnetic	407783	5783473	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700378	Magnetic	407830	5783458	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700379	Magnetic	407760	5783305	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700380	Magnetic	407590	5782923	A2	-	-	-	78	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700381	Magnetic	407283	5782331	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700382	Magnetic	407320	5782427	A2	-	-	-	89	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. Situated 100 m southwest of a very dispersed wreck and may be associated buried debris	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700383	Magnetic	407333	5782478	A2	-	-	-	45	Positive monopole on one line only. Clear sharp signal superimposed on the artificially raised signal around the nearby wreck. May be associated debris. Situated 55 m southwest of a very dispersed wreck and may be associated buried debris	117810	-
700384	Magnetic	406665	5780944	A2	-	-	-	73	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700385	Magnetic	406595	5780791	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700386	Magnetic	407207	5782560	A2	-	-	-	99	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700387	Magnetic	407320	5782716	A2	-	-	-	67	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700388	Magnetic	407191	5782340	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700389	Magnetic	406197	5780704	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700390	Magnetic	406064	5781010	A2	-	-	-	44	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700391	Magnetic	406414	5781185	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700392	Magnetic	406724	5781495	A2	-	-	-	52	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700393	Magnetic	406690	5781423	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700394	Magnetic	406414	5781590	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700395	Magnetic	406518	5781645	A2	-	-	-	225	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700396	Magnetic	406176	5781626	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700397	Magnetic	406206	5781693	A2	-	-	-	30	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700398	Magnetic	405863	5781585	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700399	Magnetic	406709	5781762	A2	-	-	-	36	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700400	Magnetic	406381	5781831	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700401	Magnetic	406366	5781923	A2	-	-	-	55	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700402	Magnetic	406313	5781924	A2	-	-	-	58	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700403	Magnetic	405786	5781877	A2	-	-	-	532	A very large magnetic anomaly identified on two lines, approximately 30 m apart, may indicate a singular length of ferrous material or be two items that are likely linked as a ferrous feature. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700404	Magnetic	406065	5782104	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700405	Magnetic	406121	5781991	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700406	Magnetic	406538	5781931	A2	-	-	-	63	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700407	Magnetic	406643	5782096	A2	-	-	-	169	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700408	Magnetic	406616	5781985	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700409	Magnetic	406841	5781932	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700410	Magnetic	406881	5782136	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700411	Magnetic	406979	5782064	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700412	Magnetic	406836	5782221	A2	-	-	-	66	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700413	Magnetic	406760	5782235	A2	-	-	-	27	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700414	Magnetic	406550	5782214	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700415	Magnetic	406554	5782342	A2	-	-	-	33	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700416	Magnetic	406376	5782190	A2	-	-	-	102	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700417	Magnetic	406180	5782185	A2	-	-	-	44	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700418	Magnetic	406161	5782141	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700419	Magnetic	407058	5782405	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700420	Magnetic	406919	5782463	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700421	Magnetic	406912	5782518	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700422	Magnetic	406752	5782453	A2	-	-	-	96	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700423	Debris	406653	5782388	A2	6.6	4.5	1.2	68	A large and slightly angular dark reflector object with a clear, very jagged shadow and significant height off the seabed. This feature is located in an area of textured seabed but is clearly defined. There is a medium sized magnetic anomaly associated with this feature indicating ferrous material is present. This is a possible ferrous item of debris	117810	-
700424	Magnetic	406660	5782441	A2	-	-	-	177	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700425	Magnetic	406675	5782475	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700426	Magnetic	406705	5782534	A2	-	-	-	43	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700427	Magnetic	406709	5782495	A2	-	-	-	55	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700428	Magnetic	406452	5782510	A2	-	-	-	82	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700429	Magnetic	406416	5782593	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700430	Magnetic	406513	5782661	A2	-	-	-	76	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700431	Magnetic	406478	5782698	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700432	Magnetic	406494	5782771	A2	-	-	-	33	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700433	Magnetic	406707	5782731	A2	-	-	-	273	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700434	Magnetic	406696	5782703	A2	-	-	-	83	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700435	Magnetic	406560	5782878	A2	-	-	-	110	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700436	Magnetic	406590	5782945	A2	-	-	-	229	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700437	Magnetic	406709	5782860	A2	-	-	-	65	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700438	Magnetic	406804	5782882	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700439	Magnetic	406883	5782838	A2	-	-	-	71	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700440	Magnetic	407184	5783008	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700441	Magnetic	407084	5782949	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700442	Magnetic	406998	5782975	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700443	Magnetic	406904	5782907	A2	-	-	-	37	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700444	Magnetic	406964	5782911	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700445	Magnetic	406902	5782990	A2	-	-	-	59	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700446	Magnetic	407252	5783049	A2	-	-	-	67	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700447	Magnetic	407513	5783116	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700448	Magnetic	407224	5783077	A2	-	-	-	57	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700449	Magnetic	406705	5783081	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700450	Magnetic	406661	5783096	A2	-	-	-	672	Very large and broad magnetic anomaly across 30 m of seabed identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. This feature is close to an area of magnetic variance that may be associated however, as the magnetic variance doesn't appear to be archaeological and is quite irregular, it hasn't been retained as potential archaeology.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700451	Magnetic	406318	5783017	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700452	Magnetic	406350	5783097	A2	-	-	-	36	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700453	Magnetic	406472	5783141	A2	-	-	-	47	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700454	Magnetic	406512	5783113	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700455	Magnetic	406553	5783213	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700456	Magnetic	406381	5783229	A2	-	-	-	107	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700457	Magnetic	406232	5783103	A2	-	-	-	56	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. Located	117810	-
700458	Magnetic	406198	5783027	A2	-	-	-	49	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700459	Magnetic	406552	5783311	A2	-	-	-	87	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700460	Magnetic	406660	5783312	A2	-	-	-	223	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700461	Magnetic	406569	5783348	A2	-	-	-	42	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700462	Magnetic	407382	5783190	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700463	Magnetic	407284	5783209	A2	-	-	-	70	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700464	Magnetic	407228	5783216	A2	-	-	-	218	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700465	Magnetic	407294	5783231	A2	-	-	-	27	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700466	Magnetic	407014	5783204	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. Located close to a number of magnetic anomalies that appear to follow a linear trend (700199, 700467).	117810	-
700467	Magnetic	406985	5783206	A2	-	-	-	38	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. Located close to a number of magnetic anomalies that appear to follow a linear trend (700199, 700466).	117810	-
700468	Magnetic	406951	5783221	A2	-	-	-	35	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700469	Magnetic	406914	5783162	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700470	Magnetic	406963	5783260	A2	-	-	-	34	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700471	Magnetic	406886	5783253	A2	-	-	-	33	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700472	Magnetic	406996	5783319	A2	-	-	-	26	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700473	Magnetic	406863	5783310	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700474	Magnetic	406821	5783295	A2	-	-	-	27	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700475	Magnetic	406734	5783215	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700476	Magnetic	406721	5783307	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700477	Magnetic	406752	5783374	A2	-	-	-	47	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700478	Magnetic	406359	5783533	A2	-	-	-	43	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700479	Magnetic	406192	5783611	A2	-	-	-	66	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700480	Magnetic	406156	5783621	A2	-	-	-	196	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700481	Magnetic	406197	5783650	A2	-	-	-	68	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700482	Magnetic	406634	5783498	A2	-	-	-	120	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700483	Magnetic	406628	5783532	A2	-	-	-	58	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700484	Magnetic	406729	5783501	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700485	Magnetic	406710	5783462	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700486	Magnetic	406136	5783761	A2	-	-	-	638	Very large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700487	Magnetic	406200	5784024	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700488	Magnetic	406249	5783770	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700489	Magnetic	406446	5783846	A2	-	-	-	59	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700490	Magnetic	406511	5783805	A2	-	-	-	98	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700491	Magnetic	406462	5783698	A2	-	-	-	27	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700492	Magnetic	406582	5783733	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700493	Magnetic	406614	5783630	A2	-	-	-	52	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700494	Magnetic	406652	5783760	A2	-	-	-	63	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700495	Magnetic	406680	5783636	A2	-	-	-	41	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700496	Magnetic	406824	5783530	A2	-	-	-	62	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700497	Magnetic	406891	5783486	A2	-	-	-	464	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700498	Magnetic	406800	5783618	A2	-	-	-	33	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700499	Magnetic	406956	5783611	A2	-	-	-	96	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700500	Magnetic	407003	5783620	A2	-	-	-	145	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700501	Magnetic	406985	5783537	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700502	Magnetic	407050	5783562	A2	-	-	-	124	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700503	Magnetic	407085	5783573	A2	-	-	-	80	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700504	Magnetic	407131	5783595	A2	-	-	-	74	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700505	Magnetic	407117	5783576	A2	-	-	-	81	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700506	Magnetic	407031	5783522	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700507	Magnetic	407022	5783431	A2	-	-	-	145	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700508	Magnetic	407048	5783454	A2	-	-	-	104	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700509	Magnetic	407054	5783421	A2	-	-	-	311	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700510	Magnetic	407091	5783461	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700511	Magnetic	407052	5783370	A2	-	-	-	40	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700512	Magnetic	407209	5783458	A2	-	-	-	50	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700513	Magnetic	407324	5783355	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700514	Magnetic	407362	5783367	A2	-	-	-	448	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700515	Magnetic	407356	5783428	A2	-	-	-	84	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700516	Magnetic	407531	5783323	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700517	Magnetic	407591	5783334	A2	-	-	-	11	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700518	Magnetic	407688	5783382	A2	-	-	-	44	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700519	Magnetic	407694	5783445	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700520	Magnetic	407680	5783484	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700521	Magnetic	407750	5783575	A2	-	-	-	80	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700522	Magnetic	407316	5783538	A2	-	-	-	32	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700523	Magnetic	407257	5783564	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression. Located close to a second anomaly (700243).	117810	-
700524	Magnetic	407298	5783657	A2	-	-	-	26	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700525	Magnetic	407045	5783706	A2	-	-	-	40	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700526	Magnetic	406987	5783719	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700527	Magnetic	406821	5783689	A2	-	-	-	68	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700528	Magnetic	406922	5783788	A2	-	-	-	65	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700529	Magnetic	406768	5783680	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700530	Magnetic	406796	5783735	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700531	Magnetic	406793	5783720	A2	-	-	-	21	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700532	Magnetic	406826	5783792	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700533	Magnetic	406363	5784015	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700534	Magnetic	406297	5784112	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700535	Magnetic	406339	5784207	A2	-	-	-	78	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700536	Magnetic	406335	5784278	A2	-	-	-	83	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700537	Magnetic	406202	5784389	A2	-	-	-	58	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700538	Magnetic	406335	5784440	A2	-	-	-	150	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700539	Magnetic	406481	5784354	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700540	Magnetic	406555	5784396	A2	-	-	-	83	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700541	Magnetic	406354	5784603	A2	-	-	-	171	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700542	Magnetic	407078	5784471	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700543	Magnetic	406909	5784372	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700544	Magnetic	406728	5784073	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700545	Magnetic	406581	5784152	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700546	Magnetic	406669	5783961	A2	-	-	-	35	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700547	Magnetic	406924	5784017	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700548	Magnetic	406967	5783880	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700549	Magnetic	407045	5783812	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700550	Magnetic	407101	5783825	A2	-	-	-	39	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700551	Magnetic	407273	5783781	A2	-	-	-	30	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700552	Magnetic	407369	5783779	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700553	Magnetic	407780	5783824	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700554	Magnetic	407708	5783816	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700555	Magnetic	407867	5784194	A2	-	-	-	100	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700556	Magnetic	407739	5784638	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700557	Magnetic	407528	5784162	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700558	Magnetic	407156	5784707	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700559	Magnetic	407145	5784621	A2	-	-	-	11	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700560	Magnetic	407074	5784353	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700561	Magnetic	407209	5784267	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700562	Magnetic	407936	5784342	A2	-	-	-	27	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS and MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700563	Recorded Wreck	406008	5783583	A3	-	-	-	-	This wrecks location is not covered by the geophysical datasets, this is an unknown wreck identified by multibeam survey. The UKHO record states the vessel is 9.4 x 2.8 x 0.5 m and orientated 045/225 degrees on the seabed.	117810	UKHO 87912
700564	Recorded Wreck	406038	5784901	A3	-	-	-	-	This wrecks location is not covered by the geophysical datasets, this is recorded in the UKHO as the fishing vessel <i>Ocean Pride</i> , which sank on approaching the beach off Sizewell. It was last surveyed in 2016 when it was reported as being a moderately defined wreck, measuring 25.9 x 21.4 x 2.1 m, possibly in two parts.	117810	UKHO 10324
700565	Recorded Wreck	406127	5783160	A1	-	-	-	558	This wrecks location is not completely covered by the geophysical datasets; however, a very large magnetic anomaly is identified on the closest line of magnetometer data, 44 m south-east of the wrecks location. It is likely that this is related to the wreck, indicating a significant amount of ferrous material. The wreck is reported as being an unknown wreck in the UKHO database (UKHO 87914). The vessel is recorded as having dimensions of 54.3 x 16.2 x 1 m and orientated 166/346 ° on the seabed. The scour length is recorded as being 45.3 x 1 m deep.	117810	UKHO 87914
700566	Magnetic	415224	5790859	A2	-	-	-	36	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700567	Magnetic	415100	5790671	A2	-	-	-	17	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700568	Rope/ Chain	415435	5790667	A2	103	0.7	0.2	20	Very long linear reflector which may represent a length of rope/chain. Located in an area of flat seabed but with other faint seabed disturbances. The feature appears to have an associated magnetic anomaly which indicates the presence of ferrous material, possibly a length of chain.	117810	-
700569	Magnetic	414871	5790552	A2	-	-	-	16	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700570	Magnetic	415453	5790258	A2	-	-	-	28	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700571	Rope/ Chain	415434	5790046	A2	117	0.6	0.2	12	Very long sinuous object within an area of otherwise flat and featureless seabed. Not visible in places, and as such may be partially buried or broken up. Has scoured a slight indentation. The feature has an associated magnetic anomaly indicating a length of chain, or possibly a rope with a buried ferrous item attached.	117810	-
700572	Magnetic	415113	5790123	A2	-	-	-	61	Medium magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700573	Magnetic	415257	5789467	A2	-	-	-	136	Large sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700574	Magnetic	414083	5789536	A2	-	-	-	93	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700575	Magnetic	414008	5788380	A2	-	-	-	46	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700576	Magnetic	414048	5788384	A2	-	-	-	9	Small but very sharp magnetic anomaly with no associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700577	Magnetic	413001	5787037	A2	-	-	-	30	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700578	Magnetic	413165	5786897	A2	-	-	-	206	Large sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Part of a cluster of anomalies which could represent a spread of ferrous debris which is either buried or has no surface expression.	117810	-
700579	Magnetic	413120	5786798	A2	-	-	-	22	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Part of a cluster of anomalies which could represent a spread of ferrous debris which is either buried or has no surface expression.	117810	-
700580	Magnetic	413101	5786757	A2	-	-	-	19	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Part of a cluster of anomalies which could represent a spread of ferrous debris which is either buried or has no surface expression.	117810	-
700581	Magnetic	413167	5786782	A2	-	-	-	29	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Part of a cluster of anomalies which could represent a spread of ferrous debris which is either buried or has no surface expression.	117810	-
700582	Magnetic	413339	5785612	A2	-	-	-	138	Large magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700583	Magnetic	412830	5785576	A2	-	-	-	28	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700584	Magnetic	412298	5785715	A2	-	-	-	71	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700585	Magnetic	412451	5785332	A2	-	-	-	32	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700586	Magnetic	412536	5785287	A2	-	-	-	143	Large magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700587	Magnetic	412892	5785098	A2	-	-	-	24	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700588	Magnetic	412119	5785198	A2	-	-	-	16	Small, slightly broader magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700589	Magnetic	412178	5783878	A2	-	-	-	27	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700590	Debris	411428	5783615	A1	13.3	13.1	1.6	4091	Partially buried debris visible in both the SSS and MBES datasets. Clearly visible in an area of flat and otherwise featureless seabed. Some detail of internal structure is visible. A separate distinct object with height and linear features are also visible within the boundary. Associated with a very large magnetic anomaly clearly visible in the magnetometer data indicating a significant amount of ferrous material. Feature has no associated UKHO record, however the feature's structure and associated magnetic anomaly suggests a possible wreck site or associated debris. Approximately 500 m from the nearby known wreck (700591, UKHO 10321), not clearly associated.	117810	-
700591	Wreck	411648	5783222	A1	162.0	46.7	4.1	21605	Wreck of the <i>Magdapur</i> , a steamship built in 1921 by Lithgows Ltd. of Port Glasgow. Original length of 144 m and width at beam of 20 m with a gross tonnage of 8641 T. Powered by a 1147 HP turbine with a single shaft and two boilers. Struck a German mine on passage from South Shields to Southampton on the 10th of September 1939, broke in two and sank with the loss of six men. This wreck is clearly visible in the MBES and SSS datasets, located in an area of flat seabed. The wreck appears upright with some additional debris outside the hull perimeter. Some internal structures are visible but indistinct. Scour and sediment build-up can be seen on all sides. The wreck is associated with a very large magnetic anomaly.	117810	UKHO 10321
700592	Magnetic	411850	5783395	A2	-	-	-	83	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700593	Magnetic	412018	5783252	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700594	Magnetic	412131	5783157	A2	-	-	-	16	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700595	Magnetic	411543	5782713	A2	-	-	-	37	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700596	Magnetic	411682	5781921	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700597	Magnetic	411628	5781973	A2	-	-	-	12	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700598	Magnetic	411560	5781918	A2	-	-	-	367	Large magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700599	Magnetic	411598	5782325	A2	-	-	-	87	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700600	Seabed disturbance	411596	5782442	A1	8.7	8.1	-	1519	Small round seabed disturbance located in an otherwise flat and featureless seabed, comprised poorly defined light and dark reflectors. Feature has an associated very large magnetic anomaly indicating a significant amount of ferrous material. Seen as a series of smaller depressions and mounds on the MBES data. Located approximately 780 m from known wreck (700591 , UKHO 10321), however not clearly associated.	117810	-
700601	Magnetic	411045	5781983	A2	-	-	-	19	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700602	Magnetic	410951	5781695	A2	-	-	-	38	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700603	Rope/ Chain	414518	5788350	A2	41.9	0.4	0	-	Linear dark reflector running approximately north to south. Located in an area of flat featureless seabed. Slightly curved at the southern end. No magnetic signature present, and as such may be a discarded rope or other non-ferrous debris.	117810	-
700604	Rope/ Chain	413449	5788081	A2	25.6	0.8	0.2	-	Short section of sinuous reflector with what appears to be a rounded dark reflector with height at one end. No associated magnetic response and as such possibly a rope. Located in an area of flat seabed but proximal to a large possible wreck so may be associated.	117810	-
700605	Debris	413543	5788077	A1	10.0	6.9	4.9	60	Very large object with a large, distinct, irregular shadow. Scour and sediment build-up visible around the object. Southern edge of object is curved and terminates to a point. Possibly partially buried wreck or debris associated with nearby wrecks. The feature appears to have an associated magnetic variance however, due to the features position between two magnetometer lines, the magnetic signal is quite broad, and the amplitude is likely to be underestimated.	117810	-
700606	Debris	413838	5787938	A2	12.0	2.3	0.3	-	A straight, linear dark reflector with a small dark reflector on the near edge with a rounded shadow. Located in an area of flat and otherwise featureless seabed. Seen on the MBES datasets an elongated mound protruding from the seabed, possibly indicating partial burial. No associated magnetic anomaly and likely to be a non-ferrous item of debris.	117810	-
700607	Dark reflector	413911	5787002	A2	1.3	0.9	-	-	Small sub-angular object or disturbance which appears to be a possible cluster of much smaller linear objects. Located proximal to a large bedform but looks different from other natural features. Nothing visible in the bathymetric dataset and not associated with a magnetic anomaly.	117810	-
700608	Rope/ Chain	412988	5785722	A2	45.3	0.8	0.1	-	Slightly curved lineation with a possible reflector with height on one end. Appears as a slight gouge or trench on one of the lines. Nothing visible in the MBES dataset and not associated with a magnetic anomaly. Possible object dragged on the seabed or else a length of rope or chain with an attached object.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700609	Dark reflector	419403	5788973	A2	3.6	3.3	0.4	-	Squared reflector with a complex, non-tapering shadow. Isolated within an area of flat seabed. Seen in the MBES dataset and have no associated magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700610	Magnetic	417161	5789786	A2	-	-	-	65	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700611	Magnetic	416689	5789766	A2	-	-	-	21	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700612	Magnetic	419214	5789498	A2	-	-	-	36	Small magnetic anomaly clearly visible on the magnetometer data and with a smaller secondary peak. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700613	Magnetic	416278	5789753	A2	-	-	-	56	Medium magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700614	Magnetic	420077	5789269	A2	-	-	-	29	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700615	Magnetic	419894	5789275	A2	-	-	-	29	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700616	Magnetic	417140	5789472	A2	-	-	-	34	Small sharp magnetic anomaly located within an area of low-amplitude magnetic background noise. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700617	Magnetic	417073	5789432	A2	-	-	-	83	Medium magnetic anomaly located within an area of low-amplitude magnetic background noise but clearly sharper than the broader natural signal. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700618	Magnetic	420198	5789107	A2	1.7	1.7	0.1	11	Small sharp magnetic anomaly clearly visible on the magnetometer data. No associated SSS but possibly associated with a small mound seen on the MBES dataset. As such, this may represent a small item of ferrous debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700619	Magnetic	417786	5789281	A2	-	-	-	131	Large magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700620	Magnetic	418266	5789193	A2	-	-	-	129	Large magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700621	Magnetic	419895	5789082	A2	-	-	-	35	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700622	Debris	420194	5788847	A2	2.1	1.8	0.1	193	Faint, elongate dark reflector with a slight shadow indicating it is low laying within scour and located within an area of flat seabed. Feature appears to correspond with a large magnetic anomaly indicating ferrous material, the magnetic variance appears to cover a wide area indicating potentially further buried items of debris (up to approximately 30 m south-west of position).	117810	-
700623	Magnetic	417577	5788998	A2	-	-	-	29	Small magnetic anomaly located within an area of low-amplitude magnetic background noise but clearly sharper than the broader natural signal. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700624	Magnetic	415128	5789061	A2	-	-	-	60	Medium magnetic anomaly located within an area of low-amplitude magnetic background noise but clearly sharper than the broader natural signal. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700625	Magnetic	416621	5788882	A2	1.7	1.5	0.1	56	Medium magnetic anomaly located within an area of low-amplitude magnetic background noise but clearly sharper than the broader natural signal. Associated with a small mound visible on the MBES dataset located amongst some minor bedforms. May be a partially buried item of ferrous debris.	117810	-
700626	Magnetic	417667	5788887	A2	-	-	-	35	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
77911	Magnetic	427255	5780812	A2	-	-	-	15	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78052	Magnetic	427306	5780489	A2	-	-	-	5	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
73170	Magnetic	427116	5780215	A2	-	-	-	19	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700627	Magnetic	426971	5780380	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700628	Debris	426974	5781550	A2	2.6	1.6	0.1	24	Curvilinear dark reflector identified in the SSS data in an area of ripples seabed. Feature corresponds with a small magnetic anomaly, indicating the presence of ferrous material	117810	-
700629	Magnetic	426946	5781206	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
77909	Magnetic	426930	5780474	A2	-	-	-	24	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not definitively identified in the most recent magnetometer data; however, the feature is located approximately 40 m NE of magnetic anomaly 42646 which may be related.	74547	-
700630	Magnetic	426912	5780439	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression. The feature is located approximately 40 m SW of magnetic anomaly 77909 which may be related however, as this is not certain, the features have been kept separate.	117810	-
700631	Dark reflector	426311	5780003	A2	1.2	0.2	0.2	-	Dark straight, elongated dark reflector with a broad, distinct shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700632	Magnetic	426236	5780178	A2	-	-	-	32	Sharp magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700633	Debris	426048	5780653	A2	3.5	0.8	0.5	47	Curvilinear dark reflector with a broad, distinct shadow identified on the SSS data. Feature corresponds with a small magnetic anomaly, indicating the presence of ferrous material.	117810	-
700634	Magnetic	426080	5780584	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
77908	Magnetic	425354	5780277	A2	-	-	-	8	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700635	Magnetic	425434	5780293	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700636	Dark reflector	425025	5781924	A2	1.8	0.6	0.2	-	Rounded dark reflector with a relatively broad shadow. Feature identified amongst the bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700637	Dark reflector	425110	5781265	A2	2.5	1.5	0.1	-	Angular, poorly defined dark reflector with height. Close to another similar feature (700638), may be associated. Feature located amongst rippled bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700638	Dark reflector	425123	5781239	A2	2.4	0.8	0.1	-	Elongated dark reflector with a distinct, angular shadow. Close to another similar feature (700637), may be associated. Feature located amongst rippled bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700639	Debris	425226	5781307	A2	8.2	0.4	0.3	-	Linear dark reflector with a bright, distinct shadow. Feature is possibly partially buried or distorting the bedforms. Possible linear item of non-ferrous debris.	117810	-
700640	Mound	424725	5780920	A2	13.5	7.3	0.5	-	Poorly defined dark reflector with a distinct shadow. Possible large object or mound. A linear dark reflector is identified just to the north of the feature; however, this appears to be natural. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700641	Rope/Chain	424505	5780860	A2	11.6	0.1	0.0	-	Curved dark linear reflector with very slight height. Second linear feature (700642) nearby which may be associated. Feature has no associated magnetic anomaly indicating a possible rope.	117810	-
700642	Rope/Chain	424507	5780892	A2	22.9	0.6	0.0	-	Curved dark linear reflector with very slight height. Second linear feature (700641) nearby which may be associated. Feature has no associated magnetic anomaly indicating a possible rope.	117810	-
700643	Dark reflector	424185	5780995	A2	2.1	0.8	0.0	-	Rectangular dark reflector, or possibly two objects close together, with very slight height. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700644	Magnetic	424269	5781558	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700645	Dark reflector	424492	5781946	A2	2.8	0.8	0.0	-	Elongate dark reflector with no discernible height identified perpendicular to the bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700646	Dark reflector	424294	5782141	A2	1.1	0.5	0.1	-	Elongate dark reflector with slight tapering height identified perpendicular to the bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700647	Dark reflector	424297	5782153	A2	1.4	0.5	-	-	Elongate dark reflector with no discernible height identified perpendicular to the bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700648	Rope/Chain	424273	5781908	A2	14.6	0.8	0.0	-	Dark linear reflector with very slight height seen crossing the bedforms. Feature has no corresponding magnetic anomaly indicating a possible length of rope.	117810	-
700649	Rope/Chain	424069	5782009	A2	11.8	0.3	0.0	-	Slightly curvilinear dark reflector with slight height, identified within an area of rippled seabed. Feature appears to be partially broken up, possibly indicating partial burial. The feature has no associated magnetic anomaly, possibly indicating it is more likely to be a length of rope.	117810	-
700650	Dark reflector	423920	5781756	A2	2.6	0.7	0.6	-	Small, defined rounded dark reflector with a broad, distinct shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700651	Rope/ Chain	423494	5781596	A2	20.3	0.8	0.0	-	A wavy dark reflector with very slight height identified in an area of bedforms. Feature appears to be partially disrupted, possibly indicating partial burial.	117810	-
700652	Magnetic	423311	5781820	A2	-	-	-	44	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700653	Magnetic	423411	5781732	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700654	Magnetic	423401	5781646	A2	-	-	-	135	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700655	Dark reflector	423324	5782182	A2	3	1.1	0.1	-	Irregularly shaped dark reflector with a straight edge and a slight shadow identified within an area of rippled bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700656	Magnetic	422581	5783144	A2	-	-	-	251	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700657	Magnetic	422666	5783316	A2	-	-	-	87	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700658	Dark reflector	422818	5783469	A2	3.6	1	0.2	-	Elongate dark reflector with a broad, distinct shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700659	Magnetic	423197	5783332	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700660	Dark reflector	422261	5783470	A2	1.5	0.8	0.3	-	Distinct, rounded dark reflector with a bright, broad shadow. Feature has some slight associated scour. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700661	Magnetic	422222	5783600	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700662	Magnetic	422326	5783631	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700663	Dark reflector	423021	5784106	A2	2	1.1	0.4	-	Slightly angular, irregularly shaped dark reflector with a bright shadow. Some possible disturbance to surrounding bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700664	Magnetic	422467	5783996	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700665	Magnetic	422424	5784030	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700666	Seabed disturbance	422023	5784189	A2	8.2	1.8	0.0	-	Irregular seabed disturbance comprised slightly linear bright reflectors. No clearly associated magnetic anomaly. Possibly natural however looks slightly anomalous.	117810	-
700667	Debris field	422288	5784349	A2	19.8	10.2	0.2	-	Collection of dark reflectors, with heights of up to 2.6 x 0.9 x 0.2 m, including some linear features. Possibly natural however may be a collection of non-ferrous items of debris.	117810	-
700668	Dark reflector	421959	5784709	A2	2.2	0.3	0.0	-	Elongated dark reflector with a slight shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700669	Dark reflector	422284	5784839	A2	3	2.2	0.8	-	Relatively broad, slightly angular dark reflector with a distinct but tapered shadow. Feature appears to have some slight associated scour. Identified on MBES data as a small mound. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700670	Magnetic	422485	5784732	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700671	Magnetic	422496	5784823	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700672	Magnetic	422271	5785366	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700673	Magnetic	422385	5785300	A2	-	-	-	23	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression. Appears potentially part of a linear series of three similar anomalies (700674 , 700675).	117810	-
700674	Magnetic	422428	5785294	A2	-	-	-	31	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression. Appears potentially part of a linear series of three similar anomalies (700673 , 700675).	117810	-
700675	Magnetic	422476	5785297	A2	-	-	-	48	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression. Appears potentially part of a linear series of three similar anomalies (700673 , 700674).	117810	-
700676	Dark reflector	421975	5784978	A2	3.1	0.7	0.4	-	Distinct, straight, elongated dark reflector with a broad, bright shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700677	Dark reflector	421898	5784995	A2	2.2	0.6	0.3	-	Small distinct dark reflector with a bright, relatively broad shadow. Feature has some associated scour. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700678	Magnetic	421551	5785143	A2	-	-	-	77	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700679	Magnetic	421839	5785454	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700680	Magnetic	421203	5785560	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700681	Magnetic	421162	5785652	A2	-	-	-	22	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700682	Debris	421069	5786212	A2	1.7	0.8	0.3	56	Slightly angular dark reflector with a relatively broad shadow. Feature corresponds with a medium magnetic anomaly, indicating the presence of ferrous material.	117810	-
700683	Magnetic	421215	5786318	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700684	Dark reflector	421316	5786878	A2	2.6	2.2	0.3	-	An irregular, poorly defined dark reflector with some height. Possibly partially buried. Identified as small mounds within a slight depression, measuring 12 x 8.8 x -0.4 m on the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700685	Magnetic	421015	5787070	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700686	Magnetic	420965	5787045	A2	-	-	-	24	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700687	Magnetic	420927	5786994	A2	-	-	-	30	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700688	Magnetic	420898	5787050	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700689	Magnetic	421060	5787397	A2	-	-	-	10	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700690	Magnetic	421372	5787441	A2	-	-	-	30	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700691	Seabed disturbance	420928	5787677	A2	7.7	5.1	0.1	-	Small, slightly oval area of disturbed seabed, possibly with some bright and dark reflectors with height.	117810	-
700692	Debris	420610	5787645	A2	2.9	0.6	0.1	-	Slightly curved linear dark reflector with a bright, distinct shadow. Shadow suggest feature may be larger at one end. Possible non-ferrous linear item of debris.	117810	-
700693	Debris	420519	5787960	A2	9.2	0.3	0.0	-	Slightly curved linear dark reflector with slight height. Feature appears to be discontinuous, possibly indicating partial burial. Possible non-ferrous linear item of debris.	117810	-
700694	Dark reflector	420055	5787916	A2	1.5	0.6	0.7	-	Small, slightly rounded dark reflector with a broad, distinct shadow. Relatively isolated on the seabed. Identified as a small mound within a slightly depression on the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700695	Magnetic	419982	5788313	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700696	Magnetic	419641	5788608	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700697	Rope/Chain	420437	5789024	A2	22.5	0.7	0.0	-	Slightly wavy linear dark reflector with no discernible height. Feature has no corresponding magnetic anomaly indicating it is comprised non-ferrous material such as a length of rope.	117810	-
700698	Magnetic	420170	5789481	A2	-	-	-	48	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700699	Mound	420261	5788917	A2	18	6	0.5	-	A peaked with sediment build up and slightly curved linear mound identified in the MBES data, appears isolated situated with in a natural depression or slight scour. No defined structure is seen in the SSS data, nor any magnetic variation seen at the location. Potentially an isolated natural bedform however, due to the anomalous identity, the feature has been retained as a precaution.	117810	-
700700	Magnetic	435488	5783403	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700701	Dark reflector	434853	5783273	A2	5.2	1.7	0.8	-	Large, slightly rounded dark reflector, possibly in two parts. Feature has a slightly variable shadow with a sloping edge. Feature corresponds with a small mound with some slight associated seabed disturbance in the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
78055	Magnetic	435274	5782882	A2	-	-	-	7	Negative monopolar magnetic anomaly identified in the 2014 report, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
77919	Debris	435466	5782581	A2	3.5	0.5	0.0	42	Thin, straight, elongated dark reflector with a bright shadow identified on the SSS data. This corresponds with a small magnetic anomaly identified during the 2014 data assessment, indicating the presence of ferrous material. The feature was not identified on the most recent magnetic data, which may reflect differences in line positioning and spacing. Possible linear item of ferrous debris.	74547, 117810	-
78056	Magnetic	434812	5782340	A2	-	-	-	6	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700702	Dark reflector	434501	5782632	A2	5.9	1.8	0.8	-	A large, poorly defined dark reflector with a broad, distinct shadow. Identified within an area of natural bedforms. Feature corresponds with a small mound with associated seabed disturbance identified in the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700703	Magnetic	434511	5782793	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
78048	Magnetic	434572	5782829	A2	-	-	-	10	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, though a small amount of magnetic variance was seen, which may reflect differences in line positioning and spacing.	74547	-
78050	Magnetic	434352	5782897	A2	-	-	-	8	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78170	Seabed disturbance	434173	5782569	A2	10.9	7.9	0.3	-	An area of disturbed seabed comprised poorly defined bright and dark reflectors identified on the SSS data, corresponding with a slight seabed disturbance identified on the MBES data. This feature was originally identified in the 2014 data assessment as debris, measuring 7.7 x 1.5 x 0.3 m, and reported as being diffuse with harder looking sediment in the central area with some bright reflectors at the perimeter. The feature classification and dimensions have been updated based on the latest data assessment.	117810, 74547	-
700704	Magnetic	433881	5782353	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
77918	Magnetic	433809	5782213	A2	-	-	-	31	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78169	Dark Reflector	433516	5782171	A2	3.4	0.5	0.2	-	Isolated and indistinct anomaly identified during the 2014 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78155	Mound	433605	5782194	A2	26.0	6.5	0.5	-	An elongated mound, orientated north-west to south-east and with a slightly spherical end to the SSE was identified during the 2014 data assessment. This correspond with a slight mound, measuring 15 x 5.8 x 0.2 m, identified in the current MBES data assessment. The dimensions identified during the 2014 assessment have been retained here as it may be that the feature has been partially buried by mobile sediments, obscuring the features dimensions. May be a natural bedform however has the possibility of being a buried non-ferrous feature of archaeological interest and, as such, has been retained as potential archaeology.	74547, 117810	-
78168	Dark Reflector	433636	5781931	A2	2.0	1.7	0.3	-	Diffuse anomaly isolated amongst sand waves. with some disturbance to the sediment formation with scour and clear shadow, identified during the 2014 data assessment. However, feature was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
77915	Magnetic	433738	5781870	A2	-	-	-	51	Medium positive monopole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700705	Dark reflector	432441	5782124	A2	2.1	0.8	0.7	-	Small, distinct dark reflector with a bright, relatively broad shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
77916	Magnetic	432022	5782058	A2	-	-	-	25	Small positive monopole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78167	Seabed disturbance	432249	5781790	A2	30.4	6.5	1.1	-	Distinct oval area of disturbance identified during the 2014 data assessment, however not identified on the current data. The feature is reported as having bright and dark reflectors, the largest (2mx2.6mx1m) of which is a diffuse anomaly with distinct irregular shadow showing height variation. The feature has a central oval bright reflector & adjacent irregular bright reflector. It is possible that the feature was not identified on the current data due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78054	Magnetic	432429	5781340	A2	-	-	-	6	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
77917	Magnetic	431098	5781767	A2	-	-	-	10	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700706	Magnetic	430991	5781646	A2	-	-	-	58	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
73162	Dark reflector	430928	5781032	A2	10.5	2.8	0.5	-	Indistinct feature with height identified during the 2012 data assessment, however was not identified during the 2014 and latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541, 74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78166	Bright Reflector	430988	5781107	A2	6.4	6.4	0.0	-	Isolated and irregular bright reflector identified amongst the sand waves during the 2014 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
73163	Rope/ Chain	430763	5781155	A2	303	0.7	0.1	67	A series of magnetic anomalies running approximately 303 m north-west to south-east. At the feature's south-eastern end, a slightly wavy linear dark reflector (centred on 430877 E and 5781113 N), measuring 30.5 x 0.7 x 0.1 m, is seen on the SSS data orientated north-west to south-east with a corresponding magnetic anomaly of 25 nT, indicating a ferrous feature such as cable or chain. At the feature's north-western end, the feature corresponded with a small magnetic anomaly, measuring 11 nT, identified during the 2012 data assessment. Due to the length of the feature, it is possible that this represents a length of uncharted cable. However, this isn't certain and as such, the feature has been retained as potential archaeology.	74541, 74547, 117810	-
77932	Magnetic	430660	5781310	A2	-	-	-	16	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700707	Magnetic	430485	5781282	A2	-	-	-	61	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression. Feature is identified approximately 143 north-west of linear magnetic feature 73163 . Feature is in the same orientation and may be related however, as this isn't clear, the features have been kept as two separate anomalies.	117810	-
700708	Dark reflector	429988	5781585	A2	2.5	0.7	0.3	-	Rounded reflector with a slightly straight edge and a broad shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
73161	Dark reflector	430638	5780807	A2	3.8	0.7	1.7	-	Indistinct linear feature with faint shadow identified during 2012 data assessment, however was not identified during the 2014 and latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541, 74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
73164	Magnetic	430411	5780550	A2	-	-	-	15	Medium magnetic anomaly without an associated SSS contact identified during the 2012 data assessment. Feature was not identified in the 2014 data assessment or the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74541, 74547	-
700709	Debris	429733	5780585	A2	2.7	0.8	0.0	-	Short elongated dark reflector with a slightly irregular shadow and some slight disturbance to surrounding bedforms. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
73167	Magnetic	429696	5780475	A2	-	-	-	8	Medium magnetic anomaly without an associated SSS contact identified during the 2012 data assessment. Feature was not identified in the 2014 data assessment or the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74541, 74547	-
77912	Magnetic	428974	5781392	A2	-	-	-	23	Small positive monopole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78043	Magnetic	428881	5781017	A2	-	-	-	7	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700710	Magnetic	428127	5781215	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700711	Magnetic	428714	5780658	A2	-	-	-	109	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700712	Dark reflector	429084	5780039	A2	3.1	1.1	0.7	-	Indistinct dark reflector with a complex shadow or possible depression. In the MBES data, the feature appears to be causing disturbance to the surrounding bedforms. Feature may be partially buried. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
73160	Bright reflector	428723	5779981	A2	4.0	1.4	0.0	-	An irregularly shaped bright reflector was identified during 2012 data assessment, however was not identified during the 2014 and latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541, 74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78014	Magnetic	428448	5780107	A2	-	-	-	13	Small positive monopole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
73198	Magnetic	428169	5779538	A2	-	-	-	14	Positive monopole on one line only. Near an area of clear natural noise and part of a linear feature probably derived from a bedform, so possibly natural. Corresponds with a small anomaly identified in 2012 assessment.	74541, 74547, 117810	-
73165	Magnetic	428215	5779651	A2	-	-	-	30	Asymmetric dipolar anomaly identified originally during the 2012 data assessment, and then updated during the 2014 data assessment. Feature was not identified in the most recent magnetometer data, though some magnetic variance was present, which may reflect differences in line positioning and spacing.	74541, 74547	-
78013	Magnetic	428066	5779763	A2	-	-	-	28	Small negative monopole measuring 17 nT identified during this phase of data assessment. Feature corresponds with a negative monopole identified in the 2014 data assessment. Differences in position and magnetic amplitude may reflect differences in line positioning and spacing.	74547, 117810	-
73166	Magnetic	428224	5779847	A2	-	-	-	62	A small dipole identified on the magnetometer data during this phase of the geophysical assessment. Feature corresponds with a medium magnetic anomaly identified in the 2012 and 2014 data assessments. Differences in position and magnetic amplitude may reflect differences in line positioning and spacing.	74541, 74547, 117810	-
73169	Seabed disturbance	428057	5780059	A2	21.7	9.1	2.7	-	Sub-rectangular shaped area of anomalous seabed was identified during 2012 data assessment, however was not identified during the 2014 and latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541, 74547	-
78015	Magnetic	427705	5779817	A2	-	-	-	7	Small negative monopole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78045	Magnetic	427726	5780074	A2	-	-	-	8	Small dipole identified during the 2014 data assessment, with Nothing visible on the SSS or MBES data. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700713	Magnetic	427491	5781381	A2	-	-	-	13	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700714	Magnetic	427681	5781458	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700715	Dark reflector	424100	5796756	A2	1.5	0.8	0.3	-	Rounded dark reflector with a relatively broad shadow with a rounded apex. Located amongst minor bedforms. Not visible in the MBES dataset and no associated magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700716	Magnetic	424157	5796537	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700717	Magnetic	424440	5796638	A2	-	-	-	23	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700718	Magnetic	424263	5796306	A2	1.6	1.4	0.1	16	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS contact but possibly associated with a small mound visible on the MBES dataset approximately 11 m to the north. As such, it may represent an item of small or partially buried ferrous debris.	117810	-
700719	Magnetic	423957	5796128	A2	-	-	-	17	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700720	Magnetic	423876	5796036	A2	-	-	-	22	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700721	Magnetic	424094	5796045	A2	-	-	-	16	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700722	Magnetic	423286	5795996	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700723	Debris field	423273	5795809	A2	18.1	8.0	0.2	13	Cluster of small objects including a linear dark reflector and rounded reflector with a shadow. Located over a flat seabed and clearly distinguished. Largest item is approximately 2.3 m x 1.7 m. Also visible on the MBES dataset. Associated with a small but complex magnetic signature which suggests multiple items of ferrous debris.	117810	-
700724	Seabed disturbance	423303	5795812	A2	17.4	3.2	0.0	-	Area of slightly darker seabed with possible linear structure. Not visible on the MBES or magnetometer datasets. Within close proximity to debris field 700723 and may be associated.	117810	-
700725	Magnetic	423909	5795689	A2	1.8	1.6	0.1	52	A medium sized magnetic anomaly identified on the magnetometer data with no associated SSS item. The magnetic anomaly is located approximately 15 m SSW of a small mound on the MBES data. It is possible that the two features are associated however, as this cannot be guaranteed, the features have not been grouped together. Possibly ferrous debris which is either partially buried or has no surface expression.	117810	-
700726	Bright reflector	423801	5795448	A2	2.0	1.7	0.1	-	Elongated bright reflector with irregular edges. Isolated in an area of flat seabed. No visible shadow but appears on the MBES dataset as a small mound. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700727	Magnetic	424260	5795335	A2	-	-	-	34	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700728	Debris	423857	5795102	A2	6.2	1.3	0.2	429	Distinct linear item, seen with the item displaying right angles, may indicate the edge of a partially buried item of debris. Feature appears linked to a large magnetic anomaly, indicating ferrous debris. Located in an area of bedforms, with mobile sediments, indicating high potential for burial. Full extent of item not known.	117810	-
700729	Magnetic	422517	5795499	A2	-	-	-	19	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Magnetic signature suggests it may be two separate ferrous features however, as this cannot be confirmed, they have been retained as one. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700730	Dark reflector	422174	5795334	A2	2.5	1.0	0.8	-	Sub-angular reflector with a clear pointed shadow. Located in an area of flat seabed with some sedimentary features nearby. Clearly visible in the MBES dataset which shows an area of scour created by the object. No associated magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700731	Magnetic	423693	5794427	A2	-	-	-	27	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700732	Magnetic	423587	5794149	A2	-	-	-	59	Medium magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700733	Magnetic	422499	5794441	A2	-	-	-	20	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700734	Magnetic	422465	5794485	A2	-	-	-	15	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700735	Magnetic	422083	5794572	A2	-	-	-	28	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700736	Debris	422034	5794481	A2	3.0	1.2	0.3	34	Small squared reflector with a broad, squared shadow. Considerable sediment disturbance on the near side. Isolated in an area of flat seabed. Associated with a small magnetic anomaly and seen in the MBES dataset. Possibly an item of ferrous debris.	117810	-
700737	Magnetic	422101	5794343	A2	-	-	-	15	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700738	Dark reflector	422264	5794172	A2	3.1	1.6	1.2	-	Small reflector with a large, pointed tapered shadow. The reflector itself is poorly defined and isolated in an area of flat seabed. Identified as a small mound in the MBES dataset but not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700739	Dark reflector	422636	5794232	A2	2.9	1.4	0.8	-	Elongate angular reflector with a clear sharp tapered shadow. Isolated in an area of flat seabed. Not visible in the MBES or magnetometer datasets. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700740	Magnetic	422333	5794022	A2	-	-	-	30	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700741	Dark reflector	421213	5794462	A2	3.3	0.8	0.1	-	Small but complex dark reflector with a jagged shadow and some internal structure. Located within an area of flat seabed and clearly defined within this. Not visible in the MBES or magnetometer datasets. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700742	Magnetic	421774	5793711	A2	-	-	-	25	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700743	Magnetic	420135	5794225	A2	-	-	-	24	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700744	Magnetic	420977	5793839	A2	-	-	-	11	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700745	Dark reflector	420838	5793531	A2	4.8	4.0	0.5	-	Sub-angular and irregular reflector highlighted with a broad, jagged shadow. Isolated in an area of flat seabed. Seen in the MBES dataset as an elongate mound. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700746	Dark reflector	421507	5793322	A2	1.8	1.1	0.5	-	Poorly-defined dark reflector with a jagged shadow. One of a pair of similar reflectors located within an area of flat seabed. Seen in the MBES dataset as a small round mound. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700747	Dark reflector	421482	5793314	A2	3.1	1.0	0.4	-	Poorly-defined dark reflector with a jagged shadow. One of a pair of similar reflectors located within an area of flat seabed. Seen in the MBES dataset as a small round mound. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700748	Magnetic	421312	5793203	A2	-	-	-	24	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700749	Magnetic	420931	5792962	A2	-	-	-	16	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700750	Magnetic	419816	5793587	A2	-	-	-	30	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700751	Magnetic	420089	5793289	A2	-	-	-	44	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700752	Magnetic	420305	5793466	A2	-	-	-	51	Medium magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700753	Dark reflector	420515	5792964	A2	4.7	1.9	0.6	-	Indistinct reflector but with a clear shadow with a jagged edge, identified within a small area of disturbed seabed. Seen in the MBES dataset as a small round mound. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700754	Dark reflector	419968	5793143	A2	7.1	3.0	0.5	-	Very elongate dark reflector with a short shadow. Isolated in an area of flat seabed. Seen in the MBES dataset as a small mound within a scoured zone. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700755	Debris	419165	5793716	A2	1.5	0.8	0.0	-	Small item of debris characterised by small straight sections of linear dark reflectors. Located amongst minor bedforms but with a clear dark outline. Not seen on the MBES dataset and not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700756	Magnetic	419273	5793562	A2	-	-	-	31	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS or MBES contact. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700757	Magnetic	419931	5792559	A2	-	-	-	143	Large magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700758	Magnetic	420120	5792554	A2	-	-	-	21	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700759	Magnetic	419727	5792515	A2	-	-	-	11	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700760	Magnetic	419435	5793149	A2	-	-	-	11	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700761	Dark reflector	419121	5793229	A2	2.3	1.8	0.6	-	Clear round reflector within an area of minor bedforms. Straight pointed shadow. Much darker and shadow longer than the sinuous bedforms in which it is situated. Seen in the MBES dataset as a small round mound. Not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700762	Dark reflector	419090	5793101	A2	1.5	0.6	0.3	-	Dark round reflector with a high reflectivity value and a straight square shadow. Located amongst minor bedforms and within some minor seabed disturbances. Not seen on the MBES dataset and not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700763	Magnetic	419372	5792132	A2	-	-	-	37	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700764	Dark reflector	418979	5792193	A2	1.9	0.6	0.1	-	Very indistinct dark reflector with a small flat shadow. Isolated within an area of flat seabed. Not seen on the MBES dataset and not associated with a magnetic anomaly. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700765	Magnetic	418414	5791888	A2	-	-	-	32	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700766	Magnetic	418485	5792214	A2	-	-	-	48	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700767	Magnetic	418788	5792560	A2	-	-	-	17	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700768	Magnetic	418132	5792651	A2	-	-	-	30	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700769	Debris	418233	5792703	A2	3.6	2.5	0.6	114	Large, sub-angular reflector with a clear pointed shadow. Slightly obscured or partially buried by surrounding bedforms. Some lineation can be seen within the internal structure. Associated with a large magnetic anomaly and seen in the MBES dataset. Possibly an item of ferrous debris.	117810	-
700770	Magnetic	417993	5791419	A2	-	-	-	29	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700771	Magnetic	417072	5792107	A2	-	-	-	42	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700772	Magnetic	417049	5792093	A2	-	-	-	19	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700773	Magnetic	416810	5791851	A2	-	-	-	12	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700774	Magnetic	417271	5791188	A2	-	-	-	142	Large magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700775	Magnetic	416393	5792131	A2	-	-	-	23	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700776	Magnetic	415841	5791198	A2	-	-	-	11	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700777	Magnetic	416084	5791329	A2	-	-	-	16	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700778	Magnetic	416240	5791414	A2	-	-	-	15	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700779	Magnetic	416470	5791489	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700780	Magnetic	415844	5790911	A2	-	-	-	21	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700781	Magnetic	415824	5790674	A2	-	-	-	22	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700782	Magnetic	416440	5791003	A2	1.4	1.3	0.1	44	Small magnetic anomaly clearly visible on the magnetometer data. No associated SSS contact but may be associated with a small mound on the MBES dataset. As such, this may represent a small or partially buried item of ferrous debris.	117810	-
700783	Magnetic	416800	5790751	A2	-	-	-	25	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700784	Magnetic	417040	5790883	A2	-	-	-	14	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700785	Magnetic	416448	5790500	A2	-	-	-	18	Small magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700786	Wreck	416532	5790383	A1	41.1	8.3	2.3	-	Defined outline of a wreck (UKHO 10338), recorded as being the <i>Mascotte</i> , a steamship built in 1885 by Ramage and Ferguson (Leith). Sunk on the 3rd of September 1916 by a mine laid by U-6 with the loss of one man. On the SSS data, the wreck appears to be relatively well intact and probably upright, located within an area of rippled bedforms. Few internal details are visible are seen on the SSS data, however the wreckage is seen to have significant height. The feature is likely associated with nearby magnetic anomaly 700787 (112 nT), although the magnetometer coverage does not extend to the wreck itself, so the features have been retained as two separate anomalies. The wreck is located outside the study area, however the wreck's associated AEZ falls within the study area and therefore has been retained.	117810	UKHO 10338
700787	Magnetic	416470	5790410	A2	-	-	-	112	Large magnetic anomaly clearly visible on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly associated with the nearby wreck 700786 (UKHO 10338); however, as this cannot be confirmed and may represent a separate item of buried ferrous debris, it has been retained as a separate anomaly.	117810	-
700788	Dark reflector	415438	5791222	A2	3.1	0.7	0.2	-	Slightly rectangular dark reflector with a distinct, sharp shadow. Located within an area of flat seabed but some minor texture is present nearby. Not seen on MBES or magnetometer datasets. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700789	Dark reflector	414786	5791141	A2	1.6	0.5	0.3	-	Linear reflector with a tapered shadow. Clearly defined in an area of flat seabed. Does not look natural. Seen on the MBES dataset as a small mound. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
70012	Debris	428980	5798031	A2	3.4	0.2	0.0	-	Short curvilinear anomaly with clearly defined edges identified in the data review for the 2011 report. Located in an area of bedforms. The item was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation	74540	-
700790	Debris	428836	5796595	A2	2.7	1.1	0.5	-	Hard, defined, slightly elongate item with broad height and scour extending and distorting bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural, however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700791	Dark reflector	428641	5796016	A2	1.7	1	0.3	-	Rounded dark reflector with narrow, slightly irregular shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700792	Magnetic	428001	5797885	A2	-	-	-	7	Small magnetic anomaly identified on the magnetometer data acquired for the 2011 assessment. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700793	Magnetic	427957	5799035	A2	-	-	-	7	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700794	Debris field	427349	5797925	A2	22.2	7.8	0.3	-	A collection of dark reflectors of different sizes, some of which appear to be quite straight. Feature appears to have some associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly a collection of debris items.	117810	-
700795	Dark reflector	427474	5796862	A2	2.1	0.5	0.4	-	A short, straight, elongated dark reflector with a broad shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700796	Dark reflector	427461	5795982	A2	3.6	1.3	0.3	-	A distinct, slightly rounded dark reflector with a bright, slightly irregular shadow. Identified in an area of rippled bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly an item of debris.	117810	-
700797	Dark reflector	426802	5796970	A2	1.8	0.4	0.4	-	Small dark reflector with a bright but narrow shadow. Feature appears to have an associated high reflectivity seabed disturbance, possibly associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly an item of debris.	117810	-
700798	Magnetic	426046	5797473	A2	-	-	-	6	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700799	Magnetic	425058	5797352	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS data or MBES. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700800	Debris	424831	5797168	A2	15.3	0.4	0.1	-	Slightly curved narrow linear dark reflector with a distinct shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is composed of ferrous material. Possibly a linear item of debris.	117810	-
700801	Dark reflector	424851	5795921	A2	2.6	0.4	0.2	-	Slightly curved, elongated dark reflector with slight height. Identified in an area of textured seabed. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly an item of debris.	117810	-
700802	Seabed disturbance	425543	5796224	A2	17.5	7.2	0	-	Area of disturbed seabed comprised several slightly angular bright reflectors. Possibly natural however appears to be quite distinct and anomalous and therefore has been retained as a potential archaeology.	117810	-
700803	Bright reflector	425392	5796055	A2	2	1.4	0	-	Elongated bright reflector identified amongst bedforms. Possibly natural however appears to be anomalous compared to surrounding seabed and, as such, has been retained as potential archaeology.	117810	-
700804	Debris field	426015	5795401	A2	21	10.4	0.7	-	An area of seabed disturbance containing one particularly large object measuring 8.6 x 1.8 x 0.7 m. Possible linear item of debris, however this is difficult to discern. On the MBES data, the feature is identified as a mound identified within a depression with a depth of - 0.6 m. Feature has associated high reflectivity and scour. Possible debris field.	117810	-
700805	Dark reflector	426603	5794934	A2	0.9	0.3	0.2	-	Slightly elongated dark reflector with a broad, bright shadow. Possible associated linear feature, however this may just be sediment built up on, as such, has not been included in the measurements. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700806	Debris	426091	5794680	A2	5.2	1.8	0.9	-	A large, poorly defined dark reflector with a broad, bright shadow indicating possibly of anthropogenic origin. Feature identified within a slight seabed disturbance measuring 6.7 x 4.5 m. On the MBES data, the feature is identified as a small mound identified within a slight depression. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700807	Dark reflector	425849	5794993	A2	2	0.3	0.2	-	A small but angular dark reflector with a short, bright shadow. Feature has some slight associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700808	Dark reflector	424734	5794381	A2	4.6	2	0.4	-	Poorly defined dark reflector with a bright shadow and some associated scour. Identified as a small elongated mound on the MBES data. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700809	Dark reflector	424735	5794407	A2	3.3	0.8	0.1	-	Dark elongate reflector with a very slight shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700810	Dark reflector	424336	5794858	A2	2	1.3	0.4	-	Elongated, slightly angular dark reflector with a bright, slightly irregular shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700811	Debris	424481	5794961	A2	8.9	1.5	0.3	-	A straight, elongated dark reflector with a bright, distinct shadow. Feature is identified on the MBES data as several slightly linear mounds within a depression measuring 15.4 x 13.3 x -0.5 m. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Potentially a linear item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700812	Dark reflector	424494	5795206	A2	2.9	0.6	0.4	-	Poorly defined, slightly elongated dark reflector with broad, slightly irregular shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700813	Dark reflector	423905	5794147	A2	2.6	1.5	0.6	-	Poorly defined, slightly angular dark reflector with a relatively broad shadow and some associated scour. Identified as a small mound within a depression on the MBES data. Located approximately 18 m from another similar feature (700814). Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700814	Dark reflector	423899	5794129	A2	1.7	0.3	0.2	-	Poorly defined, slightly angular dark reflector with a relatively broad shadow and some associated scour. Located approximately 18 m from another similar feature (700813). Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700815	Rope/Chain	423684	5794211	A2	12.9	0.3	0	-	Short, slightly wavy bright reflector, or possibly a hard to discern dark reflector with a bright shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being a short length of rope/chain.	117810	-
700816	Dark reflector	424041	5794801	A2	2	0.3	0.2	-	A small, slightly angular dark reflector with a broad shadow. Feature is possibly partially buried by sediment; however, this is hard to discern. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700817	Seabed disturbance	424150	5795860	A2	17	3.6	0.5	-	A disturbed area of high reflectivity seabed with some disturbance to the natural bedforms. Feature corresponds with a poorly defined mound on the MBES data. No clear magnetic variation, indicating possibly a buried item of non or low ferrous debris.	117810	-
700818	Magnetic	427957	5799035	A2	-	-	-	7	Small magnetic anomaly identified on the magnetometer data acquired for the 2011 assessment. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700819	Dark reflector	428868	5798654	A2	5.7	0.5	0.1	-	Dark strong linear reflector, appears slightly buried amongst the bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural, however has the potential of being an item of debris.	117810	-
700820	Dark reflector	429249	5798703	A2	1.6	0.7	0.4	-	Rounded dark reflector with tapered height, second nearby. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700821	Dark reflector	429251	5798701	A2	1.6	0.4	0.2	-	Rounded dark reflector with rounded height and scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
70639	Debris field	429622	5797407	A1	46.6	6.1	0.4	-	Collection of items of various shapes and sizes, no apparent structure or pattern identifiable, but does not appear to be a natural collection of items looking at the surrounding area. Located amongst the bedforms indicating further debris may be buried. Items appear to be almost in a north-east to south-west orientation. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Debris appears to be associated with an unidentified wreck, UKHO 10674. The wreck was located in 1982. Dimension are stated in the UKHO data as 35.5 m x 5.6 m x 4.1 m. Lying approximately east to west across, and almost completely buried by, a north to south sand wave, just protruding either side. Not located during mine hunting in 1997. During the 2010 East Coast REC survey the wreck was recorded buried by an east to west sand wave, aligned north to south and without apparent structure or debris. This indicated the debris may be well scattered within the recent sediments.	117809, 74540	UKHO 10674
700822	Debris	429487	5797383	A1	1.1	0.9	0.5	-	Curved defined item with broad shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however located within 140 m of a debris field of an unknown wreck (70639, UKHO 10674), potentially an item of debris associated with debris field.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700823	Debris	429573	5797373	A1	3.1	0.8	0.3	-	Curvilinear items with broad height. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however located within 60 m of a debris field of an unknown wreck (70639 , UKHO 10674), potentially an item of debris associated with debris field.	117810	-
700824	Debris	429585	5797375	A1	1.2	0.7	0.3	-	Curvilinear dark reflector with broad height. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however located within 50 m of a debris field of an unknown wreck (70639 , UKHO 10674), potentially an item of debris associated with debris field.	117810	-
700825	Dark reflector	429690	5797212	A2	3.9	0.5	0.1	-	Dark elongate reflector with slight height. May be either an item buried in the bedforms or a seabed scar. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700826	Magnetic	429999	5796640	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression	117810	-
700827	Magnetic	430003	5798241	A2	-	-	-	9	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression	117810	-
700828	Dark reflector	430222	5796865	A2	2.5	0.7	0.6	-	Defined item with broad rounded shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
70641	Wreck	430250	5796405	A1	25.0	8.0	2.8	-	Defined structure with some linear dark reflectors, possibly timbers, possibly upside-down, with no apparent superstructure visible. Appears to either have a break or hole close to one end of the vessel. Not much of a debris field present, appears well contained. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Located amongst bedforms, partially buried. This item is part of a known wreck identified in the UKHO data (10350). The known wreck is the remains of the <i>St Patrick</i> , a British wooden motor fishing vessel measuring 21 m x 5.5 m with a draught of 2.4 m. The <i>St Patrick</i> was lost in 1976 following an explosion onboard. The condition of the wreck on the seabed is recorded by the UKHO as being intact and upright with no superstructure apparent, covering an area of approximately 35 m x 4.5 m x 6.5 m and lying with an orientation of 170/350°.	117810, 74540	UKHO 10350
700829	Debris	430247	5796406	A1	0.8	0.4	0.1	-	Small elongate dark reflector with slight height, close to the known wreck of the <i>St Patrick</i> (70641 , UKHO 10350). Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Likely debris associated with the wreck (70641).	117810	-
700830	Dark reflector	430472	5797680	A2	2.8	0.5	0.3	-	Elongate dark reflector with height, located amongst rough ground (potential reef) with a second item nearby. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700831	Dark reflector	430472	5797677	A2	5.1	0.6	0.5	-	Elongate dark reflector with height, located amongst rough ground (potential reef) with a second item nearby. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700832	Dark reflector	430513	5796277	A2	3.9	1.1	0.4	-	Defined elongate dark reflector with rounded height in a large scour. Close to some defined bedforms that appear unusual but likely natural. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700833	Debris	430676	5798705	A2	10.6	0.8	0.4	-	Defined linear item with broad height, located amongst bedforms. Appears more defined than bedforms and partially buried. Possible sediment build up one side or part of buried item. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700834	Magnetic	430959	5797272	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700835	Debris field	431208	5798167	A1	27.2	16.8	1.0	-	Collection of items, one large rectangular item (6.2 m x 1.9 m x 0.1 m) , a more angular item amongst a number of smaller items scattered around the area. Amongst bedforms and located close to a larger area of debris associated with a known wreck (70645 ; UKHO 10357) and therefore likely related. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the items are comprised ferrous material.	117810	-
700836	Debris	431225	5798178	A1	1.7	0.6	0.2	-	Elongate item with slight height, close to a number of items and a debris fields. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Amongst scour and located close to a larger area of debris associated with a known wreck (70645 ; UKHO 10357) and therefore likely related.	117810	-
700837	Debris	431228	5798179	A1	2.0	0.4	0.1	-	Item with slight height, close to a number of items and a debris fields. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Amongst scour and located close to a larger area of debris associated with a known wreck (70645 ; UKHO 10357) and therefore likely related.	117810	-
700838	Debris	431237	5798179	A1	2.6	0.4	0.1	-	Small dark reflector amongst bedforms. Potentially associated debris to nearby debris field. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Amongst scour and located close to a larger area of debris associated with a known wreck (70645 ; UKHO 10357) and therefore likely related.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700839	Debris	431245	5798189	A1	1.2	0.9	0.2	-	Faintly indistinct rectangular shaped item with hard corners, located close to debris field and known wreck. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Amongst scour and located close to a larger area of debris associated with a known wreck (70645; UKHO 10357) and therefore likely related.	117810	-
70645	Wreck	431268	5798215	A1	107.1	49.8	2.1	-	Slightly broken up structure of the known wreck, the <i>Groenlo</i> (UKHO 10357). Various internal features, structures and items visible in the data, such as two dark cylindrical items, likely to be the two boilers and a mound extending from the main structure with slight text that may link to coal spoil. It is located in a large area of scour surrounded by bedforms. Nearby items of debris seen to be scattered to the south-west. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the items are comprised ferrous material. The <i>Groenlo</i> was a Dutch steamship of 1984 gross ton. The <i>Groenlo</i> was built in 1926 by N. V. Boele's, Bolne and its machinery was made by N V Boele's schps and Machfb, Bolnes. It was equipped with two boilers, a triple expansion engine of 209 HP and a single shaft. At its time of loss, the <i>Groenlo</i> was carrying a cargo of coal when it was torpedoed by an E-boat whilst en route from Hartlepool for London. It was lost on the 24th November 1941. The remains of the wreck are stated in the UKHO to cover an area of 104.0 m x 8.9 m with a height of 9.1 m. The wreck lies with an orientation of 084/264°.	117810, 74540	UKHO 10357
700840	Dark reflector	431140	5796648	A2	5.8	1.6	0.4	-	Poorly defined dark reflector with broad height and trailing scour. Located amongst rough ground (potentially reef) and bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700841	Dark reflector	431204	5796742	A2	6.8	1.9	0.5	-	Poorly defined dark reflector with broad height and trailing scour. Located amongst rough ground (potentially reef) and bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700842	Dark reflector	431291	5796812	A2	1.2	0.4	0.2	-	Elongate dark reflector with broad height. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700843	Dark reflector	431482	5799069	A2	2.2	0.6	0.2	-	Rounded dark reflector with rounded shadow, appears isolated amongst the bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700844	Dark reflector	431695	5797608	A2	2.8	0.6	0.8	-	Elongate dark reflector with rounded tapered height. Scour seen affecting bedform formation around item. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700845	Dark reflector	431716	5796908	A2	3.7	2.3	0.7	-	Indistinct dark reflector with height, located close to rough ground (potential reef). Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700846	Dark reflector	432380	5798601	A2	3.6	2.0	0.6	-	Curvilinear dark reflector with defined edge and broad width and shadow. Located on the edge of an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700847	Dark reflector	432492	5798369	A2	5.3	0.4	0.0	-	Appears like a depression amongst the bedforms, may be a seabed mark or impression from buried items. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700848	Debris	432590	5798103	A2	4.0	3.0	0.4	-	Circular item, indicating anthropogenic origin, located amongst scour and bedforms. Appears to be hollow in the centre. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700849	Dark reflector	432856	5798266	A2	1.0	0.7	0.5	-	Small dark reflector with a narrow straight shadow, perhaps a linear object protruding from the sediment. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700850	Dark reflector	432996	5796267	A2	2.8	0.3	0.1	-	Elongate dark reflector with slight broad height. Appears anomalous as rough ground (potential reef) appears to have scour that is a halo around the item and not cover item. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700851	Dark reflector	433828	5798398	A2	2.2	0.7	0.3	-	Rounded dark reflector with broad height. Appears anomalous. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700852	Dark reflector	433900	5797837	A2	2.9	1.0	0.1	-	Defined dark reflector located on the edge of the bedforms. Close to likely boulders. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700853	Seabed disturbance	434065	5796353	A2	20.4	16.9	-	-	Angular disturbance seen amongst some natural bedforms, may be part of natural features however due to angularity present retained as a feature of potential interest. Not seen in the magnetometer data, indicating non-ferrous.	117810	-
700854	Debris	434246	5798987	A2	5.5	0.5	0.4	-	Elongate item defined in the sidescan data with broad height. Possibly partially buried item, isolated amongst flat seabed. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700855	Debris	434412	5798340	A2	2.2	1.2	0.3	-	Indistinct faint reflector with broad shadow appears rectangular amongst scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700856	Debris	434408	5797080	A2	2.6	1.8	0.4	-	Defined elongate item appears possibly rectangular with broad height, second small item located next to larger or complex extension of the single item. Another item of debris is located approx. 50 m away (700857), may be associated. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700857	Debris	434443	5797120	A2	3.7	2.1	0.5	-	Defined elongate angular item with broad height located in defined scour. Another item of debris is located approx. 50 m away (700856), may be associated. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700858	Bright reflector	434452	5797340	A2	3.2	0.5	-	-	Bright linear reflector, with no clear dark reflector associated, amongst some minor bedforms indicating potential partial burial. Possibly linked to partially buried item. Close to another bright reflector (700859), may be associated. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris. Located close (within 90 m) to an area of foul ground noted in the UKHO data (80984).	117810	-
700859	Bright reflector	434474	5797338	A2	7.0	1.1	-	-	Bright reflector, likely height of a poorly defined item on the seabed, amongst some minor bedforms indicating potential partial burial. Close to another bright reflector (700858), may be associated. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris. Located close (within 70 m) to an area of foul ground noted in the UKHO data (80984).	117810	-
700860	Bright reflector	434500	5799194	A2	4.9	0.7	-	-	Elongate bright reflector - may be natural or seabed scar but appears unusual. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700861	Debris	434622	5797604	A2	8.2	6.8	1.3	-	Poorly defined item, appears to be an almost circular with sediment build up on one side, the shadow indicates likely shape. Located amongst an area of bedforms. Seen as a mound in the MBES data. Unable to identify object but appears very anomalous. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700862	Dark reflector	434674	5796221	A2	1.9	0.3	0.1	-	Elongate dark reflector with broad shadow and large scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
70032	Dark reflector	435066	5796808	A2	13.9	9	-0.4	-	Identified in the data review for the 2011 report, an irregular shaped anomaly in an area dominated by sand waves. A scour appears to be associated with this anomaly. Observed in the bathymetry data as a teardrop shaped scour, aligned 000/180, N/S. Broad end to the north. General seabed depth -36.7 m. This was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74540	-
70036	Magnetic	435059	5798101	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	74540, 117810	-
70037	Debris	434976	5798537	A2	3.3	1.4	0.5	-	Elongate dark reflector with broad height with a large amount of scour. Located close to bedforms and rough ground (potential reef) . Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	74540, 117810	-
700863	Magnetic	435949	5797940	A2	-	-	-	20	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700864	Dark reflector	436352	5798131	A2	4.8	2.1	1.2	-	Indistinct dark reflector with broad shadow, in the form of a small mound, appears potentially complex with sub angular form. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700865	Dark reflector	436386	5797832	A2	3.2	1.5	0.4	-	Distinct rounded dark reflector with broad rounded shadow and defined scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700866	Dark reflector	436396	5796849	A2	1.1	0.7	0.4	-	Dark reflector, possibly hollow, with broad tapering shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700867	Dark reflector	436761	5798333	A2	5.6	1.8	0.6	-	Poorly defined dark reflector, possible small mound, with broad rounded height and scour. Located amongst bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700868	Dark reflector	436764	5796306	A2	4.4	0.3	0.2	-	An indistinct slightly angled elongated dark reflector object with a slight shadow, slightly anomalous and isolated. Located close to an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly part of the natural bedforms however has the potential of being an item of debris.	117810	-
700869	Debris	437430	5796622	A2	7.0	4.3	0.7	-	Indistinct item with variable height, likely more than one item or of complex structure, located amongst bedforms. Second smaller item located nearby, more indistinct and likely partially buried. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700870	Dark reflector	438171	5798701	A2	3.0	1.9	0.0	-	A small and indistinct diamond shaped dark reflector with no shadow, located amongst the bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700871	Rope/ Chain	438476	5797317	A2	28.1	0.5	0.2	-	Linear defined item, appears to have texture, indication potentially chain. Situated in between the bedforms, orientated in an east to west direction. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Further length may be buried amongst the bedforms.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700872	Bright reflector	439263	5797026	A2	3.9	0.7	-	-	A small oval shaped bright reflector located within the bedforms, looks distinct. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700873	Dark reflector	439731	5798705	A2	9.9	2.6	2.0	-	Large indistinct dark reflector with a large broad shadow and clear scour. Seen as a mound in the MBES data. Located amongst bedforms and rough ground (potential reef). Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700874	Dark reflector	439792	5798199	A2	2.7	1.1	0.7	-	Distinct rectangular shaped item with angular shadow and some scour. Located amongst an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700875	Dark reflector	439888	5797554	A2	4.1	1.5	0.4	-	Defined dark reflector with a bright rounded shadow situated within bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700876	Debris	439987	5796368	A2	5.0	0.5	0.1	-	Two linear features seen partially buried amongst the bedforms, appear to potentially be linked beneath the buried sediment. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700877	Dark reflector	440296	5795519	A2	0.9	1.7	0.5	-	A defined angular 'V' shaped dark reflector object with a bright shadow, appears isolated amongst bedforms and possible bedrock outcrop. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700878	Rope/ Chain	440796	5795697	A2	18.0	0.4	0.1	-	Defined linear item located amongst the bedforms. Sections appear buried, length calculated from sections seen however, full extent unknown. Likely a piece of rope/chain. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700879	Dark reflector	440870	5795778	A2	4.0	0.6	0.0	-	Relatively straight linear dark reflector, no indication of height. Located amongst an area of bedforms, with burial between crests. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700880	Dark reflector	440962	5796087	A2	2.1	0.5	0.6	-	A distinct dark reflector with a very long and bright shadow and significant height, isolated within an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700881	Dark reflector	441005	5796420	A2	1.3	0.2	0.3	-	A small elongated dark reflector, appears almost rectangular, with a broad bright shadow and scour. Isolated amongst an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
70085	Magnetic	441012	5795646	A2	-	-	-	7	Isolated weak magnetic anomaly, identified in the data review for the 2011 report. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	74540	-
70087	Dark reflector	441036	5797413	A2	12.6	2.5	0.0	-	In the data review for the 2011 report, an anomaly consists of two parallel linear anomalies. The anomalies are located in an area of sand waves and could simply be pronounced sand waves. Not observed in the bathymetry data. The item was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation	74540	-
700882	Dark reflector	441117	5794770	A2	16.0	2.0	1.0	-	An elongate dark reflector with slight height, sections appear buried by the crests of the bedforms. Likely cable, rope or chain. Length of item measure by what can be seen, however, the item may extend further. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700883	Debris	441158	5794716	A2	2.4	1.9	0.2	-	A small rectangular shaped dark reflector comprising four slatted dark reflector objects in a uniform alignment, with a central slat. Located possibly on the stoss side of a bedform, may have further sections buried. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700884	Debris	441686	5797143	A2	8.8	4.1	1.7	-	A well-defined large elongate and broad item with broad shadow, appears oblong. Situated amongst the bedforms. Uncertain if more buried. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700885	Debris	441961	5798447	A2	3.2	1.3	0.6	-	A distinct angular object comprising two parallel elongate reflectors with a broad angular shadow. Isolated amongst an area of bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700886	Debris	443014	5798467	A2	3.9	0.8	0.7	-	Defined dark reflector, either two or more complex shape, with broad shadow located amongst the bedforms. Intermittent linear feature seen extending from item amongst the bedforms for around 50 m. May extend further but be partially buried; full extent unconfirmed. The data used for the 2011 report, indicates slight magnetic variation (18 nT) seen over the area indicating potential ferrous material. Likely a chain with an item, such as an anchor, at one end.	117810	-
700887	Dark reflector	443671	5797022	A2	1.7	0.8	0.6	-	Elongate dark reflector with bright slightly tapered shadow. Located next to a seabed scar amongst flat seabed. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700888	Dark reflector	443728	5797258	A2	2.1	1.7	0.6	-	An indistinct dark reflector with a very bright shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700889	Magnetic	444055	5797768	A2	-	-	-	9	Small magnetic anomaly identified in the data review for the 2011 report. Nothing visible on the sonar data or bathymetry. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700890	Seabed disturbance	442661	5796913	A2	18.1	12.7	0.8	-	Disturbance seen amongst bedforms, some possible structure seen but hard to confirm. Seen as a disturbance and mound in the MBES data. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700891	Debris	453366	5801007	A2	5.2	0.3	0.2	-	A straight, linear dark reflector with a slight shadow. Identified in an area of rippled bedforms. May be natural however has the potential of being a non-ferrous short linear item of debris.	117810	-
70241	Debris	453035	5800820	A2	0.7	0.4	0.1	-	Irregular shaped anomaly with an associated scour identified during the 2011 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74540	-
70242	Seabed disturbance	452944	5800948	A2	7.8	3.2	0.2	-	Anomalous seabed disturbance corresponding with a small mound with two slightly raised points identified during the 2011 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation. The feature is reported as being orientated 30/210 (NE/SW).	74540	-
700892	Debris field	452361	5800911	A2	21.9	4.9	0.3	-	A long spread of dark reflector objects aligned in a rectangular alignment, has bright shadows throughout with slight height off the seabed, looks slightly anomalous. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris	117810	-
700893	Dark reflector	452437	5800679	A2	1.2	1	0.6	-	A small but distinct dark reflector with a bright, slightly oval shaped shadow. Feature has some slight associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700894	Dark reflector	452340	5800115	A2	2.1	0.6	0.8	-	A small slightly elongated dark reflector with a bright and rounded shadow and significant height off the seabed. The feature has scouring orientated north-east to south-west measuring 26.5 m. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700895	Dark reflector	452245	5800236	A2	2.6	0.4	0.3	-	A long and thin dark reflector object with a bright, rectangular shadow. Feature looks quite distinct. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700896	Dark reflector	451791	5800892	A2	2.6	0.9	1	-	A medium sized slightly oval shaped dark reflector with a very large and bright shadow and significant height off the seabed. Slight scour to the north measuring 5.6 m. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700897	Dark reflector	451764	5800141	A2	5.2	2	1.1	-	A poorly defined dark reflector with a bright, distinct shadow and some associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700898	Dark reflector	451365	5800700	A2	2.1	1	1.1	-	Small dark reflector with a bright, distinct relatively broad shadow. Feature has some associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700899	Dark reflector	450867	5800340	A2	1.3	1.1	0.6	-	A distinct dark reflector with a very bright, slightly angular shadow. Feature has some associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700900	Dark reflector	450709	5800094	A2	4.4	0.5	0.1	-	A distinct elongated dark reflector with a slight shadow, situated within sand waves. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700901	Dark reflector	450646	5799599	A2	2.9	0.3	0.3	-	An elongated dark reflector with a short, bright shadow, situated in between bedforms. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700902	Dark reflector	450529	5799785	A2	3.9	2.4	0.8	-	A poorly defined dark reflector, with a bright irregular shadow, identified in the SSS data. Feature appears to have an associated seabed disturbance. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700903	Bright reflector	450461	5800105	A2	8.7	3.2	0	-	An irregular bright reflector outline, may be some kind of coiled feature situated close to the base of a sand wave. Possibly part of a natural feature, however looks quite anomalous. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700904	Rope/ Chain	450388	5799766	A2	17	0.2	0.2	-	A long and thin linear dark reflector. Shadow suggest that the feature may be larger at one end, or have an associated object measuring 1.6 x 0.2 m, however this is not clearly a separate feature and, as such, has been tagged as one. Possible length of a rope/chain. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700905	Rope/ Chain	450296	5799744	A2	21.1	0.2	0.1	-	A long, thin, slightly curvilinear dark reflector with height, possibly partially buried by mobile sediments. Possible length of rope/chain. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700906	Dark reflector	450213	5799787	A2	9.5	2.9	0	-	An indistinct, elongated dark reflector with no discernible height, identified in an area of bedforms. Feature appears to be partially buried. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700907	Dark reflector	450007	5799801	A2	4	1.8	0.9	-	Distinct, straight, elongated dark reflector with a relatively broad shadow. Feature has some associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700908	Dark reflector	449774	5799655	A2	4.1	0.5	1	-	A very thin, poorly defined dark reflector with a broad, distinct bright shadow. Feature has some slight associated scour. Feature is seen on the MBES data as an area of disturbed seabed. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700909	Magnetic	449949	5799406	A2	-	-	-	9	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700910	Dark reflector	448260	5799304	A2	2	0.9	0.6	-	A distinct dark reflector with a bright, relatively broad shadow and significant height off the seabed. Feature has some slight sediment build up surrounding it. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700911	Dark reflector	447320	5798836	A2	4.8	1.7	0.8	-	An elongated, poorly defined dark reflector with a bright, distinct shadow. Feature has some possible associated scour. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700912	Dark reflector	447012	5798535	A2	5.9	5.5	0.9	-	A poorly defined, slightly triangular shaped dark reflector with a pointed shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700913	Dark reflector	446814	5799028	A2	1.6	1	0.4	-	A small, angular, slightly elongated dark reflector with a broad, bright shadow. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material. Possibly natural however has the potential of being an item of debris.	117810	-
700914	Debris	445498	5797991	A2	8.2	5.8	2.1	-	A large, poorly defined dark reflector with a broad, irregular shadow. Feature may be one large item or possibly a collection of items. Feature has some associated scour. Identified on the MBES data as a irregular, poorly defined mound. Likely debris item. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700915	Dark reflector	444468	5798334	A2	13.9	4.8	0.2	-	Possible partially buried curvilinear thin dark reflector with a bright shadow. May be part of a natural bedform, however has the potential of being a partially buried rope/chain. Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.	117810	-
700916	Magnetic	444055	5797768	A2	-	-	-	9	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700917	Dark reflector	440543	5786057	A2	1.3	0.5	0.3	-	A small, distinct, slightly oval shaped dark reflector with a long, bright shadow. Feature appears to have some associated scour. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700918	Dark reflector	440564	5785603	A2	8.6	1.7	0.3	-	A poorly defined, elongated dark reflector with a broad, dull shadow. Feature is relatively isolated on the seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700919	Magnetic	440385	5784995	A2	-	-	-	27	Small dipole identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700920	Magnetic	440238	5784973	A2	-	-	-	22	Small dipole identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
78183	Dark Reflector	440597	5784519	A2	2.7	0.3	0.2	-	Elongated anomaly with a clear shadow located on a quiet seabed between areas of sand waves. Feature was identified during a previous phase of geophysical interpretation in 2014, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78184	Dark reflector	440768	5784409	A2	3.5	0.7	0.8	-	An elongated, slightly angular, dark reflector object with a bright shadow. The object has associated scour orientated north and measuring 20 m. Also identified in the 2014 assessment, this feature was reported as being an indistinct fragmented anomaly isolated on the seabed with small rounded shadows. Possibly natural however has the potential of being a non-ferrous item of debris.	74547, 117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700921	Dark reflector	440010	5784448	A2	1.1	1	0.2	-	A small rounded dark reflector object that appears to be hollow in its centre, the feature has a bright, distinct shadow. Not clearly seen in the magnetic data, however, some slight variance seen in this area. Possibly natural however has the potential of being a low or non-ferrous item of debris.	117810	-
77942	Magnetic	440331	5784034	A2	-	-	-	10	Weak asymmetric dipolar anomaly amongst sand waves was reported on in the 2014 geophysical assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700922	Dark reflector	440307	5783869	A2	1.8	0.5	0.2	-	A small oval shaped dark reflector with a short bright shadow, possibly within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
77943	Magnetic	440359	5783908	A2	-	-	-	15	Small dipole identified on the magnetometer data. Also identified in the previous 2014 assessment as a weak asymmetric dipolar anomaly measuring 12 nT. Nothing visible on the SSS or MBES data during either phase of assessment. Possibly ferrous debris which is either buried or has no surface expression.	74547, 117810	-
700923	Dark reflector	440282	5783671	A2	1.7	0.9	0.7	-	A small, rounded dark reflector with a relatively broad, distinct shadow, possibly within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
72331	Debris	440671	5783569	A2	9.2	1.5	0.9	-	An item of debris was identified in the 2012 geophysical data assessment and was reported as being an object with hard near edge, possibly linear. This feature was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541	-
700924	Magnetic	440063	5783149	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 5 similar features (700924-700928), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700925	Magnetic	440022	5783332	A2	-	-	-	46	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 5 similar features (700924-700928), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700926	Magnetic	440032	5783457	A2	-	-	-	82	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 5 similar features (700924-700928), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700927	Magnetic	439989	5783525	A2	-	-	-	106	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 5 similar features (700924-700928), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700928	Magnetic	439997	5783641	A2	-	-	-	11	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 5 similar features (700924-700928), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700929	Dark reflector	440537	5783339	A2	1.7	0.6	0.5	-	A distinct, slightly rounded dark reflector with a bright shadow, situated within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700930	Magnetic	440496	5781362	A2	-	-	-	18	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700931	Magnetic	440419	5781665	A2	-	-	-	41	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700932	Magnetic	440339	5781973	A2	-	-	-	104	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700933	Magnetic	440296	5782190	A2	-	-	-	29	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700934	Magnetic	440221	5782540	A2	-	-	-	134	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-
700935	Magnetic	440192	5782646	A2	-	-	-	124	Large magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. Feature appears to be part of a series of 6 similar features (700930-700935), orientated NNW-SSE. Possibly these are all related however, as this cannot be confirmed these have been retained as separate anomalies.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700936	Magnetic	440061	5782312	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression. The feature is located approximately 50 m ENE of dark reflector 72335 identified during the 2012 data assessment. It is possible that these features are related however, as this cannot be confirmed, they have been retained as two separate anomalies.	117810	-
72335	Dark reflector	440011	5782294	A2	3.8	2.0	0.0	-	A semi-circular feature lying at the crest of a sand wave was identified during the 2012 geophysical data assessment however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation. The feature is located approximately 50 m WSW of magnetic anomaly 700936 identified during the 2018 data assessment. It is possible that these features are related however, as this cannot be confirmed, they have been retained as two separate anomalies.	74541	-
700937	Magnetic	440045	5782032	A2	-	-	-	41	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700938	Dark reflector	439837	5781719	A2	1.8	0.5	0.6	-	A very distinct dark reflector object with a bright, rounded shadow, possibly situated within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700939	Dark reflector	439970	5781483	A2	1	0.3	0.5	-	A slightly elongated dark reflector object with a very long and bright shadow, situated within sand waves. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700940	Magnetic	440257	5780748	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700941	Debris	440434	5779266	A2	8.7	0.6	0	-	Short, straight linear bright reflector, relatively isolated on the seabed with no magnetic variance apparent. The low reflectivity of the material may suggest that it is comprised of a material that absorbs acoustic energy, such as waterlogged wood or synthetic materials. Possibly natural however has the potential of being a linear item of non-ferrous debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700942	Magnetic	439962	5777944	A2	-	-	-	11	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700943	Rope/ Chain	438953	5779050	A2	29.9	0.3	0.1	-	A thin linear dark reflector with height. Feature appears to be disrupted along its length, possibly indicating partial burial. No clear magnetic variance associated. Possibly natural however has the potential to be a partially buried length of rope.	117810	-
700944	Dark reflector	439118	5780033	A2	6.6	3.3	0.6	-	A poorly defined dark reflector with a bright, distinct shadow. Some slight associated seabed disturbance. Feature corresponds with a mound on the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700945	Dark reflector	438920	5780595	A2	2.6	0.3	0.3	-	A thin and slightly elongated dark reflector object with a broad, bright shadow situated within a rippled area of seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700946	Magnetic	438954	5780780	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700947	Dark reflector	439031	5780773	A2	1.1	0.7	0.3	-	A small, slightly rounded dark reflector with a very bright, relatively broad shadow. Feature appears to have associated scour extending approximately 16 m to the south. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700948	Magnetic	438791	5781461	A2	-	-	-	85	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700949	Dark reflector	439027	5781784	A2	3.3	0.9	1.2	-	A poorly defined dark reflector with distinct, slightly irregular shadow. Feature possibly has a second associated object; however, this is hard to discern. Feature has an associated seabed disturbance and some scour. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
72336	Debris	439561	5782066	A2	4.6	0.2	0.2	6	A straight, slightly elongated dark reflector with a bright shadow identified on the most recent SSS data. Feature appears to correspond with a small magnetic anomaly identified during the 2012 data assessment, indicating some ferrous material. The feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing. Possible short linear item of debris.	74541, 117810	-
700950	Magnetic	439563	5782380	A2	-	-	-	28	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700951	Magnetic	438618	5782492	A2	-	-	-	32	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700952	Magnetic	438172	5782705	A2	-	-	-	16	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700953	Dark reflector	438341	5782950	A2	4.9	0.5	0.4	-	A slightly curved shaped dark reflector object with a bright, tapered shadow. Feature has some associated scour extending approximately 32 m to the north. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700954	Debris	438982	5783239	A2	9.7	0.5	0.2	-	A long and straight linear dark reflector with a slight shadow. Possibly a linear item of non-ferrous debris	117810	-
78004	Magnetic	438234	5783293	A2	-	-	-	14	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78179	Dark Reflector	438412	5783292	A2	2.8	0.3	0.3	-	Distinct elongated anomaly with an angular shadow identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78180	Dark Reflector	438553	5783304	A2	1.7	0.4	0.5	-	Small isolated anomaly with a distinct sub-oval shadow identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78177	Dark Reflector	438437	5783346	A2	0.8	0.8	0.1	-	Small indistinct dark reflector was identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78178	Dark Reflector	438433	5783350	A2	7.7	2.7	0.3	-	Distinct oval anomaly with a clear oblong shadow visible was identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
700955	Magnetic	438778	5783394	A2	-	-	-	17	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression or may be linked to a natural feature, however retained at this time for archaeological precaution. Located close to anomalies 78005 and 700956 , may be associated.	117810	-
700956	Magnetic	438729	5783406	A2	-	-	-	15	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression or may be linked to a natural feature, however retained at this time for archaeological precaution. Located close to anomalies 78005 and 700955 , may be associated.	117810	-
78005	Magnetic	438624	5783503	A2	-	-	-	20	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, but magnetic variance was seen in the area, which may reflect differences in line positioning and spacing. The anomaly is broad indicating that it may be linked to a natural feature, however retained at this time for archaeological precaution. Located close to anomalies 700955 and 700956 , may be associated.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700957	Seabed disturbance	438924	5783658	A2	14.5	7.8	1.2	-	An area of disturbed seabed possibly containing objects. Possible dark and bright reflector anomalies are visible within the area of disturbance, a possible bright, distinct shadow is identified however object is not clearly defined. Possibly natural however may represent partially buried anthropogenic features.	117810	-
700958	Magnetic	439404	5783806	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
77941	Magnetic	439716	5783738	A2	-	-	-	17	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78181	Dark Reflector	439051	5783980	A2	1.8	1.0	0.4	-	Indistinct anomaly with a clear tapered shadow was identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78058	Magnetic	438378	5783779	A2	-	-	-	11	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78176	Dark reflector	438258	5783804	A2	2.2	1.9	0.5	-	A small and distinct dark reflector with a bright, relatively broad shadow identified during the most recent geophysical assessment. The feature corresponds with an elongated anomaly with a distinct oblong shadow and a possible scour identified during the 2014 data assessment.	74547, 117810	-
77929	Debris	438307	5784009	A2	1.8	0.3	0.2	138	A small magnetic anomaly, measuring 21 nT and corresponding with a small, slightly elongated dark reflector with a bright shadow, was identified on the geophysical data during this phase of the geophysical assessment. This also corresponds with a large magnetic anomaly, measuring 138 nT, identified during the 2014 data assessment. Differences in magnetic amplitude may reflect differences in line positioning and spacing. As such, the larger, previously observed magnetic anomaly has been grouped with the SSS feature identified during this phase. Possible ferrous item of debris.	74547, 117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78006	Magnetic	438162	5784159	A2	-	-	-	12	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700959	Magnetic	439184	5784146	A2	-	-	-	25	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700960	Magnetic	439003	5784451	A2	-	-	-	19	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
77928	Magnetic	439251	5784529	A2	-	-	-	287	A small monopole, measuring 27 nT was identified during this phase of data assessment. This corresponded with a large magnetic anomaly identified during the 2014 data assessment. Differences in magnetic amplitude may reflect differences in line positioning and spacing. Nothing visible on the sonar data or bathymetry data during either phase of assessment, indicating ferrous debris with no surface expression.	74547, 117810	-
700961	Dark reflector	439579	5784328	A2	2.1	0.3	0.1	-	A small, slightly elongated dark reflector with a short but bright shadow. Feature is possibly situated within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
78182	Dark Reflector	439655	5784631	A2	2.7	1.0	0.2	-	A small isolated anomaly with a tapered shadow and distinct scour mark was identified during the 2014 geophysical data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78001	Magnetic	439452	5784983	A2	-	-	-	11	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
77999	Magnetic	439396	5785352	A2	-	-	-	43	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, but magnetic variance was seen in the area, which may reflect differences in line positioning and spacing. The anomaly is broad indicating that it may be linked to a natural feature, however retained at this time for archaeological precaution.	74547	-
78049	Magnetic	439431	5785486	A2	-	-	-	5	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700962	Debris	438697	5785206	A2	15.9	1.9	0.2	-	A poorly defined linear dark reflector with a faint shadow and some possible associated scour. Feature is in the same formation as the natural bedforms, however looks anomalous compared to surrounding features. Not seen in the magnetic data. Possible linear item of non-ferrous debris.	117810	-
78000	Magnetic	438444	5784958	A2	-	-	-	10	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78002	Magnetic	438511	5784467	A2	-	-	-	49	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700963	Rope/ Chain	438004	5784401	A2	24.5	0.6	0.2	-	A poorly defined, slightly curved linear dark reflector with slight height. Feature appears to be either partially buried or partially broken up. Feature has no associated magnetic anomaly indicating a possible length or rope.	117810	-
700964	Rope/ Chain	436608	5784073	A2	34.8	1.3	0.3	-	A thin, slightly curved dark reflector with height. Feature possibly had an object with height at one end, however this isn't clearly defined and, as such, hasn't been tagged as a separate feature. The feature has no associated magnetic anomaly which may indicate that it is more likely to be a length of rope.	117810	-
700965	Magnetic	436860	5784018	A2	-	-	-	12	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
77939	Magnetic	437245	5783968	A2	-	-	-	81	Medium magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78174	Dark Reflector	436973	5783794	A2	0.7	0.4	0.3	-	Isolated and distinct anomaly with a rounded shadow was identified during the 2014 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
77920	Magnetic	437308	5783462	A2	-	-	-	32	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
78175	Dark reflector	437489	5783525	A2	1.7	0.8	0.7	-	A small dark reflector with a bright shadow was identified on the most recent geophysical data. The feature corresponds with a small distinct anomaly with a tapered shadow identified during the 2014 data assessment. Possibly natural however has the potential of being a non-ferrous item of debris.	74547, 117810	-
72340	Seabed disturbance	437775	5782035	A2	14.5	9.1	0	-	Oval area of uneven seabed identified during the 2012 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74541	-
700966	Dark reflector	438166	5781918	A2	3.3	0.3	0.1	-	A thin, slightly curved, elongated dark reflector with a slight shadow identified on the sonar data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700967	Magnetic	438126	5781279	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700968	Dark reflector	438452	5781095	A2	1.2	0.6	0.2	-	A slightly elongated dark reflector with a short, bright shadow, situated within sand waves. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-



ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700969	Dark reflector	437878	5780240	A2	5.3	2.1	1.1	-	A large, poorly defined dark reflector with a bright, tapered shadow. Feature identified within an area of disturbed seabed measuring 16.3 x 5.3 m, however this may be associated scour. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700970	Dark reflector	437477	5781332	A2	3.2	0.9	0.1	-	A slightly irregularly shaped dark reflector object with a slight shadow, within a slight depression. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700971	Magnetic	437257	5781631	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
72342	Dark reflector	436930	5782002	A2	3.3	0.7	0.3	-	A very small but distinct dark reflector with a bright shadow identified on the most recent SSS data. Feature corresponds with a linear feature with height identified during the 2012 data assessment. Possibly natural however has the potential of being a non-ferrous item of debris.	74541, 117810	-
700972	Dark reflector	436474	5782573	A2	2.3	0.2	0.1	-	A thin, elongated dark reflector with a short, bright shadow. Located approximately 4 m away from another similar feature. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700973	Dark reflector	436479	5782573	A2	2.2	0.3	0.1	-	A thin, elongated dark reflector with a short, bright shadow. Located approximately 4 m away from another similar feature. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700974	Rope/chain	436618	5782629	A2	14.9	1.7	0.1	-	A length of possible rope or chain, a long and thin curvilinear dark reflector with a shadow in places along the length of the feature. Nothing seen in the magnetic or MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
77940	Magnetic	436915	5782804	A2	-	-	-	13	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-
700975	Magnetic	436740	5782867	A2	-	-	-	14	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-

