DOGGER BANK D WIND FARM

Preliminary Environmental Information Report

Volume 2
Appendix 17.2 Offshore Archaeological Geophysical Survey Report

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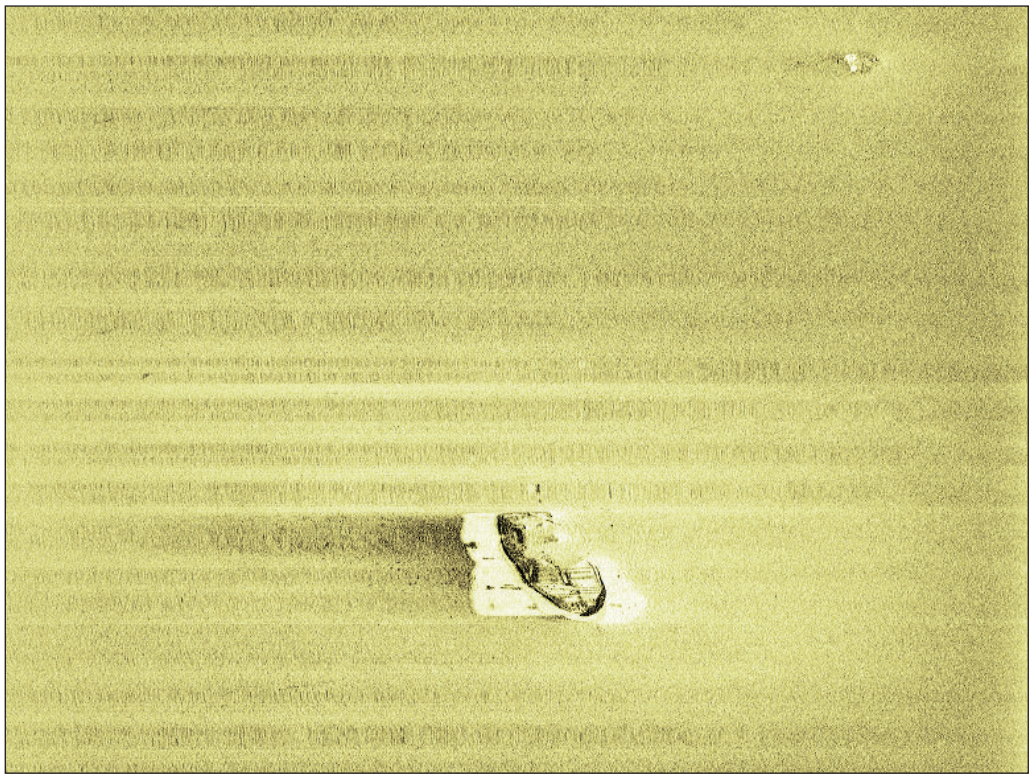
Dogger Bank D Offshore Wind Farm

Archaeological Assessment of Marine Geophysical Data



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wessexarchaeology

Portway House
Old Sarum Park
Salisbury
Wiltshire
SP4 6EB

www.wessexarch.co.uk

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Project management by	Tim Marples
Document compiled by	Laura Andrews
Contributions from	Robyn Pelling, Abby Mynett and Tim Marples
Graphics by	Kitty Foster

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Summary

Wessex Archaeology was commissioned by Royal HaskoningDHV to undertake an archaeological assessment of 2022 geophysical data acquired within the Offshore Development Area for Dogger Bank D Offshore Wind Farm. The aim of this assessment is to identify anomalies of archaeological potential within the Offshore Development Area to further inform the planning process ahead of the proposed development scheme.

This report compiles results from the assessment of geophysical data over Dogger Bank C Offshore Wind Farm and Export Cable Route, and the assessment of geophysical data over the Array Area and the former Export Cable Corridor option for Dogger Bank D Offshore Wind Farm, that lie within the Offshore Development Area.

Both sets of geophysical data comprise sidescan sonar, magnetometer and multibeam echosounder data acquired by Enviros and Ocean Infinity in 2022.

The results of the assessments of these datasets were then compared to the results of the previous archaeological assessments of data acquired in 2012 and 2021 and 2022 where overlap occurs.

The results of this assessment are limited to the extents of the DBD Array Area and the sections of the former DBD ECC option and the DBC footprint that are located within the Offshore Development Area. Any anomalies located outside of these defined areas, either previously recorded in known databases (e.g. Oceanwise or UKHO) or identified during this geophysical assessment, are deemed beyond the scope of the current assessment and are subsequently not included in this report.

No new data have yet been acquired outside of these extents over the remainder of the Offshore Development Area, however, further data covering a revised ECC option will be acquired in 2025 and these data will be archaeologically assessed with the results set out in a separate report.

Therefore, there are currently areas within the Offshore Development Area for which there is currently no data coverage, and these results should not be considered comprehensive.

The assessment of geophysical data over the Offshore Development Area resulted in a total of 267 anomalies being identified as of possible archaeological interest. These are summarised as follows:

- a total of 10 anomalies were assigned an A1 archaeological discrimination; anthropogenic origin of archaeological interest;
- a total of 29 anomalies were assigned an A2_h archaeological discrimination; anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature;
- a total of 184 anomalies were assigned an A2_l archaeological discrimination; anomaly of possible anthropogenic origin but interpretation is uncertain; may be anthropogenic or a natural feature;
- a total of 40 anomalies were assigned an A2 archaeological discrimination; DBC anomaly of possible archaeological interest but the origin and interpretation are uncertain. Three of these (**73593**, **73741** and **73744**) are magnetic only anomalies over 100 nT in amplitude and have the potential to represent a significant amount of ferrous material. It should also be noted that three of these anomalies (**73518**, **73519** and **73520**) were originally identified in the DBC ECR data and are therefore located approximately 110 km to the west of the main anomaly distribution, within the new DBD ECR corridor.

- a total of three items, all recorded wrecks, were assigned an A3 archaeological discrimination; historic record of possible archaeological interest with no corresponding geophysical anomaly; and

- One item (**73767**), a magnetic only anomaly, was given a U2 non-archaeological discrimination as it has been ground-truthed since the original data assessment.

For anomalies assigned A1 and A3 archaeological discriminations, Archaeological Exclusion Zones are recommended. A total of eight Archaeological Exclusion Zones have been recommended within the Offshore Development Area, all of which are located within the DBD Array Area.

Buffers of 50 m and 100 m have been recommended, based on the relationships between how well the feature extents are constrained, the confidence in positioning, and the likelihood of further buried or low-lying material that is not currently visible.

These Archaeological Exclusion Zones all have the potential to be modified and some may be able to be removed at a later date, should further information become available.

For features assigned A2_h, A2_l or A2 archaeological discriminations, no Archaeological Exclusion Zones are recommended at this time. However, avoidance of these features by micro-siting is recommended if they are proposed to be directly impacted by development in the future. If micrositing is not possible, then further assessment to ascertain the nature of the features may be required.

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.

Acknowledgements

The assessment of geophysical data was commissioned by Royal HaskoningDHV and the assistance of Victoria Boothby of Royal HaskoningDHV throughout the project is acknowledged in this regard.

The Dogger Bank C data were provided to Wessex Archaeology by Ocean Infinity and the assistance of Roger Birchall, Aidan Flint and Callum Duffy (SSE plc) is acknowledged in this regard.

The Dogger Bank D data were provided to Wessex Archaeology by Roger Birchall of SSE plc and his assistance is acknowledged in this regard.

The results of both assessments were clipped to the new study area and the resulting list was provided to Wessex Archaeology by Victoria Boothby of Royal HaskoningDHV and her assistance is acknowledged in this regard.

Dogger Bank D Offshore Wind Farm

Archaeological assessment of marine geophysical data

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Royal HaskoningDHV to undertake an archaeological assessment of geophysical data acquired in 2022 within the Offshore Development Area for Dogger Bank D Offshore Wind Farm (DBD).

1.1.2 The Offshore Development Area is located offshore in the southern North Sea and extends inshore with landfall at Skipsea (Figure 1).

1.1.3 This report compiles the results of two separate assessments that are within the Offshore Development Area. The first is the assessment of 2022 data acquired over the Export Cable Route (ECR) and Array Area of the Dogger Bank C Offshore Wind Farm (DBC) (Wessex Archaeology 2023). The second is the assessment of 2022 data acquired over the DBD Array Area, and the former DBD Export Cable Corridor (ECC) option which is no longer being taken forward (Wessex Archaeology 2024) (Figure 1). Data covering the revised ECC option will be acquired in 2025 and this will be archaeologically assessed and the results set out in a further report.

1.1.4 This report consists of an assessment of marine geophysical survey data comprising sidescan sonar (SSS), magnetometer (Mag.) and multibeam echosounder data (MBES) over these separate areas acquired by Enviros and Ocean Infinity in 2022 using traditional survey vessels.

1.2 Previous work

1.2.1 The geophysical assessment forms part of a series of assessments conducted by Wessex Archaeology for the overarching Dogger Bank Wind Farm development.

1.2.2 A previous archaeological assessment of 2012 geophysical data was produced by Wessex Archaeology in 2013 (Wessex Archaeology 2013) and 2014 (Wessex Archaeology 2014) as part of the Dogger Bank Teesside environmental Impact Assessment (EIA).

1.2.3 A previous archaeological assessment of 2021 and 2022 geophysical data was conducted over the DBC ECR and Array by Wessex Archaeology in 2023 (Wessex Archaeology 2023). The Offshore Development Area overlaps the eastern part of the original DBC site.

1.2.4 DBC (formerly known as Teesside A) was consented alongside the Sofia Offshore Wind Farm (Sofia) (formerly known as Teesside B). Due to the shared Development Consent Order (DCO) and Export Cable Corridor, there exists a close relationship between DBC and the Sofia Offshore Wind Farm, the latter being 100% owned by RWE. In order to facilitate full understanding and appropriate application of measures set out in Written Schemes of Investigation (WSIs) which have been prepared and agreed for each of the projects, an agreement was reached between all parties to share data and results where relevant and undertake open communications regarding elements of the projects as relevant to archaeological considerations (Royal HaskoningDHV, 2019).

1.2.5 The results of this report are limited to the extents of the DBD Array Area and the sections of the former DBD ECC option and the DBC footprint that are located within the Offshore Development Area (Figure 1).

1.2.6 To this end, where survey areas overlap, reference is made to data and the results from all assessments. Anomalies identified and any previously recommended Archaeological Exclusion Zones (AEZs) have been reproduced as part of this archaeological assessment of the Offshore Development Area.

1.3 Aims and objectives

1.3.1 The aim and objective of this assessment is to:

- 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; and
- provide recommendations for archaeological mitigation.

1.4 Co-ordinate system

1.4.1 The survey data from both phases of work were acquired in WGS84 UTM31N and the results are presented in the same coordinate system.

2 METHODOLOGY

2.1 Data sources

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

- geophysical survey datasets acquired over DBC by Ocean Infinity in 2022;
- geophysical survey datasets acquired over DBD by Ocean Infinity in 2022;
- geophysical survey datasets acquired over DBD by Enviros in 2022;
- recorded wreck and obstruction data acquired via the Oceanwise Marine Themes Feature (MTF) Wreck and Obstructions database provided by Royal HaskoningDHV;
- recorded wreck and obstruction data acquired via the United Kingdom Hydrographic Office (UKHO);
- relevant background mapping from the area; admiralty charts received from the UKHO;
- previous archaeological investigations from the study area (Wessex Archaeology 2012; 2014; 2021; 2023; 2024)
- client supplied survey reports (Ocean Infinity 2022, Ocean Infinity 2023 and Enviros 2023).

2.2 Geophysical data – technical specifications

2.2.1 Geophysical data were acquired in separate phases and to different survey specifications.

2.2.2 The DBC ECR and Array geophysical data were acquired by Ocean Infinity on board survey vessel MV *Northern Franklin* between March and June 2022 (Ocean Infinity 2022). The SSS, MBES and Mag. data sets were acquired with a 50 m line spacing across the ECR and a 25 m line space across the IAC and OSP areas.

2.2.3 Geophysical data for the DBD Array Area were acquired by Enviros on board survey vessel MV *Guard Celena* between 10 August and 5 October 2022. Line spacings were 100 m for the main lines, with crosslines run at 2000 m (Enviros 2023).

2.2.4 Geophysical data for the former DBD ECC option were acquired by Ocean Infinity on board survey vessel MV *Northern Franklin* between 26 September and 28 October 2022. Line spacings for the survey varied between 100 m in water depths greater than 30 m and 75 m in water depths less than 30 m with crosslines at 5000 m (Ocean Infinity 2023).

2.2.5 Further details on the equipment used by all surveys are summarised below in Table 1:

Table 1 Summary of survey equipment

Survey /Operator	Survey Vessel	Data Type	Equipment	Data Format
DBC Ocean Infinity 2022	*MV Northern Franklin*	MBES	Kongsberg EM2040 Dual Head (EM2040D)	*.xyz*
		SSS	Edgetech MP 2205 300/600kHz	*.jsf*
		Mag.	Geometrics G-882	*.xls*
		Positioning	Applanix POS MV 320 with C-Nav 3050 and C2 (SF2) corrections	N/A
DBD Array Enviros 2022	MV *Guard Celena*	MBES	Dual head Reson T20-R 400 kHz	*.xyz*
		SSS	Edgetech 4200-MP (300/600 kHz, 100 m range)	*.jsf, .tifw*
		Mag.	Geometrics G-882	*.txt*
		Positioning	VERIPOS Ultra	N/A
Former DBD ECC Ocean Infinity 2022	M/V *Northern Franklin*	MBES	Kongsberg EM2040 Dual Head (EM2040D)	*.xyz*
		SSS	Edgetech MP 2205 (300/600 kHz, 100/120 m range)	*.jsf, .tifw*
		Mag.	Geometrics G-882	*.csv*
		Positioning	Applanix POS MV 320 with C-Nav 3050 and C2 (SF2) corrections	N/A

2.3 Geophysical data – processing

2.3.1 A number of datasets were assessed over the study area and each data set was processed separately using the software summarised in Table 2, and the methodology is detailed below.

Table 2 Software used for geophysical assessment

Project code	Operator and Year	Area	Vessel	Dataset	Processing Software	Interpretation and rationalisation
201326		DBC		MBES	QPS Fledermaus v8.5.1	ArcMap v10.8.1

Project code	Operator and Year	Area	Vessel	Dataset	Processing Software	Interpretation and rationalisation
	Ocean Infinity 2022		MV *Northern Franklin*	SSS raw	CodaOctopus Survey Engine v8.2.1	
				Mag.	In-house proprietary software	
286390	Enviros 2022	DBD Array	MV *Guard Celena*	MBES	QPS Fledermaus v8.5.2	ArcMap v10.8.1
				SSS mosaic	ArcMap v10.8.1	
				SSS raw	CodaOctopus Survey Engine v8.6	
				Mag.	In-house proprietary software	
286390	Ocean Infinity 2022	Former DBD ECC	MV *Northern Franklin*	MBES	QPS Fledermaus v8.5.2	
				SSS mosaic	ArcMap v10.8.1	
				SSS raw	CodaOctopus Survey Engine v8.6	
				Mag.	In-house proprietary software	

2.3.1 As outlined in the previous section, the DBC data were acquired at a high resolution over constrained pre-construction areas and a detailed assessment was undertaken on this data set. The DBD data were acquired at a lower resolution over a larger area and the assessment undertaken was a 'light touch' approach so that only anomalies of higher potential would be identified. Both approaches are outlined separately below.

DBC

2.3.2 The MBES data were analysed to identify any unusual seabed structures that could be shipwrecks or other anthropogenic debris. The data were gridded at 0.25 m and analysed using QPS Fledermaus software, which enables a 3-D visualisation of the acquired data and geo-picking of seabed anomalies.

2.3.3 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.

2.3.4 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.

2.3.5 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 be unrelated individual features, define the edges of a buried but intact feature, or may be all that remains as a result of past impacts from, for example, dredging or fishing. Assessment is made of such groups of anomalies during data interpretation to determine which of these alternatives is the most likely.

2.3.6 The Mag. data were processed using in-house proprietary software in order to identify any discrete magnetic contacts which could represent buried metallic debris or structures such as wrecks.

2.3.7 The software enables both the visualisation of individual lines of data and gridding of data to produce a magnetic anomaly map. The data were first smoothed to try and eliminate any spiking. A trend was then fitted to the resulting data, and the trend values subtracted from the smoothed values. This was carried out 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.

2.3.8 It should be noted that the magnetometer is a passive sensor, and the effectiveness of the sensor to detect magnetic fluctuations caused by ferrous material decreases with increased distance from the target. As such, only significant ferrous objects (e.g. steel hulled wrecks) will be identified between lines of surveys with relatively large line spacings, and smaller individual pieces of ferrous debris will not be detected - these smaller items are only likely to be detected when the sensor passes much closer to, or directly over, such objects. Larger numbers of magnetic anomalies are often found during subsequent higher resolution surveys than during initial lower resolution surveys; e.g. a pre-construction UXO survey with a shorter line spacing is likely to find additional anomalies between the more widely spaced survey lines of an original EIA/scoping survey.

2.3.9 For the purposes of this assessment, any identified magnetic anomalies have been classified depending on their amplitude as small (5 nT to 49 nT), medium (50 nT to 99 nT), or large (>100 nT).

DBD

2.3.10 The MBES data were analysed to identify any unusual seabed structures that could be shipwrecks or other anthropogenic debris. The data were gridded at 0.25 m and analysed using QPS Fledermaus software, which enables a 3-D visualisation of the acquired data and geo-picking of seabed anomalies.

2.3.11 For the DBD Array Area, low frequency SSS mosaics were provided by the client as .tifw files and were assessed using ArcMap. For the former ECC option, the client provided high and low frequency SSS mosaics and both were assessed, with the high frequency mosaics primarily used for object detail.

2.3.12 Positions taken from the survey company contact lists were also checked to mitigate the possibility of anomalies of archaeological interest being missed. The contact lists were checked against the SSS mosaic for anomalies interpreted by the survey company as wreck, debris or suspected debris. If features were considered to be of possible archaeological origin in the mosaic, they were added to the gazetteer.

2.3.13 The Mag. data were processed using in-house proprietary software in order to identify any discrete magnetic contacts which could represent buried metallic debris or structures such as wrecks.

2.3.14 The software enables both the visualisation of individual lines of data and gridding of data to produce a magnetic anomaly map. The data were first smoothed to try and eliminate any spiking. A trend was then fitted to the resulting data, and the trend values subtracted from the smoothed values. This was carried out 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.

2.3.15 It should be noted that the magnetometer is a passive sensor, and the effectiveness of the sensor to detect magnetic fluctuations caused by ferrous material decreases with increased distance from the target. As such, only significant ferrous objects (e.g. steel hulled wrecks) will be identified between lines of surveys with relatively large line spacings, and smaller individual pieces of ferrous debris will not be detected - these smaller items are only likely to be detected when the sensor passes much closer to, or directly over, such objects. Larger numbers of magnetic anomalies are often found during subsequent higher resolution surveys than during initial lower resolution surveys; e.g. a pre-construction UXO survey with a shorter line spacing is likely to find additional anomalies between the more widely spaced survey lines of an original EIA/scoping survey.

2.3.16 For the purposes of this assessment, any identified magnetic anomalies have been classified depending on their amplitude as small (5 nT to 49 nT), medium (50 nT to 99 nT), or large (>100 nT).

