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Volume 7B Proposed Development (Offshore) Appendices

Appendix 10-1 Marine Archaeology Technical Report

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OCEAN WINDS

Volume 7B Appendix 10-1 Marine Archaeology Technical Report

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Acronyms and Abbreviations

AD	Anno Domini
AEZ	Archaeological Exclusion Zone
BCE	Before Common Era
BGS	British Geological Survey
BP	Before Present
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
GIS	Geographic Information System
GSA	Geophysical Study Area
HER	Historic Environment Records
JNAPC	Joint Nautical Archaeology Policy Committee
km	Kilometre
LGM	Last Glacial Maximum
Mag.	Magnetometer
MBES	Multibeam Echo Sounder
MD-LOT	Marine Directorate - Licensing Operations Team
MEDIN	Marine Environment Data and Information Network
MHWS	Mean High Water Springs
MoD	Ministry of Defence
MSA	Marine Study Area
nm	Nautical Mile
O&M	Operation and Maintenance

OECC	Offshore Export Cable Corridor
OSP	Offshore Substation Platform
OWF	Offshore Wind Farm
PAD	Protocol for Archaeological Discoveries
PMRA 1986	Protected Military Remains Act 1986
PWA 1973	Protection of Wrecks Act 1973
SPB	Sub-Bottom Profiler
SSC	Suspended Sediment Concentrations
SSS	Sidescan Sonar
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UTM	Universal Mercator Transverse
UXO	Unexploded Ordnance
WA	Wessex Archaeology
WGS	World Geodetic System
WTG	Wind Turbine Generator

Executive Summary

This appendix provides a marine archaeological technical report for the marine component of the Proposed Development (Offshore), comprising the Caledonia Offshore Wind Farm (OWF) (i.e., Array Area) which covers the Caledonia North Site and Caledonia South Site, and the respective Offshore Export Cable Corridors (OECCs), located in the Moray Firth, Scotland. The Caledonia OWF is located wholly in the United Kingdom Exclusive Economic Zone (EEZ), and the Caledonia OECC is located within the EEZ and then into Scottish Territorial Waters (up to 12 nautical miles) to landfall west of Banff, Aberdeenshire.

The marine proposed works comprise the development of an OWF in the Moray Firth called the Caledonia OWF, within the previously named NE4 Plan Option by the Scottish Government through Sectoral Marine Plan, and then leased through the ScotWind leasing round by Crown Estate Scotland. The Proposed Development (Offshore) will comprise of the Caledonia OWF with up to 140 Wind Turbine Generators (WTG), of which 39 could be floating WTGs, and associated infrastructure, plus the OECC which will house the offshore export cables bringing electricity to the Landfall Site at Stake Ness in north Aberdeenshire.

This Marine Archaeology and Cultural Heritage Technical Report has assessed the known and potential baseline of the marine historic environment of the Proposed Development (Offshore) seaward of Mean High Water Springs.

This baseline has been enhanced by the assessment of site-specific marine geophysical data acquired in 2022 and 2023 over the Proposed Development (Offshore). The geophysical data comprise sidescan sonar, multibeam echosounder, marine magnetometer and sub-bottom profiler data sets. These were used to assess the presence of seabed and sub-seabed palaeogeographic features of archaeological potential within the study area.

The palaeogeographic assessment of the geophysical data within the study area has identified a total of four shallow geological units, none of which are considered to be of archaeological potential. No individual palaeolandscape features of archaeological potential were identified within the study area.

The baseline of maritime and aviation archaeology and cultural heritage comprises 21 features of anthropogenic origin of archaeological interest (wrecks and other seabed features characterised as A1 anomalies) within the study area, including two wreck sites designated under the Protection of Military Remains Act 1986.

The assessment also identified a total of 716 seabed features listed as being of possible archaeological potential within the geophysical survey extents or within the documentary sources, discriminated as follows:

- 21 A1 anomalies (Anthropogenic origin of archaeological interest);
- 104 A2_h anomalies (anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest of a modern feature);
- 570 A2_l anomalies (anomaly of possible anthropogenic origin but interpretation is uncertain; may be anthropogenic or a natural feature);

- 17 A3 records (historic record of possible archaeological interest with no corresponding geophysical anomaly); and
- four U2 anomalies (known non-archaeological feature/feature of non-archaeological interest).

No intertidal features of archaeological potential were identified other than the Recorded Losses of vessels which are discussed in the maritime archaeology potential section.

10 Marine Archaeology Technical Report

10.1 Introduction

10.1.1 Overview

10.1.1.1 This appendix provides a marine archaeological desk-based assessment in regard to the Proposed Development (Offshore), comprising the Caledonia Offshore Wind Farm (OWF) (i.e., Array Area) and Caledonia Offshore Export Cable Corridor (OECC), located in the Moray Firth, Scotland.

10.1.1.2 This appendix covers the Proposed Development (Offshore) plus a 1km buffer. This will be used to capture the relevant data on designated and non-designated marine archaeological assets, and to provide the necessary context for understanding archaeological potential and heritage significance of receptors that may be affected by the Proposed Development (Offshore).

10.1.2 Project Background

10.1.2.1 The Caledonia OWF is approximately 423km^2 and sits in the outer Moray Firth in the North of Scotland, immediately adjacent to the north-eastern boundary of the Moray East OWF. The Caledonia OECC will run from the southern extent of the Caledonia OWF to the Landfall Site to the west of Whitehills on the north Aberdeenshire coast.

10.1.2.2 The Proposed Development (Offshore) will comprise of the Caledonia OWF with up to 140 Wind Turbine Generators (WTGs), of which 39 could be floating WTGs, and associated infrastructure, plus the Caledonia OECC within which offshore the offshore export cables will bring electricity to the Landfall Site at Stake Ness, Aberdeenshire. The Proposed Development (Offshore) will be delivered in phases to support with deliverability. Separate consents are sought for each phase and are referred to as Caledonia North and Caledonia South.

10.1.2.3 Up to 77 WTGs could be installed in the Caledonia North Site and up to 78 WTGs could be installed in the Caledonia South Site. If constructed first, the number of WTGs in the Caledonia North Site will not exceed 77, and if Caledonia South is constructed first, the number of WTGs in the Caledonia South Site will not exceed 78. In both instances, the number of WTGs in the following phase will be such that the total number of WTGs across the Proposed Development (Offshore) will not exceed 140.