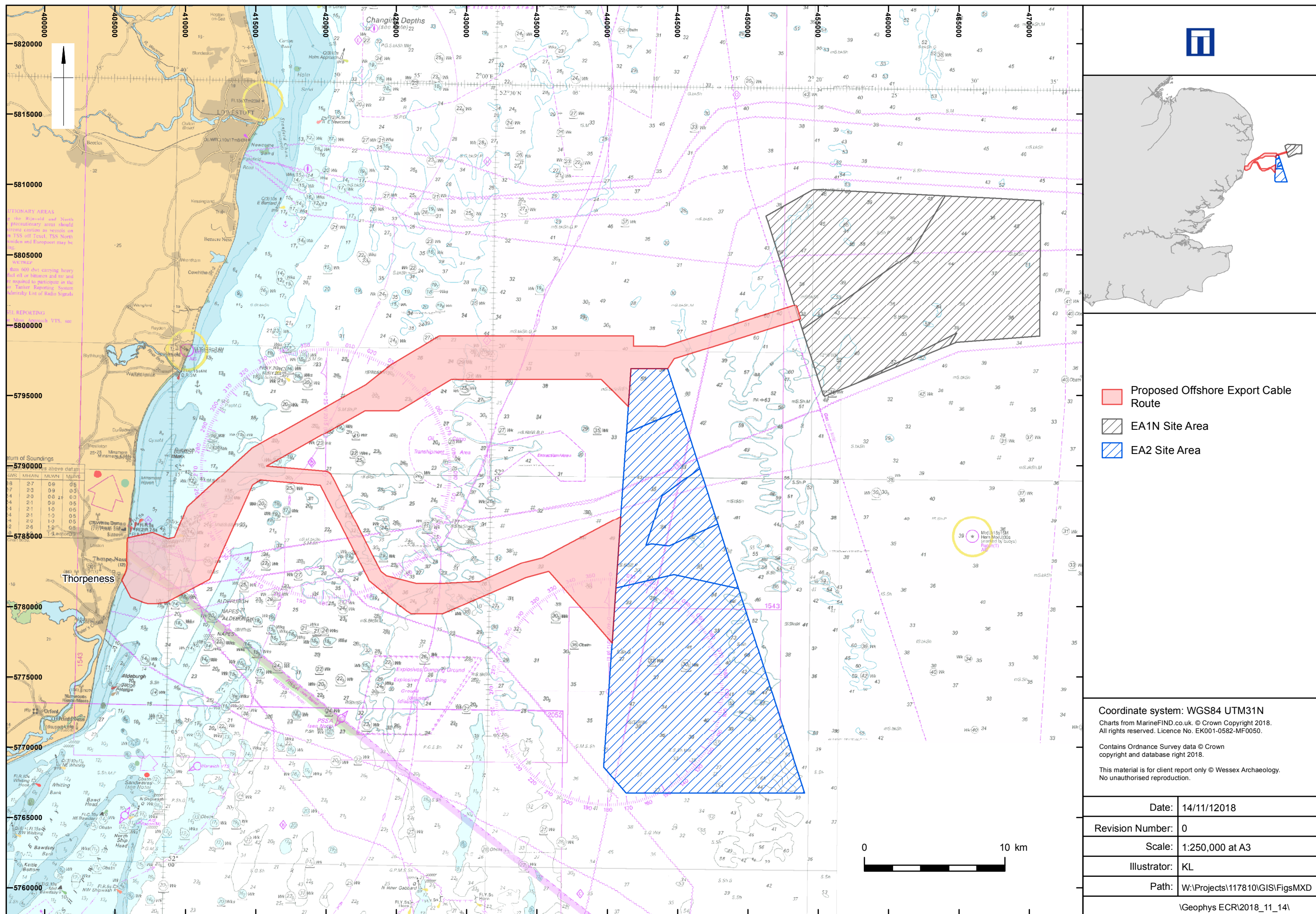


ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
78173	Debris	436914	5782861	A2	5.1	1.9	0.5	-	A very distinct, elongated dark reflector with a bright shadow was identified on the SSS data during this phase of assessment. This corresponds with a distinct 'T' shaped anomaly with a clear angular shadow identified during the 2014 data assessment. Possible item of non-ferrous debris	74547, 117810	-
700976	Magnetic	436650	5783130	A2	-	-	-	11	Small magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-
700977	Dark reflector	436594	5783389	A2	5	0.4	0.2	-	An elongated dark reflector with a slight shadow. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700978	Bright reflector	436396	5783437	A2	4.3	0.6	0	-	An elongated, slightly curved bright reflector with associated scour extending 19 m to the north. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700979	Dark reflector	436397	5783418	A2	1.1	0.6	0.5	-	A small, distinct dark reflector object with a bright, relatively broad shadow. Feature has some associated scour extending approximately 1 m to the north and north-west. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700980	Dark reflector	435620	5783543	A2	14.5	4.8	1.4	-	A large dark reflector object that appears to be partially buried by sand waves. Feature has a very large shadow and significant height. Corresponds with a mound on the MBES data. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700981	Debris field	435975	5783692	A2	26.3	13.3	0	-	A spread of possible debris objects, mainly irregularly shaped bright reflectors (largest 4.2 x 1.3 m) one dark reflector (3.8 x 0.6 m) situated in sand waves. Features appear to be slightly linear. Possibly a natural formation however has the potential of being a spread of non-ferrous debris.	117810	-
700982	Dark reflector	435927	5783412	A2	4.4	4.1	0.1	-	A very indistinct oval shaped dark reflector with shadows in parts in a depression, could be a buried object, looks slightly anomalous to the surrounding seabed. Possibly natural however has the potential of being a non-ferrous item of debris.	117810	-
700983	Magnetic	435557	5783205	A2	-	-	-	58	Medium magnetic anomaly identified on the magnetometer data. Nothing visible on the SSS or MBES data. Possibly ferrous debris which is either buried or has no surface expression.	117810	-