2.3.17 A threshold approach has been used for this assessment and all three data types in the Array area have been subject to these. Anomalies picked from the SSS mosaic were subject to a threshold: being over 2.5 m in any one direction merited inclusion in the gazetteer. As with the SSS mosaics, anomalies seen in the MBES data were subject to a threshold, required to be over 2.5 m in any one direction to merit inclusion in the gazetteer. Any magnetic anomalies below 25 nT have been excluded based on ground-truthing information from similar large-scale sites. This has been applied to all magnetic anomalies throughout the study areas. Thresholding has been used to refine the process, facilitating identification of features of anthropogenic origin or archaeological interest, but not necessarily those with a more uncertain interpretation.

2.3.18 A sub-set of anomalies tagged by Wessex Archaeology in the SSS mosaics, MBES and Mag. data were further investigated in the individual line SSS data files (.xtf). These data are referred to in this report as raw SSS data to distinguish them from the mosaics (even though some of the .xtf files received may have undergone some processing). These included anything with the potential to be classified as A1 - Anthropogenic origin of archaeological interest such as wreck, debris field and Mag. anomalies over 500 nT (that are not known to be modern).

2.3.19 Anomalies assessed in the raw SSS data were not subject to a size threshold, as this process was designed to ensure the full extents of significant anthropogenic seabed features, including adjacent related small anomalies, were recorded to ensure AEZs are as definitive as possible.

2.3.20 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.

2.3.21 It is standard practice for a mosaic of the SSS to be 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. For this project, the mosaics had already been created and provided by the client and these were used to finalise the positioning of anomalies from the raw SSS data.

2.3.22 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 be unrelated individual features, define the edges of a buried but intact feature, or may be all that remains as a result of past impacts from, for example, dredging or fishing. Assessment is made of such groups of anomalies during data interpretation to determine which of these alternatives is the most likely.

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 then rated using the following criteria (Table 3).

Table 3 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.
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 various data sets has been rated using the above criteria and is summarised in the following table (table 4) and outlined below:

Table 4 Data quality summary table for multi datasets

Project	Survey Details			Data Quality			
Project code	**Operator and Year**	**Area**	**Vessel**	**MBES**	**SSS mosaic**	**SSS raw**	**Mag.**
201326	Ocean Infinity 2022	DBC ECR	MV *Northern Franklin*	Good	N/A	Good	Average
201326	Ocean Infinity 2022	DBC Array	MV *Northern Franklin*	Good	N/A	Average	Good
286390	Enviros 2022	DBD Array	MV *Guard Celena*	Good	Average	Average	Variable
286390	Ocean Infinity 2022	Former DBD ECC	MV *Northern Franklin*	Good	Average	Average	Variable

2.4.3 The DBC ECR SSS data were rated as 'Good' using the above criteria. The data were occasionally slightly affected by weather noise; however, this was minimal. The range of 65 m enabled the identification of small anomalies and as such, the data set was considered suitable for archaeological interpretation.

2.4.4 The DBC ECR MBES data were rated as 'Good' using the above criteria. The data quality and resolution of 0.25 m was found to be of a good standard and suitable for archaeological assessment of objects and debris over 0.25 m in size.

2.4.5 The DBC ECR Mag. data have been rated as 'Average' using the above criteria. The relatively wide line spacing of 50 m means that smaller ferrous features which aren't directly covered by a line of Mag. data may not have been picked up in the data. However larger features such as wrecks and substantial ferrous debris were largely still identifiable in the data and, as such, the data set was considered suitable for archaeological interpretation.

2.4.6 The DBC Array SSS data were rated as 'Average' using the above criteria. The data were occasionally slightly affected by weather noise; however, this was minimal. The range of 40 m enabled the identification of small anomalies and as such, the data set was considered suitable for archaeological interpretation.

2.4.7 The DBC Array MBES data were rated as 'Good' using the above criteria. The data quality and resolution of 0.25 m was found to be of a good standard and suitable for archaeological assessment of objects and debris over 0.25 m in size.

2.4.8 The DBC Array Mag. data have been rated as 'Good' using the above criteria. Some spiking was visible in the data; however, the data have not been detrimentally affected to a significant degree. The line spacing of 25 m means that smaller ferrous features not directly covered by a line of Mag. data may not be visible in the data. However larger features such as wrecks and substantial ferrous debris were largely still identifiable in the data and, as such, the data set was considered suitable for archaeological interpretation.

2.4.9 The DBD Array MBES data were rated as 'Good' using the above criteria. The data quality and resolution of 1 m was found to be of a good standard and suitable for archaeological assessment of objects and debris over 1 m in size, sufficient given the 2.5 m threshold of this project.

2.4.10 The DBD Array SSS mosaic has been rated as 'Average' using the above criteria table. The data were occasionally slightly affected by weather noise; however, this was minimal. Only the low frequency mosaic data was available for the study area and so object detail generally seen in high frequency mosaics may be missed. However, with a resolution of 0.5 m it is suitable for archaeological assessment and sufficient given the 2.5 m threshold of this project.

2.4.11 The DBD Array SSS raw data have been rated as 'Average' using the above criteria table. The data were occasionally slightly affected by weather noise and the range of 100 m may mean that small objects are difficult to identify. However, it is suitable for archaeological assessment and sufficient given the 2.5 m threshold of this project.

2.4.12 The DBD Array Mag. data have been rated as 'Variable' using the above criterial table. The data displayed some weather noise and spiking. The relatively wide line spacing of 100 m, typical for an EIA survey, means that smaller ferrous features which aren't directly covered by a line of Mag. data may not have been picked up in the data. However larger features

such as wrecks and substantial ferrous debris were largely still identifiable in the data and, as such, the dataset was considered suitable for archaeological interpretation.

2.4.13 The former DBD ECC MBES data were rated as 'Good' using the above criteria. The data quality and resolution of 0.25 m was found to be of a good standard and suitable for archaeological assessment of objects and debris over 0.25 m in size.

2.4.14 The former DBD ECC SSS mosaic has been rated as 'Average' using the above criteria table. The data were occasionally slightly affected by weather noise; however, this was minimal. The client provided high and low frequency mosaic resolution was 1 m which allows for archaeological assessment of objects and debris over 1 m in size. Small objects and details of large objects may not be visible or difficult to identify. However, it is suitable for archaeological assessment and sufficient given the 2.5 m threshold of this project.

2.4.15 The former DBD ECC SSS raw data have been rated as 'Average' using the above criteria table. The data were occasionally slightly affected by weather noise and the range of 120 and 100 m may mean that small objects are difficult to identify. However, it is suitable for archaeological assessment and sufficient given the 2.5 m threshold of this project.

2.4.16 The former DBD ECC Mag. data have been rated as 'Average' using the above criteria table. The relatively wide line spacing of 100 m and 75 m, typical for an EIA survey, means that smaller ferrous features which aren't directly covered by a line of Mag. data may not have been picked up in the data. However larger features such as wrecks and substantial ferrous debris were largely still identifiable in the data and, as such, the data set was considered suitable for archaeological interpretation.

2.5 Data limitations

2.5.1 The results of this assessment are limited to the extents of the DBD Array Area and the sections of the former DBD ECC option and the DBC footprint that are located within the Offshore Development Area (Figure 1). No new data have yet been acquired outside of these extents over the remainder of the Offshore Development Area.

2.5.2 Further data covering the revised ECC option will be acquired in 2025 and these data will be archaeologically assessed with the results set out in a separate report. Therefore, there are currently areas within the Offshore Development Area for which there is no data coverage, and these results should not be considered comprehensive.

2.6 Geophysical data – anomaly grouping and discrimination

2.6.1 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.

2.6.2 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, a MBES anomaly, and multiple SSS anomalies.

2.6.3 At this stage, the data interpretation were then also grouped with gazetteers of anomalies created during other phases of work over the two relative study areas (Wessex Archaeology 2013, 2020, 2023).

2.6.4 During grouping of the interpretation results with the results of previous phases of work, any identified anomaly from the current data sets that match a previously identified feature retains the original anomaly number assigned for previous Wessex Archaeology reports. However, positions and dimensions are updated to reflect the more recent, higher resolution data where appropriate.

2.6.5 Where previously identified anomalies have subsequently been found to be of lesser or non-archaeological importance based on new information such as new data, or under the current project thresholds described in Section 2.3, these anomalies have been updated and retained or updated and removed from this report.

2.6.6 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 4).

Table 5 Criteria discriminating relevance of identified features to proposed scheme

Overview classification	Discrimination	Criteria	Data type
Archaeological	A1	Anthropogenic origin of archaeological interest	MBES, SSS, Mag.
Archaeological	A2_h	2022 DBD anomaly of likely anthropogenic origin but of unknown date	MBES, SSS, Mag.
Archaeological	A2_l	2022 DBD anomaly of possible anthropogenic origin but the interpretation is uncertain	MBES, SSS, Mag.
Archaeological	A2	2021 DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain	MBES, SSS, Mag.
Archaeological	A3	Historic record of possible archaeological interest with no corresponding geophysical anomaly	MBES, SSS, Mag.
Archaeological	A4	Position of geophysical anomaly at which no anthropogenic features were identified, either visually or on sensors, during subsequent ROV/diver survey	Groundtruthing reports, MBES, SSS, Mag.
Non-archaeological	U1	Not of anthropogenic origin	MBES, SSS, Mag.
Non-archaeological	U2	Known non-archaeological feature / Feature of non-archaeological interest	MBES, SSS, Mag., SBP
Non-archaeological	U3	Recorded loss	MBES, SSS, Mag.
Non-impact	O1	Outside horizontal footprint of study area	MBES, SSS, Mag., SBP
Non-impact	O2	Outside vertical footprint of proposed impact	SBP
Non-impact	O3	Area subsequently cleared after data acquired, anomaly/object recovered	MBES, SSS, Mag., SBP

Overview classification	Discrimination	Criteria	Data type
Non-impact	O4	Anomaly/feature identified during previous assessments but since likely to have been disturbed or moved by natural seabed processes. Unlikely to be at original location. New location unknown.	Groundtruthing reports, MBES, SSS, Mag.
Non-impact	O5	Below the minimum size threshold for the archaeological assessment	MBES, SSS, Mag.
Non-impact	D	Anomaly/feature subsequently confirmed as UXO and detonated in situ.	UXO reports

2.6.7 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.

2.6.8 The results of this assessment are limited to the extents of the DBD Array Area and the sections of the former DBD ECC option and the DBC footprint that are located within the Offshore Development Area. Any anomalies located outside of these defined areas within the Offshore Development Area (Figure 1), either previously recorded in known databases (e.g. Oceanwise or UKHO) or identified during this geophysical assessment, are deemed beyond the scope of the current assessment and are subsequently not included in this report. Further data covering the revised ECC option will be acquired in 2025.

3 SEABED FEATURES ASSESSMENT

3.1 Introduction

3.1.1 The geophysical data were assessed to identify features of archaeological potential relating to maritime and aviation activity.

3.1.2 Several different survey specifications of data have been used in the assessments, but have been collated into a single gazetteer detailed in Appendix I.

3.1.3 For anomalies identified where different data sets overlap, the largest size or amplitude has been retained within the tabular results listed in the Appendices, and the smaller sizes and amplitudes are noted within the description.

3.1.4 The data set and study area that each anomaly has been identified in has been recorded within the gazetteer in the Appendix and not generally stated within this report text.

3.1.5 As many of the anomalies within the gazetteers were interpreted from the SSS mosaic geotiffs, height measurements will not be available. Within the gazetteer, the presence of a shadow for an anomaly seen on a SSS geotiff is mentioned in the text.

3.1.6 Where height measurements are present these have been taken from the SSS raw data during checks of significant anomalies, from a separate data set, or have been taken from the MBES data.

3.1.7 For the purposes of this assessment we consider that anomalies closer to the flown Mag. line will have an increased confidence of being detected. Larger or denser objects of ferrous material may be detected from further away, but smaller items may not be detected (see section 2.3.8, 2.3.15)

3.2 Seabed features assessment results

3.2.1 The collated results are presented in gazetteer format detailed in Appendix I and are illustrated in Figures 2a – 2i.

3.2.2 A total of 267 anomalies have been identified as being of possible archaeological potential within the Offshore Development Area and are discriminated as shown in Table 5.

Table 6 Anomalies of archaeological potential within the Offshore Development Area

Archaeological discrimination	Quantity	Interpretation
A1	10	Anthropogenic origin of archaeological interest
A2_h	29	Original DBD anomaly of likely anthropogenic origin but of unknown date
A2_l	184	Original DBD anomaly of possible anthropogenic origin but the interpretation is uncertain
A2	40	DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain
A3	3	Historic record of possible archaeological interest with no corresponding geophysical anomaly
U2	1	Known non-archaeological feature / Feature of non-archaeological interest
Total	**267**	

3.2.3 Furthermore, these anomalies can be classified by probable type, which can further aid in assigning archaeological potential and importance (Table 6).

Table 7 Types of anomaly identified within the Offshore Development Area

Anomaly classification	Definition	Number of anomalies
Wreck	Areas of coherent structure including wrecks of ships, submarines and some aircraft (where coherent structure survives)	2
Debris field	A discrete area containing numerous individual debris items that are potentially anthropogenic, and can include dispersed wreck sites for which no coherent structure remains	5
Debris	Distinct objects on the seabed, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin	11
Linear debris	Distinct linear objects on the seabed, either straight or curved, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin. May represent linear anthropogenic debris which can include, for example, lengths of rope or chain or abandoned fishing gear.	13
Rope/chain	Curvilinear dark reflectors, often with a small amount of height, indicating rope or chain (if ferrous)	1
Seabed disturbance	An area of disturbance without individual, distinct objects. Potentially indicates wreck debris or other anthropogenic features buried just below the seabed.	39
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	1
Dark reflector	Individual objects or areas of high reflectivity, displaying some anthropogenic characteristics. Precise nature is uncertain	104
Mound	A mounded feature with height not considered to be natural. Mounds may form over wreck sites or other debris.	19

Anomaly classification	Definition	Number of anomalies
Depression	An area of disturbed seabed with depth. Potentially indicates scour around a buried feature or where a feature has been cleared	4
Magnetic trend	A linear trend of individual or continuous magnetic anomalies with no associated seabed surface expression, and have the potential to represent possible buried ferrous debris	1
Magnetic	No associated seabed surface expression, and have the potential to represent possible buried ferrous debris or buried wreck sites	64
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		**267**

3.2.4 A total of 10 anomalies were discriminated as A1 – anthropogenic origin of archaeological interest.

3.2.5 One anomaly (**70587**) was interpreted as an uncharted wreck, visible in the 2022 SSS data as a distinct ovoid dark reflector orientated north-east to south-west, and measuring 28.1 x 7.3 x 1.2 m with shadow at the north-eastern end. The wreck is visible in the MBES data as a distinct ovoid mound more distinct at the north-east end and surrounded by L-shaped scour (49.0 x 35.0 x -2.6 m). There are possible covering sediments visible at the south-western end where the hull is either partially buried or collapsed. Internally, thin linear dark reflectors are visible. The wreck appears upright and mostly intact, with significant scour to the east and south-east. This location is associated with a very large Mag. anomaly in the 2012 data measuring 1159 nT and identified as two small Mag. anomalies in the 2022 Mag. data (29 and 13 nT). However, this position was not directly covered by a 2022 Mag. line and therefore the 2012 amplitude is retained. The wreck was previously identified in the 2012 SSS data as well-preserved and measuring 34.5 x 10 x 0.7 m which suggests the wreck has experienced further burial or degraded since 2012. Associated debris is visible surrounding the wreck (below) and there is potential for more to be present but buried within the vicinity.

3.2.6 Four small items of debris (**74099** – **74102**) and a debris field (**74103**) were discriminated as A1 due to their proximity to wreck **70587**. These are all located outside the interpreted hull of the wreck and range in size from 0.8 x 0.7 x 0.1 m (**74099**) to 2.9 x 1.0 m (**74103**). No associated Mag. anomalies were present.

3.2.7 One further anomaly (**70590**) was also interpreted as a possible wreck, originally identified in the 2012 SSS data as a large dark reflector with large shadow and with overall measurements of 38.8 x 14.7 x 0.4 m. The feature was in two pieces, and the size and curvilinear edge of the feature were deemed consistent with the edge of a hull and individual elements were visible. The anomaly was visible in the 2012 MBES data as an elongate depression. No corresponding 2022 dataset contacts were identified at this position and so this feature may subsequently be completely buried or broken-up. As a precaution this anomaly has been retained with its original position, dimensions and AEZ.

3.2.8 One anomaly (**74087**) was classified as an isolated debris field. This was identified in the 2021 SSS dataset as a compact group of indistinct linear dark reflectors and areas of bright reflector measuring 12.3 x 8 x 0.4 m. The feature was identified in the 2021 MBES dataset as an elongate mound, with irregular sides and rough surface surrounded by scour. The debris field has a very large magnetic amplitude associated measuring 575 nT, indicating the presence of a significant amount of ferrous material. This location was not covered by

the 2022 geophysical data and so no comment could be made on its subsequent appearance or condition.

3.2.9 The two remaining A1 anomalies (**70606** and **70608**) are magnetic only anomalies with no corresponding SSS or MBES features, and both were discriminated as A1 based on their amplitudes. Anomaly **70606** was identified in both the 2012 and 2022 data measuring 649 nT and 620 nT respectively. The position and amplitude have been retained from the 2012 dataset due to tighter line spacing. Anomaly **70608** was identified in the 2012, 2021 and 2022 Mag. data measuring 46 nT, 626 nT and 110 nT respectively. The position and amplitude have been retained from the 2021 dataset due to tighter line spacing. Both anomalies have been interpreted as representing possibly substantial ferrous debris which is either buried or has no surface expression.

3.2.10 A total of 29 anomalies were discriminated as A2_h – anomaly of likely anthropogenic origin but of unknown date; and all may be of archaeological interest or a modern feature.

3.2.11 Three A2_h anomalies (**73994**, **73996** and **74108**) were classified as debris fields. All three of these features have been interpreted as possible debris, but all have the potential to be modern and therefore discriminated as A2_h, although this cannot be confirmed without further investigation.

3.2.12 Anomalies **73994** was identified in the SSS data as indistinct dark reflectors measuring 35.7 x 21.7 x 0.7 m, with two long and narrow curvilinear features at the western extents.

3.2.13 Anomaly **73996** was identified in the SSS data as large spread of linear and sub-angular bright and dark reflectors measuring 51.6 x 19.7 m 0.9 m.

3.2.14 These features were also visible in the MBES data as two distinct groups of sub-angular mounds, situated 16 m apart. Neither of these features had associated magnetic amplitudes. These features are interpreted as possible debris and may be possibly associated.

3.2.15 Anomaly **74108** was identified in the raw SSS data as a large and distinct compact group of small dark reflectors and bright reflectors measuring 26.9 x 22.1 x 0.6 m, and visible in the MBES data as a distinct sub-rounded mound. No anomalous features were identified in the Mag. data at this location.

3.2.16 A total of seven A2_h anomalies (**70580**, **70585**, **70586**, **70588**, **70593**, **74017** and **74052**) were classified as individual pieces of debris, and all have the potential to be modern and therefore have been discriminated as A2_h.

3.2.17 These anomalies range in size from 2.6 x 1.2 x 0.1 m (**70580**) up to 15.9 x 5.9 x 0.3 m (**74052**). One of these anomalies has an associated magnetic amplitude of 10 nT (**70593**) and is interpreted as containing ferrous material.

3.2.18 A total of 13 A2_h anomalies (for full list see Appendix I) were classified as linear debris, with lengths ranging between 19.6 x 1 m (**74007**) and 1282.3 x 1 m (**73955**). None have associated magnetic amplitudes. These anomalies are interpreted to include possible rope or chain features, fishing gear and other anthropogenic linear features.