10.1.3 Study Areas

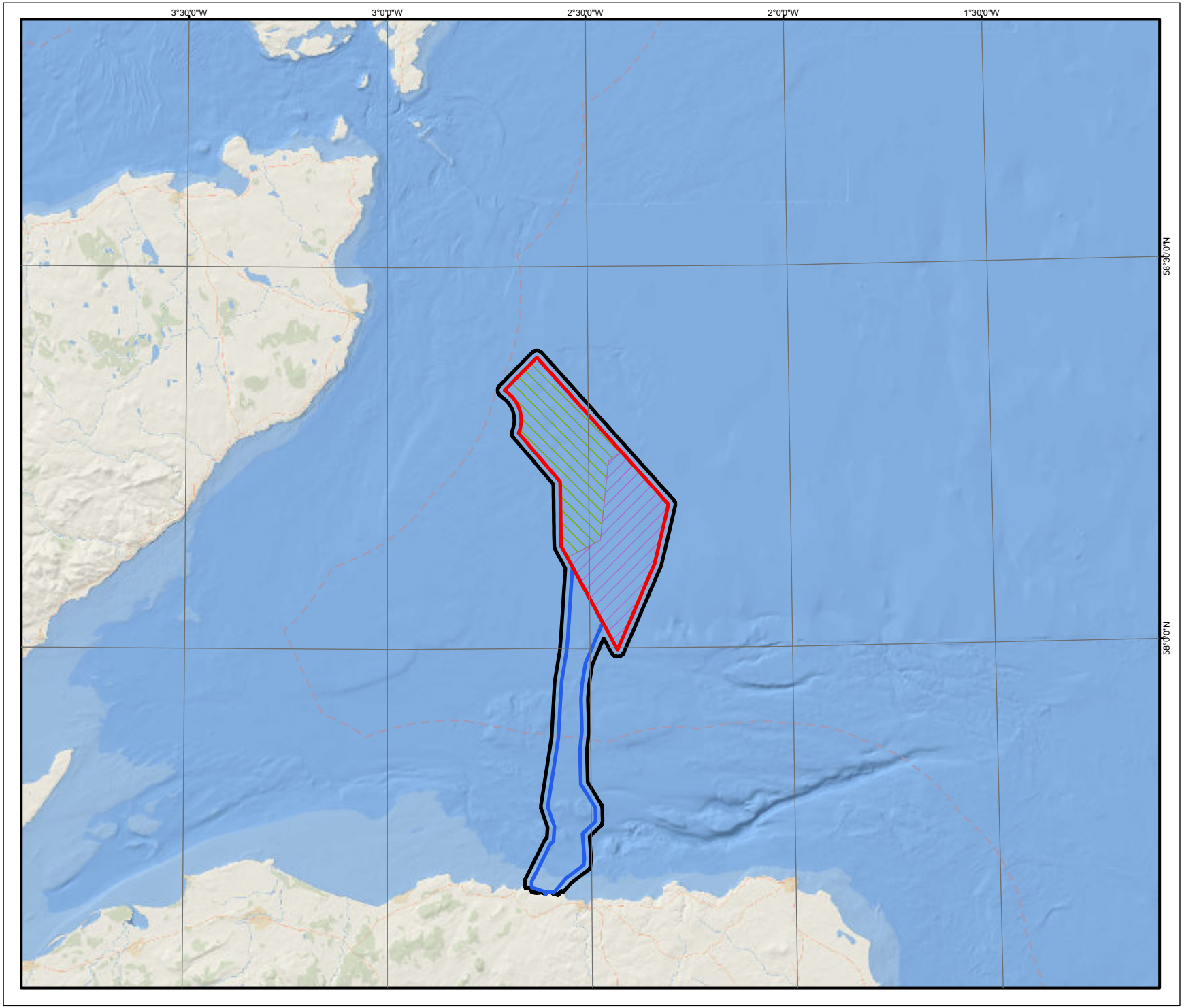
10.1.3.1 The study area is defined by the Proposed Development (Offshore) footprint plus a 1km buffer and will henceforth be referred to as the Marine

Study Area (MSA; Figure 10-1). This has been used to capture relevant data on designated and non-designated marine archaeological assets, and to provide the additional spatial context for the understanding archaeological potential and heritage significance of receptors that may be affected by the Proposed Development (Offshore). In addition, a Geophysical Study Area (GSA) is defined by the extents of the site-specific geophysical surveys (Figure 10-2) which highlights the areas where documentary sources have been assessed and enhanced by geophysical data assessment.

10.1.4 Scope of Document

10.1.4.1 The purpose of this appendix is to determine, as far as is possible from existing information and survey data, the nature, extent and significance of the known and potential marine archaeological resource within the boundary of the Proposed Development (Offshore).

10.1.4.2 This report consists of a desk-based assessment, a palaeogeographic assessment and an assessment of the geophysical survey data, over the Proposed Development (Offshore), comprising sub-bottom profiler (SBP), sidescan sonar (SSS), magnetometer (Mag.) and multibeam echosounder (MBES) data sets acquired by Gardline Ltd in 2022 and 2023, and by Titan in 2023.



Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit

0 5 10 15 20 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	27/08/2024	For Review	KF	BS	AB

CALEDONIA Offshore Wind Farm

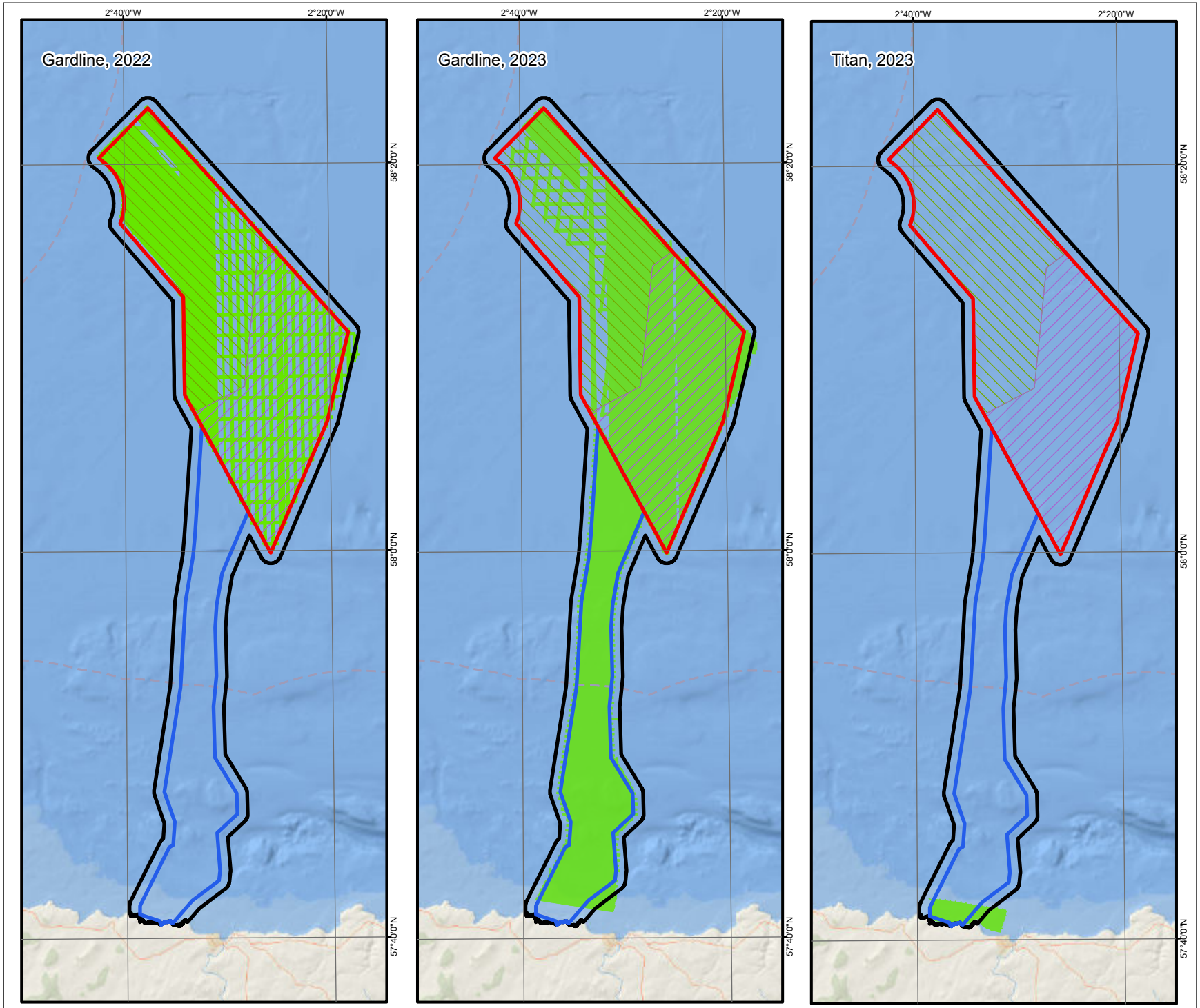
wessex archaeology

CONTRACTOR DRAWING NO: 257360_01	CONTRACTOR REV: 01
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-1: Site Location and Marine Study Area