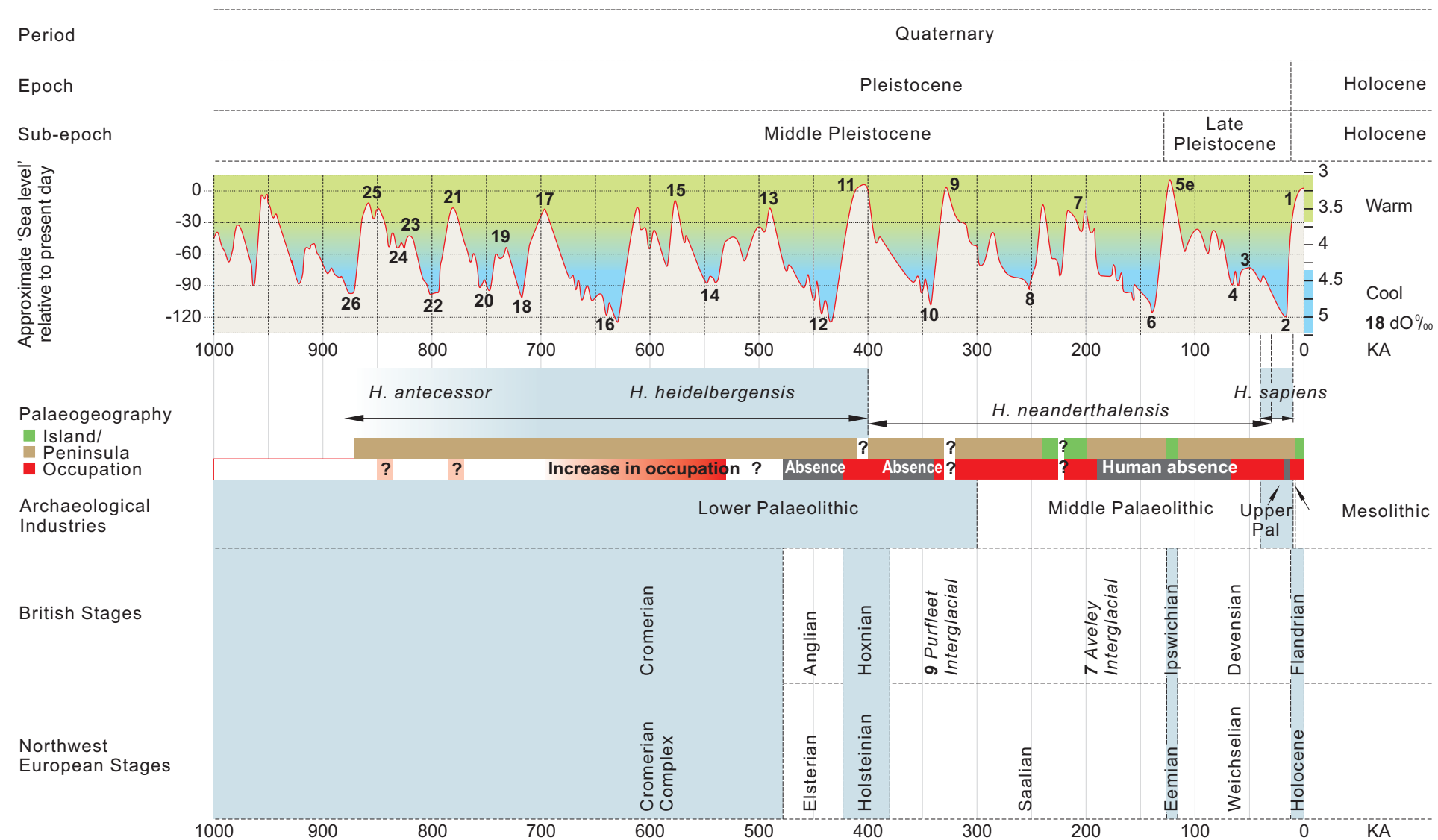
ID	Class	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Description	Report Reference	External references
700984	Debris field	436234	5783296	A2	12.8	2.7	0.2	-	A very indistinct area of possible items of debris, comprised straight, linear dark reflectors with some possible smaller dark and bright reflectors. Possible debris field comprised non-ferrous debris.	117810	-
78171	Dark Reflector	435831	5782813	A2	2.5	1.0	0.2	-	Diffuse anomaly amongst sand waves with a slight depression identified during the 2014 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78172	Dark Reflector	435919	5782790	A2	1.7	0.5	0.2	-	Isolated anomaly with a clear shadow identified during the 2014 data assessment, however was not identified during the latest phase of assessment. It is possible that this is due to burial by mobile sediments and, as such, the feature has been retained as potential archaeology based on the previous interpretation.	74547	-
78057	Magnetic	435574	5782873	A2	-	-	-	10	Small magnetic anomaly without an associated SSS contact was identified in the 2014 geophysical data assessment. Feature was not identified in the most recent magnetometer data, which may reflect differences in line positioning and spacing.	74547	-

1. Co-ordinates are in WGS84 UTM31N
2. Positional accuracy estimated within ± 10 m



Location of East Anglia Offshore Windfarm ECR

Figure 1

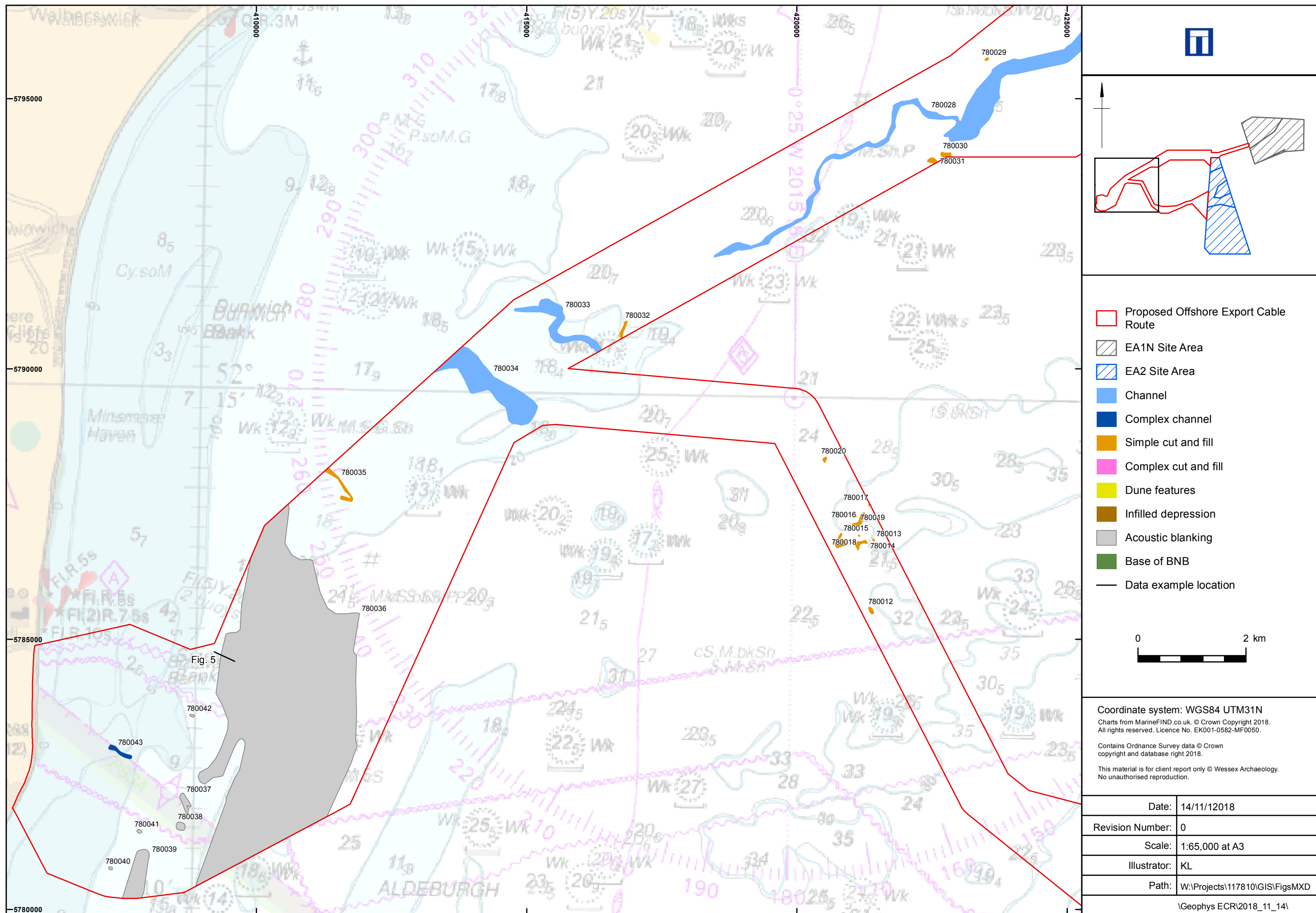


The figure presents information derived from several references: the global sea-level curve is from Lisiecki and Raymo (2005) and Jelgersma (1979). Details on the geology and archaeology were provided by Dix and Westley (2004); Funnel (1995); Gibbard and van Kolfschoten (2004); Kukla *et al.* (2002);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



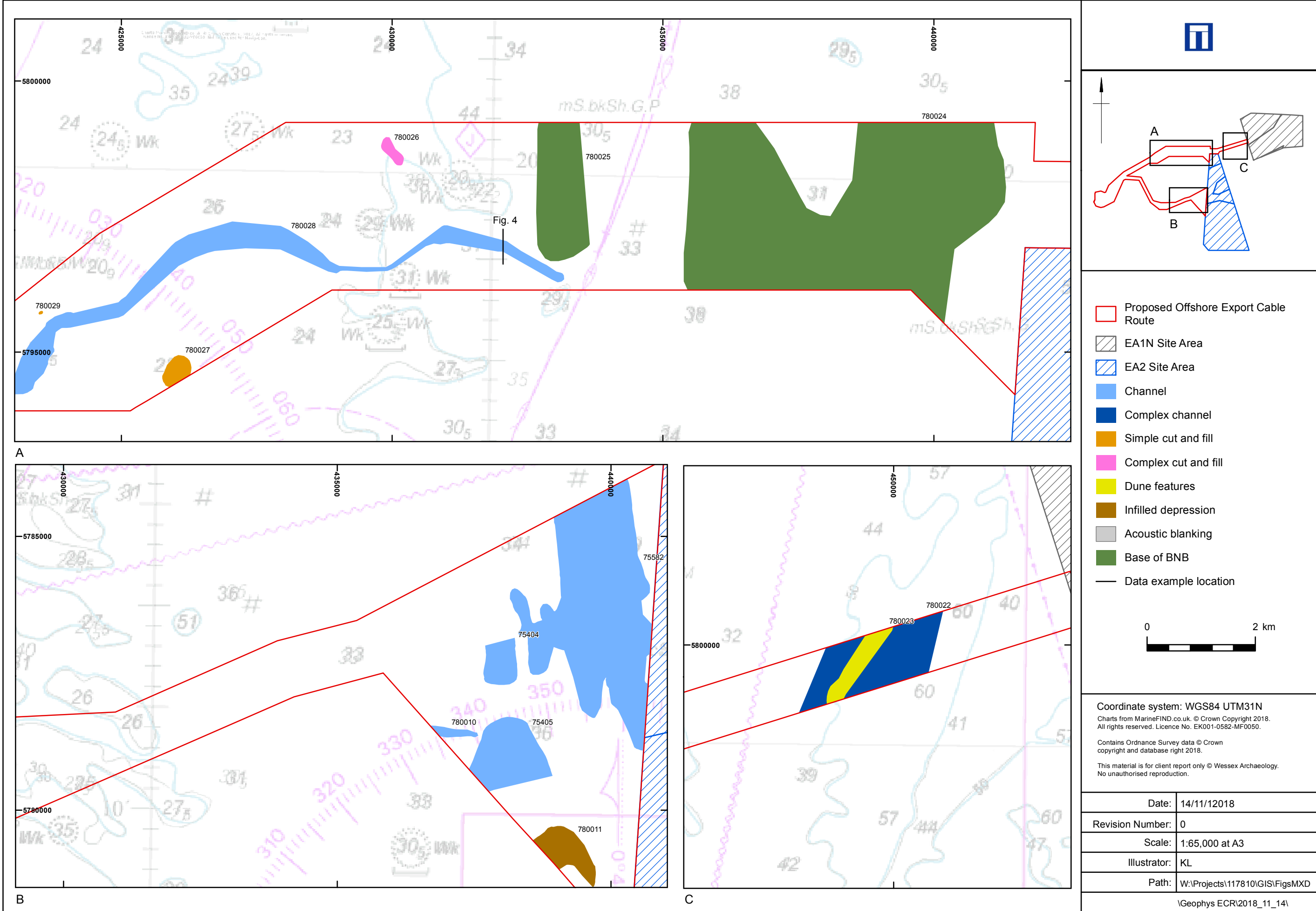
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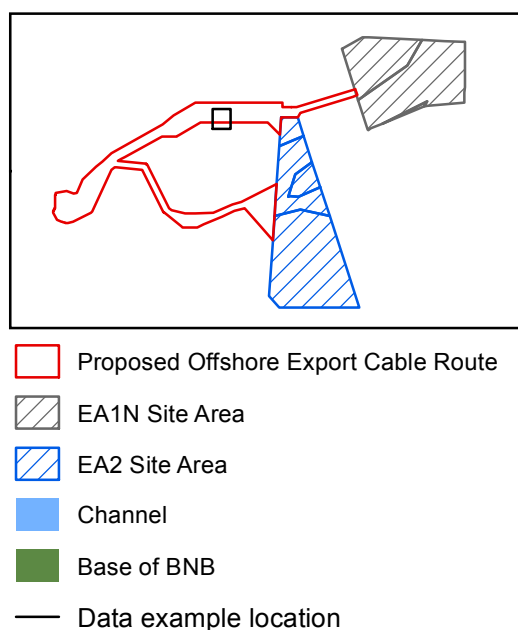
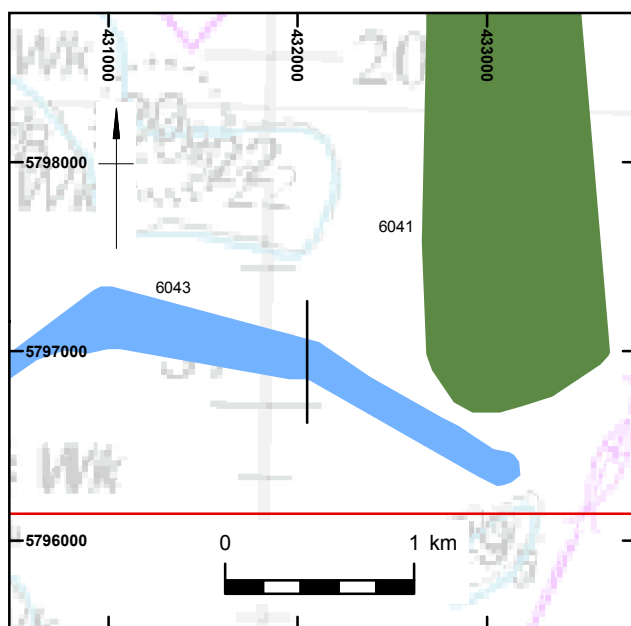
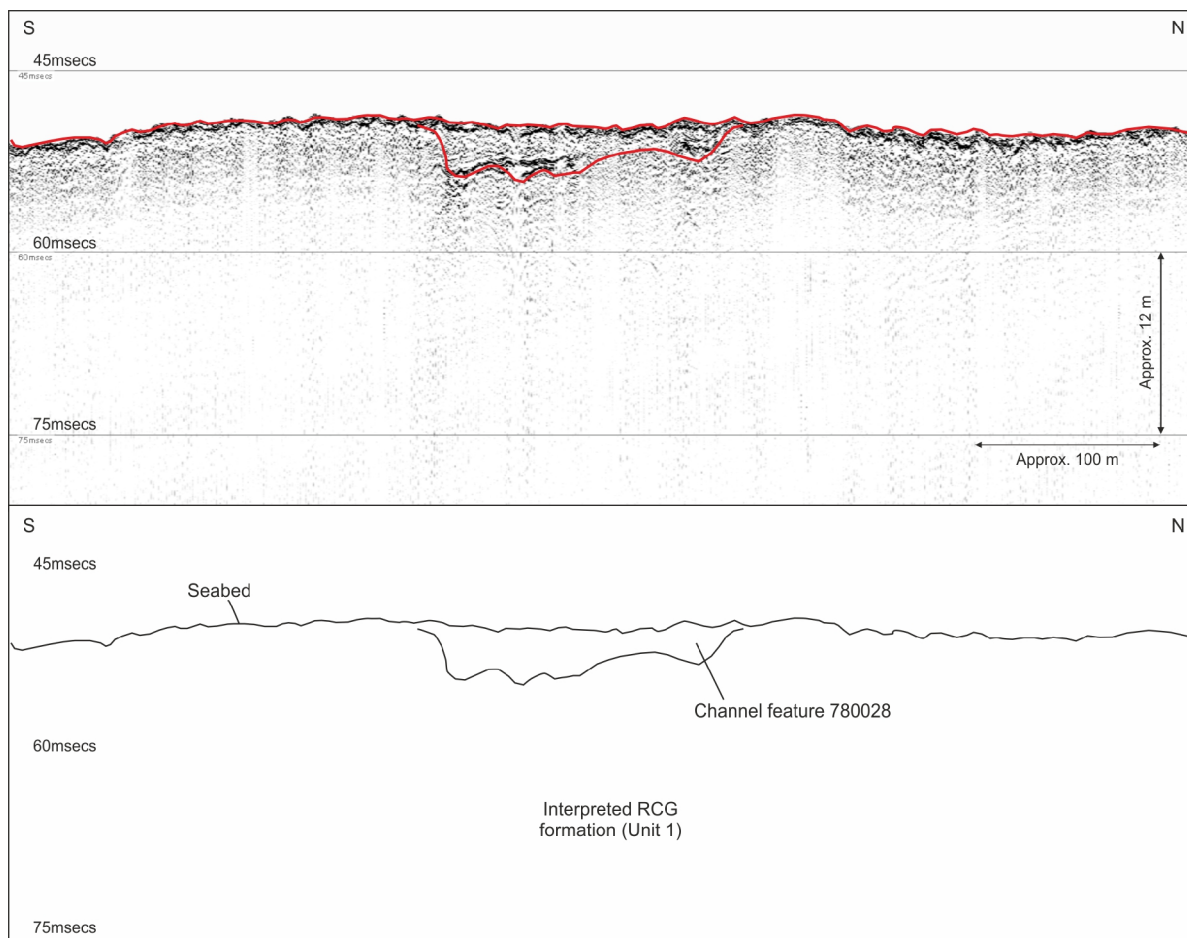
Palaeogeographic features of archaeological potential

Figure 3a



Palaeogeographic features of archaeological potential

Figure 3b



Coordinate system: WGS84 UTM31N

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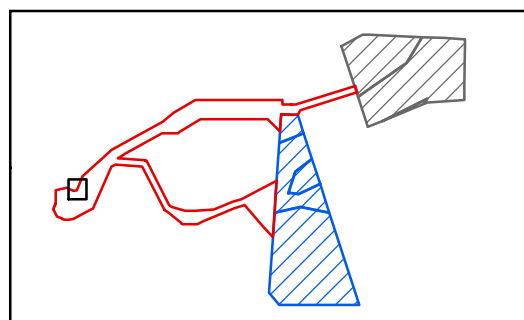
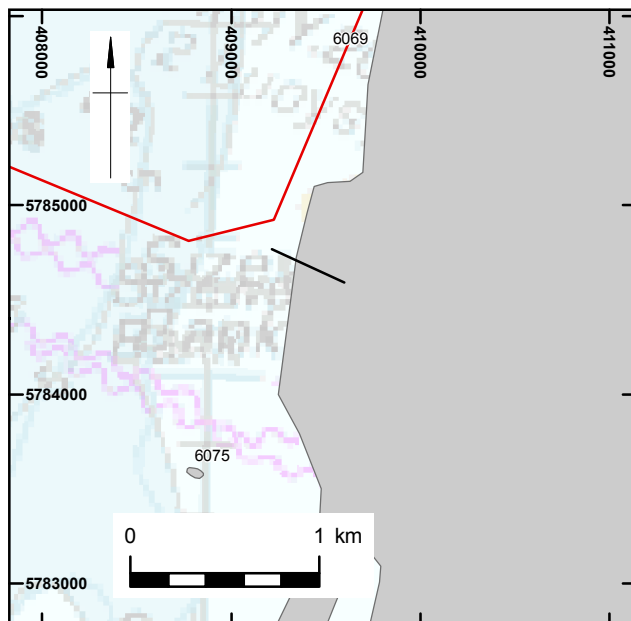
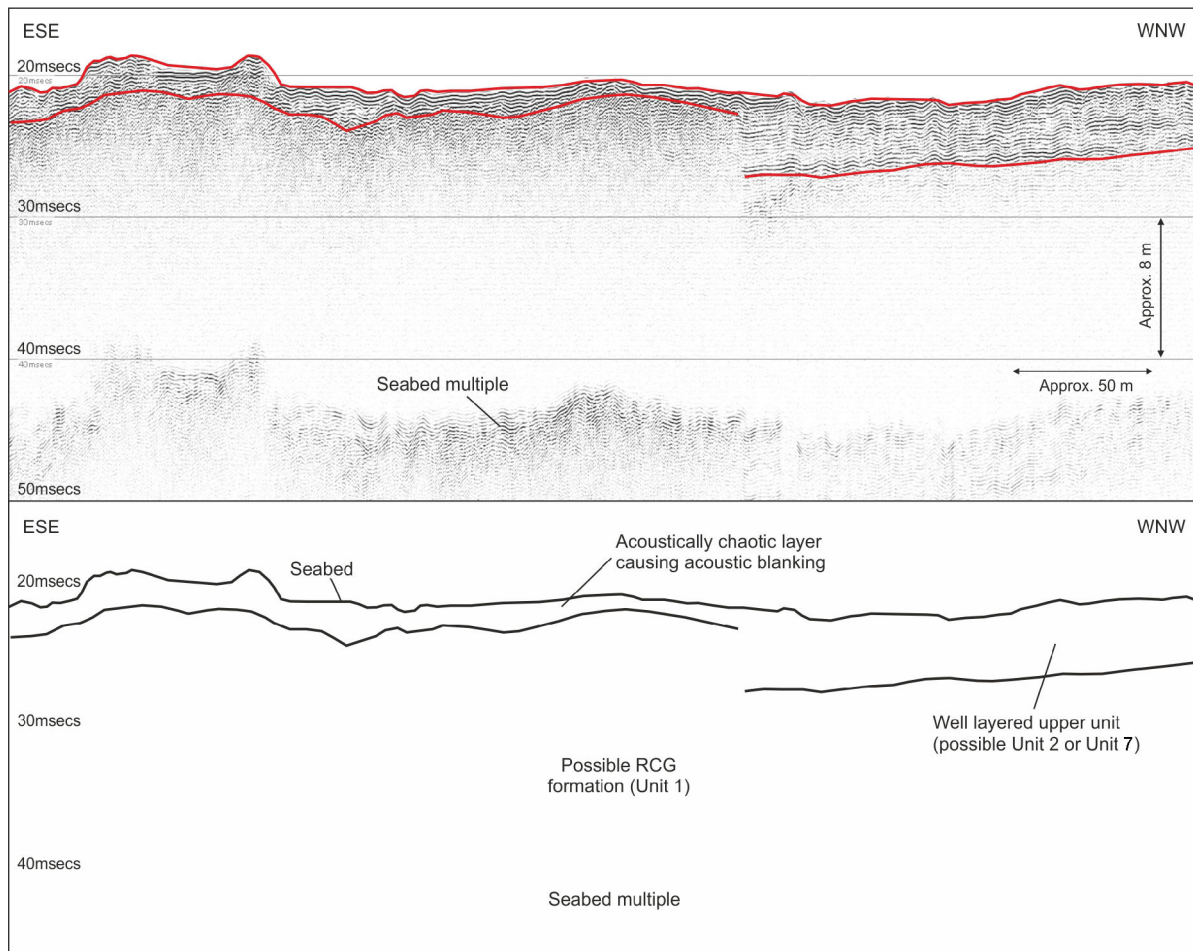
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Illustrator: KL

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Palaeogeographic feature data example – 780028

Figure 4



- Proposed Offshore Export Cable Route
- EA1N Site Area
- EA2 Site Area
- Acoustic blanking
- Data example location

Coordinate system: WGS84 UTM31N

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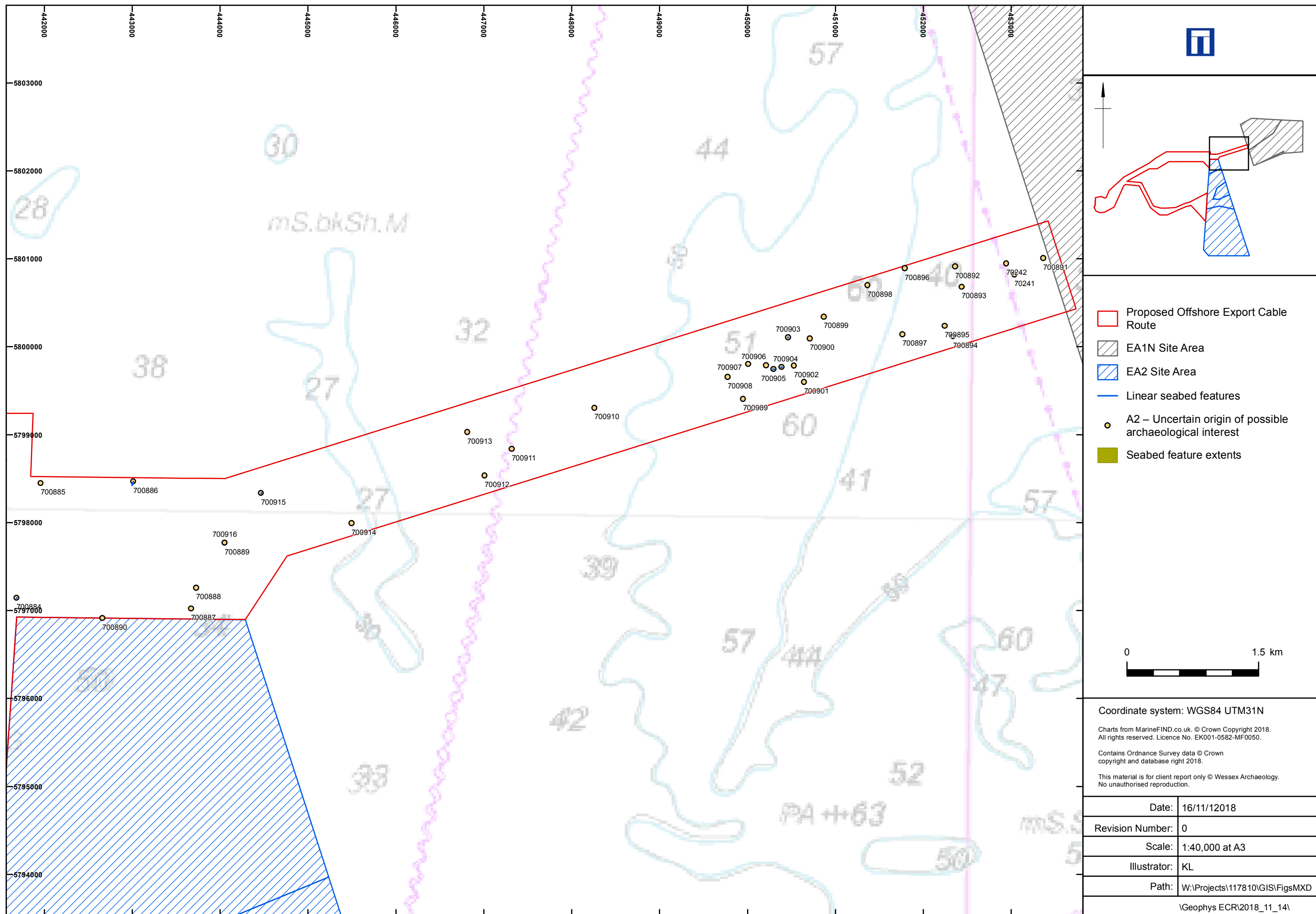
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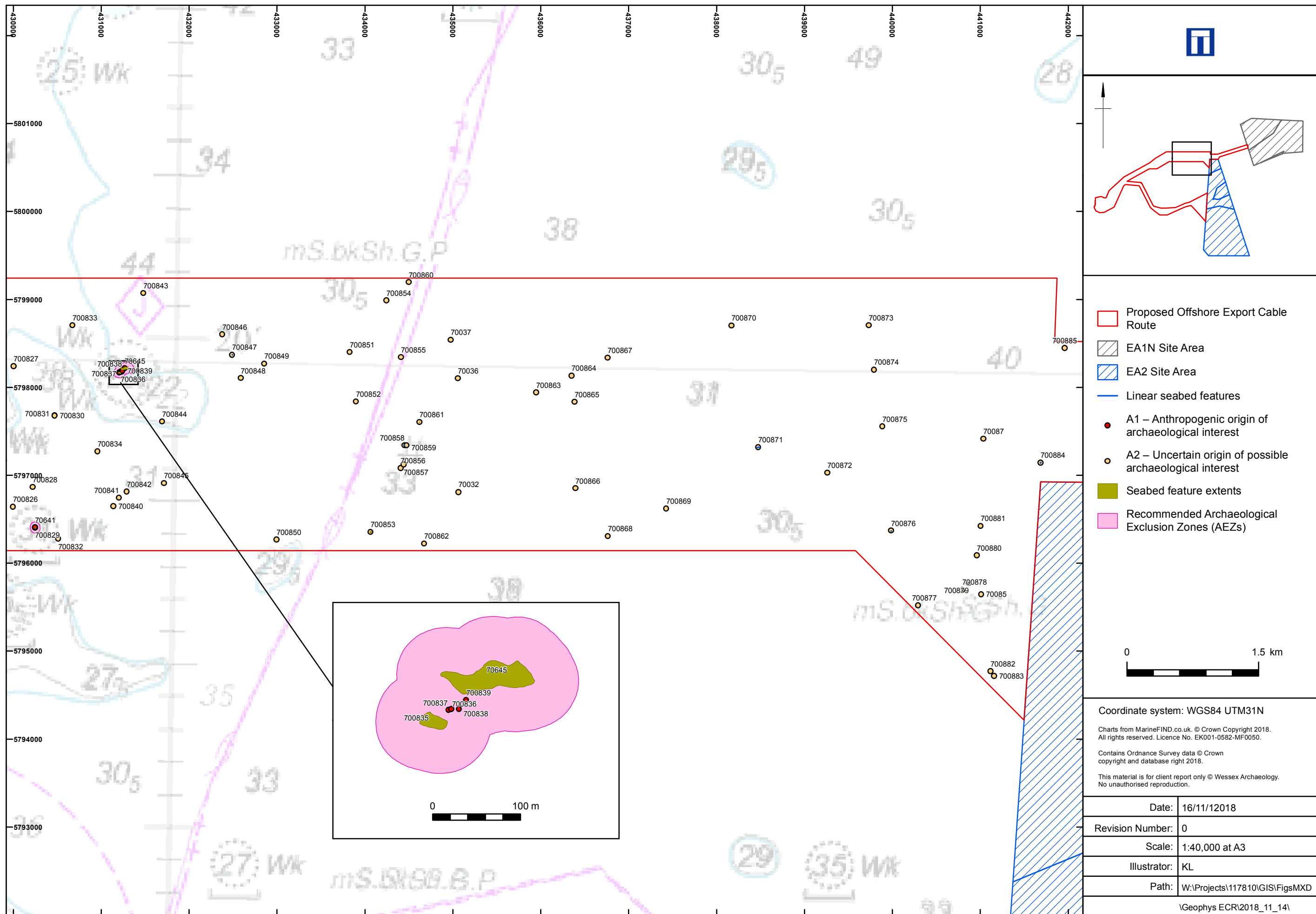
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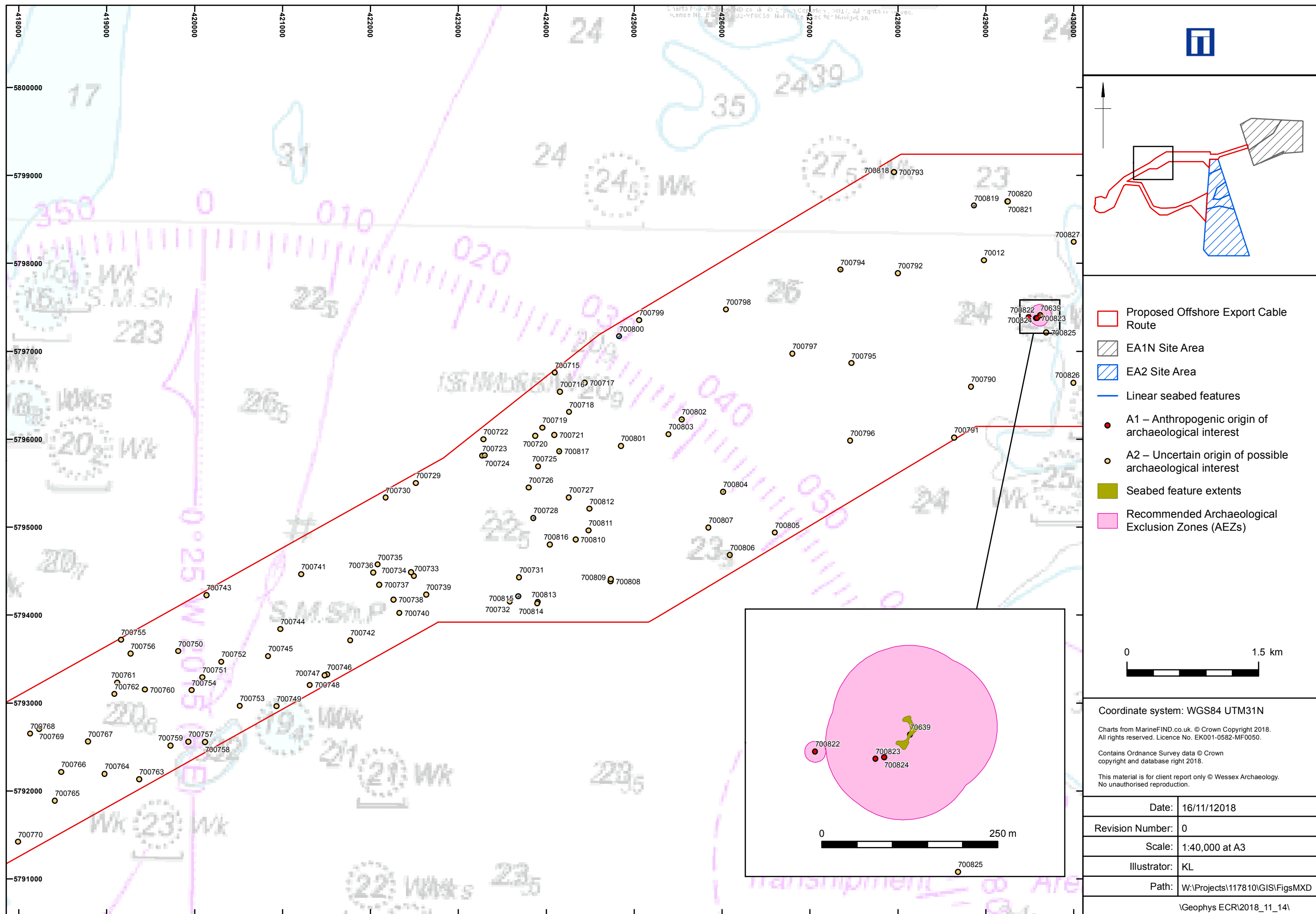
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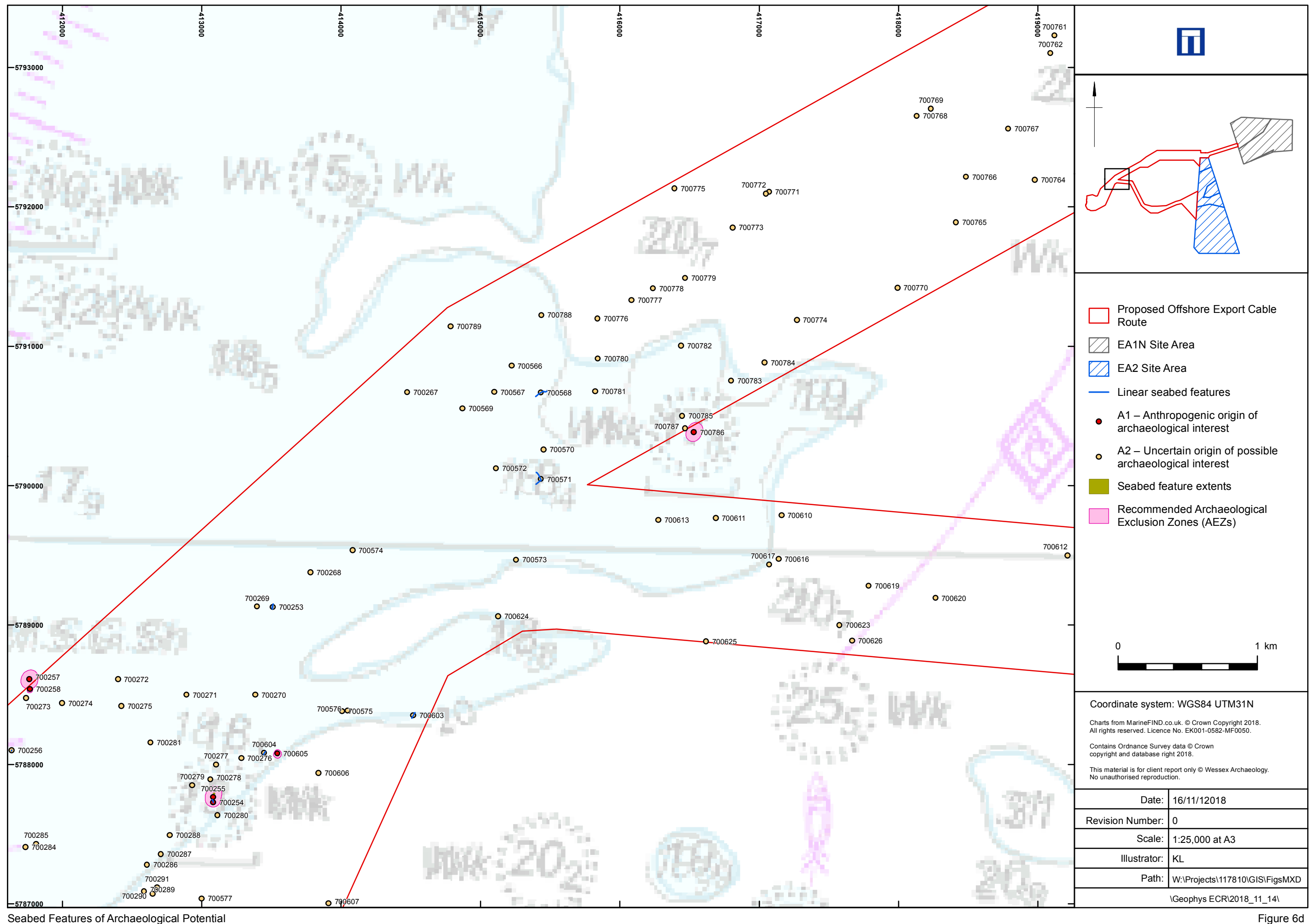