3.2.19 The remaining four A2_h anomalies (**73092**, **74078**, **74079** and **74088**) were classified as magnetic anomalies without associated SSS or MBES features. These anomalies range in

amplitude between 104 nT (**74078**) and 245 nT (**74079**). These indicate potential significant amounts of ferrous debris that is either buried or without surface expression.

3.2.20 A total of 184 anomalies were discriminated as A2_I – anomaly of possible anthropogenic origin but the interpretation is uncertain.

3.2.21 A total of 39 A2_I anomalies (for full list see Appendix I) were classified as a seabed disturbance. These features range in size from 6.0 x 3.0 m (**74004**) up to 50.6 x 14.3 (**73926**). None of these have a corresponding magnetic amplitude and are interpreted to be either possible natural features or possible debris.

3.2.22 One A2_I anomaly (**73961**) was classified as a bright reflector, measuring 19.4 x 3.1 m. Bright reflectors potentially represent pieces of debris that absorb rather than reflect acoustic waves, such as waterlogged wood or synthetic material, or may represent natural features such as seabed scars.

3.2.23 A total of 100 A2_I anomalies (for full list see Appendix I) were classified as dark reflectors. These range in size from 2.8 x 1.5 m (**73932**) up to 55.2 x 1.0 m (**73933**). None of these have a corresponding magnetic amplitude and all are interpreted to be either possible natural features or possible debris.

3.2.24 A total of 19 A2_I anomalies (for full list see Appendix I) were classified as mounds. These features range in size from 2.5 x 2.0 x 0.2 m (**74091**) up to 17.7 x 4.1 x 0.1 m (**74054**). None of these have a corresponding magnetic anomaly and all are of uncertain origin and could represent debris covered by seabed sediment or be natural features.

3.2.25 Two A2_I anomalies (**70596** and **73918**) were classified as depressions, measuring 9.0 x 7.5 x -0.1 m and 12.0 x 7.4 x -0.4 m respectively, and neither have associated magnetic amplitudes. Depressions potentially indicate scour around a buried feature or where a feature has been cleared.

3.2.26 A total of 23 A2_I anomalies (for full list see Appendix I) were classified as magnetic only anomalies with no corresponding SSS or MBES features. These anomalies range in amplitude from 25 nT (**70607**) up to 83 nT (**70603**). These indicate potential ferrous debris that is either buried or without surface expression, though have been given a lower archaeological rating based on amplitude, and may also represent natural features.

3.2.27 A total of 40 anomalies (for full list see Appendix I) were discriminated as A2 - of possibly archaeological interest but the origin and interpretation are uncertain. These anomalies were all identified in the original Dogger Bank C assessment and have not been separated into features of higher and lower potential. All have the potential to be possible anthropogenic debris, or natural features.

3.2.28 One A2 anomaly (**73519**) was interpreted as a possible length of rope or chain, measuring 8.5 x 0.9 x 0.1 m. It should be noted that this anomaly was originally identified in the DBC ECR data and is therefore located approximately 110 km to the west of the main distribution of anomalies.

3.2.29 Four A2 anomalies (**73726**, **73729**, **73731** and **73765**) were classified as dark reflectors. These were identified in the SSS data and range in size from 1.5 x 0.3 m (**73731**) up to 2.5 x 0.8 x 0.7 m (**73729**), and all are interpreted as possible debris or natural features.

3.2.30 Two of the total 24 dark reflector anomalies (**73726** and **73729**) have corresponding small magnetic amplitudes (9 nT and 17 nT, respectively). These have been retained as dark reflectors rather than debris due to their ambiguous form in the SSS data. They are interpreted to be possible geological features with high concentrations of ferrous material, or they may be possible ferrous debris.

3.2.31 One A2 anomaly (**73757**) was classified as a magnetic trend with no corresponding SSS or MBES features, measuring 150 m in length and comprising seven individual magnetic responses ranging between 14 and 38 nT. This feature has the potential to represent possible ferrous debris along its length, that is either buried or with no surface expression, and could be modern such as fishing gear, though this cannot be certain without further investigation.

3.2.32 The remaining 34 A2 anomalies (for full list see Appendix I) were classified as magnetic only anomalies with no corresponding SSS or MBES features. These range in amplitude from 6 nT (**73755**) up to 389 nT (**73741**). These have the potential to represent natural features with ferrous content or possible ferrous debris, either buried or with no surface expression.

3.2.33 Three of these anomalies have an amplitude over 100 nT (**73593**, **73741** and **73744**); 370, 389 and 109 nT respectively, and have the potential to represent a significant amount of ferrous material at these locations.

3.2.34 It should be noted that two of these magnetic anomalies (**73518** and **73520**) were originally identified in the DBC ECR data and are therefore located approximately 110 km to the west of the main distribution of anomalies.

3.2.35 A total of three anomalies (**70617**, **70620** and **70621**) within the Array study area have been discriminated as A3 - historic record of possible archaeological interest with no corresponding geophysical anomaly.

3.2.36 Record **70617** is the position of UKHO record 4950, the wreck of *St Luke*. The wreck is reported to have sunk in 1978 following an explosion on board while hauling nets. The record was created in 1978 however the position has not been surveyed since. No anomalous features were identified in the geophysical data at this location. Any remains associated with this record are either buried or located elsewhere.

3.2.37 Record **70620** is the position of UKHO record 31201, an unknown wreck. The record was created in 1911 and reported as a sailing vessel very dangerous to navigation with topmast and upper topsail showing. The position has been shown on fishing charts and the record was amended to a non-dangerous wreck in 1976. No anomalous features were identified in the 2012 or 2022 geophysical data at this location. Any remains associated with this record are either buried or located elsewhere.

3.2.38 Record **70621** is the position of UKHO record 31199 which reports the presence of the steam ship *Membland*. The wreck is reported to have sunk in 1915 on passage from Hull for the Tyne and is presumed to have struck a mine. The wreck was surveyed in 1971 but no details were given other than the position. No anomalous features were identified in the 2012 or 2022 geophysical data at this location. Any remains associated with this record are either buried or located elsewhere.

3.2.39 The remaining anomaly, **73767**, was identified as a very large positive monopole with an amplitude of 702 nT. It was originally discriminated as an A1 magnetic anomaly but has

been positively identified as modern debris and so has now been re-discriminated as U2 - Known nonarchaeological feature / Feature of non-archaeological interest, but retained within the project for recording purposes.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 Summary of results

4.1.1 A total of 267 anomalies have been identified within the Offshore Development Area as being of possible archaeological interest. These are summarised as follows:

- a total of 10 anomalies were assigned an A1 archaeological discrimination; anthropogenic origin of archaeological interest;
- a total of 29 anomalies were assigned an A2_h archaeological discrimination; anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature;
- a total of 184 anomalies were assigned an A2_l archaeological discrimination; anomaly of possible anthropogenic origin but interpretation is uncertain; may be anthropogenic or a natural feature;
- a total of 40 anomalies were assigned an A2 archaeological discrimination; DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain. Three of these (**73593**, **73741** and **73744**) are magnetic only anomalies over 100 nT in amplitude and have the potential to represent a significant amount of ferrous material;
- a total of three items, all recorded wrecks, were assigned an A3 archaeological discrimination; historic record of possible archaeological interest with no corresponding geophysical anomaly; and
- One item (**73767**), a magnetic only anomaly, was given a U2 non-archaeological discrimination as it has been ground-truthed since the original data asessment.

4.1.2 It should be noted that three of these anomalies (**73518**, **73519** and **73520**) were originally identified in the DBC ECR data and are therefore located approximately 110 km to the west of the main anomaly distribution, within the new DBD ECC.

4.1.3 It should be noted that the results of this assessment are limited (as outlined in the data limitations section 2.5) and that further data covering the revised ECC option will be acquired in 2025. These data will be archaeologically assessed with the results set out in a separate report. Therefore, there are currently areas within the Offshore Development Area for which there is no data coverage, and therefore these results should not be considered comprehensive.

4.2 Recommended mitigation measures

4.2.1 For any anomalies assigned an A1 or A3 archaeological discrimination rating, Archaeological Exclusion Zones (AEZs) are recommended. A total of eight AEZs have been recommended within the Offshore Development Area, all of which are located within the DBD Array Area, as follows (Table 8):

Table 8 Recommended AEZs within the Offshore Development Area

ID	Classification	Archaeological discrimination	Original assessment	Position (WGS84 UTM31N)		Exclusion zone
				Easting	Northing	
70587	Wreck	A1	78041	484539	6107143	50 m buffer around current feature extent
70590	Wreck	A1	78041	493165	6104781	50 m buffer around previous feature extent
70606	Magnetic	A1	78041	501852	6099020	100 m buffer around previous position
70608	Magnetic	A1	78041, 201326	485399	6105334	100 m buffer around previous position
70617	Recorded wreck	A3	78041	491400	6107708	100 m buffer around recorded position
70620	Recorded wreck	A3	78041	502564	6103991	100 m buffer around recorded position
70621	Recorded wreck	A3	78041	499904	6094717	100 m buffer around recorded position
74087	Debris field	A1	201326	485379	6104955	50 m buffer Around previous feature extent

4.2.2 For features assigned A2 archaeological discrimination rating, no AEZs are recommended at this time. However, avoidance of these features by micro-siting is recommended if they are proposed to be directly impacted by development in the future. If micro-siting is not possible, then further assessment to ascertain the nature of the features may be required.

4.2.3 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 Protocol for Archaeological Discoveries: Offshore Renewables Projects (ORPAD) (The Crown Estate 2014) as outlined in the WSI (Royal HaskoningDHV 2019). This will establish whether the recovered objects are of archaeological interest and recommend appropriate mitigation measures.

5 REFERENCES

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APPENDICES

Appendix I Seabed features of archaeological potential

Notes

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

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73518	Magnetic	376972	6079597	A2	-	-	-	81	A medium asymmetric dipole with peak and trough on one profile line. Possibly two separate responses but tagged as one complex anomaly. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC ECR 2022	CE03	-
73519	Rope/chain	377138	6079685	A2	8.5	0.9	0.1	-	A short, tightly curvilinear dark reflector with a short shadow along its length. The feature is isolated and anomalous. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as possible short length of rope or chain.	SSS	DBC ECR 2022	CE03	-
73520	Magnetic	377630	6079737	A2	-	-	-	27	A small positive monopole with peak and trough on one profile line. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC ECR 2022	CE03	-
73592	Magnetic	495429	6092776	A2	-	-	-	7	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP07 AF to DCP06 AE	-
73593	Magnetic	495270	6093428	A2	-	-	-	370	A large, sharp positive monopole with peak and trough on one profile line. Also visible on adjacent profile. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP07 AF to DCP06 AE, IAC DCP06 AE to DCP05 AD, Turbine DCP06 AE	-
73594	Magnetic	493811	6094780	A2	-	-	-	18	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP05 AD to DCF03 AC	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73601	Magnetic	495284	6090368	A2	-	-	-	23	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP08 BE to DCP09 BD	-
73726	Dark reflector	480947	6106379	A2	2.4	1.5	0.7	9	Identified in the SSS dataset as sub-rounded dark reflector with a bright tapered shadow and surrounding scour. Observed in the MBES dataset as an elongate mound, with encircling scour. Associated with a small negative monopole with peak and trough on one profile line in the Mag. data. Interpreted as a possible natural feature with some ferrous content or possible ferrous debris.	SSS, MBES. Mag	DBC IAC 2022	IAC DCP41 NE to DCF12 ND	-
73727	Magnetic	481172	6106130	A2	-	-	-	11	A small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP41 NE to DCF12 ND	-
73728	Magnetic	481524	6105511	A2	-	-	-	16	A small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP41 NE to DCF12 ND, Turbine DCF12 ND	-
73729	Dark reflector	481504	6105501	A2	2.5	0.8	0.7	17	Identified in the SSS dataset as a rounded dark reflector with an angular shadow. Observed in the MBES dataset as a sub-rounded mound in a depression. Associated with a small asymmetric dipole with peak and trough on one profile line in the Mag. data. Interpreted as a possible natural feature with ferrous content or may be possible ferrous debris.	SSS, MBES, Mag.	DBC IAC 2022	IAC DCP41 NE to DCF12 ND, Turbine DCF12 ND	-
73730	Magnetic	481694	6105556	A2	-	-	-	10	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF12 ND	-
73731	Dark reflector	481756	6105471	A2	1.5	0.3	-	-	A V-shaped dark reflector with no clear shadow. There is possible scour on the south-east side. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS	DBC IAC 2022	Turbine DCF12 ND	-
73738	Magnetic	482453	6104345	A2	-	-	-	11	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF11 PE	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73739	Magnetic	483066	6104198	A2	-	-	-	23	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF11 PE to DCF10 PD	-
73740	Magnetic	483463	6103065	A2	-	-	-	9	A small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF10 PD	-
73741	Magnetic	483748	6103231	A2	-	-	-	389	A large negative monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF10 PD	-
73742	Magnetic	483749	6102958	A2	-	-	-	31	A small positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF10 PD	-
73743	Magnetic	484488	6102002	A2	-	-	-	28	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF10 PD to DCF09 PC, Turbine DCF09 PC	-
73744	Magnetic	484663	6101827	A2	-	-	-	109	A large, sharp symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF09 PC	-
73745	Magnetic	484649	6101772	A2	-	-	-	10	A small, broad positive monopole with peak and trough over two profile lines. Also visible on adjacent lines. No anomalous features were identified in the SSS or MBES data at this location. Located approximately 27 m to the north-west of anomaly **73746** and may be related. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF09 PC	-
73746	Magnetic	484667	6101751	A2	-	-	-	7	A small negative monopole with peak and trough over two profile lines. Also visible on adjacent lines. No anomalous features were identified in the SSS or MBES data at this location. Located approximately 27 m to the south-east of anomaly **73745** and may be related. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF09 PC	-
73747	Magnetic	484700	6101671	A2	-	-	-	62	A medium, sharp asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF09 PC	-
73750	Magnetic	485273	6105403	A2	-	-	-	8	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 43	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
70608	Magnetic	485399	6105334	A1	-	-	-	626	Identified in the 2021 Mag. dataset as very large, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. Also identified in the 2022 Mag. data as a large positive monopole with peak and trough on one profile line (110 nT) and in the 2012 Mag. data measuring 46 nT. No anomalous features were identified in the SSS or MBES data at this location. Position and amplitude retained from previous dataset due to tighter line spacing. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326), DBD Array 2022, Teesside A (78041)	Turbine SL-DCP 43, Array	MC-03 (Enviros)
73751	Magnetic	485172	6105249	A2	-	-	-	8	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 43	-
73752	Magnetic	485431	6105254	A2	-	-	-	12	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 43	-
73753	Magnetic	485284	6105157	A2	-	-	-	7	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 43	-
73754	Magnetic	486064	6104304	A2	-	-	-	15	A small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 44	-
73755	Magnetic	487262	6103116	A2	-	-	-	6	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 45	-
73756	Magnetic	487142	6102790	A2	-	-	-	13	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine SL-DCP 45	-
73757	Magnetic trend	488472	6101678	A2	150.0	-	-	38	Identified in the 2021 Mag. data as a magnetic trend comprising seven individual magnetic responses ranging in amplitude between 14 and 38 nT and aligned north-east to south-west. No anomalous features were identified in the SSS or MBES data at this location. The central position of the feature has been used. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as linear trend of possible ferrous debris either buried or with no surface expression, and may be modern such as fishing gear, but this cannot be confirmed without visual inspection.	Mag.	DBC IAC 2021	Turbine SL-DCP 46, Array	-
73758	Magnetic	487164	6099638	A2	-	-	-	10	A small negative monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP01 QD to DCF07 QC	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73759	Magnetic	486331	6099809	A2	-	-	-	24	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. It is situated 10.0 m to the south-east of **73760** and may be related. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF07 QC to DCF08 QB	-
73760	Magnetic	486324	6099817	A2	-	-	-	14	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. It is situated 10.0 m to the north-west of **73759** and may be related. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF07 QC to DCF08 QB	-
73761	Magnetic	485930	6100707	A2	-	-	-	30	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF07 QC to DCF08 QB	-
73762	Magnetic	485470	6100717	A2	-	-	-	14	A small negative monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	Turbine DCF08 QB	-
73763	Magnetic	485334	6100661	A2	-	-	-	31	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCF08 QB to DCE06 QA	-
73765	Dark reflector	493412	6095777	A2	2.0	0.9	0.3	-	An elongate dark reflector with an uneven shadow indicating varying height. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS	DBC IAC 2022	Turbine DCP04 RE	-
73766	Magnetic	493158	6095865	A2	-	-	-	25	A small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP04 RE to DCP03 RD, Turbine DCP04 RE	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73767	Magnetic	492270	6097002	U2	-	-	-	702	A very large, sharp positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. This has been confirmed as lost geotechnical rods and has been retained in the gazetteer for positioning purposes.	Mag.	DBC IAC 2022	IAC DCP04 RE to IAC DCP03 RD, IAC DCP03 RD to DCF05 RC, Turbine DCP03 RD	-
73769	Magnetic	488957	6097255	A2	-	-	-	30	A small positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2022	IAC DCP03 RD to DCF05 RC	-
70588	Debris	506159	6107876	A2_h	8.0	4.5	0.3	-	Previously identified in the 2012 SSS dataset as a medium sized dark reflector with shadow located on a sandy and even area of the seabed. A very small, elongate mound was identified in the MBES data in the vicinity of the anomaly. This was considered to be a piece of possible debris. No corresponding 2022 dataset contacts were identified and so this object may now appear in the most recent datasets as a natural feature, or may now be buried. Interpreted as possible debris.	SSS	Teesside A (78041)	Array	-
70607	Magnetic	499084	6100680	A2_l	-	-	-	25	Previously identified in the 2012 Mag. data as a distinct medium negative monopole in very noisy data. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	Teesside A (78041)	Array	-
73901	Dark reflector	505857	6106339	A2_l	8.2	6.3	-	-	An angular dark reflector with a slight shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73902	Magnetic	504254	6107704	A2_h	-	-	-	189	A large, sharp asymmetric dipole with peak and trough over two profile lines. No anomalous features were identified in the SSS or MBES data at this location, although there is a seabed disturbance **73903** situated 44 m south-west that may be associated. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	MC-08 (Enviros)
73903	Seabed disturbance	504224	6107664	A2_l	18.0	11.2	-	-	A group of angular dark reflectors within an area of scour, at least four dark reflectors some with shadows, largest object measures 4.5 x 2.3 m . No anomalous features were identified in the MBES or Mag. data at this location, although large Mag. anomaly **73902** is situated 44 m north-east and may be associated. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73904	Seabed disturbance	504140	6106089	A2_l	19.4	7.7	-	-	Oval area of disturbed seabed, possibly has an elongate dark reflector at the north-west end. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73905	Dark reflector	504727	6104833	A2_l	14.1	5.5	-	-	A distinct angular dark reflector with slight shadow, may be multiple objects but unclear. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73906	Dark reflector	503054	6107902	A2_l	6.4	1.5	-	-	A curvilinear dark reflector within slight scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73907	Seabed disturbance	503082	6107925	A2_l	18.3	10.7	-	-	An irregular area of seabed disturbance visible as a group of sub-rounded dark reflectors within what appears to be scour or depressions. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73908	Dark reflector	503489	6104863	A2_l	7.4	3.7	-	-	A distinct angular dark reflector. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73909	Dark reflector	503455	6104847	A2_l	7.8	2.2	-	-	A distinct elongate dark reflector with slight shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73910	Dark reflector	503321	6104453	A2_l	8.5	2.6	-	-	An elongate dark reflector with a shadow, surrounded by slight scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73911	Mound	502619	6104943	A2_l	4.1	3.9	0.1	-	An angular mound, surrounded by scour. Visible as a small dark reflector with shadow in the SSS Mosaic. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73912	Seabed disturbance	502565	6103821	A2_l	6.9	3.5	-	-	A sub-rounded seabed disturbance visible as small elongate and angular dark reflectors. May be related to **73913** which is located 42.0 m north-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73913	Seabed disturbance	502598	6103856	A2_l	13.7	7.9	-	-	An irregular area of seabed disturbance visible as a distinct elongate dark reflector (8.2 x 1.6 m) with smaller angular dark reflectors surrounding it. May be related to **73912** which is located 42.0 m south-west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
70620	Recorded wreck	502564	6103991	A3	-	-	-	-	The position of UKHO record 31201, an unknown wreck. The record was created in 1911 and reported as a sailing vessel very dangerous to navigation with topmast and upper topsail showing. The position has been shown on fisherman's charts and the record was amended to a non-dangerous wreck in 1976. No anomalous features were identified in the geophysical data at this location. Any remains associated with this record are either buried or located elsewhere. It has been retained with a recommended AEZ.	-	DBD Array 2022, Teesside (78041)	Array	31201 (UKHO)