STATUS: Approved	SCALE: 1:750,000	
DRAWING NUMBER: N/A	SHEET NO: 01 of 01	REV: N/A



Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit
Extents of Geophysical Surveys

0 5 10 15 20 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	27/08/2024	For Review	KF	BS	AB

CALEDONIA Offshore Wind Farm

wessex archaeology

CONTRACTOR DRAWING NO: 257360_02	CONTRACTOR REV: 01
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-2: Extents of Geophysical Surveys

STATUS: Approved	SCALE: 1:500,000	
DRAWING NUMBER: N/A	SHEET NO: 01 of 01	REV: N/A

10.1.5 Aims

10.1.5.1 The principal aim of this appendix is to assess if archaeological seabed and intertidal features and palaeolandscapes of archaeological significance are present within the MSA.

10.1.5.2 This will be achieved by addressing the following objectives:

- To provide details of relevant legislation, national and local planning policy, and best practice guidance;
- Outline the known and potential marine heritage assts within the boundary of the MSA based on a review of existing information, forming the baseline; and
- Provide a summary of the value of known and potential heritage assets.

10.1.6 Copyright

10.1.6.1 This report may contain material that is non-Wessex Archaeology copyright (for instance Ordnance Survey, British Geological Survey (BGS), Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licence, but for which copyright itself is non-transferable by Wessex Archaeology. Users remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regards to multiple copying and electronic dissemination of the report.

10.2 Legislation, Guidance and Policy

10.2.1 Introduction

10.2.1.1 The MSA is partially located within Scotland's Territorial Waters, which extend 12 nautical miles (nm) from the coastline and partially within the Scottish Exclusive Economic Zone (EEZ) beyond 12nm on the UK continental shelf within the North Sea (Figure 10-1).

10.2.1.2 This section provides a summary of the national, regional and local planning and legislative framework that governs how marine historic environment is dealt with regarding the planning process. Further details on each piece of legislation and/or policy are present in Section 10.8.2 (Legislation and Policy).

10.2.2 Marine Legislation

10.2.2.1 Historic Environment Scotland is responsible for the archaeological resource within Scotland's Territorial Waters (up to 12 nm) and acts as

consultee for the resource in the Scottish EEZ. Marine Directorate - Licensing Operations Team (MD-LOT) is responsible for licencing, regulating and planning marine activities within Scotland's Territorial Waters (up to 12nm) and in the Scottish Offshore Region (between 12nm and 200nm) under the Marine and Coastal Access Act 2009.

10.2.2.2 The following relevant legislation applies within MD-LOT's licensing area within Scotland's Territorial Waters:

- Marine (Scotland) Act 2010;
- Protection of Wrecks Act 1973 (PWA 1973);
- Ancient Monuments and Archaeological Areas Act 1979 (AMAA 1979);
- Protection of Military Remains Act 1986 (PMRA 1986); and
- Merchant Shipping Act 1995 (MSA 1995).

10.2.2.3 The Marine (Scotland) Act 2010 is the primary legislation relevant to marine development within Scottish Territorial Waters. The Marine (Scotland) Act 2010 provides a framework to achieve sustainable development in Scottish waters, implementing marine planning, licensing, conservation and enforcement. It is the responsibility of the Scottish Ministers and public authorities to act to protect and enhance the marine biodiversity and the preservation of marine historic assets of national importance.

10.2.2.4 Marine historic assets may also be designated under the Marine (Scotland) Act 2010 (Section 73) and the AMAA 1979 (Part II). Military wrecks and aircraft remains may be protected under the PMRA 1986. Ownership of any wreck remains is determined in accordance with the MSA 1995.

10.2.2.5 Within the Scottish EEZ outside the 12nm Territorial Waters limit, the following legislation applies:

- Marine and Coastal Access Act 2009;
- Protection of Military Remains Act 1986; and
- Merchant Shipping Act 1995.

10.2.3 International Conventions

10.2.3.1 The United Nations Educational, Scientific and Cultural Organisation (UNESCO) Convention on the Protection of the Underwater Cultural Heritage was concluded in 2001 and is a comprehensive attempt to codify the law internationally with regards to underwater cultural heritage. The UK has not ratified the Convention but has stated that it has adopted the Annex of the Convention, which governs the conduct of archaeological investigations, as best practice for archaeology. Although the UK is not a signatory, the Convention entered into force on 02 January 2009 having

been signed or ratified by 20 member states. It has since been ratified or accepted by an additional 60 member states.

10.2.4 Marine Policy

10.2.4.1 The UK Marine Policy Statement was adopted in 2011 by all UK Administrations in March 2011 as part of a new system of marine planning being introduced across UK seas (HM Government, 2011[1]). The UK Marine Policy Statement was intended to facilitate and support the formulation of Marine Plans, ensuring that marine resources are used in a sustainable way in line with high level marine objectives.

10.2.4.2 The Marine (Scotland) Act 2010 is the primary legislation relevant to marine development plans within Scottish Territorial Waters. Under this legislation, Scottish Ministers adopted a National Marine Plan (Marine Scotland, 2015[2]). The National Marine Plan sets out a single framework for sustainable development within Scotland's marine area. General Policy 6 for the Historic Environment states, "*development and use of the marine environment should protect and, where appropriate, enhance heritage assets in a manner proportionate to their significance*" and also notes the requirement for development proposals to provide "*information on the significance of known heritage assets and the potential for new discoveries to arise*". Proposals should demonstrate how any adverse impacts will be avoided, or if not possible, minimised and mitigated.

10.2.4.3 The Scottish Marine Regions Order 2015 identifies 11 Scottish Marine Regions and 10 Offshore Marine Regions for the purposes of regional marine planning and establishes their boundaries. The Proposed Development (Offshore) is located partially within the Moray Firth Scottish Marine Region and partially within the Fladen and Moray Offshore Marine Region.

10.2.5 Marine Guidance

10.2.5.1 The following relevant guidance applies to the Proposed Development (Offshore):

- Military Aircraft Crash Sites: Guidance on their significance and future management (English Heritage (now Historic England), 2002[3]);
- The Code of Practice for Seabed Developers (Joint Nautical Archaeology Policy Committee (JNAPC) and The Crown Estate, 2006[4];
- Historic Environment Guidance for the Offshore Renewable Energy Sector (Wessex Archaeology Ltd, 2007[5]);
- Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage (now Historic England), 2008[6]);

- Our Seas - A shared resource: High level marine objectives (HM Government, 2009[7]);
- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector (Gribble and Leather, 2011[8]);
- Ships and Boats: Prehistory to Present: Designation Selection Guide (English Heritage (now Historic England) 2012[9]);
- Marine Geophysics Data Acquisition, Processing and Interpretation Guidance Notes (Bates *et al*., 2013[10]);
- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014[11]);
- Geoarchaeology: Using Earth Sciences to Understand the Archaeological Record (Historic England, 2015)[12];
- Historic Environment Policy for Scotland (Historic Environment Scotland, 2019[13])
- Managing Change in the Historic Environment: Setting (Historic Environment Scotland 2016, updated 2020[14]);Standard and guidance for historic environment desk-based assessment (Chartered Institute for Archaeologists (CIfA) 2014a, updated 2020[15]);
- Standard and guidance for archaeological advice by historic environment services (CIfA, 2014b, updated 2020[16]);
- Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021[17]); and
- Curating the Palaeolithic (Historic England, 2023[18])

10.3 Methodology

10.3.1 Archaeological Desk-based Assessment

10.3.1.1 The methodology follows the best practice professional guidance outlined by the Chartered Institute for Archaeologists' (CIfA) Standard and Guidance for Historic Environment Desk Based Assessment (2014, updated 2020[16]).