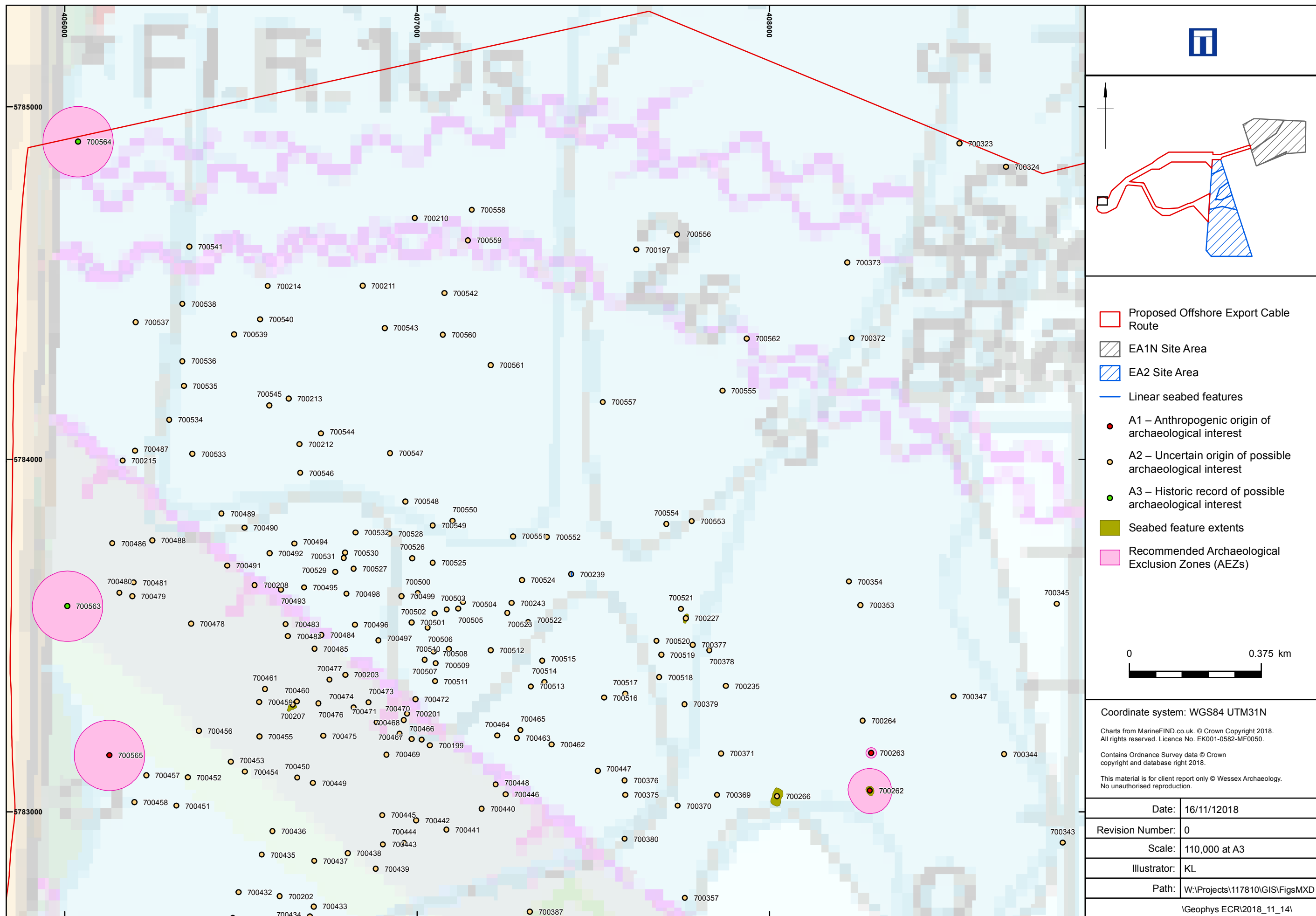


Seabed Features of Archaeological Potential

Figure 6c

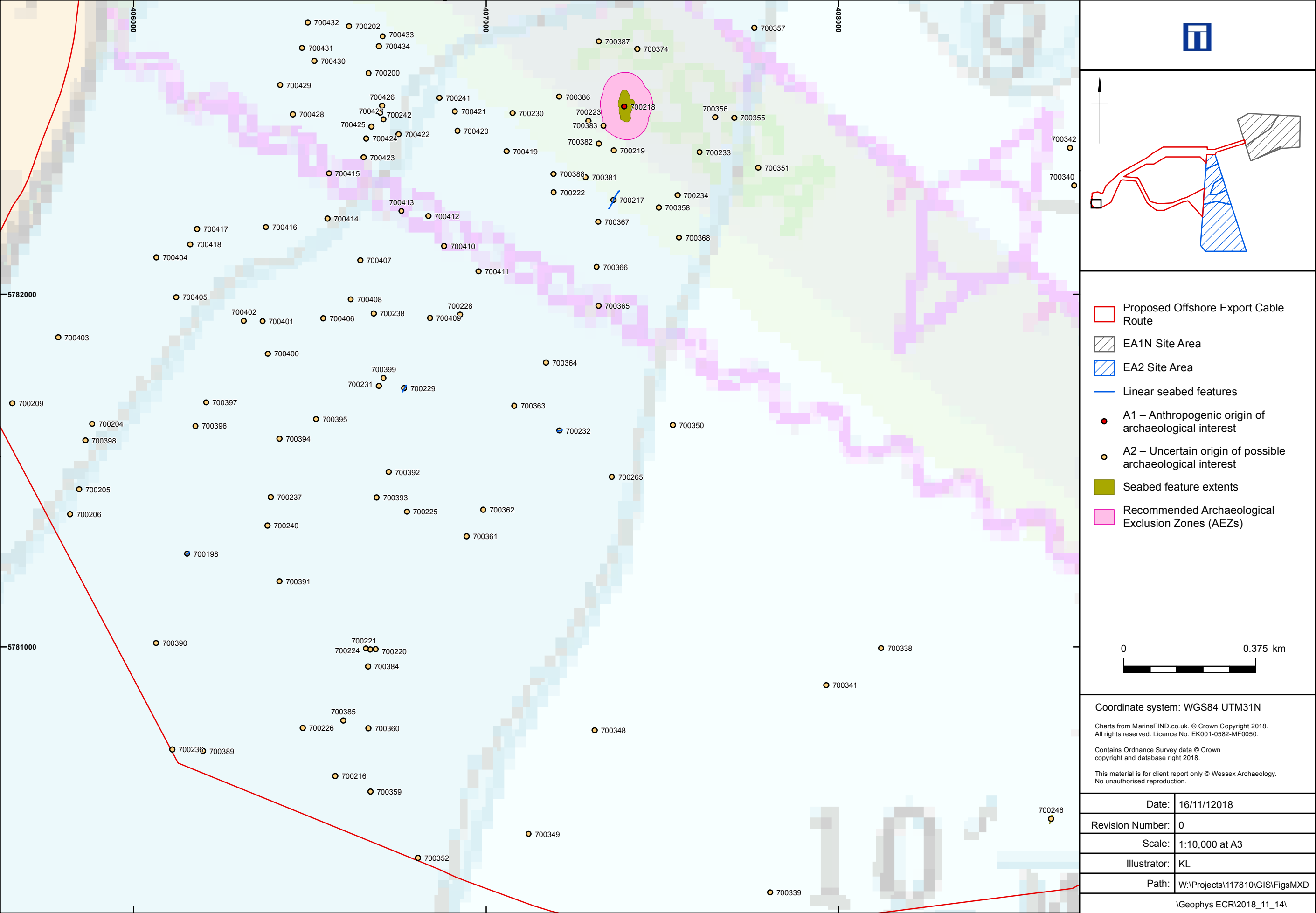






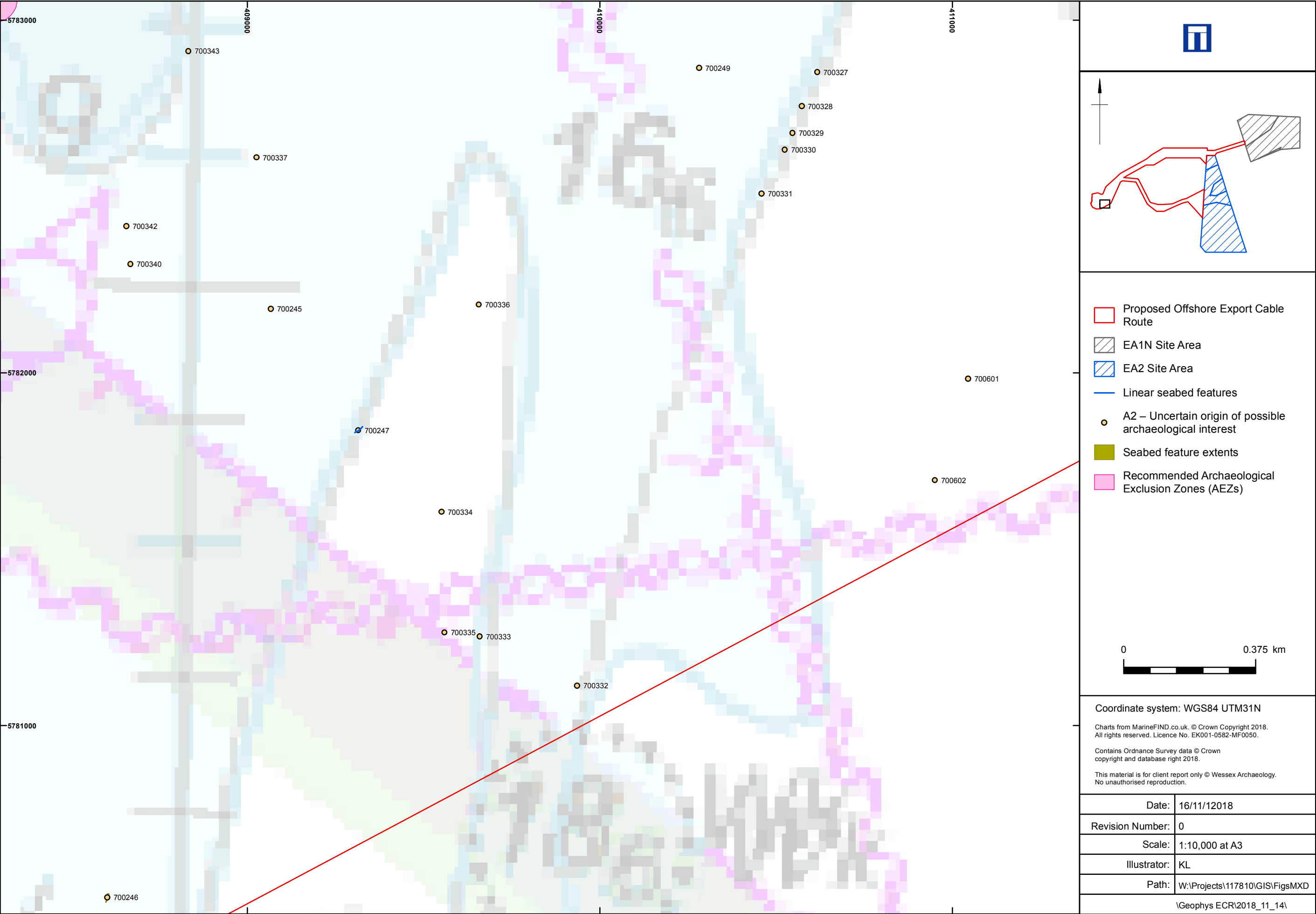
Seabed Features of Archaeological Potential

Figure 6f



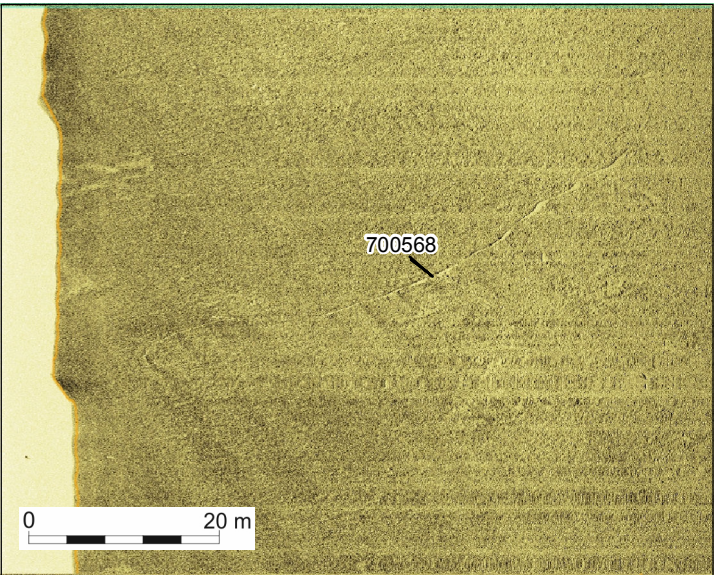
Seabed Features of Archaeological Potential

Figure 6g

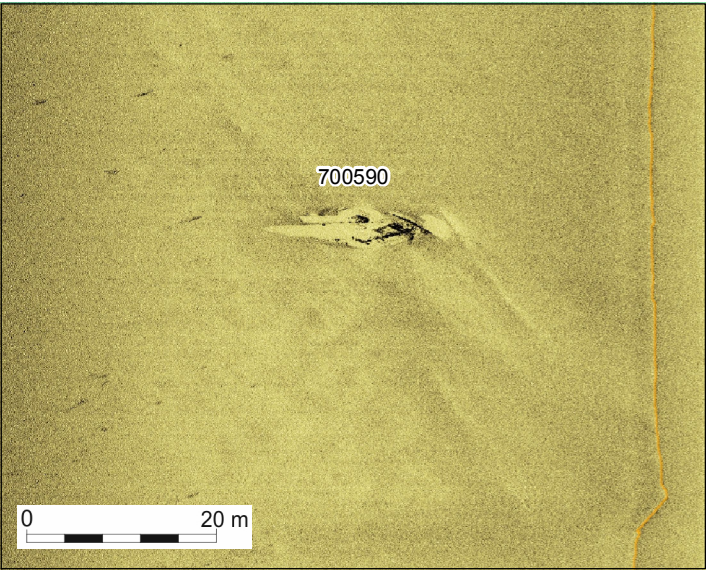


Seabed Features of Archaeological Potential

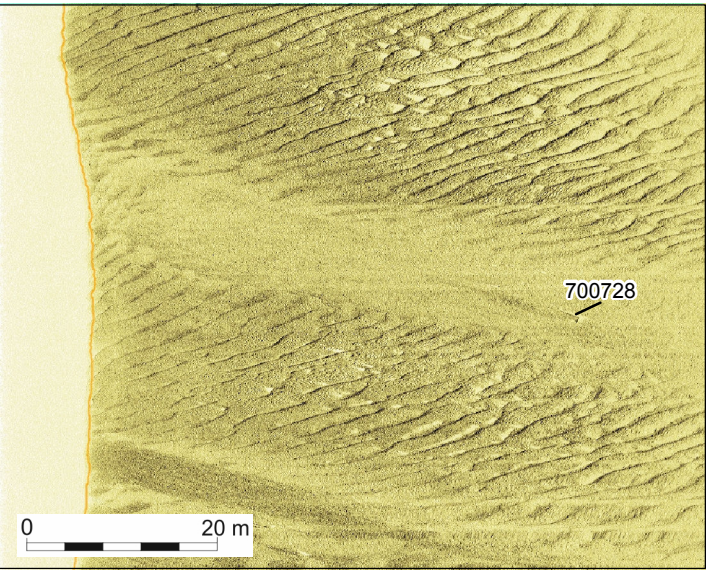
Figure 6h



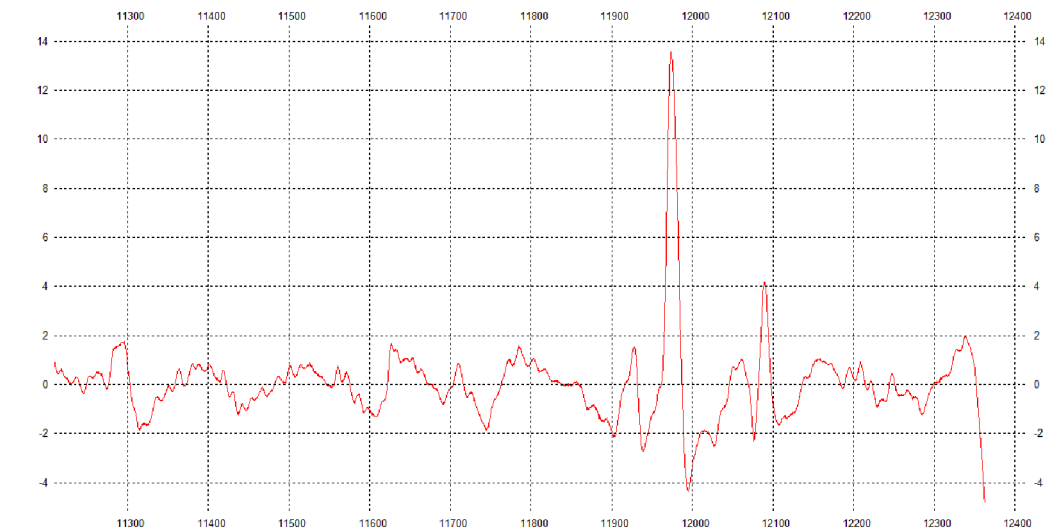
Sidescan sonar image of possible chain 700568, measuring 103 x 0.7 x 0.2 m



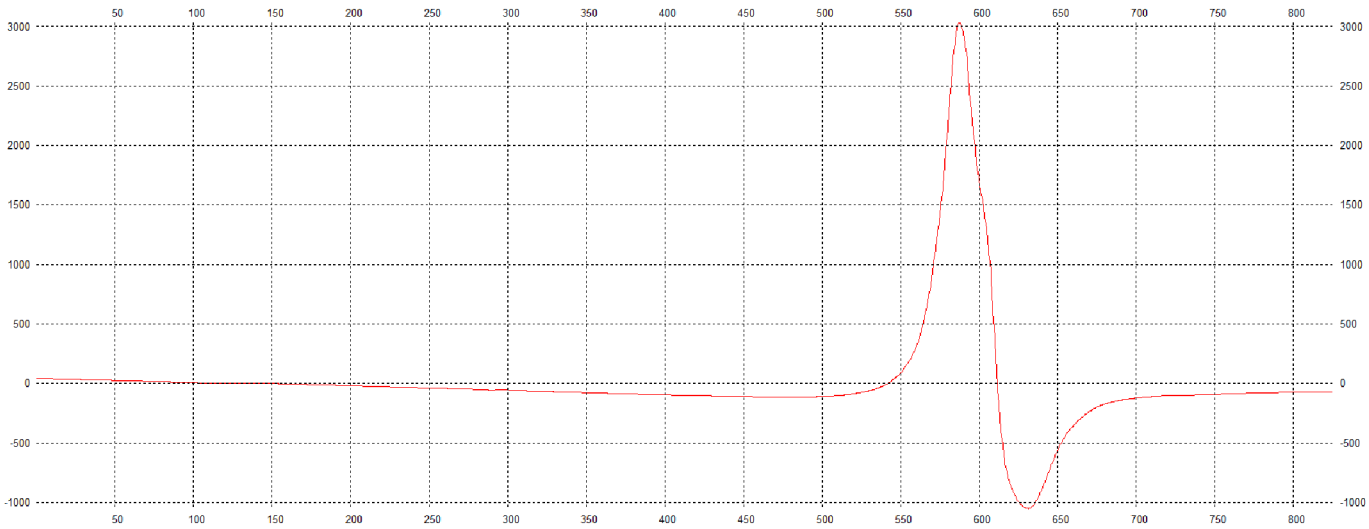
Sidescan sonar image of large debris item 700590, measuring 13.3 x 13.1 x 1.6 m



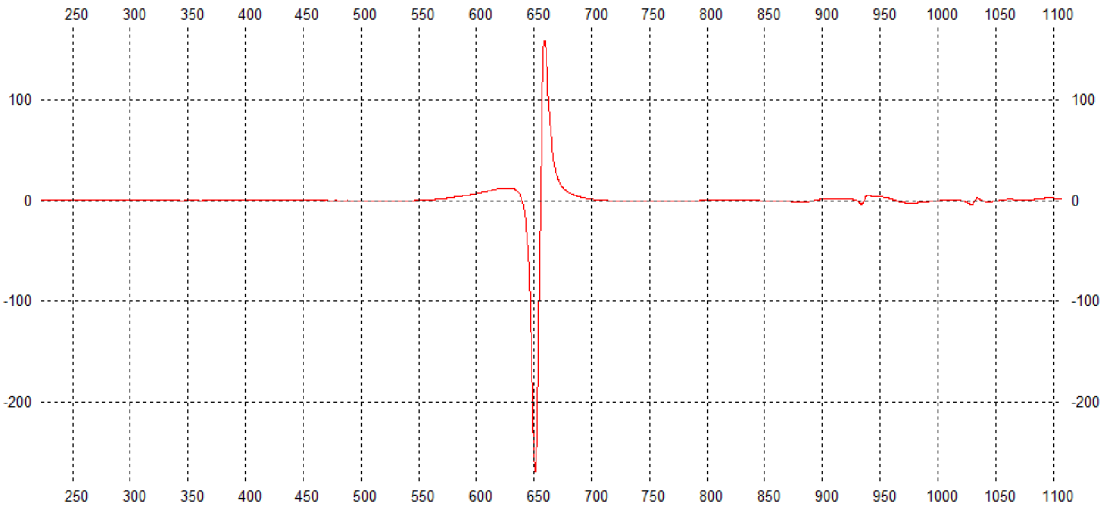
Sidescan sonar image of debris item 700728, measuring 6.2 x 0.2 x 0.1 m



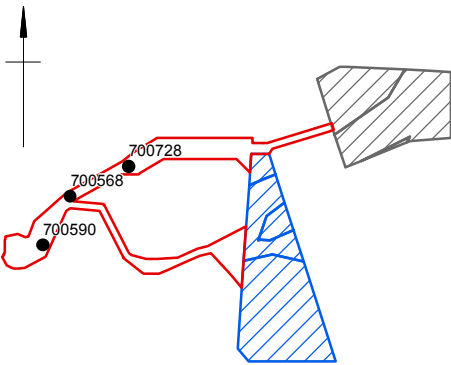
Associated magnetic anomaly of possible chain 700568, measuring 20 nT



Associated magnetic anomaly of ferrous debris item 700590, measuring 4091 nT



Associated magnetic anomaly of ferrous debris 700782 measuring 429 nT



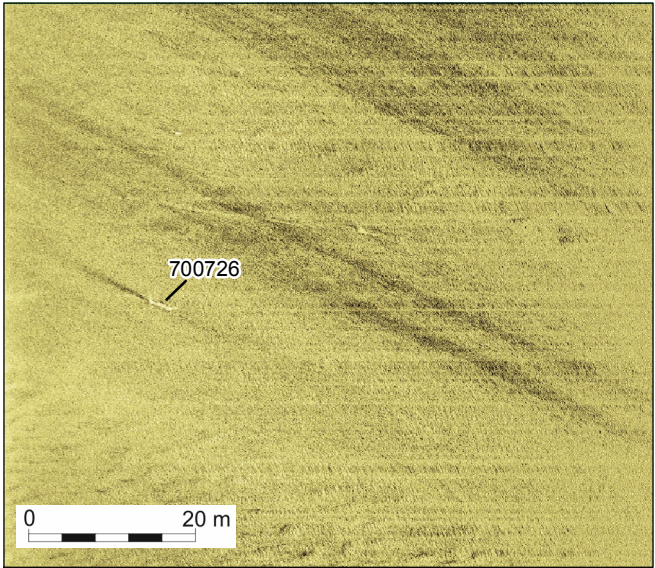
- Proposed Offshore Export Cable Route
- EA1N Site Area
- EA2 Site Area
- Data example

Coordinate system: WGS84 UTM31N
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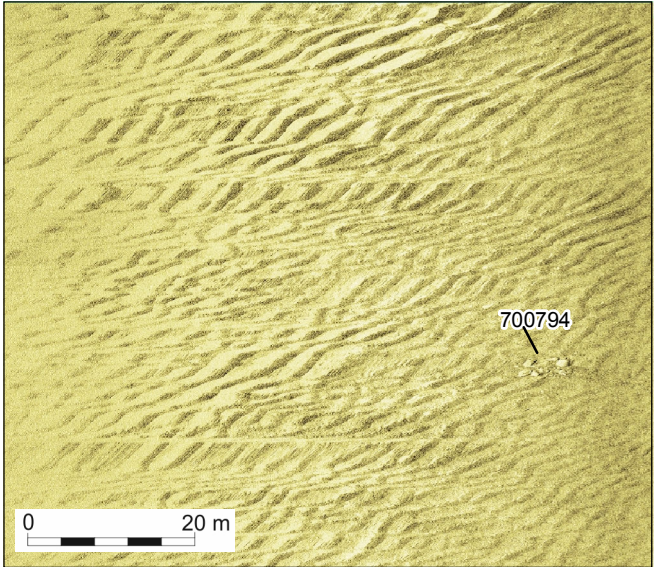
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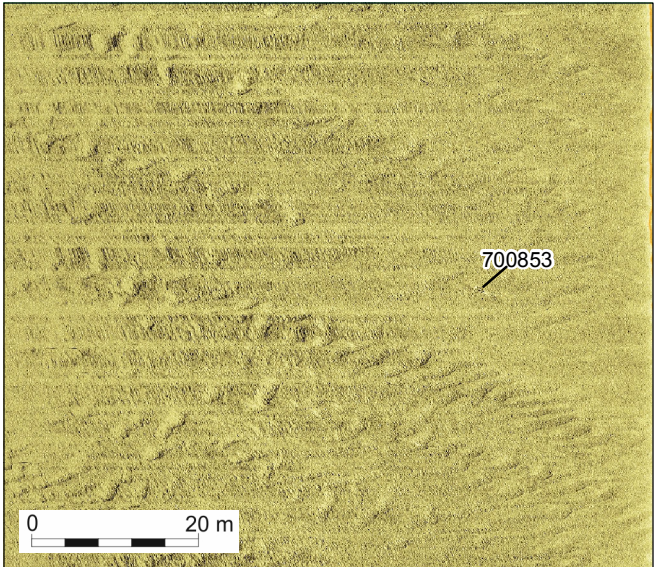
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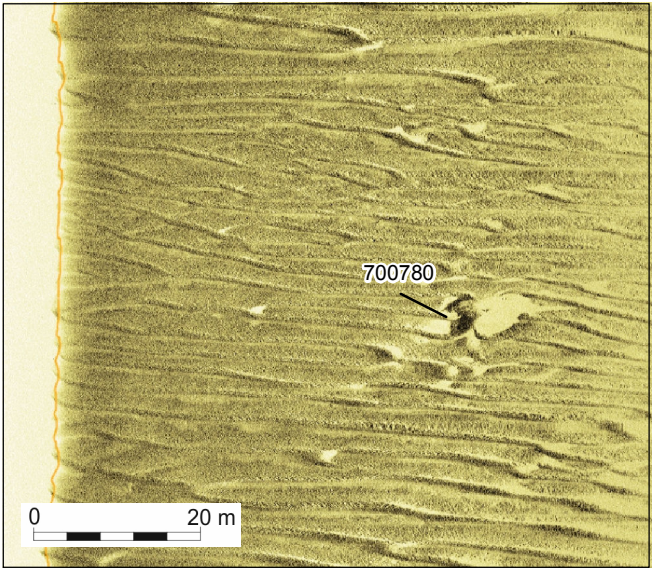
Sidescan sonar image of bright reflector 700726, measuring 2.0 x 1.7 x 0.1 m



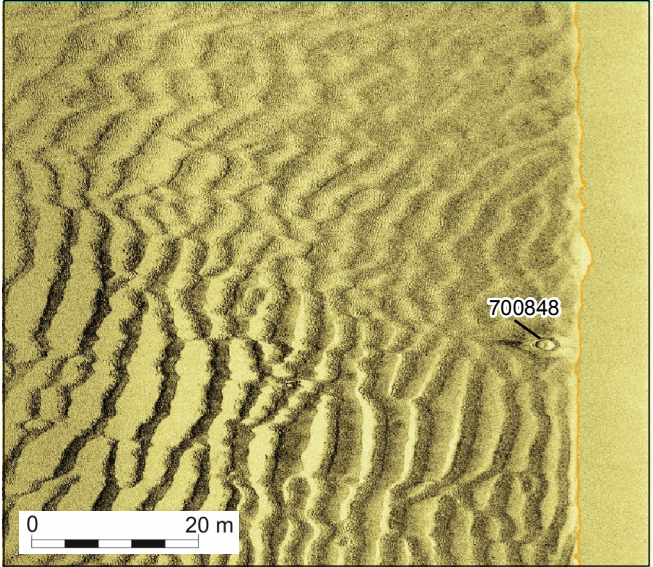
Sidescan sonar image of debris field 700794, measuring 22.2 x 7.8 x 0.3 m



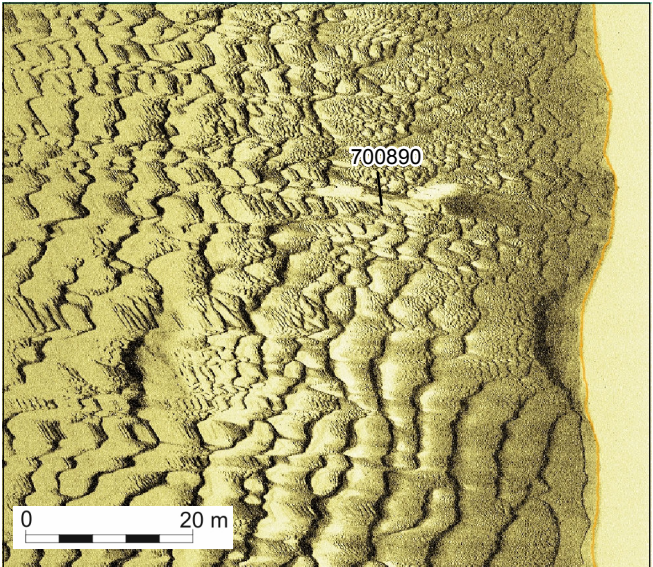
Sidescan sonar image of debris item 700853, measuring 1.5 x 0.8 x 0.0 m



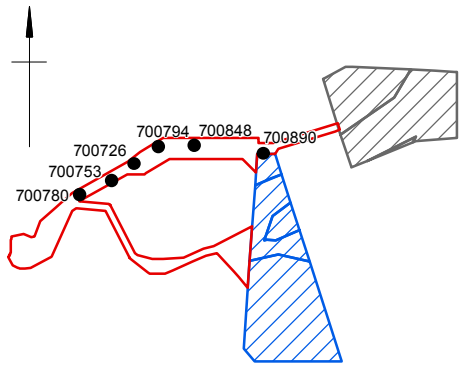
Sidescan sonar image of dark reflector 700780, measuring 14.5 x 4.8 x 1.4 m



Sidescan sonar image of debris item 700848, measuring 4.0 x 3.0 x 0.4 m



Sidescan sonar image of seabed disturbance 700890, measuring 18.1 x 12.7 x 0.8 m



- Proposed Offshore Export Cable Route
- EA1N Site Area
- EA2 Site Area
- Data example