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73914	Dark reflector	502248	6102526	A2_l	9.4	1.0	-	-	An elongate dark reflector with shadow at one end. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74025	Magnetic	489876	6100158	A2_l	-	-	-	26	Identified in the 2021 Mag. data as a small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
73916	Mound	503968	6099063	A2_l	13.7	4.8	0.1	-	An indistinct elongate and slightly angular mound with a slightly uneven peak and gently sloping sides. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73917	Dark reflector	502901	6097839	A2_l	9.7	2.3	-	-	A distinct elongate dark reflector with slight shadows within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73918	Depression	503042	6097137	A2_l	12.0	7.4	-0.4	-	Distinct elongate and relatively deep depression, isolated and highly anomalous to the surrounding seabed. The feature has a slightly uneven base that represent objects. Visible as an irregular dark reflector in the SSS data, though this is positioned mostly within the data gap below the towfish and so distorted. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	MBES	DBD Array 2022	Array	-
73919	Seabed disturbance	503358	6095881	A2_l	30.6	14.0	-	-	Seabed disturbance visible as multiple elongate and angular dark reflectors. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73920	Dark reflector	503012	6095838	A2_l	13.1	4.5	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73921	Mound	502251	6092099	A2_l	4.1	3.8	0.2	-	A sub-rounded mound in a depression, the mound has a slightly uneven peak. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73922	Seabed disturbance	502206	6091259	A2_l	12.6	5.0	-	-	An elongate seabed disturbance on an approximate NNW to SSE alignment visible as an area of higher reflectivity. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73923	Mound	500234	6091033	A2_l	7.0	1.9	0.1	-	An elongate mound with steep sides and slightly uneven peak, relatively isolated and distinct. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73924	Mound	500162	6091663	A2_l	11.3	3.2	0.1	-	An elongate low-lying mound on a north-west to south-east alignment, relatively isolated and distinct. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73925	Mound	500653	6092653	A2_l	7.0	3.0	0.1	-	A sub-angular mound, low-lying and isolated. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	MBES	DBD Array 2022	Array	-
73926	Seabed disturbance	500925	6093413	A2_l	50.6	14.3	-	-	A large area of seabed disturbance visible as multiple indistinct elongate and angular dark reflectors spread over a relatively featureless seabed. Possibly associated with similar feature 73927 situated 5 m north-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73927	Seabed disturbance	500955	6093439	A2_l	25.9	10.6	-	-	A seabed disturbance visible as indistinct dark reflectors and area of lower reflectivity. Possibly associated with similar feature 73926 situated 5 m south-west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73928	Seabed disturbance	502039	6094845	A2_l	26.1	9.8	0.1	-	Seabed disturbance comprising a low-lying linear mound with uneven peak, orientated north-west to south-east and wider at the south-eastern end. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	MBES	DBD Array 2022	Array	-
73929	Dark reflector	502346	6095455	A2_l	5.1	2.6	-	-	A sub-rounded dark reflector with scour to the south-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73930	Dark reflector	501132	6095595	A2_l	7.5	2.2	0.1	-	A curved elongate dark reflector with a shadow. Visible as a low-lying angular mound in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73931	Seabed disturbance	500289	6096092	A2_l	24.3	20.1	0.1	-	A seabed disturbance visible as a group of low-lying mounds at edge of the MBES data extents. At least four objects are noted, the largest mound measuring 10 x 8 m. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	MBES	DBD Array 2022	Array	-
70606	Magnetic	501852	6099020	A1	-	-	-	649	Previously identified in the 2012 Mag. data as a very large distinct monopole, possibly a large piece of buried ferrous debris. Also identified in the 2022 Mag. data as a very large asymmetric dipole with peak and trough on one profile line (620 nT). No anomalous features were identified in the SSS or MBES data at this location. Position and amplitude retained from previous dataset due to tighter line spacing. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022, Teesside (78041)	Array	MC-06 (Enviros)
73932	Dark reflector	500127	6098697	A2_l	2.8	1.5	-	-	An indistinct, elongate dark reflector with a shadow within slight scour. Visible as a slight depression with uneven base in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID49 (Enviros)
73933	Dark reflector	500744	6100343	A2_l	55.2	1.0	-	-	Indistinct linear dark reflector with shadow orientated north-west to south-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature such as a seabed scar or possible length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73934	Dark reflector	500299	6100264	A2_l	8.7	5.1	-	-	An indistinct angular dark reflector within an area of scour. Also identified in the MBES data as a distinct depression with a slightly uneven base that may be small objects, the north-western edge is very steep and the feature measures 20.8 x 18.2 x -0.4 m. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic, MBES	DBD Array 2022	Array	-
73935	Seabed disturbance	500315	6102710	A2_l	34.5	8.0	-	-	A seabed disturbance visible as at least three angular dark reflectors, possibly attached to a linear bright reflector or scar. The largest object measures 18 x 5.6 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73936	Dark reflector	500556	6103985	A2_l	6.4	1.7	-	-	A distinct, elongate dark reflector with a small shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74073	Magnetic	487868	6102664	A2_l	-	-	-	26	Identified in the 2021 data as a small positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
73938	Dark reflector	501554	6104796	A2_l	7.6	2.3	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73939	Dark reflector	501344	6104894	A2_l	5.5	1.6	-	-	An elongate dark reflector within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73940	Dark reflector	501739	6105995	A2_l	7.0	2.2	-	-	An elongate dark reflector. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73941	Dark reflector	501454	6106273	A2_l	8.9	6.3	-	-	An angular dark reflector with no shadow, which may be hollow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73942	Seabed disturbance	500855	6106066	A2_l	7.1	5.2	-	-	Group of four indistinct curvilinear parallel dark reflectors with no clear shadows. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Raw	DBD Array 2022	Array	-
73943	Seabed disturbance	500828	6106014	A2_l	16.6	11.2	-	-	Seabed disturbance comprising parallel elongate and narrow dark reflectors with shadows and within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73944	Mound	501183	6107865	A2_l	4.9	4.0	0.2	-	An angular mound, within a distinct depression with scour to the south-east. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73945	Dark reflector	498290	6107356	A2_l	3.3	2.9	-	-	A sub-rounded dark reflector with a slight shadow within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73946	Seabed disturbance	498364	6107403	A2_l	21.0	16.8	-0.1	-	An irregular area of disturbed seabed, comprising small angular mounds within a depression. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	MBES	DBD Array 2022	Array	-
73947	Seabed disturbance	498894	6105692	A2_l	14.0	8.5	-	-	A seabed disturbance seen as a large sub-angular dark reflector with varying reflectivity. This has scour present in the north-west to south-east. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73948	Dark reflector	498420	6105857	A2_l	3.1	1.9	0.1	-	A distinct angular dark reflector with a bright shadow. Visible as a small angular mound in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73949	Dark reflector	499176	6104239	A2_l	11.9	1.8	-	-	A distinct, linear dark reflector orientated north to south, which casts a small shadow and is present within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73950	Mound	499817	6104285	A2_l	3.7	3.0	0.4	-	Small angular mound with steep sides and a pointed peak, tall for area and isolated on a featureless seabed. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73951	Seabed disturbance	499579	6100799	A2_l	9.5	5.6	-	-	A seabed disturbance visible as two parallel elongate dark reflectors, individually these each measure 9.5 x 1.5 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73952	Dark reflector	499463	6100684	A2_l	8.2	4.8	-	-	An elongate dark reflector with no shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74080	Magnetic	485542	6104924	A2_l	-	-	-	26	Identified in the 2021 data as a small symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
70621	Recorded wreck	499904	6094717	A3	-	-	-	-	The position of UKHO record 31199, the wreck of the steam ship *Membland*. The wreck is reported to have sunk in 1915 on passage from Hull for the Tyne and is presumed to have struck a mine. Surveyed in 1971 but no details given other than position. No anomalous features were identified in the geophysical data at this location. It has been retained with a recommended AEZ.	-	DBD Array 2022, Teesside (78041)	Array	31199 (UKHO)
73953	Dark reflector	500003	6094228	A2_l	6.4	1.3	-	-	An elongate dark reflector with a slight shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73954	Linear debris	499117	6093729	A2_h	79.7	2.4	-	-	A highly curvilinear dark reflector with no clear shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as non-ferrous linear debris and may be a length of rope.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73955	Linear debris	498414	6093415	A2_h	1282.3	1.0	-	-	Very indistinct long linear dark reflector with a short shadow. There appear to be small sub-rounded dark reflectors attached at even intervals, these objects measure approximately 3.2 x 2.7 m. The feature is orientated WNW to ESE. No anomalous features were identified in the MBES or Mag. data at this location. This is interpreted as a possibly non-ferrous modern feature such as fishing gear and therefore may not be of archaeological interest. However, as this cannot be confirmed without further investigation, the feature has been retained as a precaution.	SSS Mosaic	DBD Array 2022	Array	-
73956	Dark reflector	498384	6092867	A2_l	5.3	2.0	-	-	An elongate dark reflector with a shadow. Appears to be surrounded by a scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73957	Dark reflector	499114	6089858	A2_l	6.0	2.0	-	-	A sub-rounded dark reflector within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Within SAC 2022	Array	-
73958	Dark reflector	496921	6093598	A2_l	5.8	1.3	-	-	An elongate dark reflector with a bright shadow, on a north-east to south-west alignment. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73959	Linear debris	497020	6094005	A2_h	415.1	4.2	0.1	-	An linear dark reflector with a shadow alongside it, on a NNE to SSW alignment. Also identified in the MBES data as a long and narrow mound with a slight depression at the edge. No anomalous features were identified in the Mag. data at this location. Interpreted as non-ferrous linear debris and may be a length of rope.	SSS Mosaic, MBES	DBD Array 2022	Array	-
74076	Magnetic	486558	6103716	A2_l	-	-	-	30	Identified in the 2021 data as a small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. Interpreted as possible ferrous debris either buried or with no surface expression	Mag.	DBC IAC 2021 (201326)	Array	-
73961	Bright reflector	497863	6095081	A2_l	19.4	3.1	-	-	An elongate bright reflector on a north-west to south-east alignment. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73962	Dark reflector	497702	6094613	A2_l	13.6	2.3	0.1	-	A curvilinear dark reflector on a roughly north-west to south-east alignment. Also Identified in the MBES data as a small angular mound in a depression with scour to the south. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic, MBES	DBD Array 2022	Array	-
73963	Dark reflector	497242	6094842	A2_l	13.1	1.5	-	-	An elongate linear dark reflector with a shadow, on a north-west to south-east alignment. It is wider at the south-eastern end. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74085	Magnetic	485389	6104916	A2_l	-	-	-	30	Identified in the 2021 data as a small positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73965	Dark reflector	498579	6096079	A2_l	9.8	1.4	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
70596	Depression	497747	6097589	A2_l	9.0	7.5	-0.1	-	Previously identified in the 2012 MBES data as a circular depression. No corresponding 2022 dataset contacts were identified and so this object may now appear in the most recent datasets as a natural feature, or may now be buried. Interpreted as a possible natural feature or may be possible debris.	MBES	Teesside A (78041)	Array	ID34 (Enviros)
70580	Debris	497602	6098295	A2_h	2.6	1.2	0.1	-	Previously identified in the 2012 SSS data as a small piece of possible debris with a small shadow visible. This appeared to be partially covered by sand and was present on a sandy area of the seabed. No corresponding 2022 dataset contacts were identified and so this object may now appear in the most recent datasets as a natural feature, or may now be buried. Interpreted as possible debris.	SSS	Teesside A (78041)	Array	-
73966	Mound	498442	6099679	A2_l	4.0	3.4	0.3	-	A distinct sub-angular elongate mound, surrounded by an elongate scour. Visible as a sub-angular dark reflector in the SSS data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	MBES	DBD Array 2022	Array	-
74072	Magnetic	487990	6102518	A2_l	-	-	-	34	Identified in the 2021 data as a small, sharp symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
73968	Dark reflector	497106	6101887	A2_l	9.4	6.0	-	-	A distinct and irregular dark reflector with varying reflectivity and scour to the south-east. Situated at the edge of natural outcropping. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73969	Dark reflector	497563	6101837	A2_l	6.7	2.2	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73970	Mound	497048	6101571	A2_l	3.5	3.7	0.1	-	A sub-rounded mound, surrounded by an elongate scour. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
73971	Dark reflector	497028	6103055	A2_l	5.5	1.0	-	-	A short, straight dark reflector with a bright shadow, may be two objects close together but unclear. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
70585	Debris	497844	6103568	A2_h	5.0	4.4	0.1	-	Previously identified in the 2012 SSS data as a large piece of possible debris, located on a sandy area of the seabed, measuring 3.9 x 0.9 x 0.5 m. Thin, rectangular shaped debris with large shadow and scour visible on the seabed with an elongate depression identified in vicinity of anomaly. Identified in the 2022 MBES data as a low-lying slightly angular mound in a depression with some scour to the south-east, this may be partially buried. Visible as an area of disturbed seabed with a small sub-rounded object in the SSS Mosaic. Interpreted as possible non-ferrous debris.	SSS, MBES	DBD Array 2022, Teesside (78041)	Array	-
73972	Dark reflector	498003	6103767	A2_l	4.6	1.2	-	-	Elongate dark reflector with possible scour on the north-west edge. Located in an area of seabed with varying reflectivity. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73973	Dark reflector	498223	6103579	A2_l	5.5	1.8	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73974	Dark reflector	497015	6103592	A2_l	4.5	1.0	-	-	An elongate dark reflector with a shadow within an area of ripples. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73975	Seabed disturbance	496682	6104594	A2_l	23.7	10.3	-	-	An elongate area of seabed disturbance comprising two indistinct slightly curvilinear dark reflectors lying parallel to one another and in a depression. The feature is orientated north to south. Visible in the MBES data as an angular depression -0.4 m deep. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73976	Dark reflector	496709	6104528	A2_l	5.8	4.1	-	-	Approximately triangular dark reflector with adjacent curvilinear bright reflector along the southern edge, which appears to be a scar or scour. Surrounding seabed seems uneven or possibly disturbed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73977	Dark reflector	496906	6104266	A2_l	5.2	2.3	0.1	-	Elongate dark reflector with shadow. Immediately surrounded by featureless seabed and located approximately 20 m east of an area of sand ripples. Faintly visible in the MBES data as an elongate low-lying mound. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73978	Seabed disturbance	496720	6105134	A2_l	14.4	3.6	0.1	-	A seabed disturbance seen as a group of at least four dark reflectors with shadows, aligned north-east to south-west. The largest measures 3.6 x 1.7 m. Visible as an elongate mound in the MBES data with an uneven peak. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73979	Dark reflector	497005	6105390	A2_l	3.5	1.5	-	-	An elongate dark reflector with a slight shadow, isolated on a featureless seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73980	Dark reflector	496166	6105214	A2_I	7.5	5.1	-	-	An approximately 'X' shaped dark reflector, looks anomalous to the surrounding seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73981	Dark reflector	496246	6105645	A2_I	7.5	1.9	-	-	Linear dark reflector oriented north-east to south-west, isolated on a featureless seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73982	Dark reflector	496928	6105709	A2_I	5.2	1.4	-	-	Elongate dark reflector with possible scour along southern side. Situated in area of featureless seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73983	Dark reflector	496283	6106459	A2_I	3.0	3.0	-	-	A distinct angular dark reflector with a slight shadow, in a slight depression with sediment accumulation surrounding it. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID26 (Enviros)
73984	Dark reflector	496505	6107067	A2_I	5.5	1.0	-	-	A distinct elongate dark reflector with no shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73985	Dark reflector	497579	6106788	A2_I	6.7	3.8	-	-	Irregularly shaped dark reflector with some possible scour to the west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
73986	Dark reflector	497571	6106734	A2_I	13.5	8.3	-	-	Approximately oval shaped feature oriented east to west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73987	Seabed disturbance	496745	6107957	A2_I	15.4	9.4	-	-	A seabed disturbance seen as an oval area of higher reflectivity surrounded by slight scour. Indistinct feature but isolated on a featureless seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73988	Dark reflector	496009	6107704	A2_I	3.0	2.0	0.1	-	Distinct angular dark reflector with a shadow, possibly multiple objects close together within an area of scour. Visible in the MBES data as a small angular mound within scour. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID22 (Enviros)
73989	Dark reflector	493619	6107635	A2_I	41.3	0.5	-	-	Very indistinct narrow and slightly curvilinear dark reflector, orientated NNE to SSW. The feature is intermittent. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature such as a seabed scar or may be possible linear debris.	SSS Mosaic	DBD Array 2022	Array	-
73990	Dark reflector	494818	6107501	A2_I	6.1	0.5	-	-	A very distinct straight dark reflector with a shadow, within an area of natural outcropping. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73991	Dark reflector	494394	6106794	A2_I	4.9	1.3	-	-	Elongate dark reflector with a shadow within possible scour, may be multiple objects close together but this is unclear. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73992	Seabed disturbance	495147	6107164	A2_l	6.5	4.0	-	-	A seabed disturbance seen as a distinct angular dark reflector with a shadow, possibly multiple objects close together, within an area of scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
73993	Linear debris	495541	6106705	A2_h	109.3	1.0	-	-	A long thin curvilinear dark reflector with no shadow orientated approximately east to west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as linear debris and may be a length of rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
73994	Debris field	493818	6106655	A2_h	35.7	21.7	0.7	-	A collection of indistinct dark reflectors with bright shadows, some of the features have anthropogenic characteristics. Possibly two long and narrow curvilinear features are visible on the west side of the feature. Also visible in the MBES data as a group of three sub-angular mounds very close together at the edge of a natural depression. One mound is slightly curvilinear and the largest mound measures 5.2 x 4.0 m. No anomalous features were identified in the Mag. data at this location. Possibly related to debris field **73996**. Interpreted as debris.	SSS Raw, MBES	DBD Array 2022	Array	-
73995	Dark reflector	493806	6106597	A2_l	30.8	5.4	0.6	-	A linear dark reflector with bright shadow wrapped round the base of a natural feature, there is possibly an object at one end measuring 3.4 x 2 m. Visible in the MBES data as a steep, slightly stepped edge of a natural feature, may be natural but retained due to proximity to **73996**. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Raw	DBD Array 2022	Array	-
73996	Debris field	493836	6106601	A2_h	51.6	19.7	0.9	-	A large spread of linear and sub-angular bright and dark reflectors with shadows present within sand ripples. Some of the features have anthropogenic characteristics and the largest object measures 6.6 x 5.6m. Also identified in the MBES data as a group of at least five sub-angular mounds close together at the edge of a natural depression. Largest mound measures 7.6 x 6 m. No anomalous features were identified in the Mag. data at this location. Possibly related to debris field **73994**. Interpreted as debris.	SSS Raw, SSS Mosaic, MBES	DBD Array 2022	Array	-
73997	Dark reflector	494306	6106452	A2_l	4.5	1.5	-	-	An indistinct elongate dark reflector with shadow on the eastern edge of an area of sand waves. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
70590	Wreck	493165	6104781	A1	38.8	14.7	0.4	-	Previously identified in the 2012 SSS data as a large dark reflector with strong and large shadow, size and curvilinear edge is consistent with a wreck edging. Individual elements visible in the target, possibly split in two pieces. Elongate depression identified on MBES data. No corresponding 2022 dataset contacts were identified and so this feature may now be buried. Position and dimensions have been retained from previous dataset.	SSS, MBES	Teesside A (78041)	Array	-
73998	Dark reflector	493148	6104654	A2_l	5.4	2.8	-	-	Two dark reflectors with height, located directly next to one another. These are much larger than surrounding similar features. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
73999	Dark reflector	494480	6104672	A2_l	6.0	4.0	-	-	An angular dark reflector which may have some associated scour extending to the south-east. This is located directly next to a patch of sand waves. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74000	Mound	494825	6104317	A2_l	8.5	4.4	0.2	-	An isolated sub-rounded mound with gently sloping sides and slightly uneven peak. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	MBES	DBD Array 2022	Array	-
74001	Dark reflector	494847	6104212	A2_l	6.7	1.0	-	-	A narrow, slightly curved dark reflector with a bright shadow, located within an area of outcropping geology. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74002	Mound	494702	6104217	A2_l	9.2	3.0	0.2	-	Elongate mound orientated north-east to south-west with steep sides and a pointed peak. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74003	Dark reflector	496043	6103443	A2_l	5.0	1.6	-	-	Elongate dark reflector in area of featureless seabed. The adjacent bright reflector appears to indicate a scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74004	Seabed disturbance	495626	6103078	A2_l	6.0	3.0	-	-	A small area of seabed disturbance comprising at least three short elongate dark reflectors (measuring approximately 3 x 1 m) with shadows or bright reflectors in between, anomalous to the surrounding seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74005	Dark reflector	495703	6102815	A2_l	9.8	5.0	0.1	-	An indistinct oval dark reflector with no clear shadow situated on a featureless area of seabed within slight scour. Visible in the MBES data as a sub-angular mound. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74006	Seabed disturbance	496018	6102647	A2_l	17.5	8.3	2.5	-	A seabed disturbance seen as an irregular area of dark reflectors with varying reflectivity with scour to the north-west and south-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Raw, SSS Mosaic	DBD Array 2022	Array	-
74007	Linear debris	494854	6103195	A2_h	19.6	1.0	-	-	A short, slightly curvilinear dark reflector with a shadow, possibly related to **74008** situated 40 m east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible short length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74008	Linear debris	494915	6103205	A2_h	32.9	1.0	-	-	A short, slightly curvilinear dark reflector with a shadow, possibly related to **74007** situated 40 m west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible short length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74009	Linear debris	494784	6102927	A2_h	86.0	1.0	-	-	A thin and slightly curvilinear dark reflector with a shadow, orientated approximately NNE to SSW and situated on an area of sand mega ripples. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible long length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74010	Dark reflector	495284	6102492	A2_l	3.9	3.7	-	-	A sub-angular dark reflector with a shadow. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID18 (Enviros)
74011	Dark reflector	494724	6102715	A2_l	3.8	1.3	0.2	-	An elongate dark reflector with a shadow situated within an area of sand mega ripples. Also identified in the MBES data as a elongate mound within an area of disturbed seabed. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic, MBES	DBD Array 2022	Array	-
74012	Dark reflector	495692	6102269	A2_l	2.5	1.0	-	-	An elongate dark reflector with a bright shadow surrounded by scour. Visible as a small mound in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID21 (Enviros)
74013	Seabed disturbance	495118	6101980	A2_l	17.8	8.0	-	-	An elongate area of seabed disturbance with small angular objects within, one object measures 3.0 x 1.6 m. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74014	Mound	495173	6101984	A2_l	7.9	4.0	0.2	-	An elongate mound, situated within an area of outcropping geology. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74015	Dark reflector	493897	6101639	A2_l	4.9	1.3	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	ID14 (Enviros)
74016	Dark reflector	494059	6101500	A2_l	9.8	7.2	-	-	Irregular dark reflector with slight shadow within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74017	Debris	494626	6101611	A2_h	7.6	1.7	0.1	-	A narrow linear dark reflector with short shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as possible debris.	SSS Raw	DBD Array 2022	Array	ID16 (Enviros)
73960	Magnetic	498267	6095101	A2_l	-	-	-	36	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
74019	Seabed disturbance	494900	6100786	A2_l	30.1	23.0	-	-	Seabed disturbance with multiple small angular and elongate dark reflectors and areas of higher reflectivity and scour. Largest object measures 4.9 x 3.3 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74020	Linear debris	494380	6098914	A2_h	48.9	1.0	-	-	Distinct slightly curvilinear dark reflector situated on an area of sand mega ripples. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible long length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74021	Seabed disturbance	493967	6099016	A2_l	11.6	4.9	0.4	-	A seabed disturbance visible as two small angular mounds within a depression situated at the edge of an area of sand mega ripples. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	MBES	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74022	Seabed disturbance	495616	6098788	A2_l	9.4	7.7	-	-	A circular seabed disturbance visible as two curved elongate dark reflectors and a sub-rounded dark reflector. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74023	Seabed disturbance	494800	6095363	A2_l	31.6	11.8	-0.4	-	A seabed disturbance comprising an irregular area of low reflectivity. This contains some possible small sub-angular dark reflectors within scour. Also identified in the MBES data as a long and curvilinear depression -0.4 m deep on the north edge of an area of raised seabed. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic, MBES	DBD Array 2022	Array	-
74024	Dark reflector	491275	6100239	A2_l	6.3	4.5	-	-	An indistinct sub-angular dark reflector with a shadow and within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
73937	Magnetic	501416	6104536	A2_l	-	-	-	37	A small, broad positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
74026	Dark reflector	492453	6099688	A2_l	8.9	4.9	-	-	An angular dark reflector with areas of higher reflectivity and scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74027	Dark reflector	491311	6101497	A2_l	5.0	1.3	-	-	An elongate dark reflector with no shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74028	Dark reflector	492419	6101800	A2_l	5.1	2.5	-	-	An elongate dark reflector with a shadow, may be multiple objects but this is unclear. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74029	Dark reflector	491210	6103135	A2_l	9.0	3.5	-	-	A large sub-angular dark reflector with a slight shadow, appears wider at the north-eastern end. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74030	Dark reflector	490842	6102703	A2_l	10.0	6.4	-	-	A large angular dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74031	Dark reflector	492050	6103611	A2_l	6.3	1.5	-	-	A short, straight dark reflector with a slight shadow, one of two close together with **74032** situated 22 m south. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74032	Dark reflector	492050	6103589	A2_l	6.8	1.0	-	-	A short, straight dark reflector with a slight shadow, one of two close together with **74031** situated 22 m north. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74033	Dark reflector	492136	6103570	A2_l	4.8	1.5	-	-	Distinct elongate dark reflector with a small shadow in area of featureless seabed. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74034	Dark reflector	492174	6104086	A2_l	15.0	5.3	-	-	A large sub-angular dark reflector with a slight shadow, orientated north-east to south-west with scour to the south-west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
70593	Debris	492113	6104621	A2_h	7.1	5.2	0.4	10	Previously identified in the 2012 SSS data as a large dark reflector with large shadow measuring 9 x 6.5 x 0.7 m. Identified in the 2012 MBES data as a distinct elongate object within a small depression. Identified in the 2012 Mag. data as a small irregular shaped dipole. Identified in the 2022 SSS Mosaic as a distinct sub-angular dark reflector with a bright shadow and scour to the south-east. Also identified in the MBES data as a distinct oval mound, isolated on a featureless seabed. Interpreted as possible ferrous debris.	SSS Mosaic, MBES	DBD Array 2022, Teesside (78041)	Array	-
74035	Seabed disturbance	491961	6105579	A2_l	14.9	10.5	-	-	Oval area of disturbed seabed consisting primarily of two parallel elongate dark reflectors, measuring 10.3 x 3.3 m and 7.9 x 1.4 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74036	Linear debris	490358	6105361	A2_h	91.8	0.5	-	-	A long narrow and mostly straight dark reflector with no shadow orientated approximately east to west. The feature is situated in an area of sand mega ripples. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible long length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74037	Dark reflector	490634	6105473	A2_l	5.0	2.5	-	-	A distinct elongate sub-angular dark reflector with a slight shadow on south-eastern edge. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74038	Linear debris	490390	6105265	A2_h	85.1	0.5	-	-	A long narrow and mostly straight dark reflector with a slight shadow orientated approximately east to west. The feature is situated on an area of sand mega ripples. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible long length of linear debris such as rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74039	Dark reflector	489757	6106069	A2_l	7.0	1.4	-	-	Linear dark reflector with shadow, oriented south-west to north-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74040	Dark reflector	490350	6106268	A2_l	6.0	2.5	-	-	An elongate dark reflector wider at one end, with a shadow or within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
70617	Recorded wreck	491400	6107708	A3	-	-	-	-	The position of UKHO record 4950, the wreck of *St Luke*, categorised as a dangerous wreck. The wreck is reported to have sunk in 1978 following an explosion on board while hauling nets. The record was created in 1978 however the position has not been surveyed since. No anomalous features were identified in the geophysical data at this location, however this position was not directly covered by a Mag. line. Any remains associated with this record are either buried or located elsewhere.	-	DBD Array 2022, Teesside (78041)	Array	4950 (UKHO)