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

- Seabed prehistory (e.g., palaeochannels and other features that contain Quaternary sediments, and derived early prehistoric artefacts such as lithic blades and tools);
- Seabed features, including maritime sites (such as shipwrecks and associated material including cargo, or records of obstructions and

fisherman's fasteners) and aviation sites (aircraft crash sites and associated debris; and

- Intertidal heritage assets.

10.3.1.3 The types of archaeology listed above relate to the known marine resource and also the potential, and currently, unknown resource. There is potential for archaeological and palaeogeographical features dating from the Later Upper Palaeolithic onwards (Figure 10-3).

10.3.1.4 Post-medieval and modern wrecks, as they were generally made of more substantial material, are more likely to have been discovered through surveys undertaken by the United Kingdom Hydrographic Office (UKHO) and others, and thus recorded in the archaeological record. However, there is still potential for the discovery of previously unrecorded wreck sites, particularly of wooden wrecks, broken up wrecks or partially buried wrecks that are more difficult to detect through geophysical survey.

10.3.1.5 There is also potential for 20th Century aircraft, particularly in relation to the Second World War (Wessex Archaeology, 2008[19]). Aircraft crash sites are also difficult to identify through archaeological assessments of geophysical survey data, although experience indicates material from the site, such as engines or other material may be recorded as small obstructions or anomalies.

10.3.2 Data Sources

10.3.2.1 Baseline conditions have been established within the MSA (Section 10.1.3) by undertaking a desktop review of published information and through consultation with relevant organisations. The data sources used to inform the baseline description and assessment include:

- UKHO data for charted wrecks and obstructions;
- Canmore Historic Environment Records (HER) maintained by Historic Environment Scotland, comprising data for marine archaeological sites;
- Aberdeenshire Council HER, comprising a database of all recorded marine archaeological sites within the offshore;
- Relevant mapping including Admiralty Charts, BGS, Ordnance Survey and historic maps; and
- Relevant documentary sources and grey literature held by Wessex Archaeology, and those available through the Archaeology Data Service and other websites (presented in the 'References').

10.3.2.2 In recording the locations of the reported wrecks and other records the location data was ranked using surveyed UKHO positions (such as those recorded by dGPS) then Canmore and HER records which may be based on earlier UKHO positions or the measurement method or level of spatial precision cannot be clearly confirmed.

10.3.2.3 All data for heritage assets located within this search area are stored on the Wessex Archaeology archive network and can be made available on request.

10.3.3 Data Structure

10.3.3.1 This chapter is supported by a Geographic Information System (GIS) using ArcGIS Pro 3.2.1, incorporating the positional information of the various data sources listed above, allowing the data to be spatially analysed. The data were subsequently compiled into gazetteers of the maritime and aviation resources within the study area.

10.3.3.2 Within this assessment, the gazetteer is compiled and presented in World Geodetic System 1984 Universal Transverse Mercator zone 30 North (WGS 1984 UTM zone 30 N). Any data not already in this co-ordinate system have been converted using the conversion programme Quest Geodetic calculator, version 8.0.0.1.

10.3.3.3 The geophysical survey data were acquired in WGS 1984 UTM zone 30N projected coordinates and the results are presented in the same system.

10.3.3.4 Information relating to marine archaeology and cultural heritage assets that did not include location or positional information were also used to inform the marine archaeological baselines assessment where relevant.

10.3.4 Chronology

10.3.4.1 Archaeological material is generally studied within a framework of 'periods' or 'ages' that reflect the activities and cultural changes taking place over time. All dates are referred to as BCE (Before Common Era), BP (Before Present) or AD (Anno Domini) within the text. BCE refers to calibrated radiocarbon chronology that can be considered equivalent to calendar years. BP dates are used for periods of time older than circa 10,000 years ago (for instance Figure 10-3).

10.3.4.2 A list of the main archaeological periods of the British Isles is referred to in the text, along with their broadly defined dates. These are presented in Section 10.8.1 (Terminology).

10.3.5 Marine Geophysical and Geotechnical Datasets

Objectives

10.3.5.1 The specific objectives of the geophysical assessment are:

- Identify any buried palaeolandscape features of possible archaeological potential;

- Confirm the presence of known or previously located marine sites of archaeological potential and to comment on their apparent character;
- Identify, locate and characterise hitherto unrecorded marine sites of archaeological potential; and
- Compare the results with known records (such as those from the UKHO) and the HERs.

Data Sources

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

- Geophysical survey datasets acquired by Gardline Limited in 2022 and 2023;
- Geophysical survey datasets acquired by Titan Environmental Surveys Limited (Titan) in 2023;
- Recorded wreck and obstruction data acquired via the UKHO;
- Relevant background mapping from the area (such as Admiralty charts received from UKHO) and historic geotechnical data (BGS, 2024[20]);
- Caledonia Offshore Wind Farm Limited ("the Applicant") supplied survey report (Volume 7B, Appendix 4-6: Reconnaissance Geophysical Survey Interpretation Report); and
- Gardline and Titan contact lists supplied by the Applicant.

Geophysical Data – Technical Specifications

10.3.5.3 Geophysical data were acquired by Gardline in 2022 and 2023 using the vessel MV Ocean Endeavour and by Titan in 2023 using the vessel MV Titan. Gardline collected data for the Caledonia OWF and for the main part of the Caledonia OECC while Titan collected the data for the nearshore section of the Caledonia OECC. The extents of the geophysical surveys are shown in Figure 10-2.

10.3.5.4 The Gardline 2022 survey acquired data over the Caledonia OWF only, from 6–20 November 2022. The data were collected in a grid of 150m spaced mainlines and 2000m spaced crosslines. The main line orientation in the Caledonia North Site was north-west to south-east and in the Caledonia South Site it was approximately north–south. Bad weather conditions caused the survey to stand down early, with the remainder completed in 2023.

10.3.5.5 The Gardline 2023 survey acquired the remaining geophysical data for the Caledonia OWF as well as the majority of the Caledonia OECC from 3 March to 12 June 2023 (Volume 7B, Appendix 4-6). This completed the work begun in 2022. The line spacing for the Caledonia OWF was 150m and orientated roughly north–south, in order to acquire data as close to the

existing Moray East OWF as possible. Four lines to the north of the Caledonia OWF were acquired on a roughly north-west to south-east alignment (Volume 7B, Appendix 4-6). No crosslines were required as they were collected in the 2022 survey. For the majority of the Caledonia OECC, the main line spacing was 100m with crossline spacing of 500m (Volume 7B, Appendix 4-6). A series of UXO survey lines were added to the work scope later, acquired over the proposed turbine locations, as part of a clearance survey. Two magnetometers were used 1.5m apart in a transverse gradiometer arrangement on these lines (Volume 7B, Appendix 4-6).