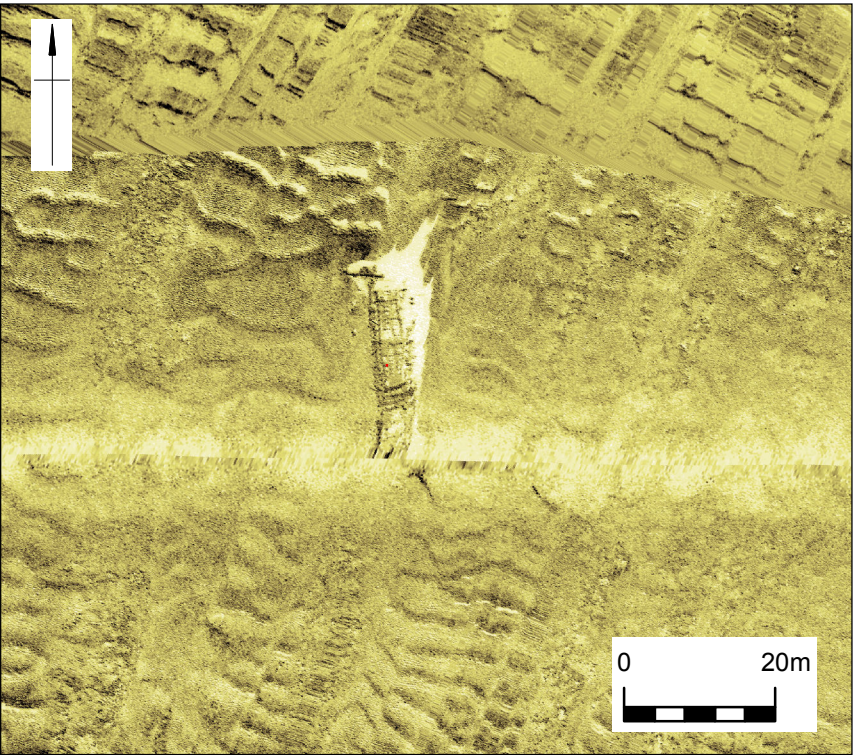
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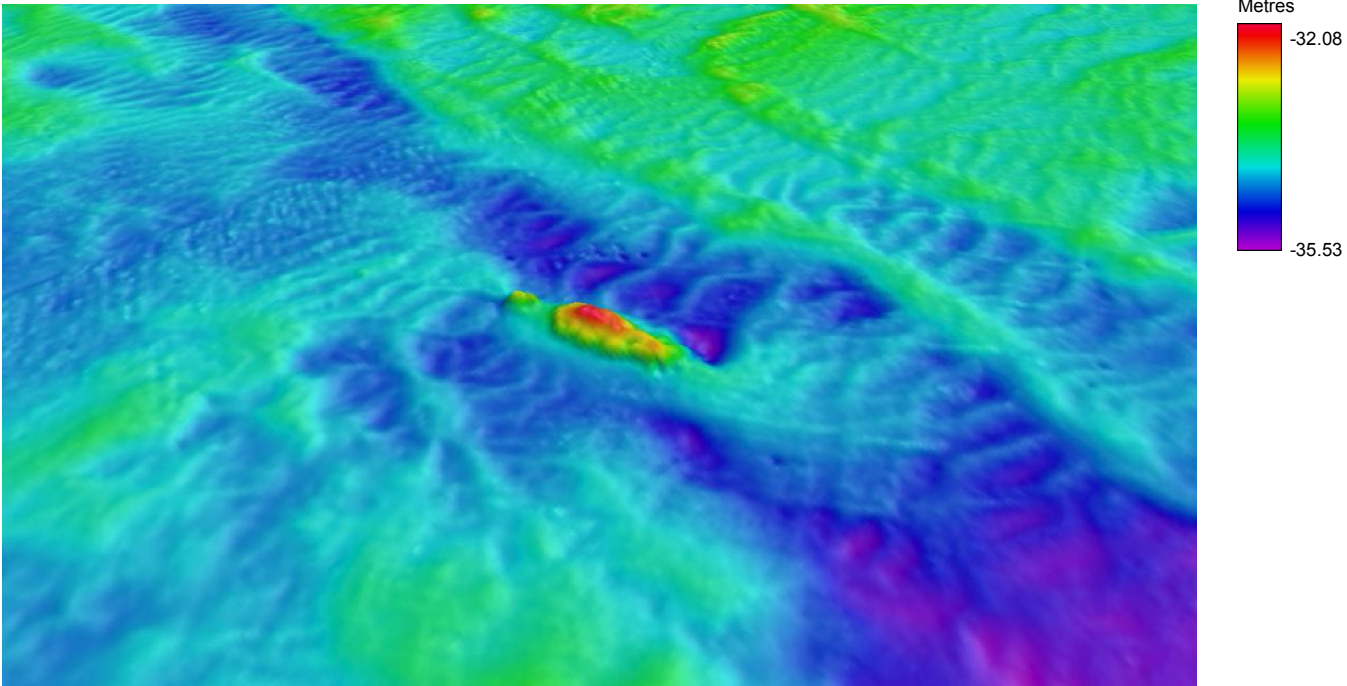
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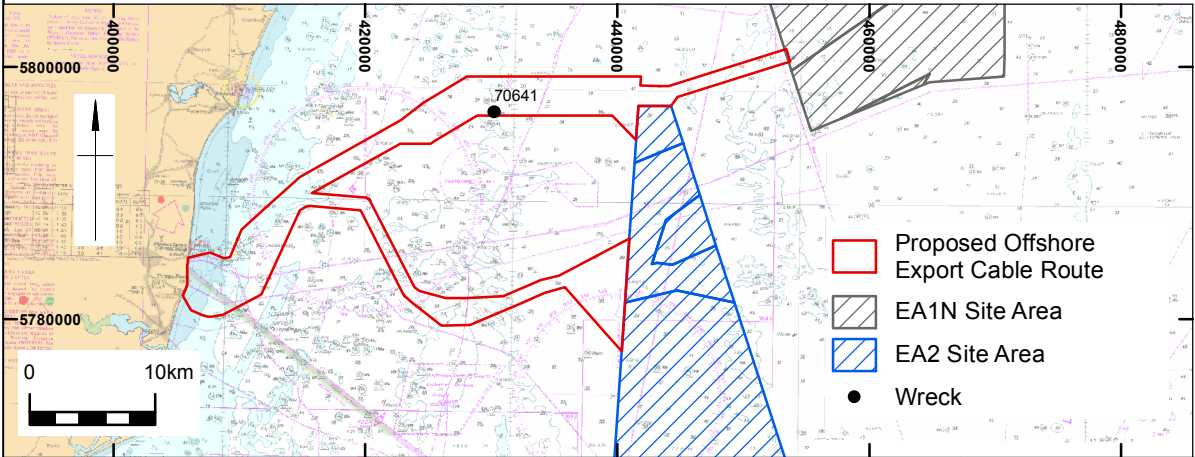
Location		430250E, 5796405N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		70641 is a small and well-contained wreck situated amongst small bedforms on the seabed. It is located in the central northern section of ECR and orientated approximately north-south. This wreck is recorded in the UKHO as <i>St Patrick</i> and was lost in 1976 following an explosion onboard.		
		On the SSS data, the wreck appears as a defined structure with some linear dark reflectors, possibly timbers extending 25.0 m by 8.0 m. The curved appearance and compact structure indicates that the vessel may be upside-down, with no apparent superstructure visible. Appears to either have a break or hole close to one end of the vessel. Not much of a debris field present, appears well contained but partially buried.		
		Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.		
		In the MBES data this wreck is clearly visible as a very large oval mounded feature isolated on the seabed, likely overturned.		
Build	Type	Fishing Vessel		
	Construction	Wood		
	Dimensions (m)	21 x 5.5 x 2.4		
	Shipyard	Unknown		
Loss	Cause	Explosion on board		
Extent of Survival		The UKHO (10350) records that the wreck was first recorded in this position in 1982, with the most recent survey in 2017 describing the wreck as intact and upright with no superstructure apparent, covering an area of approximately 35.0 m x 4.5 m x 6.5 m and at 170/35°.		
		The wreck is still largely intact. There is very little visible surrounding debris, suggesting most of the wreck is still contained within the hull itself. The wreck is partially buried and the presence of bedforms suggests the sediment is mobile. The bathymetry data suggest that one end of the hull may have collapsed that may be linked with the cause of loss due to explosion.		



Sidescan sonar image of **70641**, 25.0 m x 8.0 m x 2.8 m



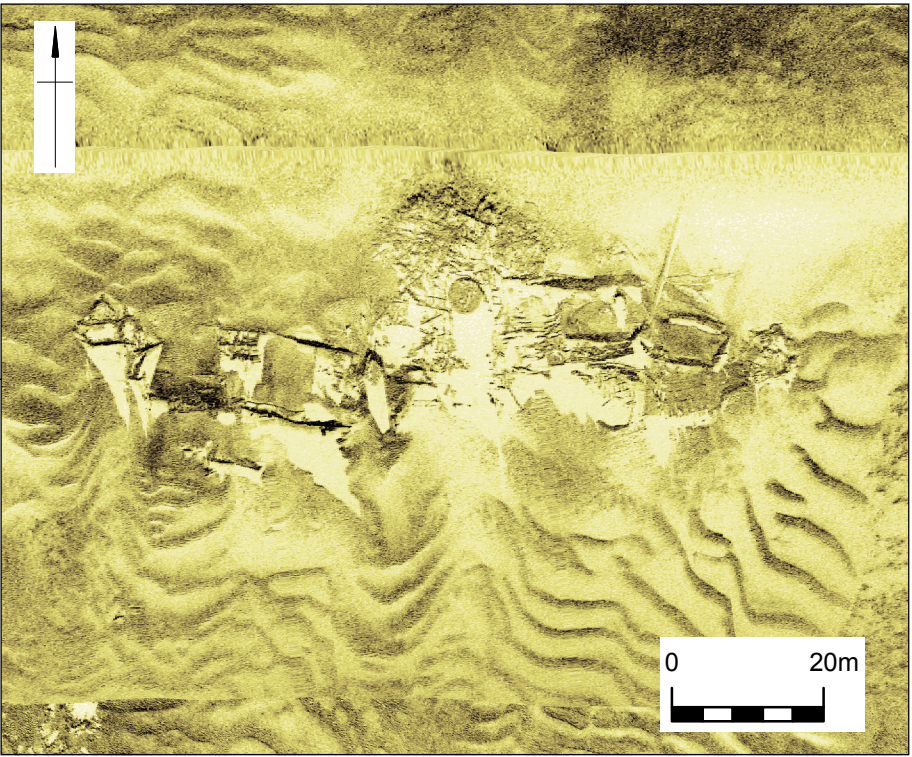
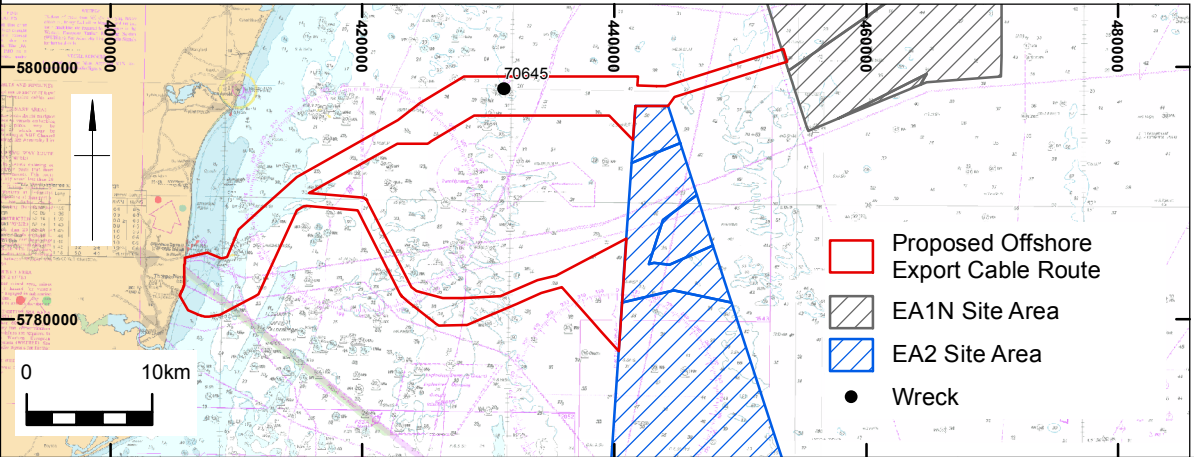
Multibeam bathymetry image of **70641**, looking south-west (x1 vertical exaggeration)



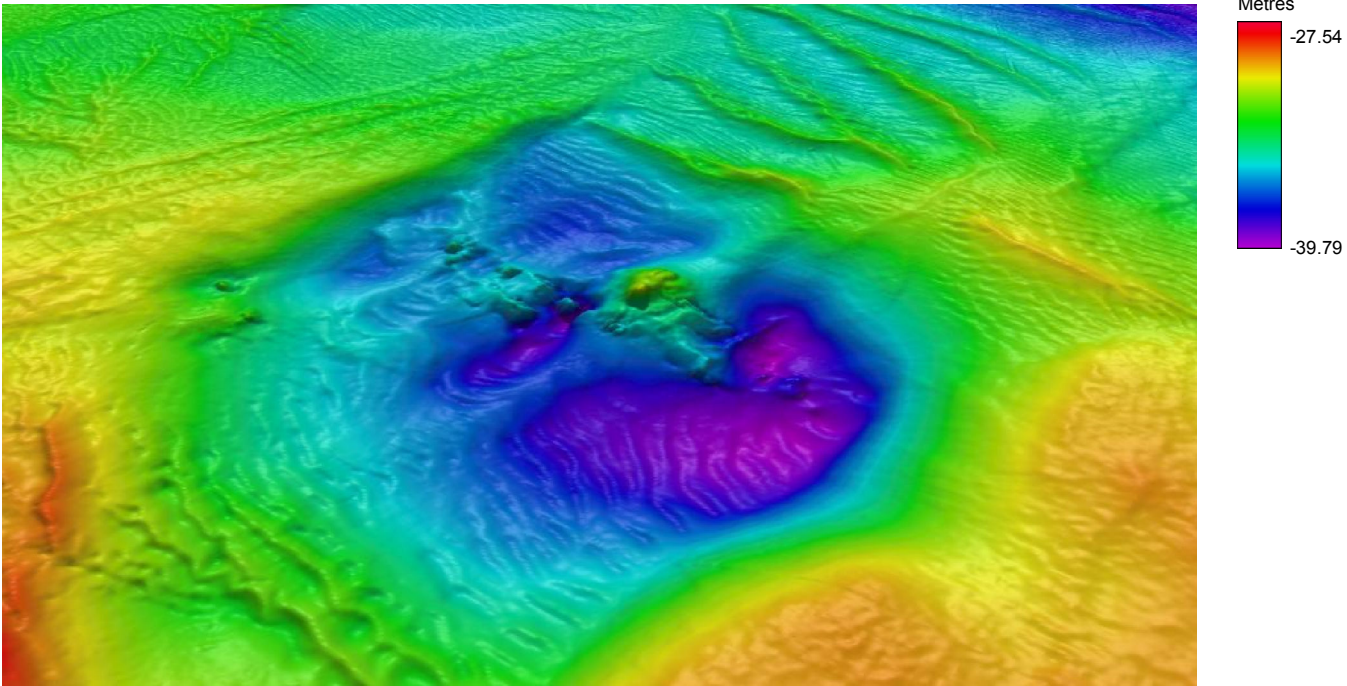
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Location		431268E, 5798215N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		70645 is a large and very dispersed wreck situated within an area of large bedforms and associated scour. It is located in the central northern section of ECR and orientated approximately east-west. This wreck is recorded in the UKHO as the <i>Groenlo</i> , Dutch steamship of 1984 gross tons.		
		In the SSS data, the wreck appears slightly broken up. Various internal features, structures and items are visible in the data, such as two dark cylindrical items, likely to be the two boilers and a mound extending from the main structure with slight texture that may be associated coal spoil.		
		Due to the magnetometer line spacing in this section, it is not possible to confirm whether the items are comprised ferrous material.		
		The MBES data show that the wreck is a collection of large items in a large area of scour surrounded by bedforms. Nearby items of debris seen to be scattered to the south-west (700835-9).		
Build	Type	Steamship		
	Construction	Wood		
	Dimensions (m)	83.8 x 12.5 x 5.8		
	Shipyard	N V Boele's, Bolnes (1926)		
Loss	Cause	Torpedoed by E-boat (24 th November 1941)		
Extent of Survival		The <i>Groenlo</i> was equipped with two boilers, a triple expansion engine of 209 HP and a single shaft. Its machinery was made by N V Boele's schps and Machfb, Bolnes. At its time of loss, the <i>Groenlo</i> was carrying a cargo of coal when it was torpedoed en route from Hartlepool for London (1941).		
		The UKHO (10357) records that the wreck was first recorded in this position in 1959. The most recent survey (2017) describe the wreck as degraded and partially buried, with an orientation of 087/26°.		
		The wreck appears dispersed, partially buried and possibly in two pieces. The cargo of coal looks to have spilled out on to the surrounding seabed. There are also a large number of debris items in the surrounding seabed.		



Sidescan sonar image of **70645**, 107.1 m x 49.8 m x 2.1 m

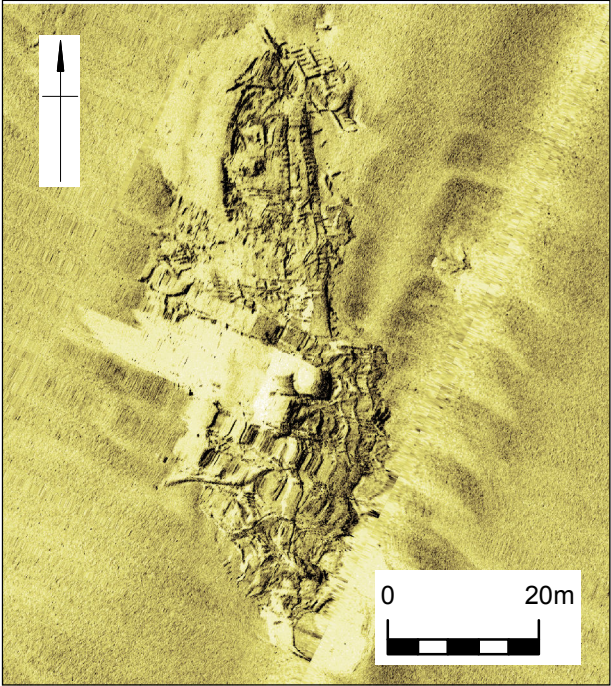


Multibeam bathymetry image of **70645**, looking north-west (x1 vertical exaggeration)

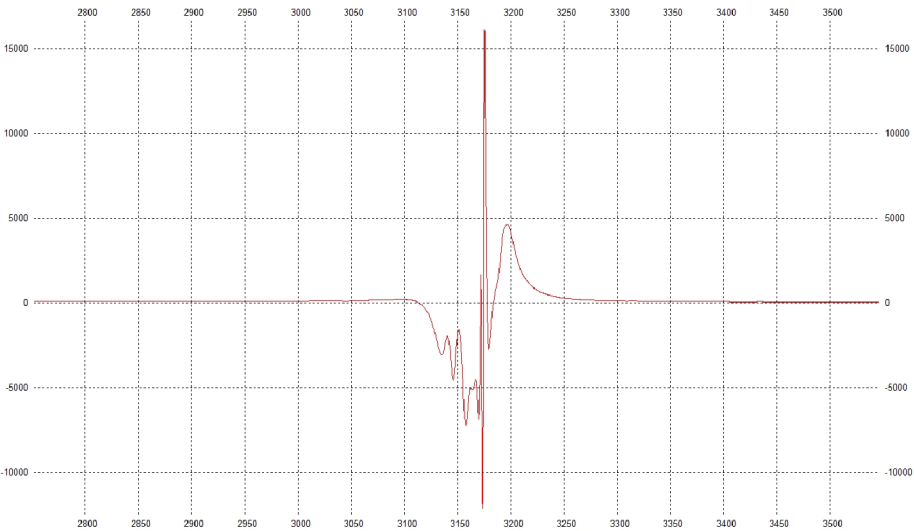
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ID 700218 – Jim

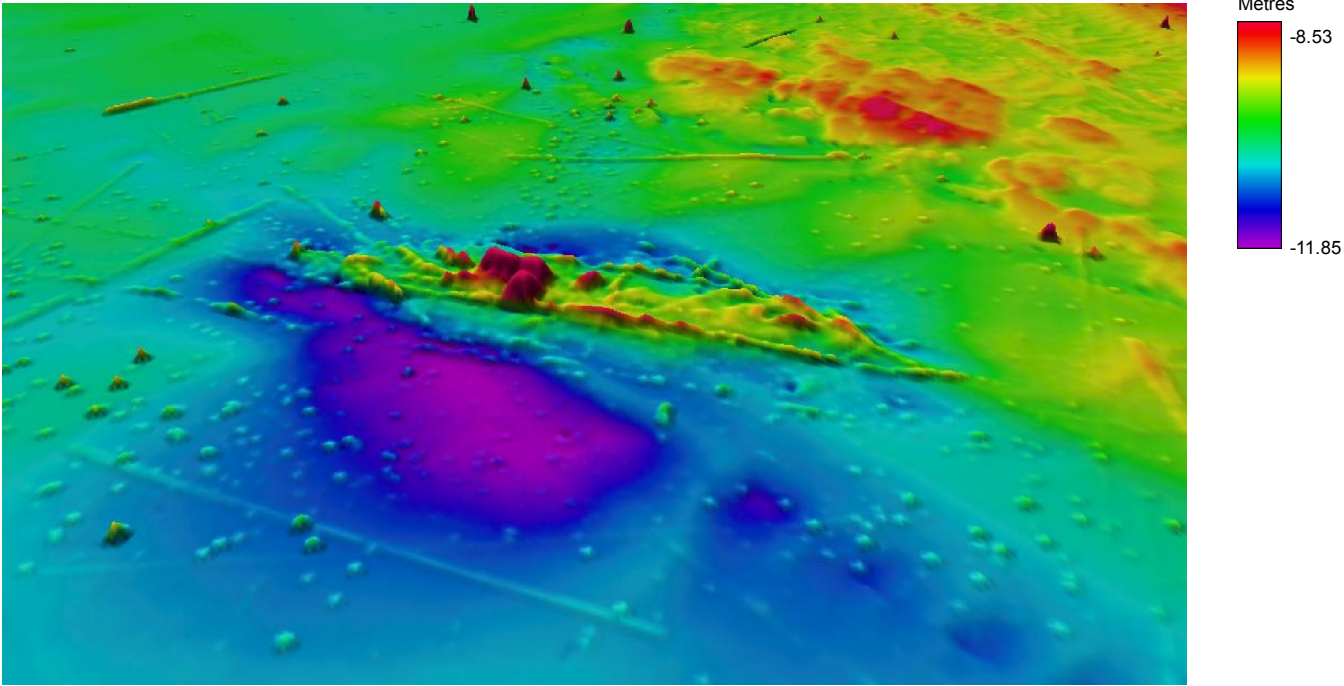
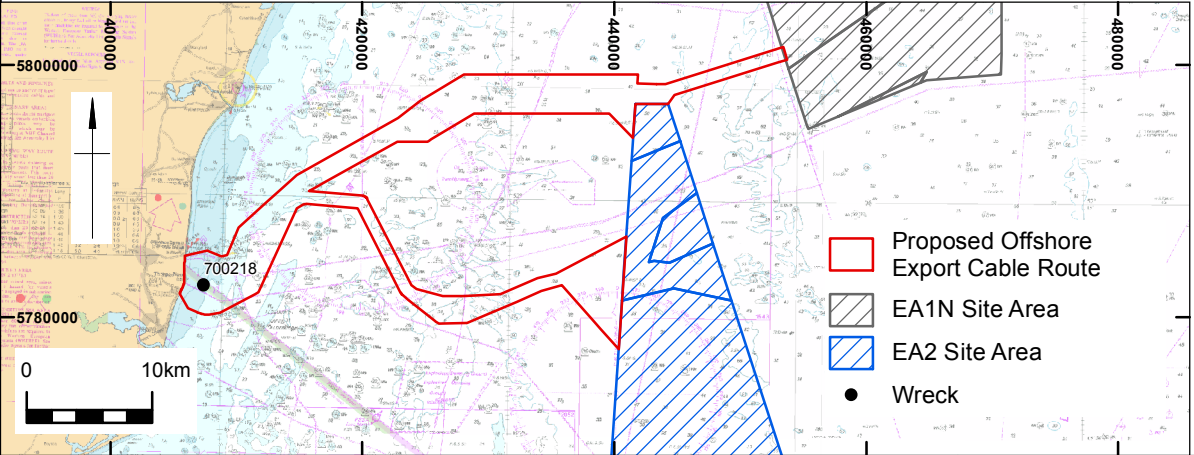
Location		407392 E, 5782532 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700218 is a large and much dispersed wreck situated amongst large bedforms on the seabed. It is located in the nearshore section of ECR and orientated approximately north-south. This wreck is recorded in the UKHO as <i>Jim</i> .		
		In the SSS data, detail of the wreck interior can be seen including many linear features that are likely related to slats and deck items, hundreds of dark reflector objects with and without shadows are visible within the wreckage. The main structure is approximately 85.7 x 46.9 m. Two large objects with large shadows, indicating a height of approximately 2.5 m, are possibly boilers. One end of either the bow or stern looks to be intact. The wreck has significant height off the seabed and sediment build up on its east side.		
		There is a very large magnetic response (up to 31,220 nT) in the magnetometer data associated with this wreck, indicating ferrous material is present or a ferrous construction		
		In the MBES data this wreck is clearly visible as a very large oval mounded feature with internal linear mounds visible, in the centre of the wreck two to three large rounded mounds are discernible.		
Build	Type	Steamship		
	Construction	Metal		
	Dimensions (m)	117.3 x 15.2 x 8.5		
	Shipyard	J. Crown & Sons Ltd. Sunderland (1908)		
Loss	Cause	Sunk by German midget submarine, or possibly mined (31 st of October 1941)		
Extent of Survival		The <i>Jim</i> had two boilers, a single shaft and a triple expansion engine of 99 NHP. It was sunk on passage from Goole to Dieppe in 1941. The circumstances surrounding the loss are unclear.		
		The UKHO (10313) records that the wreck was first recorded in this position in 2015. It was observed as upright and fully collapsed, with plating collapsing outwards. The two boilers were also identified. Further surveys in 2016 and 2017 showed the wreck in one piece and identified an orientation of 177/357° and a scour length of 142 m.		
		The wreck appears upright and fairly compact but deteriorated, with minimal superstructure. There appears to be a slight dispersal of debris still within close proximity over an area of flat seabed; there is potential for some burial of items. The magnetic anomaly for this wreck has a magnitude of 31,220 nT and contains multiple peaks running almost parallel along the wreck, suggesting partial ferrous construction. The wavelength of the anomaly appears to correlate with the length of the vessel, indicating minor dispersal of ferrous cargo.		



Sidescan sonar image of **700218**, 85.7 m x 46.9 m x 2.5 m



Magnetic profile of **700218**, measuring of 31,220 nT



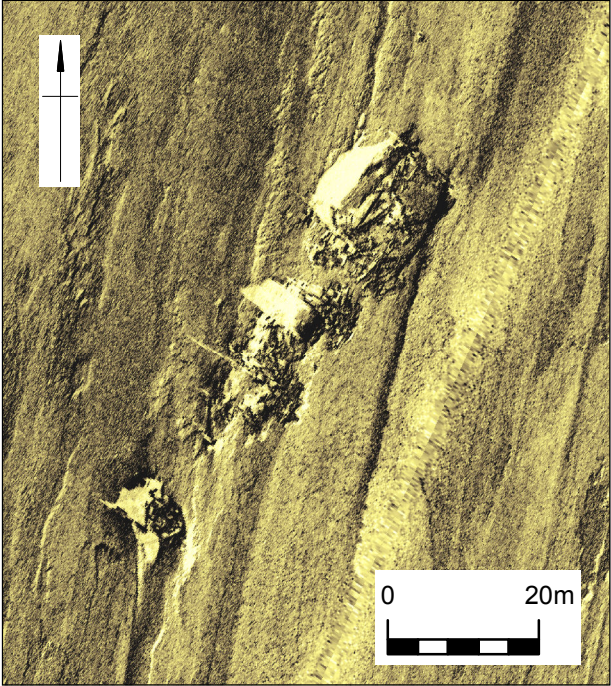
Multibeam bathymetry image of **700218**, looking south-west (x1 vertical exaggeration)



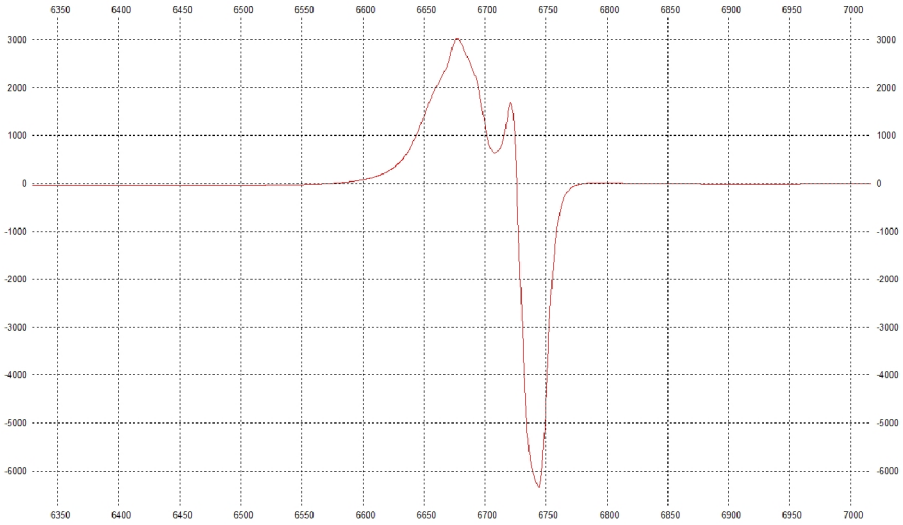
Coordinate system: WGS84 UTM31N
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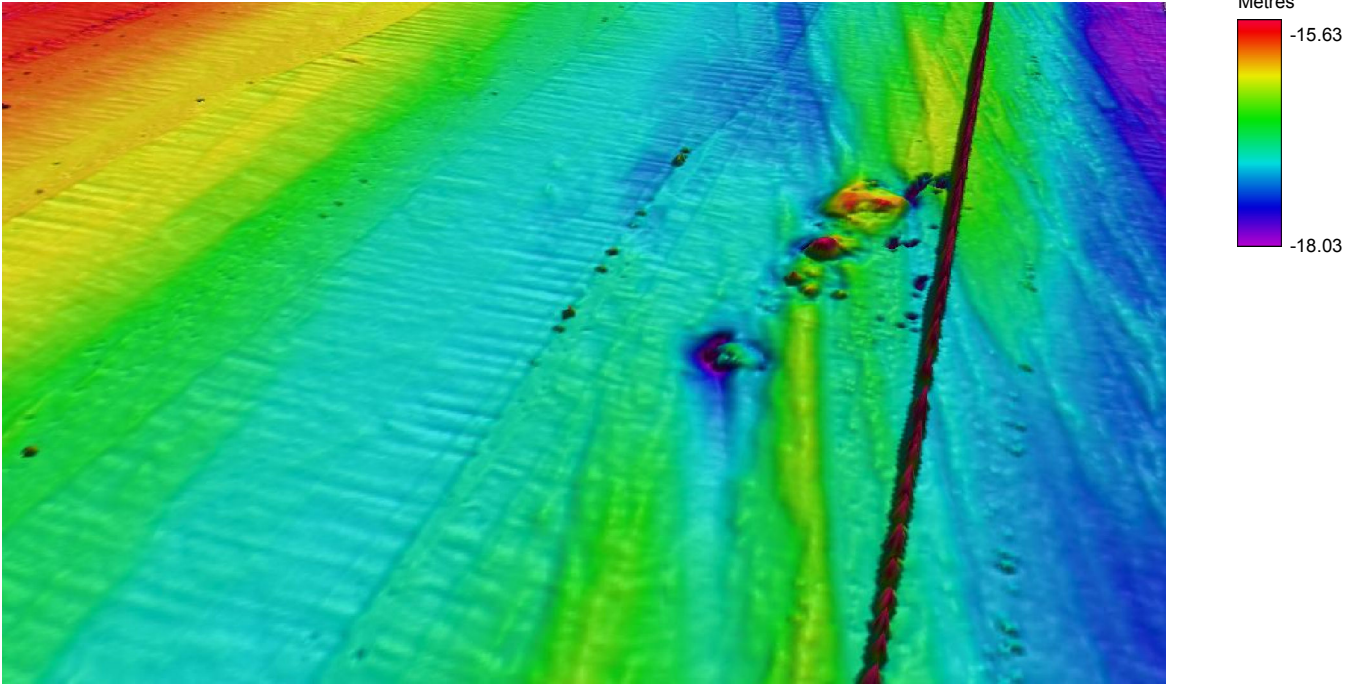
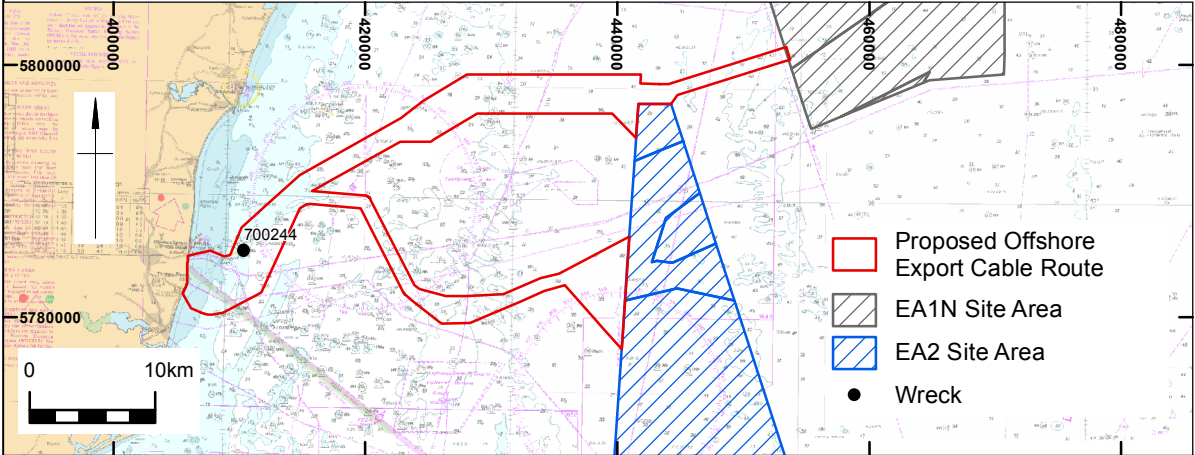
Location		410382 E, 5785290 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700244 is a large and broken up wreck situated on a rough and uneven area of the seabed amongst several north-south trending bedrock outcrops. The wreck is located in the south-western section of ECR and orientated in a north-east to south-west direction, possibly broken into two or more pieces. This wreck is recorded in the UKHO as the <i>Mangara</i> , an 1821-ton steamship.		
		In the SSS data the wreck appears to be broken up into three main sections with height, and low laying items in-between, stretching approximately 72.4 m by 20.8 m. The structure appears highly degraded, with a small number of dark reflectors in the surrounding seabed extending approximately 83 m, which may represent scattered debris. There is a large rounded object that may be a boiler, visible in the centre of the wreck standing at 2.3 m.		
		There is a very large magnetic anomaly of 9,392 nT associated with this vessel, which is likely associated with ferrous structure and the considerable quantity of iron ore in the cargo and the time of sinking.		
		In the MBES data the wreck is visible as an alignment of uneven mounds, there appear to be several small but deep depressions around the edge of the wreck up to 3 m deep.		
Build	Type	Steamship		
	Construction	Unknown		
	Dimensions (m)	79.2 x 11.3 x 5.2		
	Shipyard	A. Stephen & Sons, Glasgow		
Loss	Cause	Torpedoed by UB-16 (28 th of July 1915)		
Extent of Survival		The <i>Mangara</i> had one boiler and a triple expansion engine of 149 HP with a single shaft. It was lost in 1915 en route from Bilbao to West Hartlepool with a cargo of 2400 tons of iron ore, torpedoed with the loss of eleven men.		
		The UKHO (10325) records that the position of the wreck has been known since 1917. A survey in 1985 observed the wreck orientated 030/210° and the hull broken in two. Two surveys in 2017 indicted the wreck was almost entirely buried.		
		The wreck appears upright and dispersed. It is very degraded, although still with considerable height, and occasionally buried indicating potential for some debris dispersal. The magnetic anomaly for this wreck has a magnitude of 9,392 nT and contains multiple peaks, suggesting partial ferrous construction or else dispersal of ferrous cargo.		