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74041	Seabed disturbance	491230	6107837	A2_l	18.1	6.8	-	-	A seabed disturbance seen as an indistinct group of dark reflectors, possibly with shadows, or within a depression or scour. Angular and elongate objects are visible, the largest of which measures 7 x 1.6 m. The feature is situated south of an area of mega ripples. Visible as an uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74042	Dark reflector	491101	6107854	A2_l	11.0	1.5	-	-	An elongate dark reflector with a slight shadow orientated north-east to south-west, the feature is right angled at the north-eastern end and may be a separate object (1.8 x 1.4 m). No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74043	Dark reflector	491290	6107900	A2_l	11.3	1.5	-	-	A straight dark reflector with a very slight shadow, indistinct feature orientated north-east to south-west. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74044	Seabed disturbance	490786	6107605	A2_l	16.8	10.4	-	-	An area of disturbed seabed containing a group of dark reflectors with shadows. The largest object measures 3.4 x 1.7 and is sub-angular, with two distinct objects and smaller dark reflectors surrounding. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74045	Linear debris	490296	6107648	A2_h	96.4	1.0	-	-	A long narrow dark reflector, with a slight shadow in places, orientated north-east to south-west and situated on an area of mega ripples. The feature may be partially buried at the south-western end where slight shadow or scour is visible. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as linear debris and may be a length of rope or chain.	SSS Mosaic	DBD Array 2022	Array	-
74046	Seabed disturbance	487476	6107587	A2_l	12.7	8.3	-	-	A seabed disturbance seen as a group of three parallel elongate dark reflectors, all of which have slight shadows. The largest measures 8.5 x 1.8 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74047	Seabed disturbance	487414	6107556	A2_l	17.4	10.8	-	-	A seabed disturbance seen as indistinct angular and sub-angular dark reflectors within an area of scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74048	Seabed disturbance	487574	6104871	A2_l	28.9	27.5	-	-	A seabed disturbance seen as a group of approximately six angular dark reflectors with associated shadows. The largest object measures 14.2 x 1.7 m. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74049	Dark reflector	489056	6104181	A2_l	9.8	2.2	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74050	Dark reflector	489718	6101808	A2_l	6.8	4.0	-	-	A distinct sub-angular dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74051	Seabed disturbance	489480	6101628	A2_l	40.4	5.2	-	-	A seabed disturbance visible as an elongate bright reflector orientated NNW to SSE, may be a depression as the edges of the feature are distinct. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74052	Debris	489597	6101589	A2_h	15.9	5.9	0.3	-	A very distinct elongate mound, surrounded by scour. The mound has a slightly uneven peak and relatively steep sides. Visible in the SSS mosaic as an indistinct dark reflector with shadow or scour to the south-east. No anomalous features were identified in the Mag. data at this location. Interpreted as possible debris.	MBES	DBD Array 2022	Array	-
74053	Dark reflector	489169	6101684	A2_l	7.0	4.5	-	-	A curvilinear dark reflector with an associated shadow and scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-
74054	Mound	489225	6101202	A2_l	17.7	4.1	0.1	-	An elongate low-lying mound, orientated north-east to south-west. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74055	Seabed disturbance	488807	6101064	A2_l	17.0	8.0	-	-	A seabed disturbance seen as an irregular dark reflector with varying reflectivity, within an area of scour. Visible in the MBES data as an uneven area of seabed. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74056	Dark reflector	488875	6100969	A2_l	6.6	2.4	-	-	A distinct sub-angular dark reflector without shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74057	Dark reflector	488598	6101149	A2_l	9.6	3.6	-	-	An elongate dark reflector with a slight shadow. This location was not covered by the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74058	Dark reflector	488612	6101233	A2_l	6.3	2.5	-	-	An elongate dark reflector within slight scour. This location was not covered by the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74059	Dark reflector	488824	6101326	A2_l	8.6	8.4	-	-	A sub-angular dark reflector within scour. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74060	Dark reflector	488900	6101193	A2_l	10.0	3.8	-	-	An elongate dark reflector, slightly curvilinear. This location was not covered by the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74061	Dark reflector	488873	6101586	A2_l	8.3	4.2	-	-	A distinct sub-angular dark reflector. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74062	Dark reflector	488457	6101381	A2_l	5.8	1.6	-	-	Elongate indistinct dark reflector with a shadow. This position was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74063	Dark reflector	488521	6101418	A2_l	7.6	3.7	-	-	Distinct dark reflector with shadow. This position was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74064	Dark reflector	488537	6101361	A2_l	7.4	2.1	-	-	Distinct elongate dark reflector with shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74065	Mound	488612	6101646	A2_l	12.8	5.3	0.2	-	An elongate mound orientated north-east to south west with steep sides and an uneven peak. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74066	Dark reflector	488539	6101631	A2_l	24.3	4.5	-	-	A distinct 'S' shaped elongate dark reflector. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74067	Dark reflector	488422	6101566	A2_l	7.6	5.7	-	-	A sub-angular dark reflector with varying reflectivity. This has scour surrounding and may represent a hollow object. This position was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74068	Dark reflector	488378	6101777	A2_l	13.3	2.8	-	-	An elongate, slightly curvilinear dark reflector with shadow and possible scour to the north-west. This position was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74069	Dark reflector	488345	6101779	A2_l	7.4	2.6	-	-	An elongate dark reflector with shadow or within scour. This position was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74070	Dark reflector	488617	6102161	A2_l	5.5	2.2	0.1	-	A very distinct angular dark reflector with a bright shadow within scour. Also visible in the MBES data as a distinct depression measuring 7.2 x 6.5 x -0.3 m with a steep edge on the north-western side, and angular object at the north-western end. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic, MBES	DBD Array 2022	Array	-
73964	Magnetic	496728	6094742	A2_l	-	-	-	37	A small, broad positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
74084	Magnetic	485326	6104872	A2_l	-	-	-	37	Identified in the 2021 data as a small negative monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74083	Magnetic	485382	6104885	A2_l	-	-	-	38	Identified in the 2021 data as a small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-