10.3.5.6 The Titan 2023 survey acquired the geophysical data for the nearshore Caledonia OECC. The survey took place between 16 April to 6 June 2023 (Volume 7B, Appendix 4-6). Data were collected in water depths less than 25m (Volume 7B, Appendix 4-6). The main line spacing was 35m, with an approximately ESE–WNW orientation, with 500m spaced crosslines (Volume 7B, Appendix 4-6). The line plan was designed to produce data coverage between the 5m and 30m contours using admiralty charts, however on completion it was apparent that the 5m contour differed from the admiralty publications. For this reason, additional lines were constructed to achieve the nearshore limit and the line plan was extended (Volume 7B, Appendix 4-6).

10.3.5.7 Further details on the equipment used are in Table 10-1.

Table 10-1: Summary of survey equipment.

Survey Company	Survey Vessel	Data Type	Equipment	Data Format
Gardline	MV Ocean Endeavour (2022, 2023)	SBP	Innomar SES-2000 parametric sonar	.sgy
		MBES	Kongsberg EM2040D	.xyz
		SSS	Edgetech 4200FS (100/ 400 kHz, 175m range)	.xtf and .tifw
		Mag.	Geometrics G-882	.xls
		Positioning	Fugro StarFix DGNSS	N/A
Titan	MV Titan Discovery (2023)	SBP	Applied Acoustics surface towed boomer (model unknown)	.sgy
		MBES	Dual Head Reason T20-P (200/400 kHz)	.txt

Survey Company	Survey Vessel	Data Type	Equipment	Data Format
		SSS	EdgeTech 4200FS (100/600k Hz, 50m range)	.xtf and .tifw
		Mag.	Geometrics G882	.csv
		Positioning	Applanix POSMV GNSS	N/A

Geophysical Data – Processing

10.3.5.8 A number of datasets were assessed over the study area, each dataset was processed separately using the following software (Table 10-2).

Table 10-2: Software used for geophysical assessment.

Dataset	Processing Software	Interpretation and Rationalisation
SBP	CodaOctopus Survey Engine v8.6; S&P Kingdom Suite	ArcMap v10.8
MBES	QPS Fledermaus v7.75	ArcMap v10.8
SSS	CodaOctopus Survey Engine v8.6	ArcMap v10.8
Mag.	MagPyPro	ArcMap v10.8

10.3.5.9 The SBP and MBES data were used as the primary datasets for the palaeogeographic assessment and SSS, MBES and Mag. datasets were used for the seabed features assessment.

10.3.5.10 The Caledonia OWF and majority of the Caledonia OECC (Gardline) SBP data were processed using CodaOctopus Survey Engine Seismic+ software. Due to differences in .sgy formats of the provided data, the nearshore OECC (Titan) SBP data were processed using S&P Kingdom Suite Software. Both software packages allow the data to be visualised with user selected filters and gain settings in order to optimise the appearance of the data for interpretation. The software then allows an interpretation to be applied to the data by identifying and selecting sedimentary boundaries and shallow geological features that might be of archaeological interest.

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

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

10.3.5.13 For the array area, the 1,250 x 1,250m grid acquired during the 2023 survey was utilised for the SBP assessment. For the Caledonia OECC and Landfall Site, an approximate centre line plus four additional wing lines (two either side of centre) were initially assessed. Where features of interest were identified, additional lines were then interpreted in order to more accurately map the extents of these features. The exact positions of the lines varied along the Caledonia OECC due to the irregular shape of the study area.

10.3.5.14 The MBES data were analysed to identify any unusual seabed structures that could be shipwrecks or other anthropogenic debris. The data were gridded at:

- 2m (2022 Caledonia OWF Gardline data);
- 1.5m (2023 Caledonia OWF Gardline data);
- 1m (2023 majority of the Caledonia OECC Gardline data); and
- 0.5m (2023 nearshore section of the Caledonia OECC Titan data).

10.3.5.15 The MBES data were analysed using QPS Fledermaus software, which enables a 3-D visualisation of the acquired data and geo-picking of seabed anomalies. The MBES data were also used as a baseline for the palaeogeographic assessment.

10.3.5.16 The high frequency SSS mosaics were provided as .tifw files and were assessed using ArcMap. Mosaics were only provided for the low frequency data but were assessed as being suitable for interpretation (see Data Quality section below). To mitigate this, positions taken from the survey company contact lists were 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 linear debris. If features were considered to be of possible archaeological origin in the mosaic, they were added to the gazetteer.

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

10.3.5.18 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.

10.3.5.19 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 (such as 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; for instance 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 Environmental Impact Assessment (EIA)/scoping survey.

10.3.5.20 For the purposes of this assessment, any identified magnetic anomalies have been classified depending on their amplitude as small (15 nT to 49 nT), medium (50 nT to 99 nT) or large (100 nT to 999 nT).

10.3.5.21 A threshold approach has been used for this EIA and all three data types in the Caledonia OWF and majority of the Caledonia OECC have been subject to these. Anomalies picked from the SSS mosaic were subject to a threshold, being over 2.5m in any one direction facilitated inclusion in the gazetteer. As with the SSS mosaics, anomalies seen in the MBES data were subject to a threshold, required to be over 2.5m in any one direction to merit inclusion in the gazetteer. Any magnetic anomalies below 15 nT have been excluded based on ground-truthing information from similar large-scale sites. 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.

10.3.5.22 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 (.xtfs). 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 by Gardline and/or Titan). These included anything thought to be:

- Anomalies from the SSS and MBES datasets that were considered likely to be given an A1 classification (for instance wrecks, debris items and debris fields);
- Magnetic anomalies over 500 nT (that are not known to be modern);

- Wreck locations from the 2000s gazetteer provided by the Wessex Archaeology Coastal and Marine Team;
- All positions tagged as wreck by the survey company.

10.3.5.23 Anomalies identified and tagged 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 Archaeological Exclusion Zones (AEZs) are as comprehensive as possible.

10.3.5.24 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 around these positions of interest. 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.

10.3.5.25 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 the Proposed Development (Offshore), the mosaics had already been created and provided by the Applicant and these were used to finalise the positioning of anomalies from the raw SSS data.

10.3.5.26 The landward end of the Caledonia OECC was subject to full interpretation, with no thresholds in place (excepting the standard 5 nT for Mag. data, as survey can cause snatching to the value of 5 nT). The extent of this area was identified as the nearshore data collected by Titan in 2023 (using rough east-west survey lines, running approximately perpendicular to the rest of the survey lines), along with the area of east-west survey lines collected by Gardline in 2023. This extent measures around 4km of the Caledonia OECC (Figure 10-2).

10.3.5.27 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.

Geophysical Data – Data Quality

10.3.5.28 Once processed, the geophysical data sets were individually assessed for quality and their suitability for archaeological purposes and rated using the following criteria (Table 10-3).

Table 10-3: 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.

10.3.5.29 The quality of the Gardline Innomar SBP data has been rated as ‘’Good’ using the above criteria. Sub-surface reflectors were clearly visible, and the penetration was good for the equipment used. The quality of the Titan boomer SBP data has been rated as ‘Average’ using the above criteria. The data were heavily affected by swell, which could be rectified to a degree during processing, but affected the visibility of sub-surface reflectors. However, the data were considered to be suitable for archaeological assessment.

10.3.5.30 The MBES data for the Gardline 2022 Caledonia OWF survey were rated as ‘Below Average’ using the above criteria. The data quality and resolution of 2m were found to be only suitable for archaeological assessment of objects and debris over 4m in size, above the 2.5m threshold. This is due to adverse weather affecting the quality of the data. The data coverage for

Caledonia South Site was poor, with very large data gaps in the south-east, caused by adverse weather conditions leading to the survey being halted. However, this was later infilled by the Gardline 2023 survey.