Sidescan sonar image of **700244**, 72.4 m x 20.8 m x 2.3 m



Magnetic profile of **700244**, measuring of 9392 nT



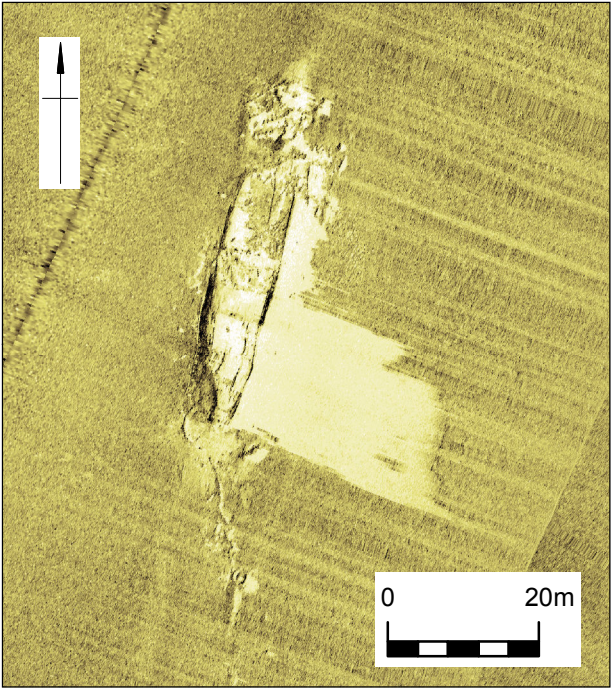
Multibeam bathymetry image of **700244**, looking north (x1 vertical exaggeration)



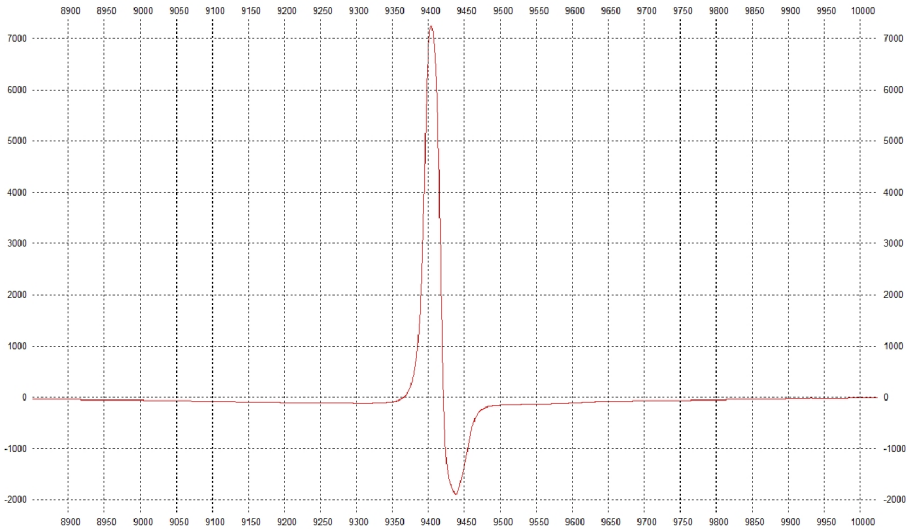
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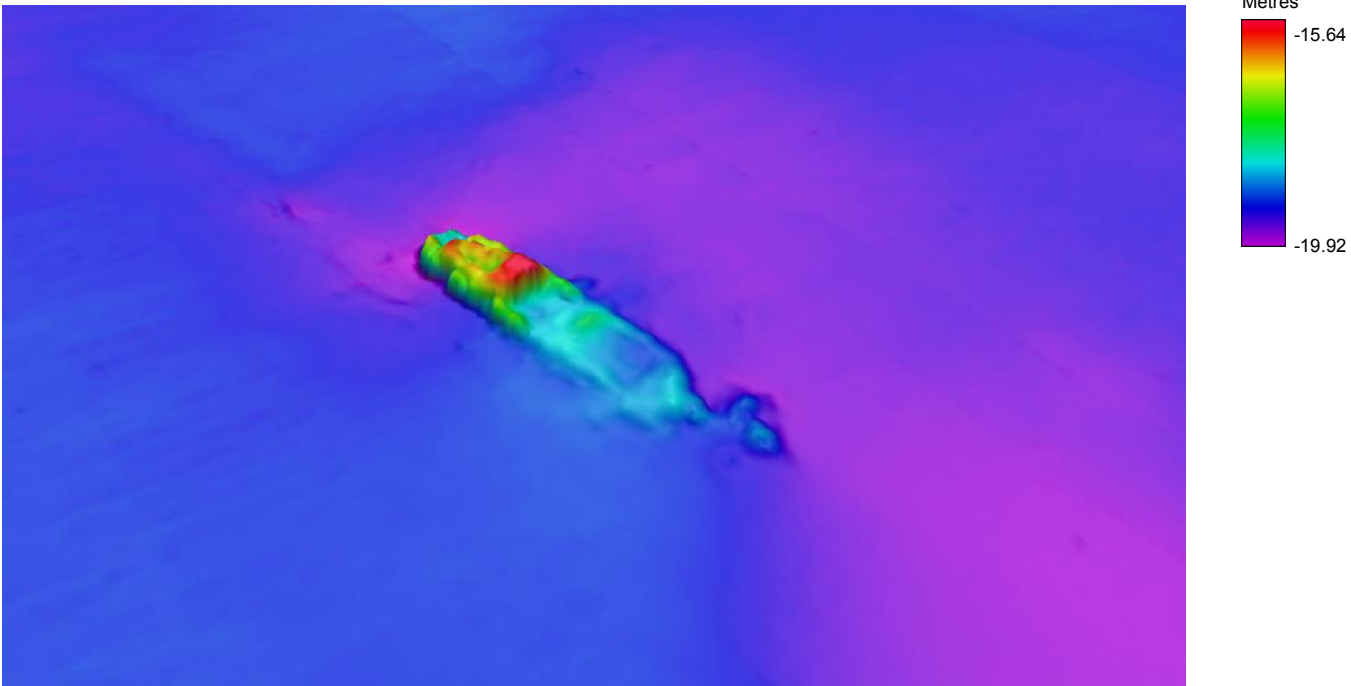
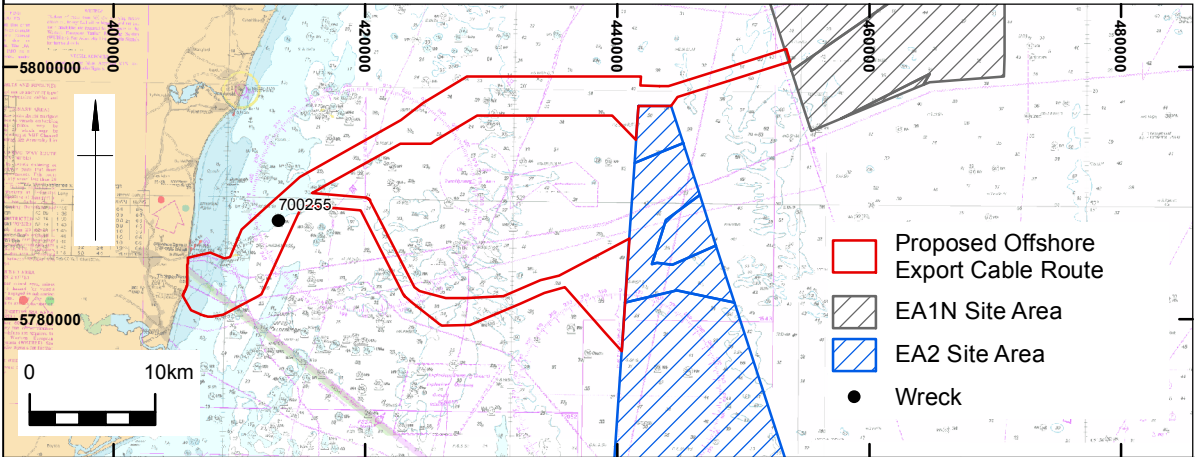
Location		413082 E, 5787765 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700255 is an upright and generally intact wreck situated in a relatively flat area of seabed. It is located in the western section of ECR and orientated approximately north to south. This wreck is recorded by the UKHO as the <i>Alastair</i> , a 366-ton steamship.		
		On the SSS data, the wreck is clearly distinguishable extending 53.4 m x 17.2 m, appearing relatively well intact albeit with some disintegration at one end (possibly the bow). The vessel has numerous small dark reflectors surrounding it in close proximity, some appear linear, and are likely to be associated wreck debris.		
		A linear dark reflector with an object with height at one end (700254) can be seen extending from the ships stern which may be an anchor and chain or other related debris.		
		There is a very large magnetic anomaly of 9,152 nT associated with this wreck indicating a ferrous construction or cargo.		
		In the MBES data this wreck has clear superstructure preserved on one half of the ship and appears intact on a featureless area of the seabed.		
Build	Type	Steamship		
	Construction	Metal		
	Dimensions (m)	44.2 x 7.3 x 3.4		
	Shipyard	J. Duthrie & Sons Ltd., Aberdeen (1902)		
Loss	Cause	Struck two mines (6 th of November 1915)		
Extent of Survival		The <i>Alastair</i> had one boiler, a single shaft triple expansion engine of 71 HP. Additional aft machinery was built by Clyne Mitchell & Co., Aberdeen. The ship was lost in 1915 due sinking quickly, with the loss of seven lives.		
		The UKHO (10331) records that the wreck was identified by sonar at this location in 1966 and further surveyed in 1985. A survey in 2016 identified the wreck as having an orientation of 014/194° and as largely intact and partially buried.		
		The wreck is upright as largely intact, with a partially collapsed at one end, likely the bow. A few minor reflectors (such as 700254) are visible outside the hull outline on the surrounding seabed which suggests debris items are mainly confined to the superstructure. This is supported by the character of the associated magnetic signature, which is a clear, smooth dipole, indicating no clear spread of debris.		



Sidescan sonar image of **700255**, 53.4 m x 17.2 m x 5.9 m



Magnetic profile of **700255**, measuring of 9152 nT



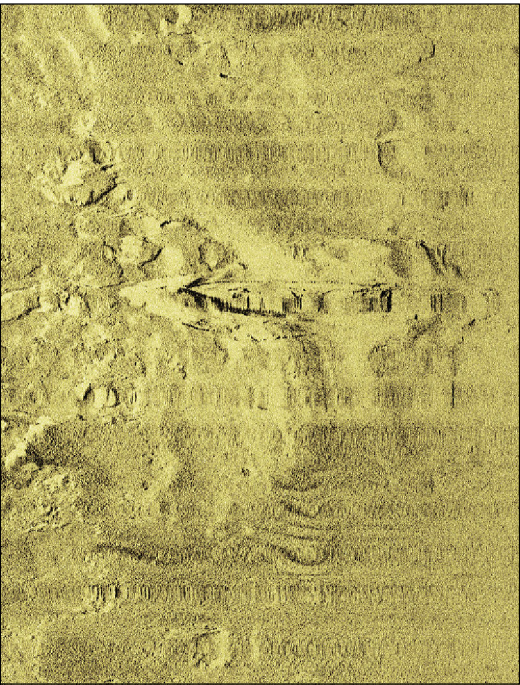
Multibeam bathymetry image of **700255**, looking south-west (x1 vertical exaggeration)



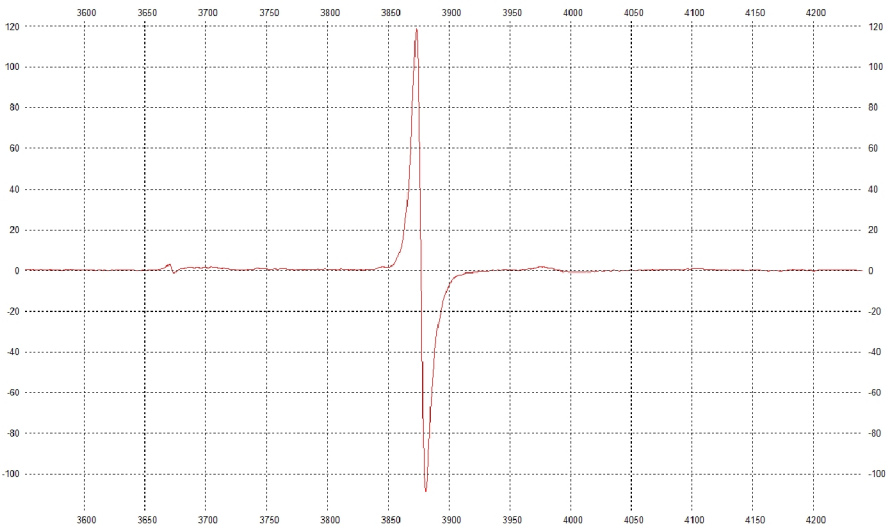
Coordinate system: WGS84 UTM31N
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Scale:	Sidescan 1:1000 at A3	Illustrator:	KL
Path:	W:\Projects\117810\GIS\FigsMXD\Geophys ECR\2018_11_14		

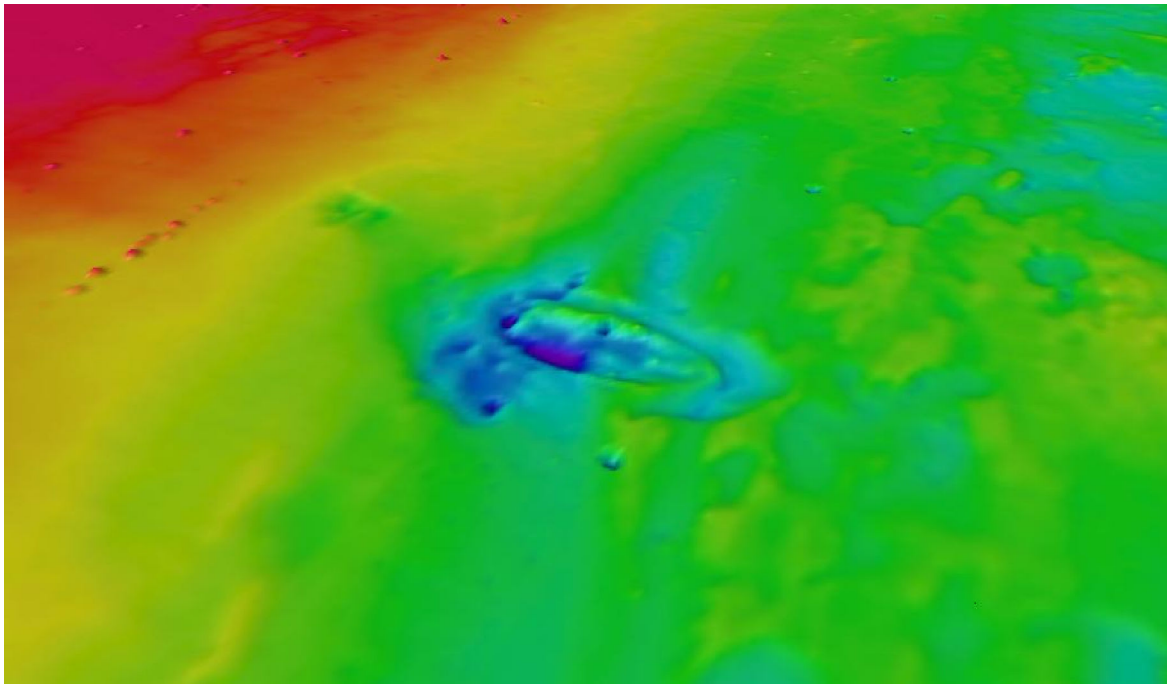
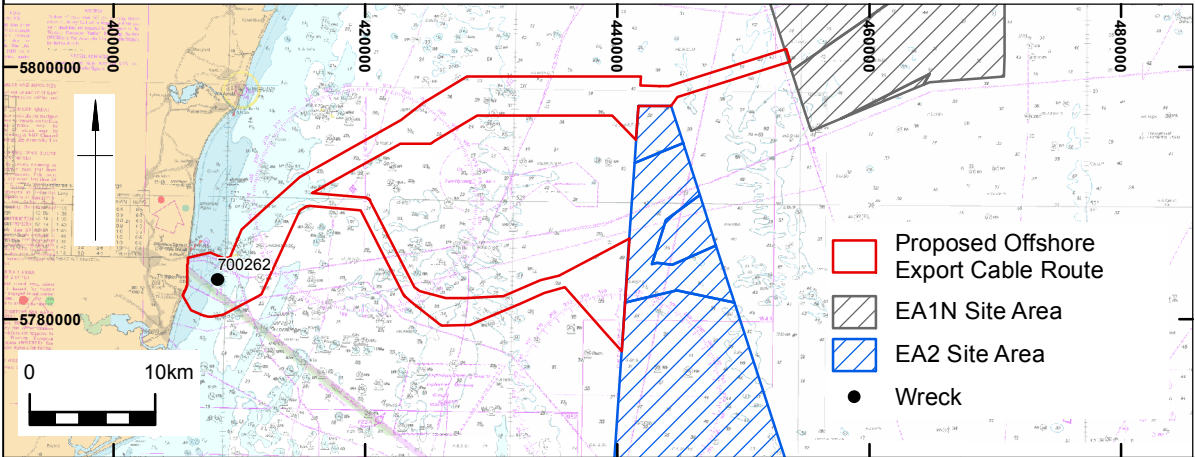
Location		408286 E, 5783069 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700262 is a wreck situated on the seabed amongst large bedforms. The wreck appears to be in a poor state of preservation and/or partially buried within sediment. As such, the surrounding bedforms may mask its true extent. The wreck has some possible associated scour and is orientated in a north-west to south-east direction on the seabed. The wreck is recorded in the UKHO database as an unknown wreck identified by geophysical survey in 2016.		
		On the SSS data, the wreck is visible as a defined outline approximately 25 m by 8 m, but poorly imaged as affected by motion in the data. The wreck is situated in an area of scour with defined edges making it unclear if additional debris or natural formation. There are some seabed disturbances close to the area, which may be associated debris fields, however they're not clearly different from other natural features in the area. There is no discernible height or superstructure, which suggests either a low laying structure or burial.		
		There is a large magnetic anomaly of 228 nT associated with this wreck indicating a ferrous construction or cargo.		
		In the MBES data the hull of the vessel is clearly distinguished in one piece with some possible faint internal structures potentially still standing. Due to the low laying nature of the wreck it is unclear and indicates partial burial.		
Build	Type	Unidentified vessel		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	Cause	Unknown		
Extent of Survival		This is an unknown wreck, UKHO (87913) records state that the wreck was first recorded by a geophysical survey in 2016 and examined further in 2017. Observed dimensions were 29.1 x 17.7 m with a height of 1.4 m and an orientation of 120/300°.		
		With the wreck being of low relief and partially buried the extent of survival is hard to confirm. There is no clear debris field, indicating either buried or still within the main structure. The clean magnetic signature (228 nT) suggests a small vessel of ferrous construction or cargo with no or minor spread of debris distributed in the area.		



Sidescan sonar image of **700262**, 25.0 m x 8.0 m x 0.8 m



Magnetic profile of **700262**, measuring of 228 nT



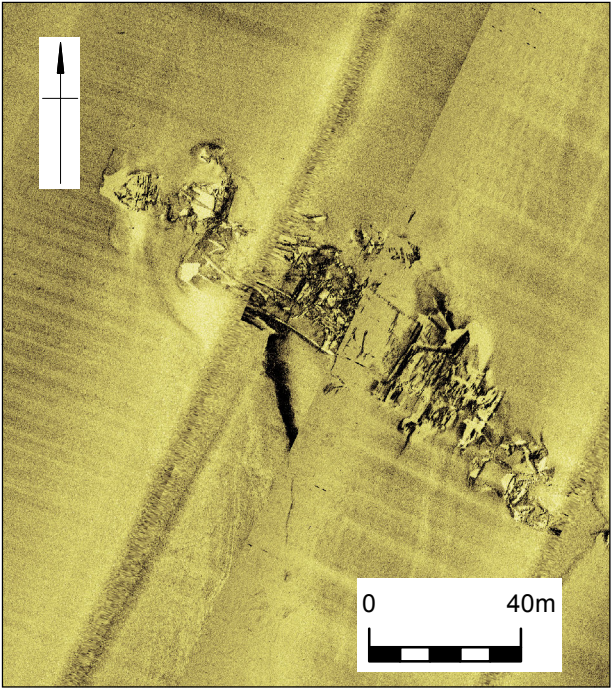
Multibeam bathymetry image of **700262**, looking north (x1 vertical exaggeration)



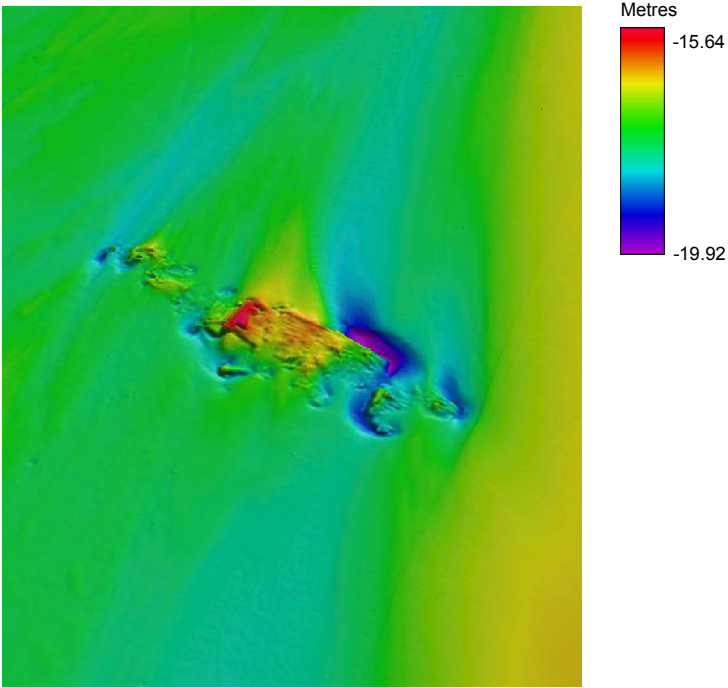
Coordinate system: WGS84 UTM31N
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Scale:	Sidescan 1:1000 at A3	Illustrator:	KL
Path:	W:\Projects\117810\GIS\FigsMXD\Geophys ECR\2018_11_14		

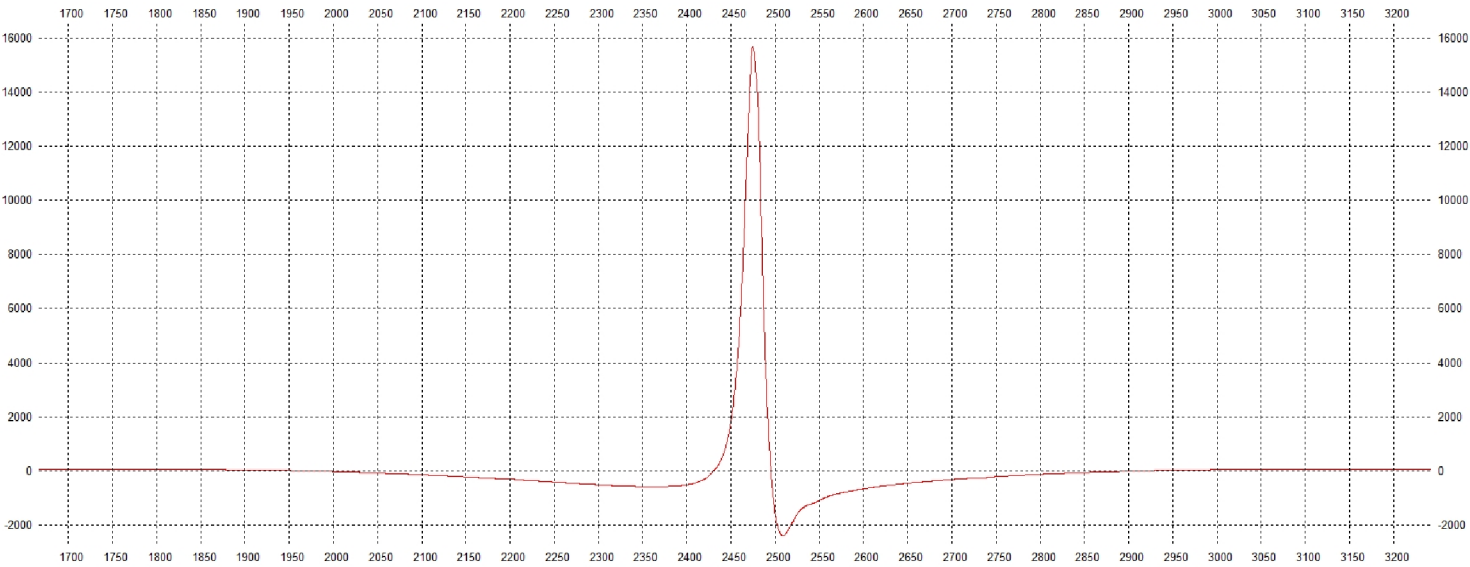
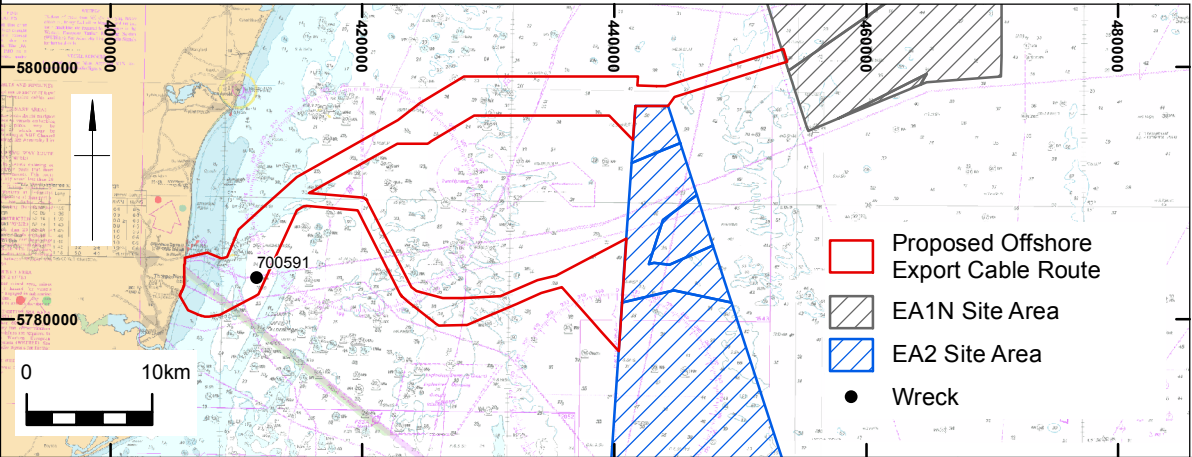
Location		411648E, 5783222N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700591 is a large upright wreck located in an area of flat and slightly textured seabed. It is located in the south-western section of ECR and orientated approximately north-west by south-east. This wreck is recorded in the UKHO as the <i>Magdapur</i> , a steamship with a gross tonnage of 8641 t.		
		In the SSS data, the wreck appears upright but broken stretching 62.0 m by 46.7 m, with some additional debris outside the hull perimeter. Some internal structures are visible but indistinct in places due to partial burial and break-up. Scour and sediment build-up can be seen on all sides. A large dark reflector with an angular shadow can be seen at the bow. Both the bow and stern look slightly more degraded than the central superstructure.		
		The wreck is associated with a very large magnetic anomaly of 21,605 nT, which suggests a ferrous construction or cargo.		
		The MBES dataset shows the wreck upright with a large object in the centre of the hull, which may be the remains of the boiler. Considerable sediment build-up and scour is also seen.		
Build	Type	Steamship		
	Construction	Metal		
	Dimensions (m)	144.2 x 19.5 x 10.4		
	Shipyard	Lithgows Ltd., Port Glasgow (1921)		
Loss	Cause	Struck mine laid by German aircraft (10 th September 1939)		
Extent of Survival		The <i>Magdapur</i> was powered by a 1147 HP turbine with a single shaft and two boilers. It was lost en route from South Shields to Southampton, sinking after breaking in two due to a mine strike, with the loss of six lives.		
		The UKHO (10321) records that the wreck was identified by sonar at his location in 1962. A further survey in 1972 described the wreck as completely pulverised with only steel found. No parts except engine room components were identified and the lie of the vessel was not clear. A sonar survey in 1985 showed considerable dispersion and a further survey in 2017 found the wreck lying at 124/304° orientation, partially buried and broken.		
		The wreck is upright and largely intact but broken, some bow and stern collapse is visible. Only a few reflectors are visible outside the hull outline on the surrounding seabed which suggests most debris items are confined to the superstructure. This inference is supported by the character of the associated magnetic signature, which is a clear, smooth dipole of magnitude 21,605 nT.		



Sidescan sonar image of **700591**, 162.0 m x 40.0 m x 4.1 m



Multibeam bathymetry image of **700591**, looking south (x1 vertical exaggeration)



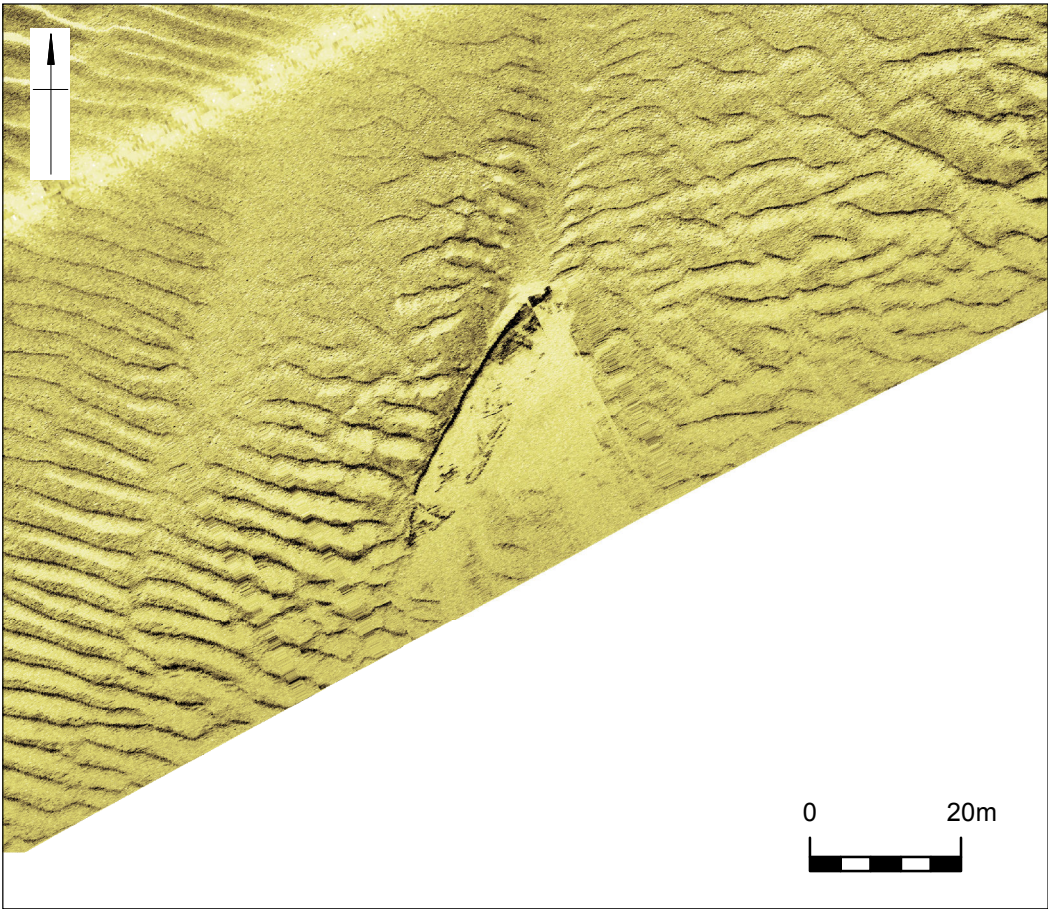
Magnetic profile of **700591**, measuring of 21,605 nT



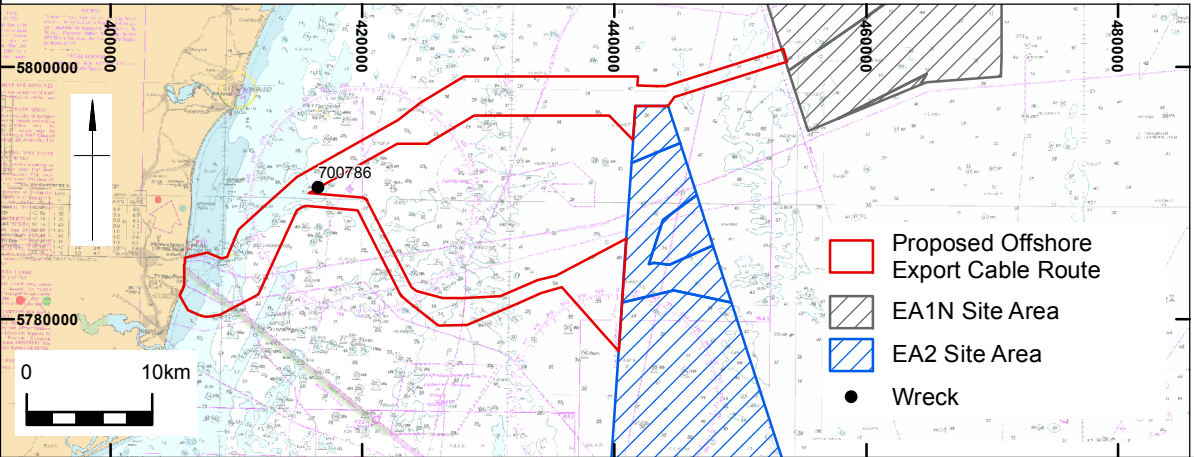
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Location		416532 E, 5790383 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700786 is an upright wreck situated amongst small bedforms. It is located south just outside of the northern route of the ECR. The wreck is recorded in the UKHO as the <i>Mascotte</i> , a 1097-ton steamship.		
		On the SSS data, the wreck appears to be relatively well intact and probably upright, located within an area of rippled bedforms. Few internal details are visible are seen on the SSS data, however the wreckage is seen to have significant height.		
		The wreck may be associated with a nearby magnetic anomaly 700787 (112 nT), although the magnetometer coverage does not extend to the wreck position the sensor may have been influenced by the nearby structure. As we are unable to confirm this the features have been retained as two separate anomalies.		
		The wreck is located outside the study area, so no MBES data covers the site, however the wreck's associated AEZ falls within the study area and therefore has been retained.		
Build	Type	Steamship		
	Construction	Metal		
	Dimensions (m)	76.1 x 9.4 x 5.0		
	Shipyard	Ramage and Ferguson, Leith (1885)		
Loss	Cause	Sunk by a mine laid by U-6 (3 rd September 1916)		
Extent of Survival		The <i>Mascotte</i> had two boilers, a single shaft and a compound expansion engine. It was sunk on passage from Rotterdam to Leith in 1916, with the loss on one life.		
		The UKHO (10338) records that the wreck was first recorded in 1916, with the general position identified in 1977 by the skipper of <i>Michelle Louisa</i> . It was observed, and the bell removed, in 1991. The position was confirmed during survey in 1993 and swept clear in 2001. Subsequent surveys in 2016 showed the wreck as intact and partially buried, the position was updated with a note of orientation of 027/207°.		
		The wreck appears upright and compact, with clear superstructure. Any debris may be buried, but none is current seen around the wreck site.		