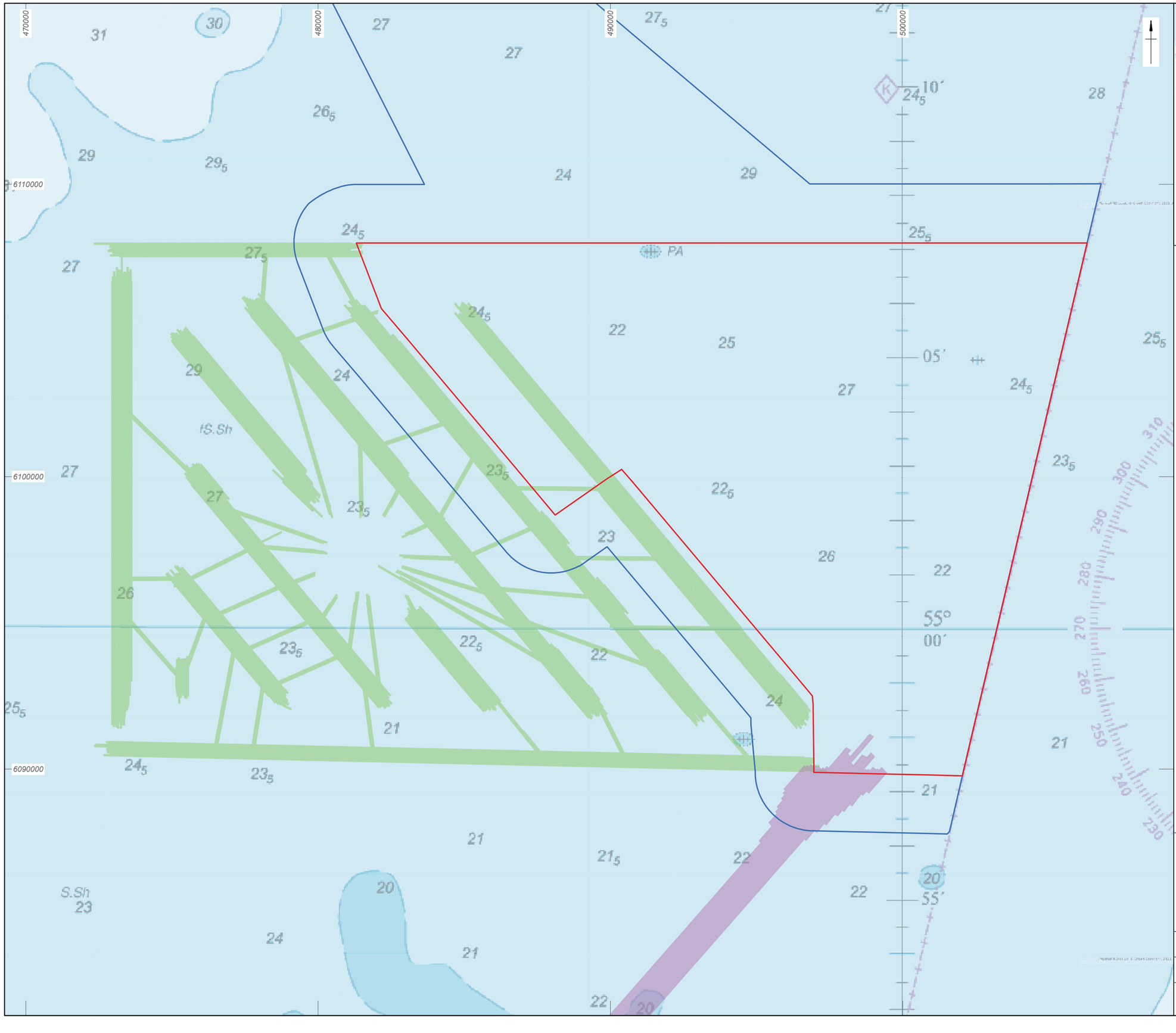
ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74071	Magnetic	487790	6101904	A2_l	-	-	-	39	Identified in the 2021 data as a small, sharp asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
73967	Magnetic	496830	6101596	A2_l	-	-	-	42	A small asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
74086	Magnetic	485333	6104907	A2_l	-	-	-	42	Identified in the 2021 data as a small negative monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 geophysical data. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74077	Dark reflector	486795	6103835	A2_l	6.4	2.5	-	-	A distinct dark reflector seen as a rounded object with a narrow linear projection extending to the north-east. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74078	Magnetic	485651	6104836	A2_h	-	-	-	104	Identified in the 2021 data as a large, sharp symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74079	Magnetic	485635	6104856	A2_h	-	-	-	245	Identified in the 2021 data as a large, sharp symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line (6 m away), or it may be that the object has moved since 2012. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74082	Magnetic	485439	6105048	A2_l	-	-	-	46	Identified in the 2021 data as a small, sharp asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
73900	Magnetic	505584	6107787	A2_l	-	-	-	48	A small, broad symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
73915	Magnetic	503527	6101219	A2_l	-	-	-	51	A medium asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	-
74081	Magnetic	485498	6104942	A2_l	-	-	-	54	Identified in the 2021 data as a medium positive monopole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74074	Magnetic	487718	6102648	A2_l	-	-	-	57	Identified in the 2021 data as a medium asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74018	Magnetic	496544	6099669	A2_l	-	-	-	59	A medium symmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBD Array 2022	Array	MC-05 (Enviros)
74075	Magnetic	487108	6103218	A2_l	-	-	-	65	Identified in the 2021 data as a medium, sharp asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74087	Debris field	485379	6104955	A1	12.3	8.0	0.4	575	Identified in the 2021 SSS dataset as a compact group of indistinct dark reflectors and areas of bright reflector. Some linear dark reflectors are visible. Observed in the 2021 MBES dataset as an elongate mound, with irregular sides and rough surface. Surrounded by scour (16 m x 11 m x -0.55 m). Associated with a very large, sharp asymmetric dipole with peak and trough on one profile line in the 2021 Mag. data, also visible on other profiles. Not covered by the 2022 geophysical data. Interpreted as ferrous debris.	SSS, MBES, Mag.	DBC IAC 2021 (201326)	Array	-
74088	Magnetic	484984	6105320	A2_h	-	-	-	107	A large, sharp asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES data at this location. No corresponding 2022 dataset contacts were identified, however this position was not directly covered by a Mag. line. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	DBC IAC 2021 (201326)	Array	-
74089	Mound	486004	6105673	A2_l	7.1	3.5	5.0	-	Very distinct elongate mound with steep sides and uneven peak along its length, isolated and anomalous. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74090	Seabed disturbance	485820	6106490	A2_l	9.5	3.3	-	-	A seabed disturbance seen as a group of indistinct, angular dark reflectors with a possible narrow elongate dark reflector measuring 5.7 x 1.0 m on the southern extent. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Array 2022	Array	-
74091	Mound	486518	6106672	A2_l	2.5	2.0	0.2	-	A distinct mound with steep sides and a flat peak. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74092	Seabed disturbance	486663	6106334	A2_l	18.0	9.6	0.1	-	A very indistinct seabed disturbance containing two elongate low-lying mounds in a depression (9.6 x 2.5 and 5.0 x 2.5 m). No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	MBES	DBD Array 2022	Array	-
74093	Dark reflector	481389	6107959	A2_l	8.6	1.9	-	-	Elongate dark reflector with a short shadow, possibly multiple aligned objects. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.	SSS Mosaic	DBD Array 2022	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74094	Dark reflector	482005	6107760	A2_l	4.4	2.2	-	-	An elongate dark reflector with an angular shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74095	Dark reflector	482733	6107104	A2_l	5.0	1.0	-	-	An elongate dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74096	Linear debris	482852	6107315	A2_h	224.0	2.5	0.1	-	A linear alignment of small angular mounds and depressions orientated north-east to south-west. The largest mound measures 4 x 2.5 m, there is no clear linear feature connecting these but that may be due to data quality. No anomalous features were identified in the SSS or Mag. data at this location. This is interpreted as a possibly non-ferrous modern feature such as fishing gear and therefore may not be of archaeological interest. However, as this cannot be confirmed without further investigation, the feature has been retained as a precaution.	MBES	DBD Array 2022	Array	-
74097	Mound	483313	6107132	A2_l	2.7	2.5	0.1	-	A distinct mound with steep sides and a flat peak, isolated on a featureless seabed. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
74098	Mound	484208	6107511	A2_l	3.5	3.0	0.3	-	A distinct mound with relatively steep sides and irregular peak, isolated on a featureless seabed. No anomalous features were identified in the SSS or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	MBES	DBD Array 2022	Array	-
70586	Debris	484421	6107086	A2_h	8.9	1.3	0.5	-	Previously identified in the 2012 SSS data as a dark reflector with small shadow measuring 4.1 x 1.6 x 0.3 m. Situated 115 m south-west of wreck **70587** and possibly associated debris. Identified in the 2022 SSS data as an indistinct sub-angular dark reflector with bright shadow measuring 1.3 x 1.3 m, with a short linear dark reflector attached (7.6 m). Also visible in the MBES data as an angular mound, surrounded by a sub-rounded scour. No anomalous features were identified in the Mag. data at this location. Interpreted as possible non-ferrous debris possibly associated with wreck **70587**.	SSS Raw, SSS Mosaic, MBES	DBD Array 2022, Teesside (78041)	Array	ID02, MC-01, MC-02 (Enviros)
70587	Wreck	484539	6107143	A1	28.1	7.3	1.2	1159	A distinct ovoid dark reflector interpreted as the hull of a wreck, orientated north-east to south-west with shadow at the north-eastern end. There is possible sediment over the wreck at the south-western end where the hull is either partially buried or collapsed. Internally, thin linear dark reflectors are visible. The wreck is upright and mostly intact, with significant scour to the east and south-east. Debris is visible in the vicinity of the wreck and more may be present but buried. Also visible in the MBES data as a distinct ovoid mound more distinct at the north-east end with deep scour on the eastern side (13.0 x 5.2 x -2.5 m). The wreck is surrounded by L-shaped scour (49.0 x 35.0 x -2.6 m). Associated with a very large Mag. anomaly in the 2012 data, also identified as two small Mag. anomalies in the 2022 Mag. data (29 and 13 nT), though this position was not directly covered by a Mag. line. Previously identified in the 2012 SSS data as a well preserved wreck measuring 34.5 x 10 x 0.7 m which suggests the wreck has experienced further burial since 2012. The wreck is not recorded in the UKHO database.	SSS Raw, SSS Mosaic, MBES, Mag.	DBD Array 2022, Teesside (78041)	Array	-

ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
74099	Debris	484542	6107155	A1	0.8	0.7	0.1	-	A distinct straight dark reflector with shadow, present within the shadow of wreck **70587** and likely associated debris. No anomalous features were identified in the MBES or Mag. data at this location, however any Mag. anomaly associated with this feature is likely to be masked by the large Mag. anomaly associated with the wreck. Interpreted as possible debris associated with wreck **70587**.	SSS Raw	DBD Array 2022	Array	-
74100	Debris	484541	6107153	A1	1.0	0.4	0.1	-	A small angular dark reflector with shadow within the shadow of wreck **70587** and likely associated debris. No anomalous features were identified in the MBES or Mag. data at this location, however any Mag. anomaly associated with this feature is likely to be masked by the large Mag. anomaly associated with the wreck. Interpreted as possible debris associated with wreck **70587**.	SSS Raw	DBD Array 2022	Array	-
74101	Debris	484520	6107127	A1	2.3	0.4	0.1	-	A distinct dark reflector with shadow, situated 6 m south-west of wreck **70587**. No anomalous features were identified in the MBES or Mag. data at this location, however any Mag. anomaly associated with this feature is likely to be masked by the large Mag. anomaly associated with the wreck. Interpreted as possible debris associated with wreck **70587**.	SSS Raw	DBD Array 2022	Array	-
74102	Debris	484536	6107133	A1	2.0	1.1	-	-	Small angular dark reflector with no shadow situated at the south-eastern edge of wreck **70587**. No anomalous features were identified in the MBES or Mag. data at this location, however any Mag. anomaly associated with this feature is likely to be masked by the large Mag. anomaly associated with the wreck. Interpreted as possible debris associated with wreck **70587**.	SSS Raw	DBD Array 2022	Array	-
74103	Debris field	484544	6107142	A1	2.9	1.0	-	-	At least two slightly angular dark reflectors with no shadow situated at the south-eastern edge of the shadow of wreck **70587** and likely associated debris. No anomalous features were identified in the MBES or Mag. data at this location, however any Mag. anomaly associated with this feature is likely to be masked by the large Mag. anomaly associated with the wreck. Interpreted as possible debris associated with wreck **70587**.	SSS Raw	DBD Array 2022	Array	-
74104	Dark reflector	482965	6106143	A2_l	9.8	6.7	-	-	A distinct and rounded dark reflector with varying reflectivity, present within scour. Also visible in the MBES data as a low-lying mound in a depression. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Array 2022	Array	-
74105	Linear debris	482427	6106040	A2_h	77.4	1.7	-	-	Very indistinct narrow curvilinear dark reflector orientated east to west, with an associated shadow. The western end is curved towards the south. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible long length of linear debris such as rope or chain	SSS Mosaic	DBD Array 2022	Array	-
70597	Depression	482885	6104922	A2_h	31.0	17.0	-3.0	144	Identified in the 2012 MBES data as an irregular depression associated with a large and distinct dipole magnetic anomaly. Not covered by the 2022 data. Original position, description and dimensions have been retained. Interpreted as possible ferrous debris.	MBES, Mag.	Teesside A (78041)	Array	-
70598	Depression	482936	6104942	A2_h	31.0	17.0	-3.0	144	Identified in the 2012 MBES data as an irregular depression associated with a large and distinct magnetic anomaly. Not covered by the 2022 data. Original position, description and dimensions have been retained. Interpreted as possible ferrous debris.	MBES, Mag.	Teesside A (78041)	Array	-

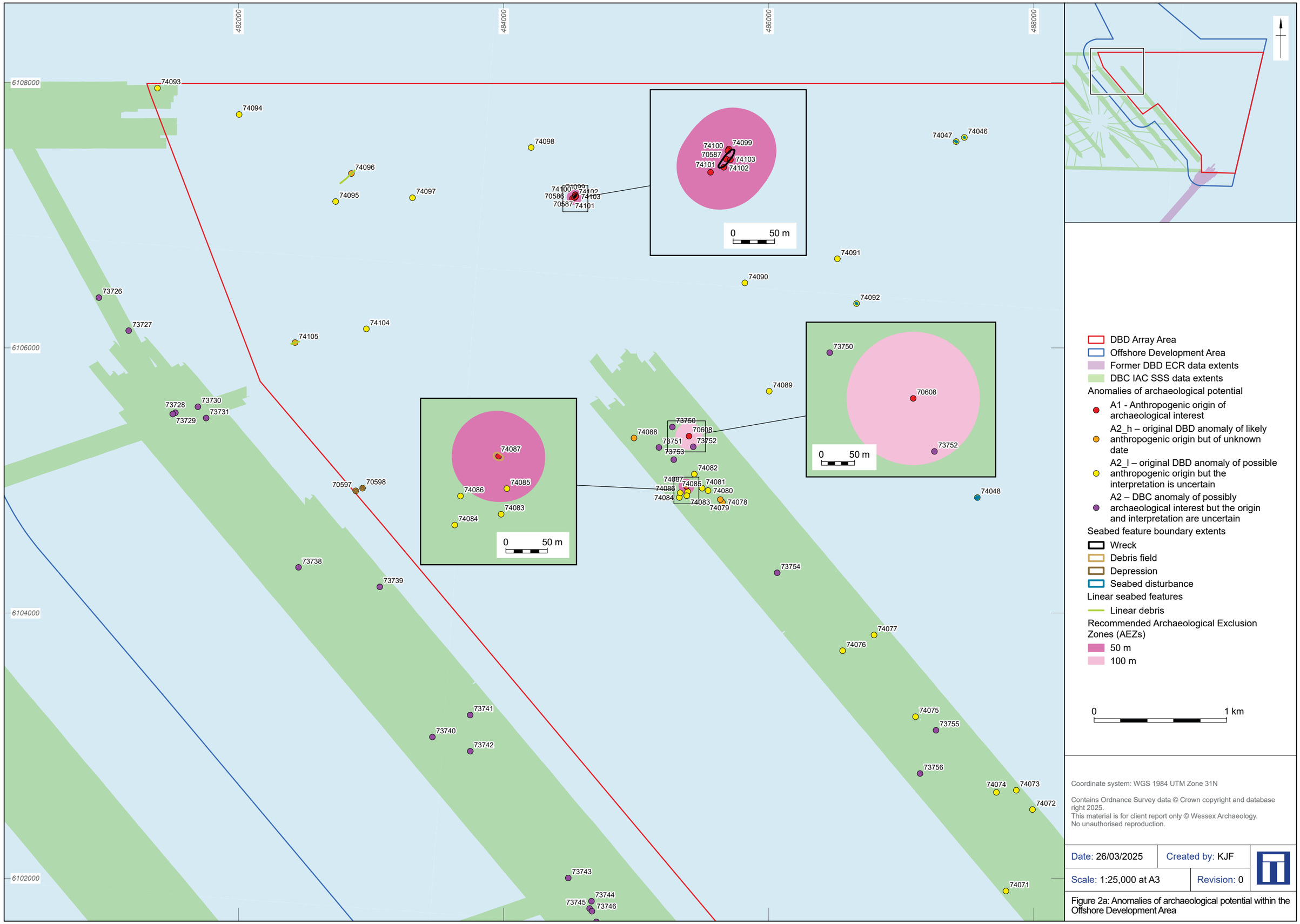
ID	Classification	Easting	Northing	Archaeological discrimination	Length (m)	Width (m)	Height (m)	Magnetic amplitude (nT)	Description	Anomaly type	Dataset	Section	External references
70603	Magnetic	486381	6101340	A2_l	-	-	-	83	Identified in the 2012 Mag. data as a distinct dipole anomaly, present faintly on adjacent survey line. No anomalous features were identified in the SSS or MBES data at this location. Not covered by the 2022 data. Interpreted as possible ferrous debris either buried or with no surface expression.	Mag.	Teesside A (78041)	Array	-
74106	Dark reflector	499049	6089699	A2_l	7.0	3.0	-	-	An angular dark reflector with a shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or may be possible debris.	SSS Mosaic	DBD Within SAC 2023	Within SAC	-
74107	Seabed disturbance	495943	6088970	A2_l	21.0	11.0	-	-	A seabed disturbance comprising a large sub-rounded dark reflector of varying reflectivity. This location was not covered by the MBES dataset. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible natural feature or may be possible partially buried debris.	SSS Mosaic	DBD Within SAC 2023	Within SAC	-
74108	Debris field	496327	6088563	A2_h	26.9	22.1	0.6	-	A large and distinct compact group of small and distinct dark reflectors and bright reflectors within. Also identified in the MBES data as a distinct sub-rounded mound with a highly textured surface, surrounded by an irregular scour up to -0.7 m deep. No anomalous features were identified in the Mag. data at this location. Interpreted as debris and may be modern though this cannot be confirmed without further investigation.	SSS Raw, SSS Mosaic, MBES	DBD Within SAC 2023	Within SAC	S_FR_A06_0004 (Ocean Infinity)



DBD Array Area
Offshore Development Area
Former DBD ECR data extents
DBC IAC SSS data extents

Date: 26/03/2025	Created by: KJF	
Scale: 1:125,000 at A3	Revision: 0	

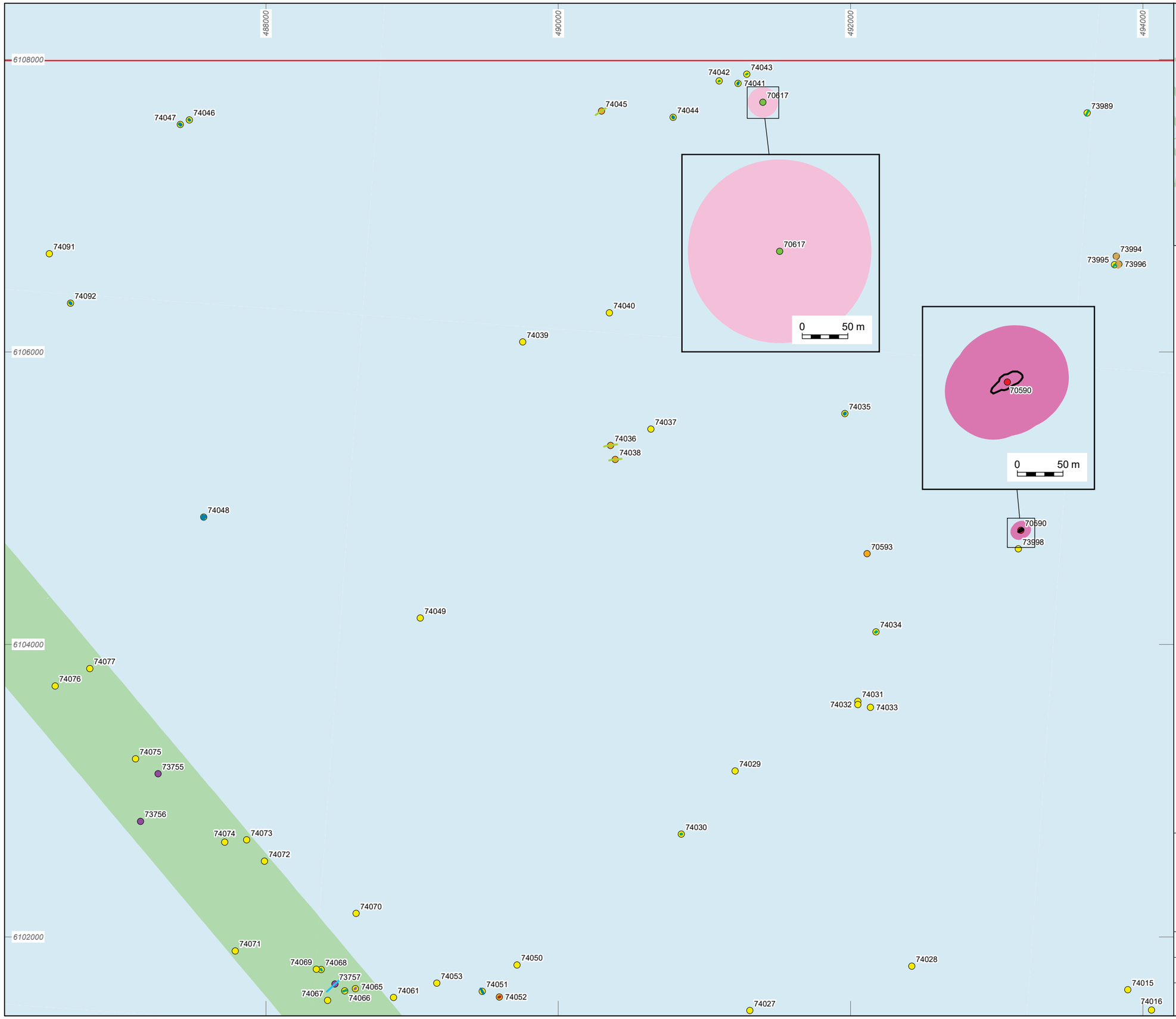
Figure 1: Location map and geophysical study areas



Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF
Scale: 1:25,000 at A3	Revision: 0

Figure 2a: Anomalies of archaeological potential within the Offshore Development Area

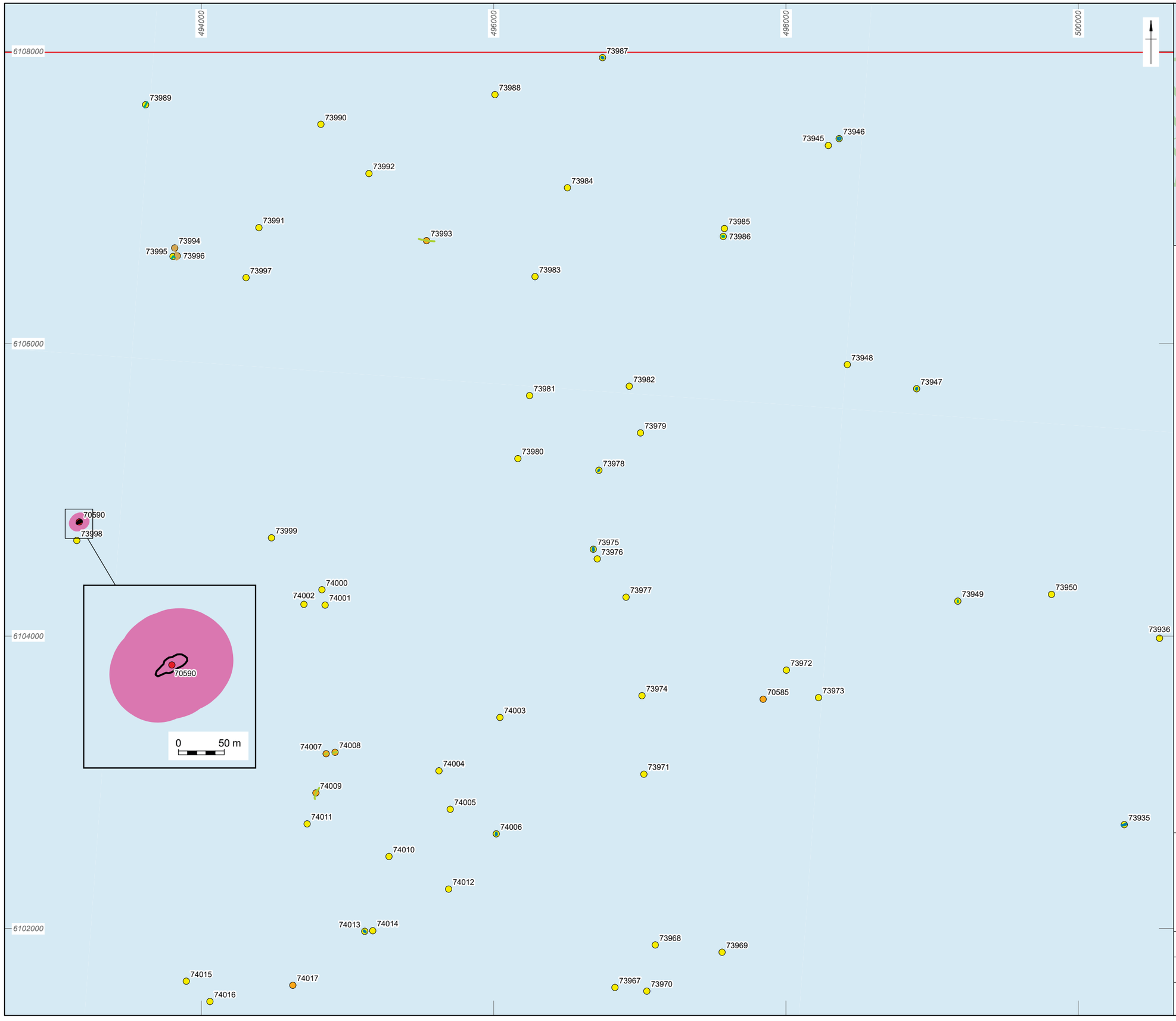


Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025 | Created by: KJF

Scale: 1:25,000 at A3 | Revision: 0

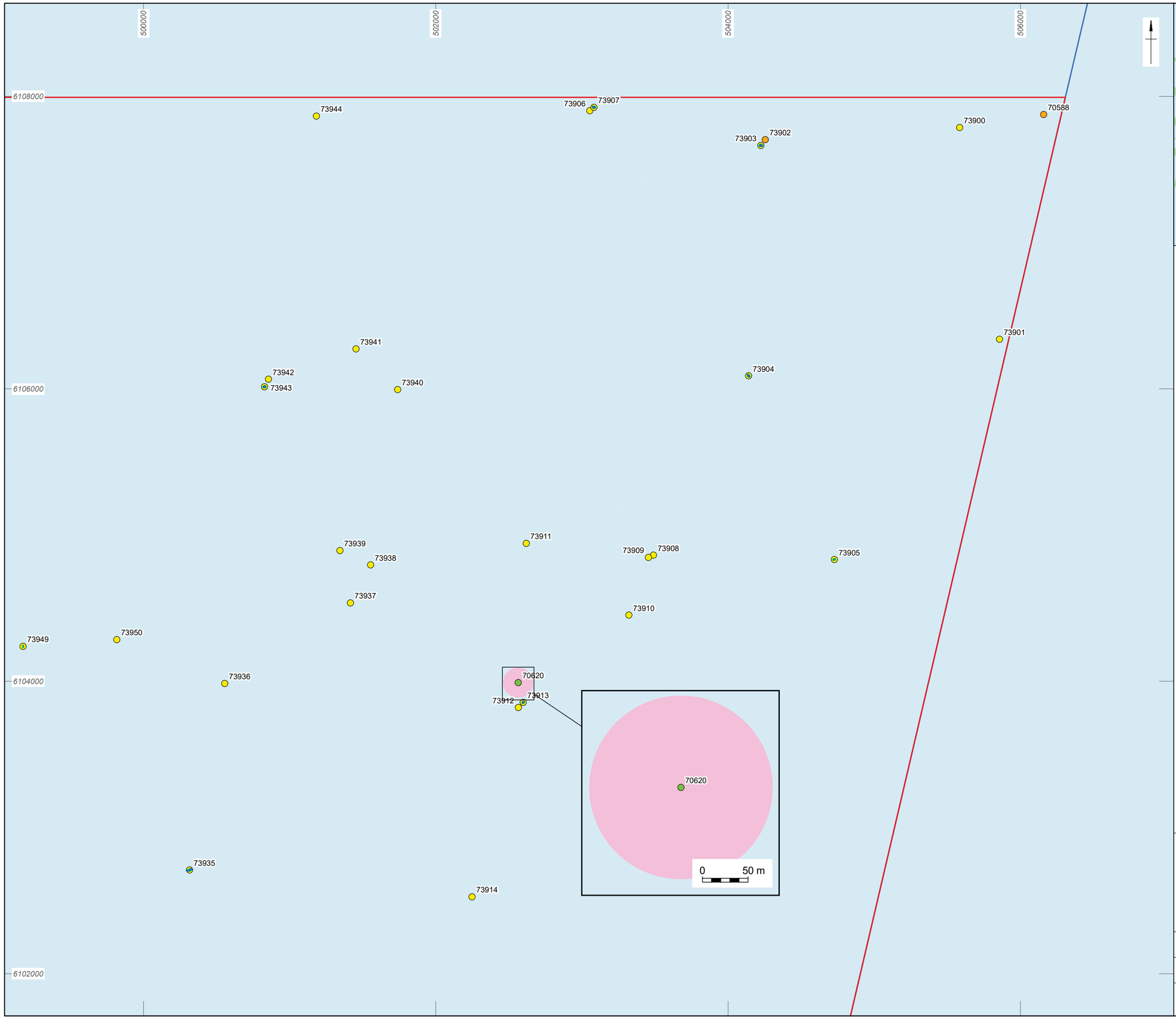
Figure 2b: Anomalies of archaeological potential within the Offshore Development Area

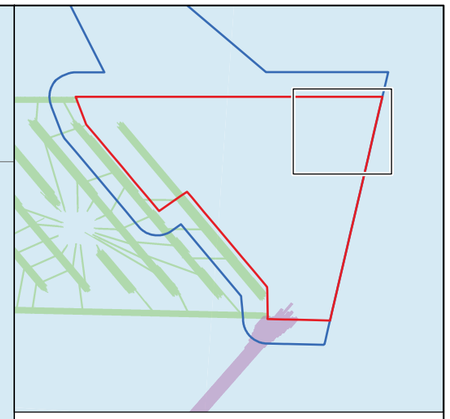


Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF
Scale: 1:25,000 at A3	Revision: 0

Figure 2c: Anomalies of archaeological potential within the Offshore Development Area





DBD Array Area
Offshore Development Area
Former DBD ECR data extents
DBC IAC SSS data extents

Anomalies of archaeological potential

- A2_h – original DBD anomaly of likely anthropogenic origin but of unknown date
- A2_l – original DBD anomaly of possible anthropogenic origin but the interpretation is uncertain
- A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly

Seabed feature boundary extents

- Dark reflector
- Seabed disturbance

Linear seabed features

- Dark reflector

Recommended Archaeological Exclusion Zones (AEZs)

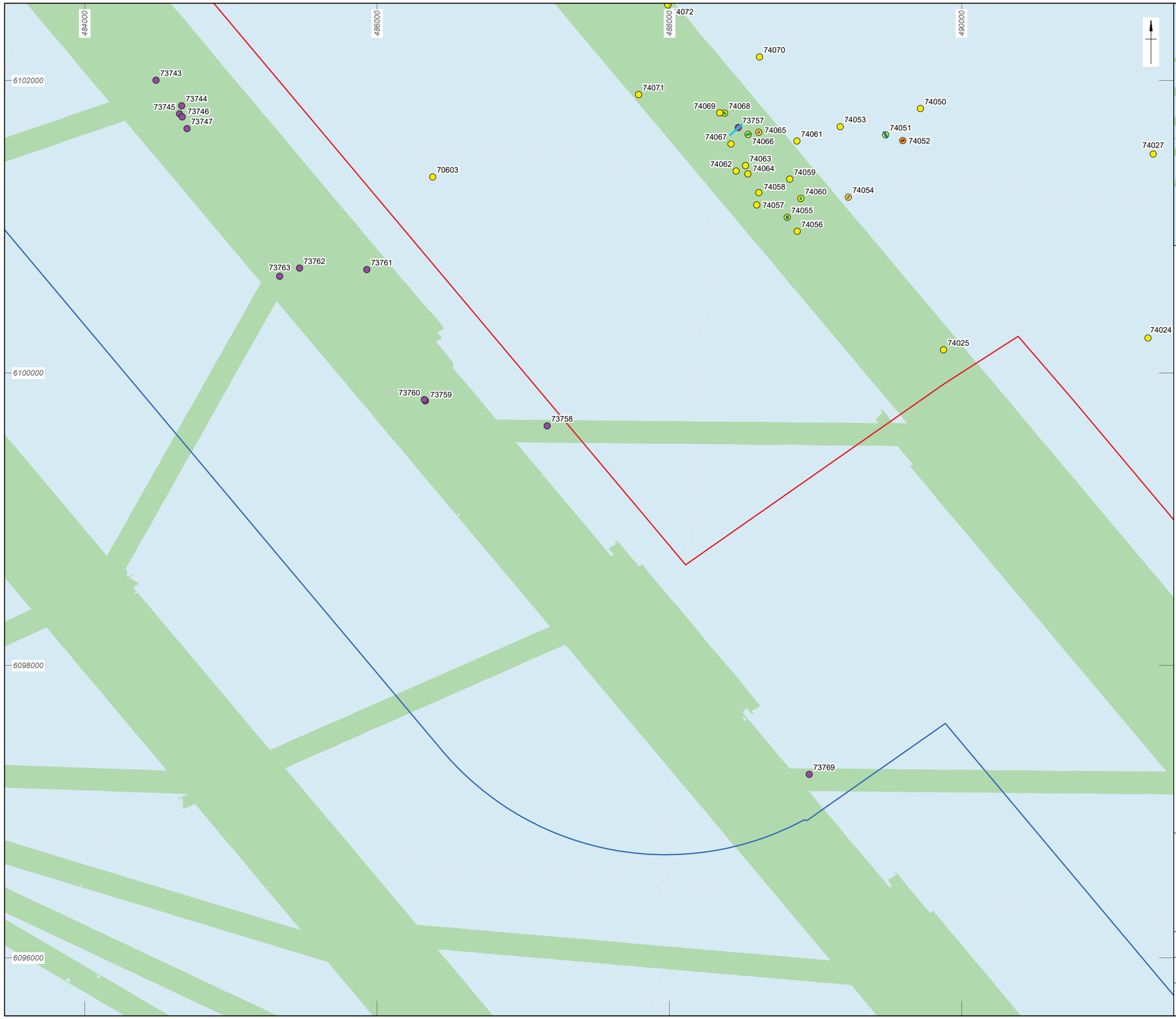
- 100 m

0 1 km

Date: 26/03/2025 | Created by: KJF

Scale: 1:25,000 at A3 | Revision: 0

Figure 2d: Anomalies of archaeological potential within the Offshore Development Area



DBD Array Area
Offshore Development Area
Former DBD ECR data extents
DBC IAC SSS data extents

Anomalies of archaeological potential

- A2_h – original DBD anomaly of likely anthropogenic origin but of unknown date
- A2_l – original DBD anomaly of possible anthropogenic origin but the interpretation is uncertain
- A2 – DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain

Seabed feature boundary extents

- Debris
- Dark reflector
- Mound
- Seabed disturbance

Linear seabed features

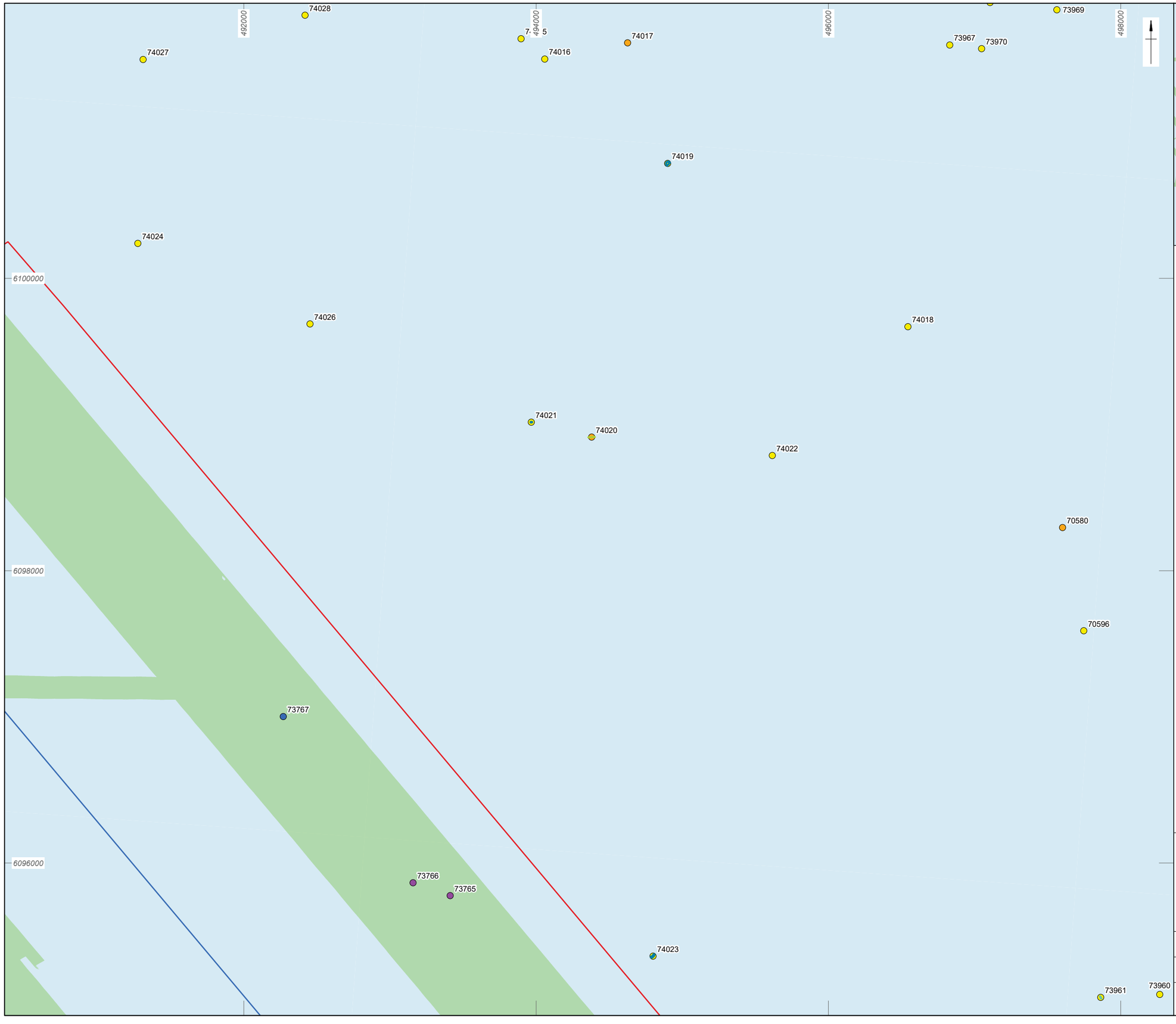
- Magnetic trend

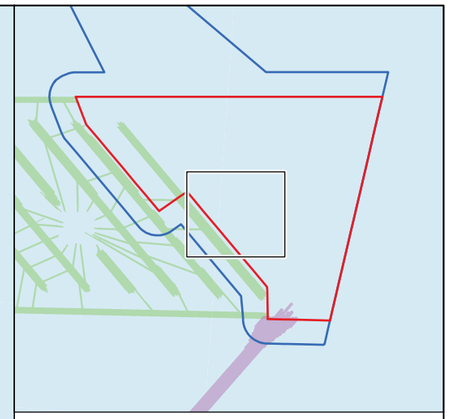
0 1 km

Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF
Scale: 1:25,000 at A3	Revision: 0

Figure 2e: Anomalies of archaeological potential within the Offshore Development Area





DBD Array Area
Offshore Development Area
Former DBD ECR data extents
DBC IAC SSS data extents

Anomalies of archaeological potential

- A2_h – original DBD anomaly of likely anthropogenic origin but of unknown date
- A2_l – original DBD anomaly of possible anthropogenic origin but the interpretation is uncertain
- A2 – DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain
- U2 – Feature of non-archaeological interest