10.3.5.31 The MBES data for the Gardline 2023 survey of the Caledonia OWF was rated as 'Average', being gridded at 1.5m resolution, and suitable for archaeological assessment of objects and debris above the 2.5m threshold. It's important to note that there is a large data gap in the north-west of the Caledonia OWF in the 2023 Gardline data, however this area is almost completely covered by the 2022 survey.

10.3.5.32 The MBES data for the Gardline 2023 survey of the Caledonia OECC were rated as 'Average' using the above criteria. With good overall coverage and a resolution of 1m, the data was found to be suitable for archaeological assessment.

10.3.5.33 The Titan 2023 nearshore Caledonia OECC MBES data were found to be of a 'Good' quality. The dataset had near complete coverage, with a resolution of 0.5m. This is considered suitable for archaeological assessment of objects and debris over 1m in size.

10.3.5.34 The Gardline SSS mosaics for the Caledonia OWF were given an 'Average' quality rating. Only the low frequency mosaics were provided, which will have rather lower resolution and hence quality than the equivalent high frequency mosaics. The 2022 and 2023 mosaic data used in conjunction give full coverage of the Caledonia OWF, both the Caledonia North Site and Caledonia South Site. There is a small strip of missing SSS data to the north-west, in the same area as the missing data for the MBES.

10.3.5.35 The Gardline 2023 SSS mosaic for the majority of the Caledonia OECC was rated as 'Average' data quality using the criteria listed above. As with the Caledonia OWF mosaics, only the low frequency mosaic was provided, and the resolution and quality are therefore rather lower than if the high frequency mosaic had been available. This mosaic has a good amount of overlap with the Titan nearshore Caledonia OECC SSS data.

10.3.5.36 The Gardline SSS raw data has been rated as 'Good' for the Caledonia North Site and Caledonia South Site, and the Caledonia OECC. There were no issues with data import and processing could be applied without issue. Coverage was found fit for the purpose of raw archaeological interpretation, although some small data gaps exist in the west and north-west of the dataset.

10.3.5.37 The Titan nearshore section of the Caledonia OECC SSS mosaics have been rated as 'Good', with both high frequency and low frequency mosaics provided. There are some tiny gaps in the high frequency mosaic, which are covered by the low frequency data. The data were suitable for archaeological assessment.

10.3.5.38 The Titan nearshore section of the Caledonia OECC SSS raw data have also been given a rating of 'Good'. There was no problem applying processing and seabed tracking was mostly already applied to a fairly good standard. The data were suitable for full archaeological assessment, including for features below the 2.5m threshold set for the assessment of the mosaics.

10.3.5.39 The Gardline Mag. datasets for the Caledonia OWF were found to give complete coverage of the entire area when the 2022 and 2023 surveys are combined. The 2022 dataset needed a bit of despiking due to seismic interference The Gardline 2023 Mag. dataset for the majority of the OECC was also found to have complete coverage. All datasets are rated 'Average' using the above criteria. The relatively wide line spacing of 150m in the Caledonia OWF and 100m in the majority of the Caledonia OECC, 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 datasets were considered suitable for archaeological interpretation.

10.3.5.40 The 2023 Gardline UXO. dataset, acquired over the proposed turbine locations in the Caledonia OWF had some issues but these were resolved successfully. The dataset was found to have good coverage and was successfully gridded up at 5m. The data quality was rated as 'Good' using the above criteria. It was suitable for full archaeological assessment.

10.3.5.41 The Titan Mag. dataset for the nearshore section of the Caledonia OECC had good overlap with the Caledonia OECC Gardline survey area and good coverage. The dataset was graded as 'Good' using the above criteria.

10.3.5.42 A summary of the above assigned data quality for archaeological purposes is summarised in Table 10-4.

Table 10-4: Data quality summary for Caledonia OWF datasets.

Survey Details			Data Quality			
Operator and Year	Area	Vessel	SBP	MBES	SSS	Mag.
Gardline 2022	Caledonia OWF – Caledonia North Site and Caledonia South Site	MV Ocean Endeavour	Good	Below Average	Average – Mosaic; Good - Raw	Average – single magneto meter
Gardline 2023	Caledonia OWF – Caledonia North Site and Caledonia South Site	MV Ocean Endeavour	Good	Average	Average – Mosaic; Good - Raw	Good – UXO, Average – single magneto meter

Survey Details			Data Quality			
Operator and Year	Area	Vessel	SBP	MBES	SSS	Mag.
	Caledonia OECC	MV Ocean Endeavour	Good	Average	Average – Mosaic; Good - Raw	Average – single magneto meter
Titan 2023	Caledonia OECC	MV Titan Discovery	Average	Good	Good – Mosaic; Good - Raw	Good – single magneto meter

Geophysical Data – Anomaly Grouping and Discrimination

10.3.5.43 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.

10.3.5.44 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.

10.3.5.45 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 10-5).

Table 10-5: 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	Anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature.	MBES, SSS, Mag.
Archaeological	A2_l	Anomaly of possible anthropogenic origin but the interpretation is uncertain; may be anthropogenic or a natural feature.	MBES, SSS, Mag.

Overview Classification	Discrimination	Criteria	Data Type
Archaeological	A3	Historic record of possible archaeological interest with no corresponding geophysical anomaly	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.
Non-archaeological	U3	Recorded loss	MBES, SSS, Mag.
Non-impact	O1	Outside horizontal footprint of proposed impact	MBES, SSS, Mag., SBP
Non-impact	O5	Anomaly size or amplitude below the Proposed Development (Offshore) threshold	MBES, SSS, Mag.

10.3.5.46 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.

10.3.5.47 Any anomalies located outside of the defined study areas, either previously recorded in known databases (UKHO, Canmore or Aberdeenshire HER) or identified during this geophysical assessment, are deemed beyond the scope of the current assessment and are subsequently not included in this report.

10.3.6 Maritime and Aviation Archaeology

10.3.6.1 The sources of data for maritime and aviation resource listed above have been collated and summarised in order to develop a baseline of marine cultural heritage for the MSA, and the potential for encountering unknown shipwreck and aircraft crash sites. Sources of data relevant to maritime and aviation archaeology are the UKHO, Canmore and Aberdeenshire HER.

10.3.6.2 The data obtained were reviewed and those located within the MSA (Figure 10-1) were extracted and compiled into the overall Proposed Development (Offshore) gazetteer as part of the known maritime and aviation baseline.

10.3.6.3 For the purpose of this assessment, records with duplicate positions between datasets were amalgamated and their co-ordinates are taken from

the UKHO dataset as the raw data therein is based on hydrographic survey data presented in World Geodetic System (WGS) 1984 datum. These co-ordinates were projected from WGS84 into UTM30N eastings and northings using the Quest Geodetic Calculator version.

10.3.6.4 Data relating to Recorded Losses were also extracted from the HER, UKHO and Canmore data sources. Recorded Losses are records for ships or aircraft that are known to have wrecked or crashed offshore, but for which the exact locations are not known. Recorded Losses are often grouped by area into Maritime Named Locations by Canmore and HER, and the positional data of these records is unreliable and serves only to provide an indication of the types of vessels that passed through the area and the wrecking incidents that are known to have occurred in the general region. Whilst the remains of these vessels and aircraft are expected to exist somewhere on the seafloor, their location is unknown. As such, they signify the potential maritime and aviation resource.