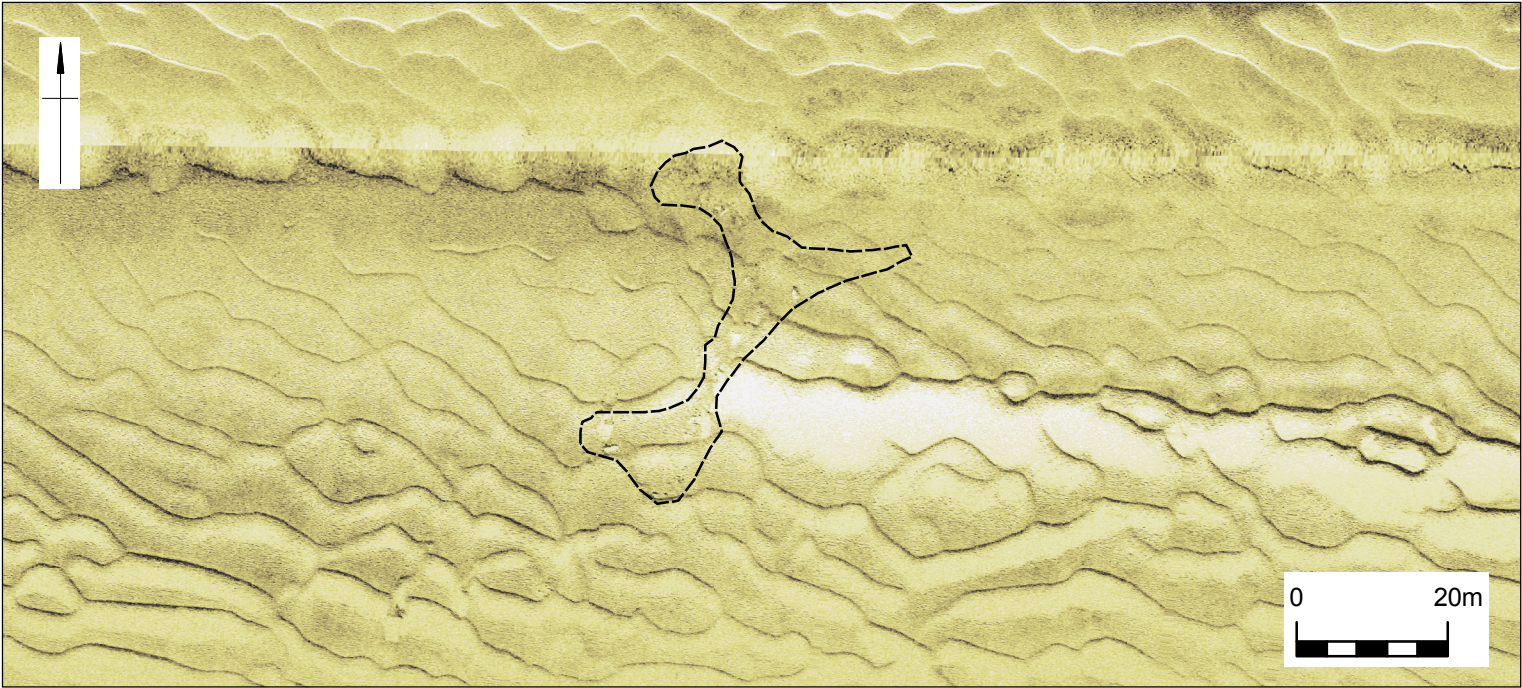
Sidescan sonar image of **700786**, 41.1 m x 8.3 m x 2.3 m



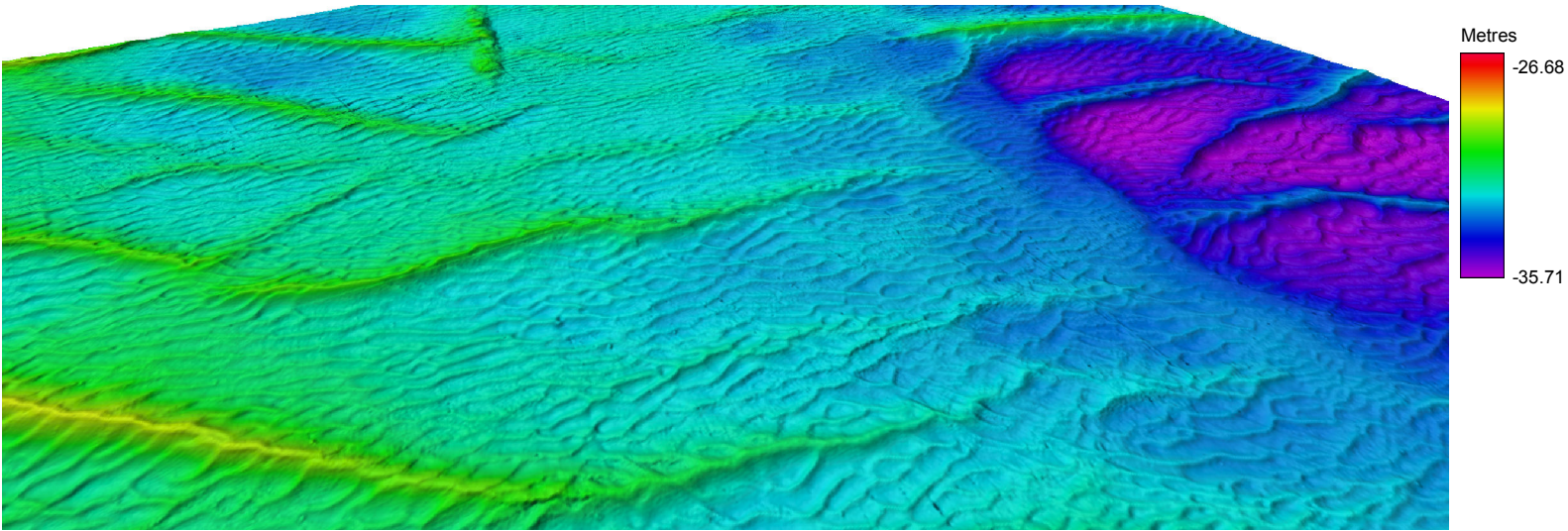
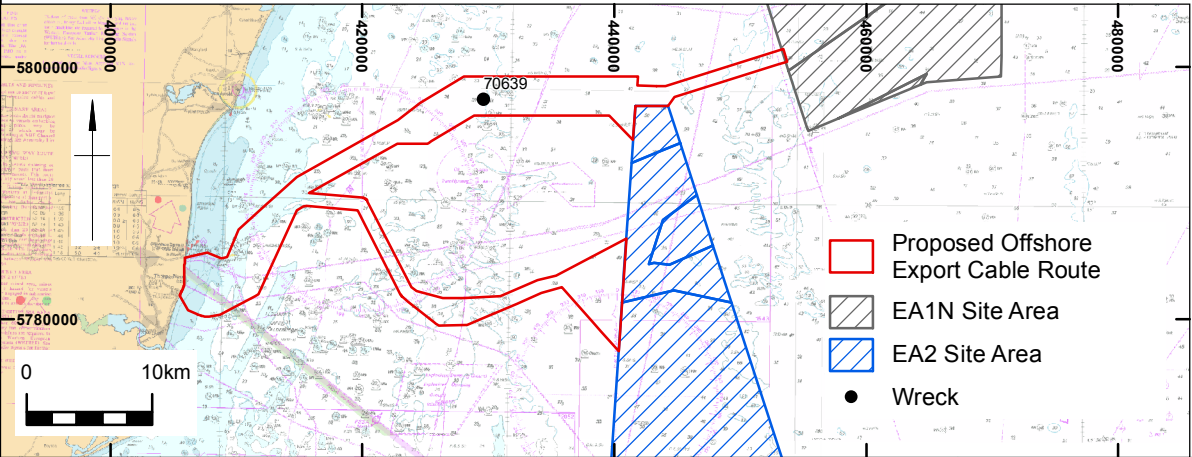
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Location		429622E, 5797407N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		70639 is an area of debris, located in the north-western section of the ECR. The distribution of the debris appears greater in the trough of the bedforms, as such orientated perpendicular to the bedforms in an approximate north-east to south-west direction. This feature is likely linked to a wreck identified in the UKHO records, but the origin is unknown.		
		On the SSS data, a debris field consisting a collection of items of various shapes and sizes, all appear less than 1.5 m. The debris field appears to extend 46.6 m by 6.1 m on the surface, but the full extend is unknown. There is no apparent structure or clear pattern identifiable, as located amongst bedforms further debris or structure may be buried. As there are mobile bedforms debris may be widely spread and buried.		
		Due to the magnetometer line spacing in this section, it is not possible to confirm whether the feature is comprised ferrous material.		
		In the MBES data, the debris is not clearly identifiable amongst the bedforms. An outcropping of bedrock is visible approximately 140 m away, perpendicular to the bedforms, orientated north to south.		
Build	Type	Unidentified vessel		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	Cause	Unknown		
Extent of Survival		Debris appears to be associated with an unidentified wreck (UKHO 10674). The wreck was located in 1982 by HMS Bulldog. Dimension are stated in the UKHO data as 35.5 m x 5.6 m x 4.1 m, laying approximately east to west across, and almost completely buried by, a north to south bedform. It was not located during mine hunting in 1997. During the 2010 East Coast REC survey the wreck was recorded buried by an east to west sand wave, aligned north to south and without apparent structure or debris. This indicated the wreck is regularly covered and uncovered by the mobile sediments, indicating debris may be well scattered within the recent sediments.		
		The wreck is still unconfirmed if intact as no structure is seen at this time. Only a debris field can be identified in the current data, which consists of a number of small items. The main body of the wreck is likely to either be partially buried or widely distributed if not intact due to the presence of mobile sediment bedforms.		



Sidescan sonar image of **70639**, 46.6 m x 6.1 m x 0.4 m



Multibeam bathymetry image of **70639**, looking north-east (x1 vertical exaggeration)

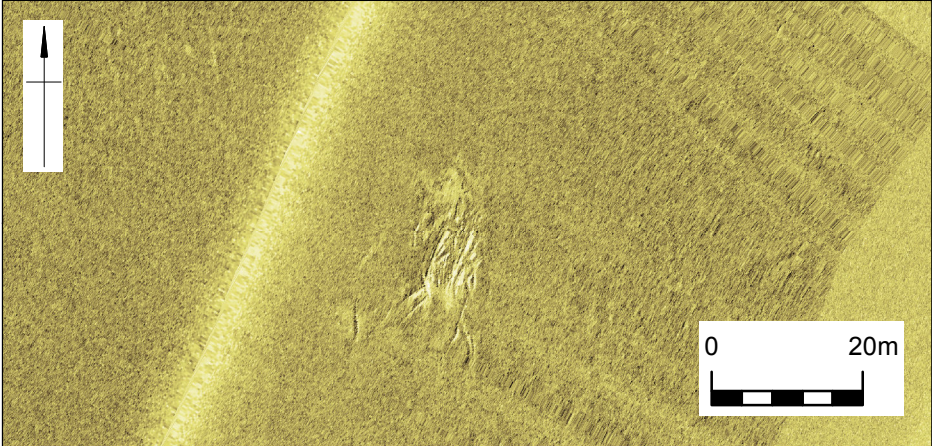


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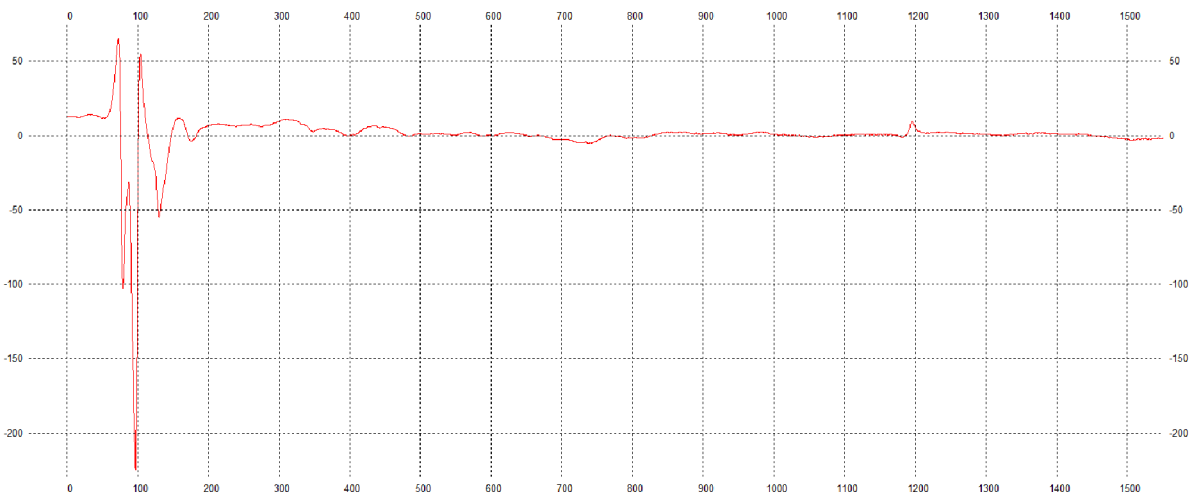
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ID 700257 – Unknown

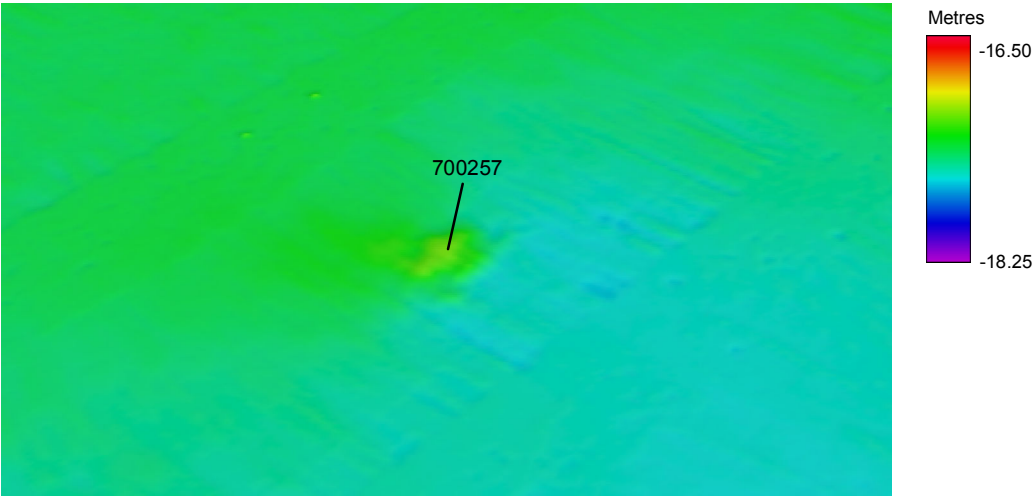
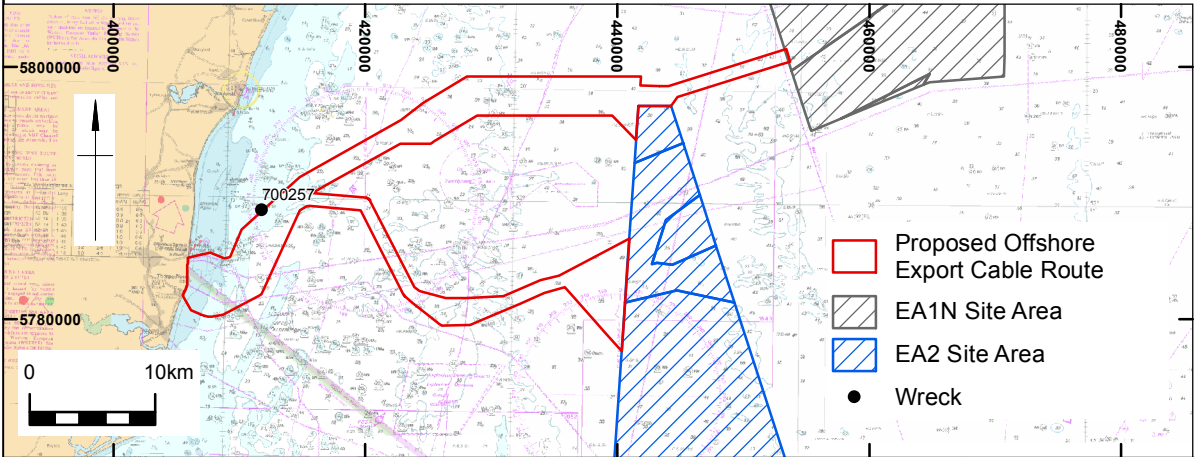
Location		411763 E, 5788611 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700257 is low laying debris field situated over an area of flat seabed, located north of the nearshore, western section of the ECR. The main seabed feature itself is located outside of the ECR, however it has been retained due to proximity.		
		On the SSS data, the debris is a distinct series of dark and bright reflectors that are mostly linear in appearance covering an area of 40 m by 19 m. These items do not appear to have any distinct form or structure to indicate an intact wreck but appears scattered and of a range of sizes with the linear features at various angles. There appears to be a dense area of items, with the debris thinning out in the surrounding area. There may be partial burial of some of these items.		
		There is an associated complex magnetic variance of up to 290 nT, indicating that at least some, if not all, of the debris may be ferrous.		
		In the MBES data, the debris is visible as a low laying mound in an area of flat seabed. The mound correlates to the area of dense debris. A possible further item of debris is situated 47 m north-east of the debris, this is located further outside of the study area and so has not been identified but may be associated.		
		Ferrous debris (700258) located approximately 70 m away (within the ECR) appears of similar form, with items of linear appearance of ferrous content located on an area of flat seabed. They are likely associated.		
Build	Type	N/a		
	Construction	N/a		
	Dimensions (m)	N/a		
	Shipyard	N/a		
Loss	Cause	N/a		
Extent of Survival		The feature currently has no corresponding UKHO data record.		
		It is not known if this area of debris relates to a wreck or lost cargo, therefore the until further information is available the extent of survival is unable to be confirmed.		



Sidescan sonar image of **700257**, 40.0 m x 19.0 m x 0.5 m



Magnetic profile of **700257**, measuring of 290 nT



Multibeam bathymetry image of **700257**, looking south-east (x1 vertical exaggeration)



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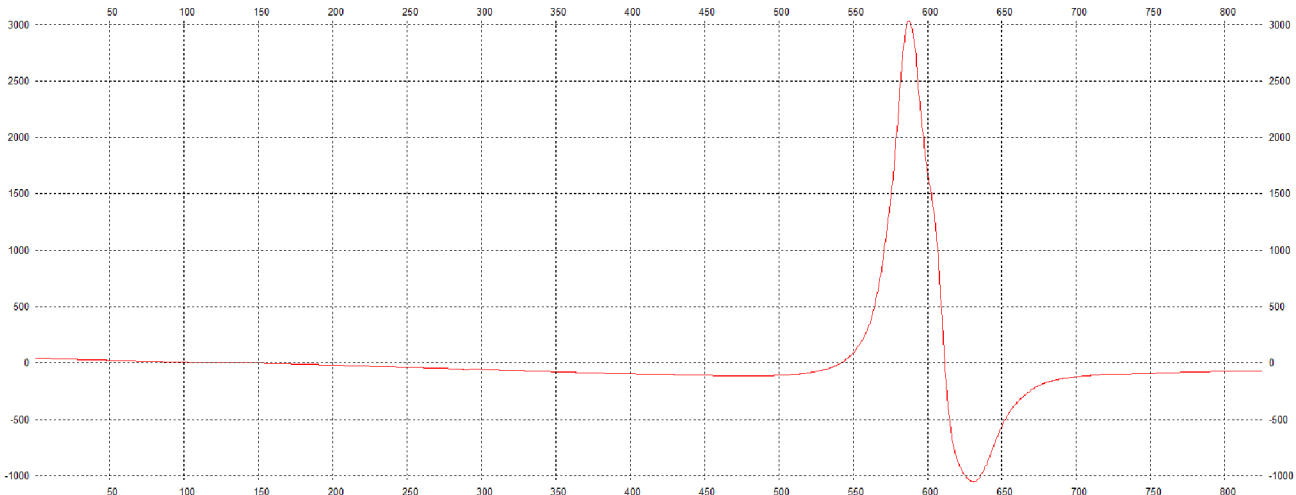
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ID 700590 – Unknown

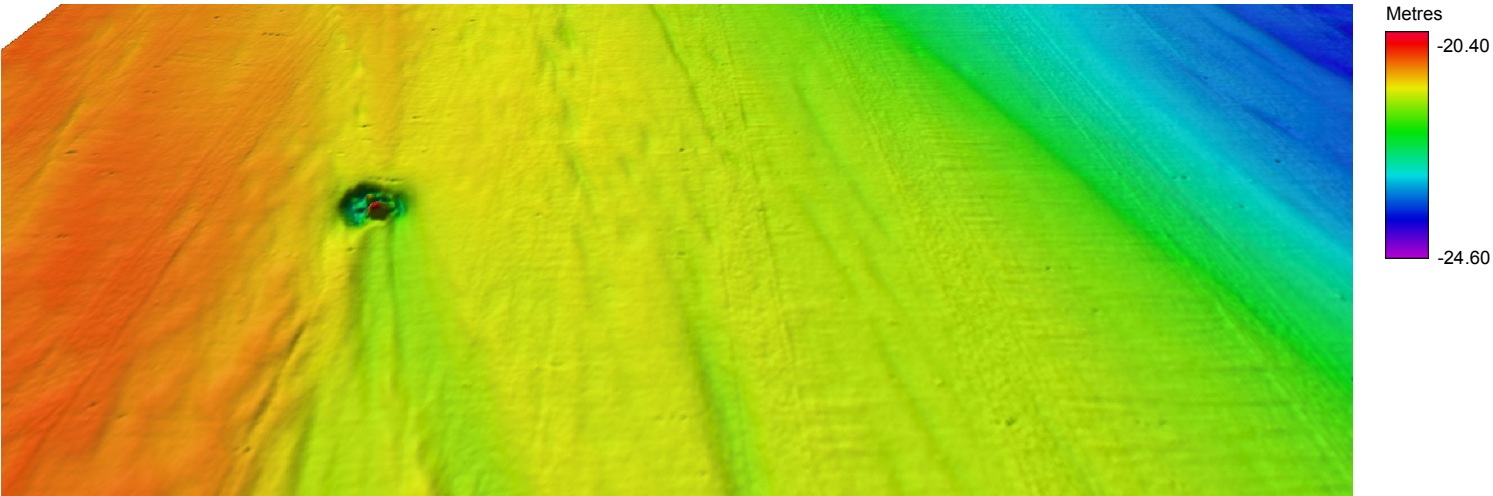
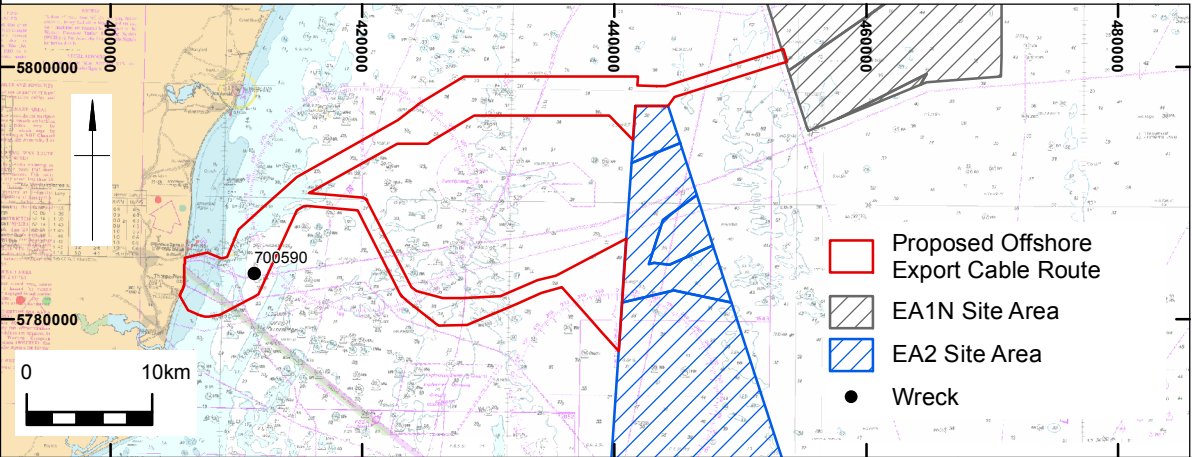
Location		411428 E, 5783615 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700590 is a collection of partially buried debris located amongst flat seabed. There is not clear orientation as items appear compact.		
		On the SSS data, some well-defined details of linear features crossing perpendicular to each other are visible, indicating possible internal structure of approximately 13.3 m by 13.1 m, within an area of scour. Also within the area of scour is a separate distinct rounded object with broad height. These items appear to be part of a larger structure that is possibly buried beneath the recent sediments.		
		The debris has an associated very large magnetic anomaly of 4,091 nT and is clearly visible in the magnetometer data indicating a significant amount of ferrous material.		
		In the MBES data, the debris is clearly visible as two items present within an area of scour, no further detail is able to be identified. Further scour is seen extending in a south-east direction for between 60 m to 130 m.		
		The debris is located approximately 500 m from the nearby known wreck (700591 , UKHO 10321), and is not clearly associated.		
Build	Type	N/a		
	Construction	N/a		
	Dimensions (m)	N/a		
	Shipyard	N/a		
Loss	Cause	N/a		
Extent of Survival		The seabed feature has no associated UKHO record, however the feature's structure and associated magnetic anomaly suggests a possible unknown undocumented wreck site or associated debris.		
		Items appear to be contained, with no apparent spread of debris field however, there is potential for burial. Unclear of full extent of feature.		



Sidescan sonar image of **700590**, 13.3 m x 13.1 m x 1.6 m



Magnetic profile of **700590**, measuring of 4091 nT



Multibeam bathymetry image of **700590**, looking south-east (x1 vertical exaggeration)



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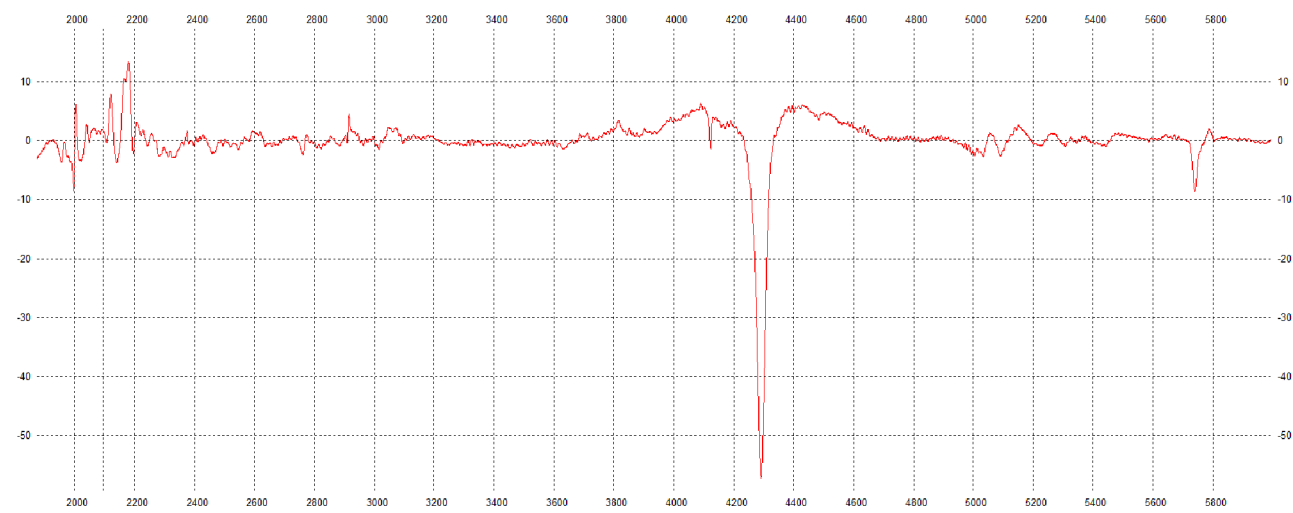
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ID 700605 – Unknown

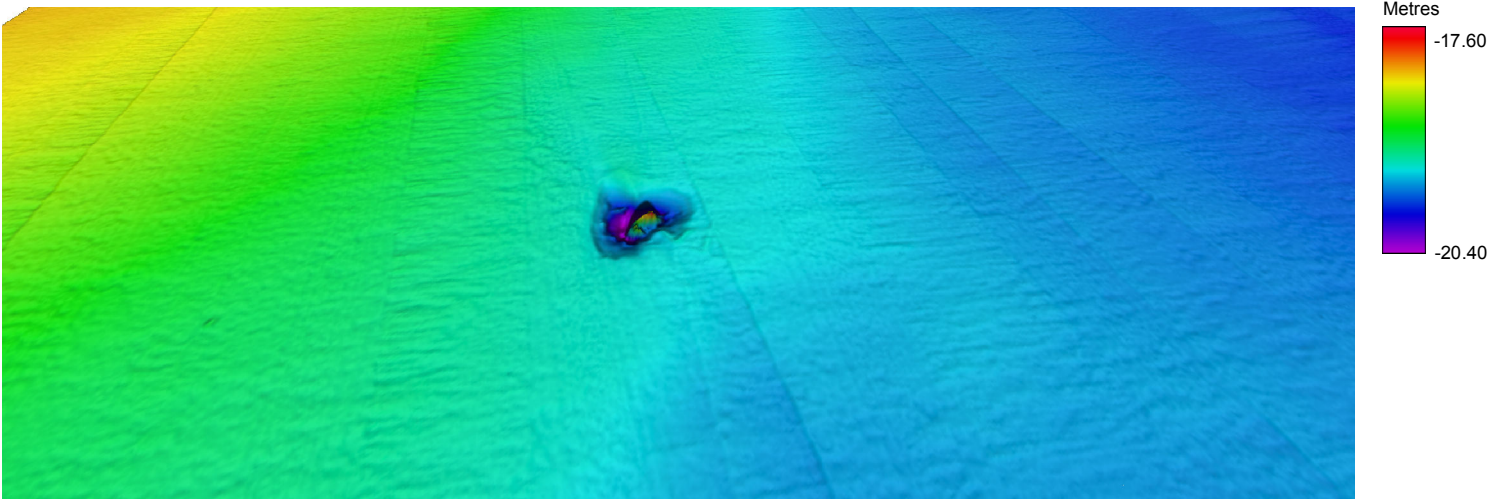
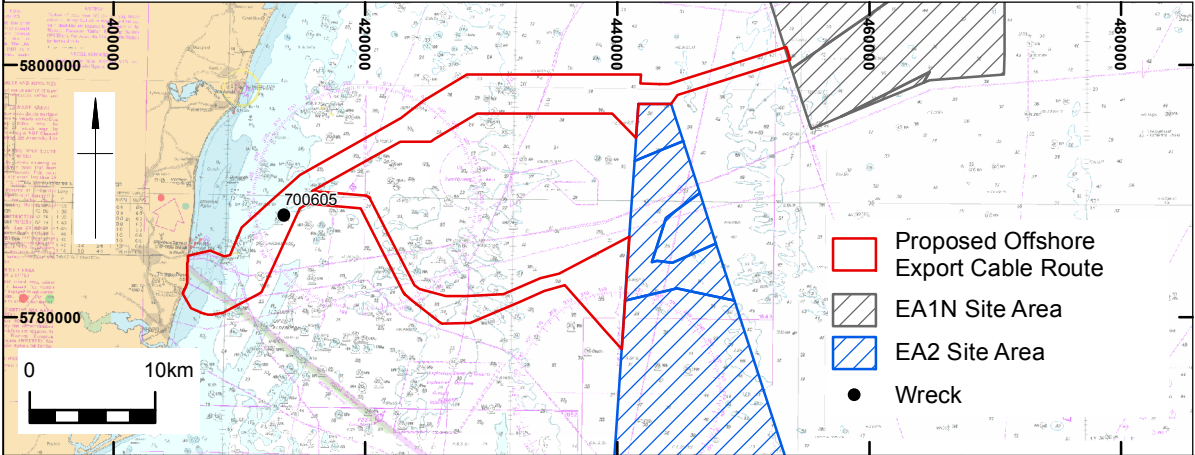
Location		413543 E, 5788077 N	Area	ECR
Archaeological Importance		High		
Geophysical survey dimensions and notes		700605 has been interpreted as a large item of debris identified in an area of flat featureless seabed. The items are quite compact, so no clear orientation is identifiable.		
		On the SSS data, a very large object measuring 10 m by 7 m was identified with a large, distinct, irregular shadow. Scour and sediment build-up visible around the object measuring approximately 28 m by 25 m. South-eastern edge of object appears to be slightly curved and extend west terminating at a point.		
		The feature appears to have an associated magnetic variance of approximately 60 nT; however, due to the features position between two magnetometer lines, the magnetic signal is quite broad, and the amplitude is likely to be underestimated.		
		In the MBES data, the item appears as either a complex single item possibly two objects the larger to the east and a smaller or extension of the item to the south-west. The item(s) is located within a depression or scour, the edges appear to be steep in places. These items are possibly part of a partially buried wreck or debris associated with lost cargo or nearby wrecks.		
		The debris is located approximately 560 m from the nearby known wreck (700255 , UKHO 10331), and is not clearly associated.		
Build	Type	N/a		
	Construction	N/a		
	Dimensions (m)	N/a		
	Shipyard	N/a		
Loss	Cause	N/a		
Extent of Survival		The feature currently has no corresponding UKHO data record.		
		It is not known if this area of debris relates to a wreck or lost cargo, therefore the until further information is available the extent of survival is unable to be confirmed.		



Sidescan sonar image of **700605**, 10.0 m x 6.9 m x 4.9 m



Magnetic profile of **700605**, measuring of 60 nT



Multibeam bathymetry image of **700605**, looking north-east (x1 vertical exaggeration)



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