Seabed feature boundary extents

- Bright reflector
- Seabed disturbance

Linear seabed features

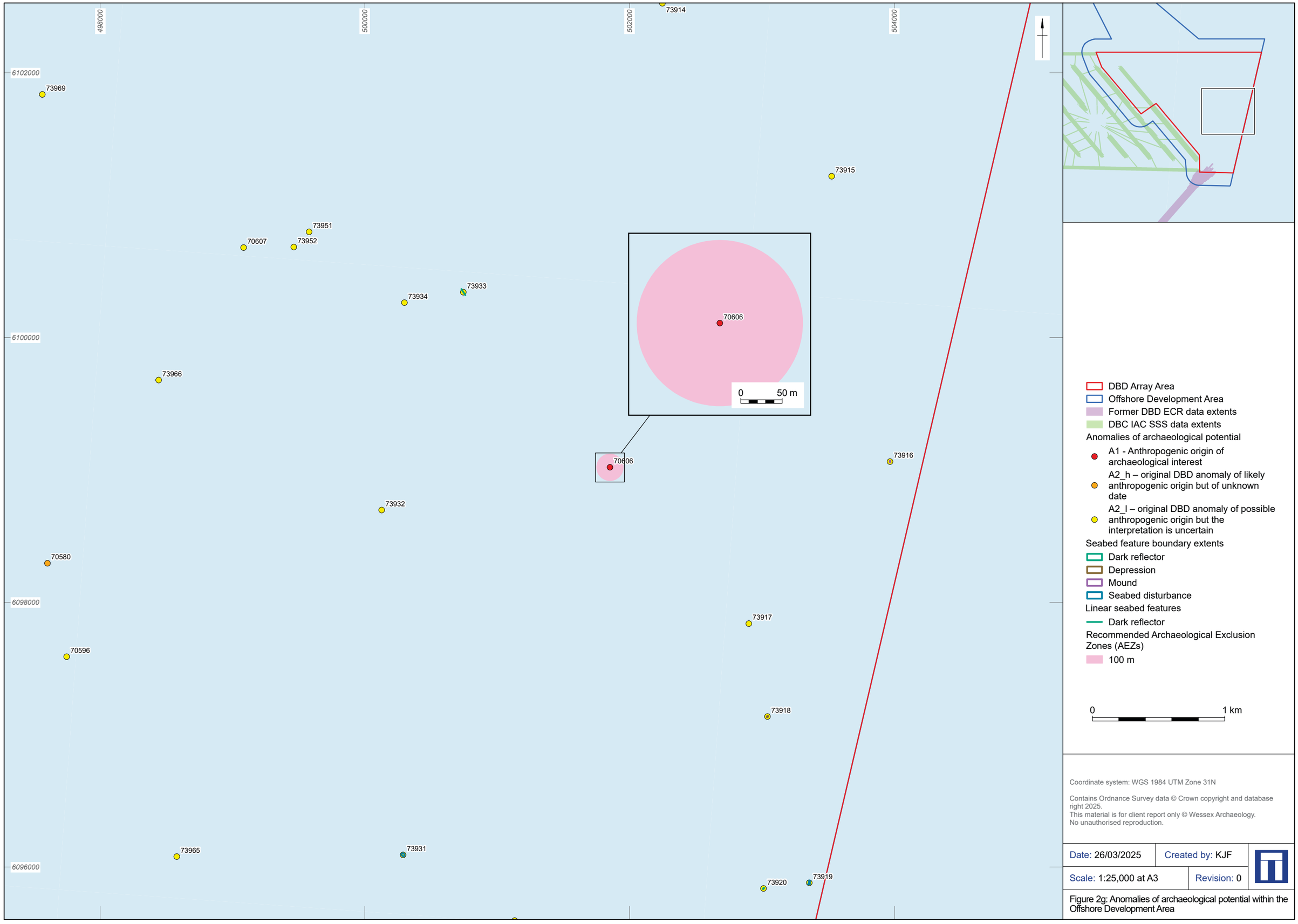
- Linear debris

0 1 km

Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF
Scale: 1:25,000 at A3	Revision: 0

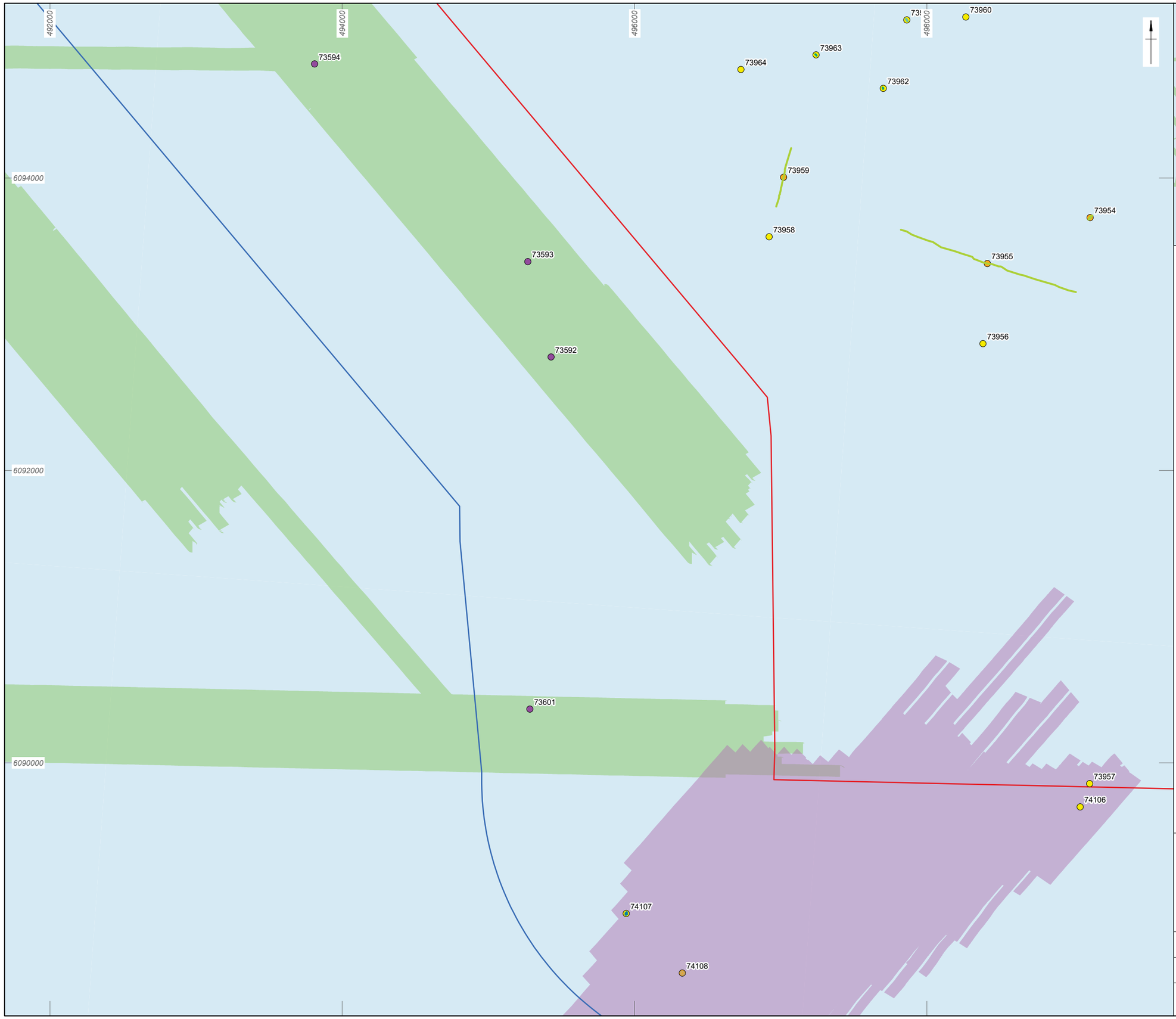
Figure 2f: Anomalies of archaeological potential within the Offshore Development Area



Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF
Scale: 1:25,000 at A3	Revision: 0

Figure 2g: Anomalies of archaeological potential within the Offshore Development Area



DBD Array Area
Offshore Development Area
Former DBD ECR data extents
DBC IAC SSS data extents

Anomalies of archaeological potential

- A2_h – original DBD anomaly of likely anthropogenic origin but of unknown date
- A2_l – original DBD anomaly of possible anthropogenic origin but the interpretation is uncertain
- A2 – DBC anomaly of possibly archaeological interest but the origin and interpretation are uncertain

Seabed feature boundary extents

- Debris field
- Bright reflector
- Seabed disturbance

Linear seabed features

- Linear debris
- Dark reflector

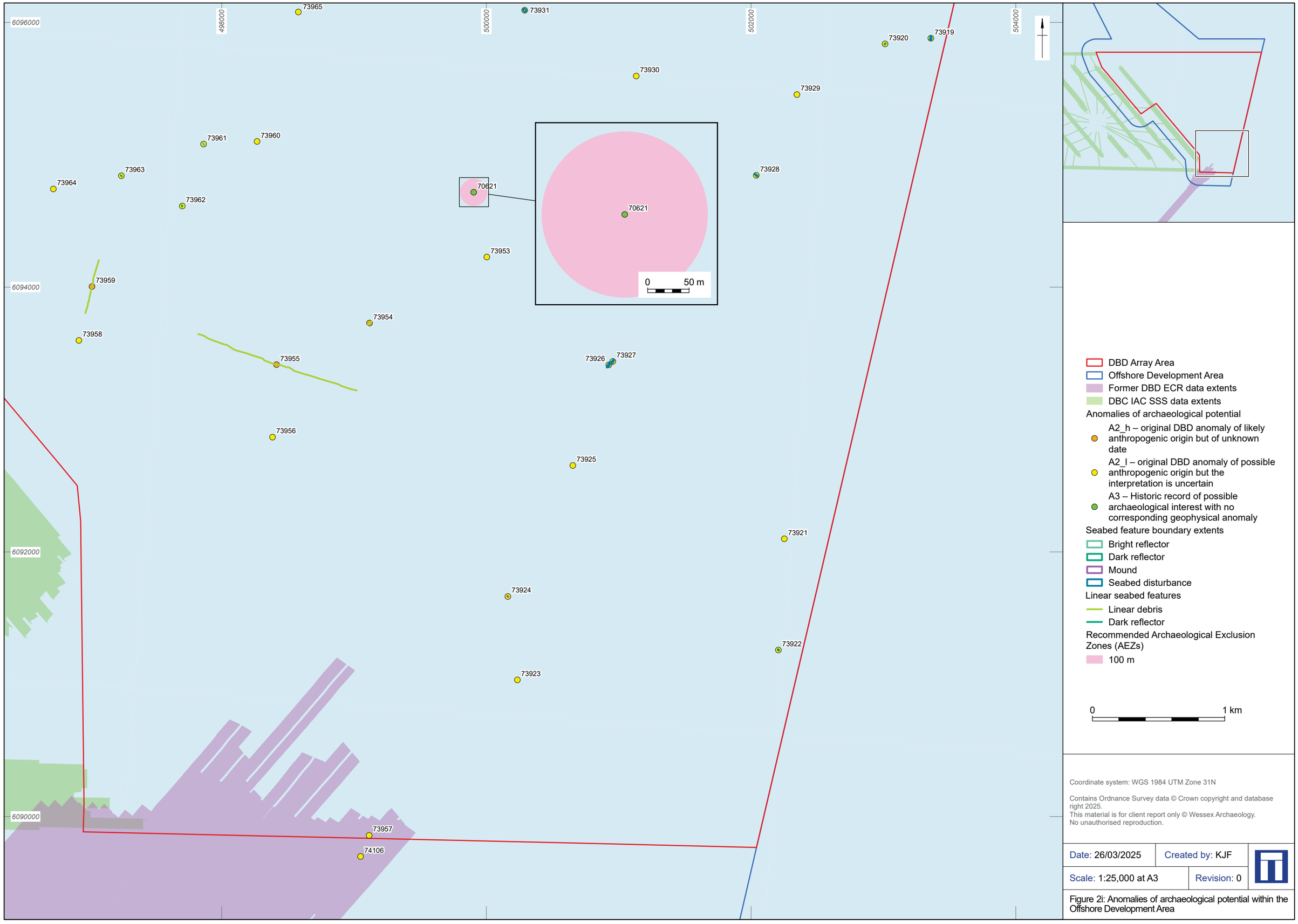
0 1 km

Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025 | Created by: KJF

Scale: 1:25,000 at A3 | Revision: 0

Figure 2h: Anomalies of archaeological potential within the Offshore Development Area



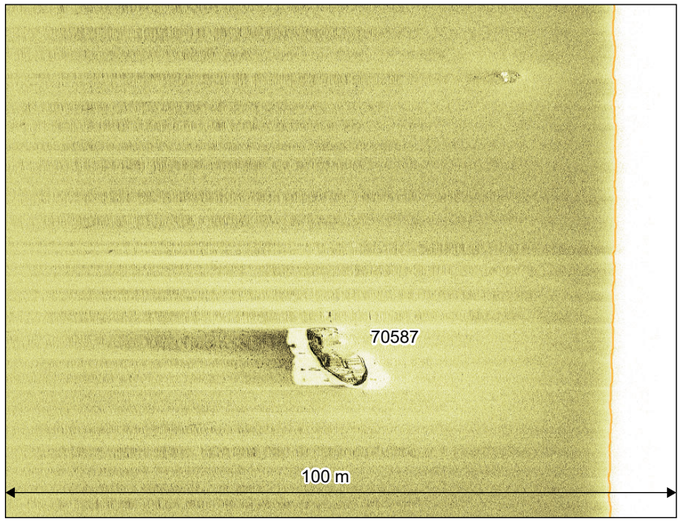
Coordinate system: WGS 1984 UTM Zone 31N

Date: 26/03/2025	Created by: KJF	
Scale: 1:25,000 at A3	Revision: 0	

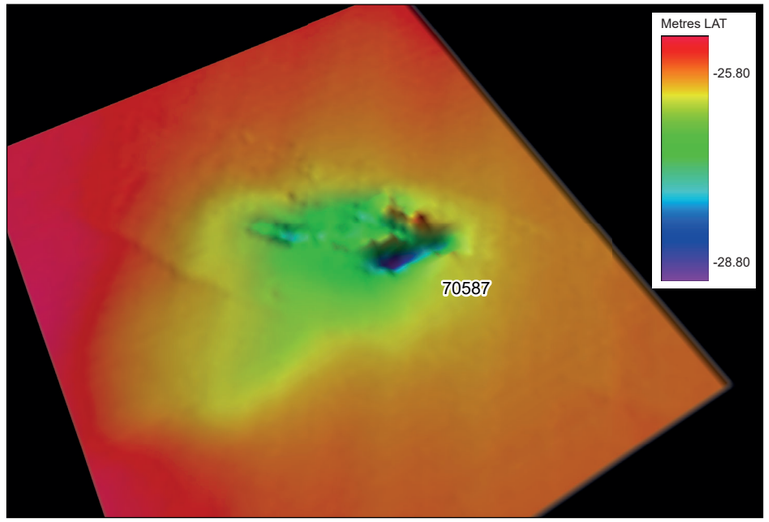
Figure 2i: Anomalies of archaeological potential within the Offshore Development Area

ID 70587 – Unknown

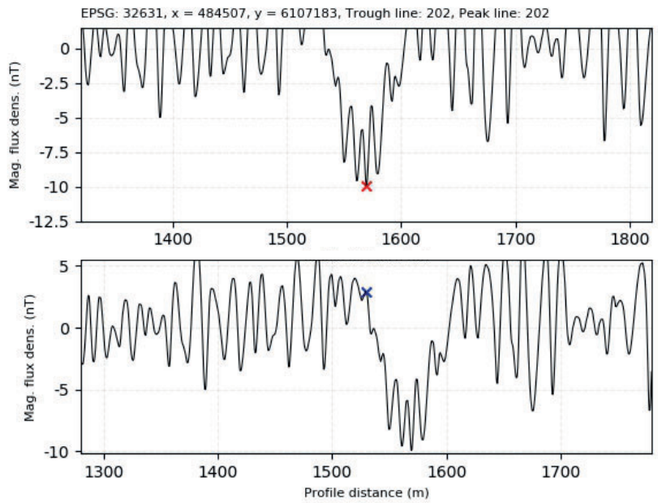
Location		484539 E 6107143 N	**Area**	DBD
Archaeological Importance		High		
Geophysical survey dimensions and notes		Anomaly **70587** has been interpreted as a wreck, lying oriented north-east to south-west, and situated in the north-western extents of the array area. There no associated UKHO record, suggesting it is previously unrecorded, and its identity is unknown. In the SSS data the wreck is visible as a large ovoid shaped dark reflector, interpreted to be the hull, with a bright shadow along its length and situated within scour. There is possible sediment cover at the south-west end of the wreck where the hull is either partially buried or collapsed. Internally, distinct narrow linear dark reflectors and sub-angular dark reflectors are visible. The wreck is situated on a generally featureless seabed and measures 28.1 x 7.3 x 1.2 m. Debris (**74099-103**) is visible in the vicinity. In the MBES data the wreck is visible as a distinct ovoid mound surrounded by a large L-shaped scour (49.0 x 35.0 x -2.6 m). The wreck is more distinct at the north-eastern end and has deep scour on the eastern side. The wreck was not directly covered by a magnetometer line in the current dataset, although a 29 nT Mag. anomaly identified on the closest line may be associated. A very large Mag. anomaly of 1159 nT was previously identified in the 2012 data at this location, indicating significant ferrous content and therefore this has been retained as the magnetic amplitude associated with the wreck.		
Build	**Type**	Unknown		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Unknown		
Extent of Survival		The wreck appears in the 2022 data to be upright and mostly intact with the south-west end either partially buried or collapsed. Scour is present around the wreck, with the deepest area along the eastern side. Debris is visible in the vicinity of the wreck and more may be present in the area but unseen owing to burial within the surrounding sediments. The wreck was previously visible in 2012 SSS data as a well-preserved wreck measuring 34.5 x 10 x 0.7 m, which suggests the wreck has experienced further burial and possible degradation since 2012. The wreck is not recorded in the UKHO database so there is no further information on previous appearance or extent of survival.		



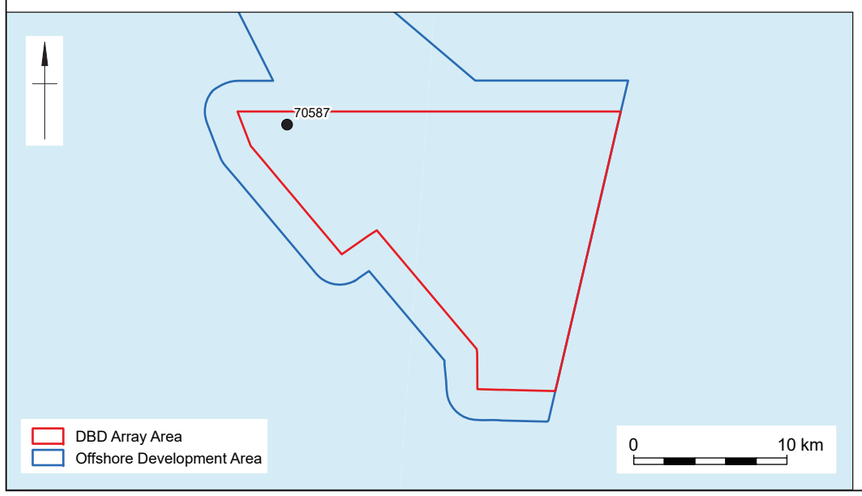
Sidescan sonar waterfall image, 100 m range per channel



Multibeam echosounder grid image, x1 vertical exaggeration, looking north-west



Profile image of magnetic anomaly associated with **70587**, measuring 29 nT



Coordinate system: WGS 1984 WGS 1984 UTM Zone 31N

Date: 18/02/2025	Created by: AW	Revision: 0	Scale: Location inset 1:400,000 at A3
Sheet 1			

Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB
Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk www. wessexarch.co.uk