10.3.6.5 Details regarding maritime Recorded Losses, whose Named Location happens to be located within the MSA are presented in a gazetteer format (Section 10.8.5: Recorded Losses). These records have retained their original identification assigned by the UKHO, Canmore or HER for ease of cross referencing. Where records are duplicated between datasets all corresponding identification numbers have been included but are referred to in the text by their original Monument ID if one exists. The gazetteer does not include positional data due to the inaccuracies therein.

10.3.6.6 The baseline assessment of maritime and aviation archaeology was further supplemented by a review of relevant primary and secondary source material to provide an indication on the nature of maritime and aviation activity across the region. As well as summarising the known archaeological resource, the baseline assessment underlines the potential for encountering unknown shipwreck and aircraft crash sites within the study area (English Heritage (now Historic England), 2002[3]; Wessex Archaeology, 2008[19]).

10.3.7 Assumptions and Limitations

Archaeological Data

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

10.3.7.2 The records held by the UKHO, HER and Canmore and other sources used in this assessment are not a record of all surviving cultural heritage assets, rather they are a record of the discovery of a wide range of archaeological

and historical components of the marine historic environment. The information therefore held within these datasets is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown. In particular, this relates to buried archaeological features.

Geophysical Data

10.3.7.3 Some limited areas within the Proposed Development (Offshore) have not been covered by geophysical data - in the nearshore area at the very southernmost point of the Caledonia OECC and in a small part of the western section of the Caledonia North Site (Figure 10-2).

10.3.7.4 The presence of small ferrous material, more likely to be anthropogenic in origin, cannot be determined due to the relatively large line spacings of the Mag. survey acquired over the Proposed Development (Offshore). Therefore, only significant ferrous objects (such as steel hulled wrecks) will be identified between lines of surveys, and smaller individual pieces of ferrous debris will not be detected. This means that there is potential for any potential ferrous debris to be buried or have little surface expression across the Proposed Development (Offshore).

10.4 Marine Archaeological Assessment: Palaeogeography

10.4.1 Geological Baseline and Archaeological Potential

10.4.1.1 An overview of the geological and archaeological history of the wider region from the Pleistocene to the Holocene marine transgression is summarised below. This is based on a range of secondary sources, including academic papers, monographs, geological information (e.g., BGS mapping), and previous work undertaken by Wessex Archaeology within the North Sea and the wider region. This serves as a baseline for the palaeogeographic assessment, and aids in producing a stratigraphy for the study area, assigning archaeological potential to identified units, and informing future sampling strategies should they be required.

10.4.1.2 The GSA is situated within the Outer Moray Firth, an inlet of the Central North Sea basin, with the Caledonia OECC extending north from west of Banff to the Caledonia OWF Site approximately 43km offshore (Figure 10-2). The environment within the study area is currently fully marine, and a shallow marine basin has existed in the approximate location of the North Sea since the Early Tertiary, although the exact position of the shorelines around the North Sea have altered significantly during this time.

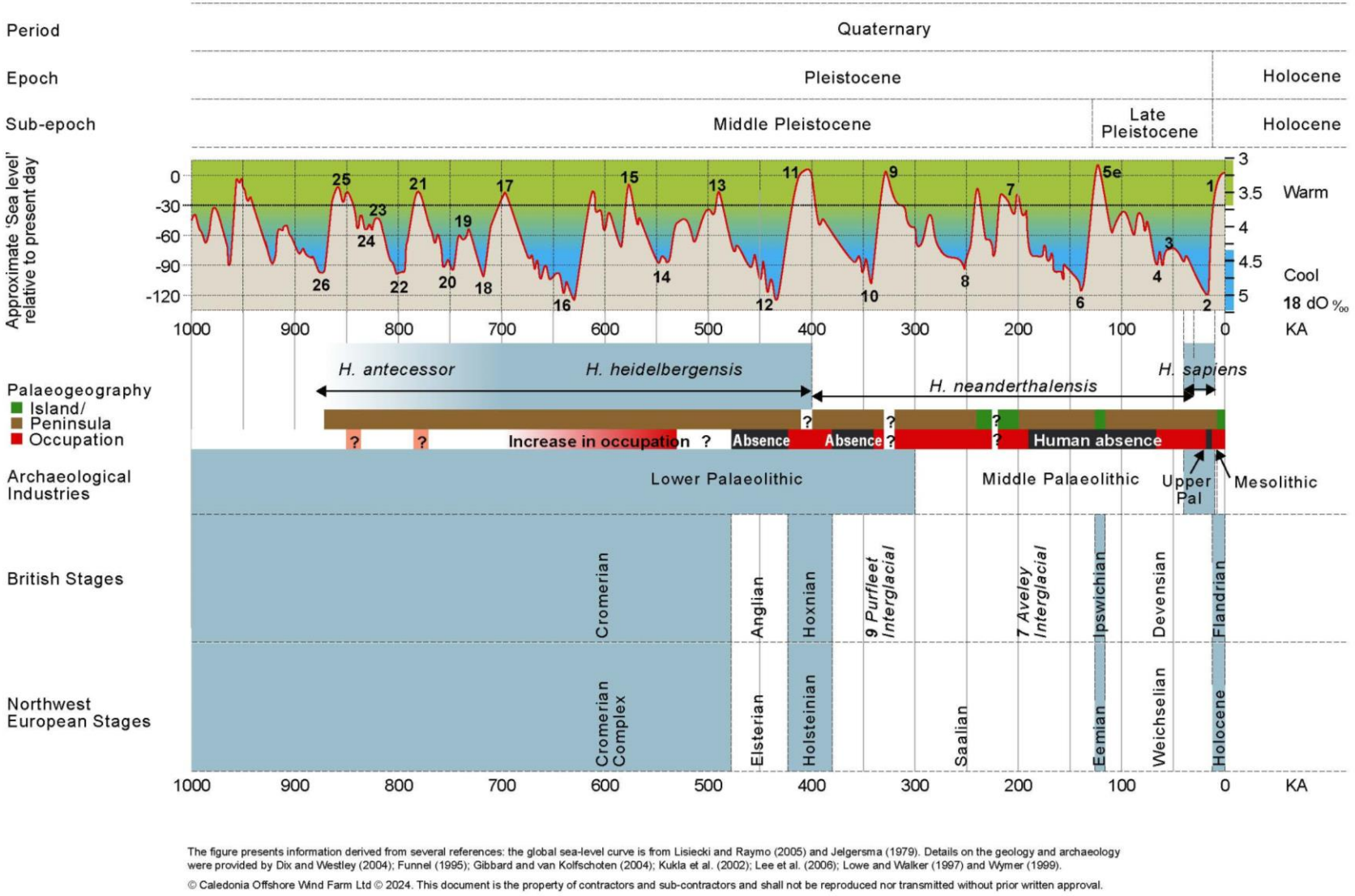
10.4.1.3 The recent geological history of the North Sea is directly linked to glacial/interglacial cycles experienced by the area during the Pleistocene

(2.58 Ma - 11.7 ka), which resulted in large areas of the North Sea being periodically exposed as a terrestrial environment. This is represented in the geological record, with distinct terrestrial landscape features being present, interspersed with deposits of marine and glacially derived sediments. Due to this fluctuating glacial cycle, the corresponding rises and falls in Global Mean Sea Level (GMSL), and major reconfigurations of the landscape during the last million years, the archaeological record is phased between periods of occupation and long periods of hiatus when environmental conditions or high sea levels restricted access to Britain (Figure 10-3). These changes in ice sheet configuration and relative sea level are discussed relative to Marine Isotope Stages (MIS), which are relative abundances of isotope ratios (e.g., 18O to 16O) archived in sediment records that give proxies of palaeoclimate changes.

10.4.1.4 Hominids and humans have occupied the British Isles at various times, with the earliest occupation extending back to around one million years in East Anglia (Parfitt *et al*., 2010[21]) (Figure 10-3), with coastal areas clearly attracting human populations, including landscapes that are now submerged (Bailey *et al*., 2020[22]).

10.4.1.5 The earliest archaeological evidence for Scotland comprises around the last 15,000 years and reflects Later Upper Palaeolithic and Early Mesolithic human activity at various locations across Scotland (Saville and Wickham-Jones, 2012[23]) in periods when (now-inundated) coastal land was more extensive than today, due to lower global sea-levels following the end of the last ice age (Gaffney and Fitch, 2022[24]).

10.4.1.6 Nearshore areas around Scotland's coasts retain higher potential for encountering Late Pleistocene and Early Holocene submerged palaeolandscapes, where preservation conditions allow. For example, there is potential for the presence of as yet undiscovered in situ palaeolandscape deposits (such as peats, estuarine and low-energy coastal sediments of archaeological interest), and prehistoric sites and finds located within the inundated nearshore palaeogeography. Any prehistoric discoveries will be regarded of national importance, above or below sea level, and are therefore of high sensitivity and value.



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

Figure 10-3: Sea level curve and chronology of the North Sea landscape.

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

10.4.1.7 In the early Pleistocene, sea level within the North Sea is interpreted to have been much lower, and the Aberdeenshire coastline is likely to have been situated further to the north and east than at present. This landscape is likely to have been dominated by fluvial/deltaic systems extending north and east from the present-day shoreline to a potential shallow marine environment in the Central Graben of the North Sea (Lamb *et al*. 2017[25]).

10.4.1.8 This palaeogeography is likely to have continued in a similar configuration into the pre-Anglian, where significant fluvial and deltaic deposits from the Ur-Frisia/Eridanos systems dominated the southern North Sea (Cameron *et al*. 1992[26]). This is represented in the geological record of the study area by the Aberdeen Ground Formation, a deposit of marine, glaciomarine, and deltaic sediments extensive within the central North Sea and within the study area (Gatliff *et al*. 1994[27]).

10.4.1.9 The earliest direct evidence for hominin activity in the UK has been dated from the Early-Middle Pleistocene period, at the Lower Palaeolithic sites of Happisburgh, on the Norfolk coast, and Pakefield, on the Suffolk coast, which date from c. 900,000 and 700,000 BP respectively (Parfitt *et al*. 2005[28]; 2010[21]). However, no known sites of Lower Palaeolithic date have been identified in Scotland (Wessex Archaeology 2018[29]), which potentially implies that the more northern reaches of the UK were already too cold for habitation, or that hominin communities simply had not spread this far north. However, significant reworking due to subsequent ice sheet activity in Scotland may have also removed any evidence of hominin activity from this time.

Anglian (Elsterian, MIS 12, c. 478-424 ka) and Hoxnian (Holsteinian, MIS 11, c. 424 ka - 374 ka)

10.4.1.10 The Anglian (Elsterian) glacial period was the most extensive glaciation of the Pleistocene and saw ice sheets extending further south than at any time in the past 2.5 million years. The exact southern extent of the Anglian glaciation is currently debated, but it is likely to have extended to just north of the present-day River Thames. The study area will have been covered by at least one phase of thick ice during this period.

10.4.1.11 During the deglaciation of the Anglian ice sheet, the Weald-Artois High, a chalk ridge across the English Channel that separated the North Sea from the channel itself, is thought to have been breached (Gupta *et al*., 2017[30]; Hamblin *et al*., 1992[31]). This breaching had a major impact on the palaeogeography of Britain, turning it from a permanent peninsula of Europe to an island during sea-level highstands. However, during sea-level lowstands, an extensive landscape within the English Channel and the southern North Sea would have been exposed and available for colonisation and migration by hominin communities.

Wolstonian (Saalian; MIS 10-6, c. 374 - 130 ka) glacial/interglacial, Ipswichian (Eemian, MIS 5, c. 130 - 71 ka) interglacial, and Devensian (Weichselian, MIS 4 -2, c. 71 -11.7 ka) glacial cycles

10.4.1.12 This cycle of glacial/interglacial and landscape exposure/inundation continued for the remainder of the Pleistocene. Within the southern North Sea, large areas of periodically exposed landscape were available for hominin colonisation during periods of favourable climate, and faunal and artefact remains have been recovered from the southern North Sea during dredging activities. These include the significant Early Middle Palaeolithic Levallois lithic assemblage identified from aggregates license Area 240 off East Anglia (Tizzard *et al*., 2014[32]; 2015[33]; Wessex Archaeology, 2013a[34]; 2013b[35]).

10.4.1.13 Proximity to the accumulation zone of the ice sheet, a lower elevation within the central North Sea basin, and glacio-isostacy resulting in relative sea level above present day meant that the ice sheet was marine-terminating within the region around the GSA, without any intervening terrestrial landscape exposure between ice retreat and marine inundation. This is represented within the geological history of the region by extensive glacial and glaciomarine deposits such as the Fisher and Coal Pit Formations (BGS, 1986[36]; Gatliff *et al*., 1994[27]), without any intervening terrestrial deposits.

10.4.1.14 In the Early Upper Palaeolithic, at the end of the Late Pleistocene, there was a transition period for hominins. Neanderthals died out around 40,000 BP, and modern humans then colonised Doggerland, arriving in Britain around 34,000 BP (Jacobi and Higham, 2011[37]). Archaeological evidence for this period is relatively sparse, but submerged palaeolandscapes provide key contextual evidence for recovered artefacts and provides a background landscape within which to place these human communities.

10.4.1.15 The onshore archaeological record of Upper Palaeolithic activity is sparse. The first evidence of human presence in Scotland is a Late Upper Palaeolithic flint assemblage (c. 14,700 BP) from Howburn Farm, near Biggar in the uppermost Clyde valley (Ballin *et al*., 2010[38]). This is located approximately 240km SSW of Banff, distant from the GSA, but demonstrates humans began to migrate north following the Devensian deglaciation when climate conditions allowed.

10.4.1.16 The GSA became ice-free between 20 and 17 ka BP. Relative sea level in north-east Scotland dropped from over 20m above present during the Last Glacial Maximum to a minimum of -20m below present, before rising to a potential Mid-Holocene highstand of 4m above present (Shennan *et al*., 2018[39]; Bradley *et al*., 2023[40], Clark *et al*., 2022[41]). As with previous deglaciations, it is likely that the ice sheet was marine terminating in the region of the GSA with very little or no intervening terrestrial exposure (Clark *et al*., 2022[41]). Any potential terrestrial exposure is likely to have

been limited to within the present-day -20m water depth contour, which in the GSA comprises a relatively narrow shelf area off the coast of Banff and Whitehills that is up to approximately 1.5km wide (Figure 10-2). Although of low spatial resolution, and not accounting for local relative sea level data, palaeotopography models generated from glacio-isostatic adjustment models show the entire study area to have been below sea level from c. 16 ka BP to the present day.

10.4.1.17 During the Mid-Holocene/Mesolithic (from around 7 ka BP), the sea-level highstand resulted in shorelines further inland than they are at present, and advancement of shorelines to their current location (Wessex Archaeology, 2018[29]). This period of highstand correlates with the first evidence for human activity within Aberdeenshire, with numerous sites of flint scatters dated to the Mesolithic period identified from around the county (Wessex Archaeology, 2018[29]). As coastlines were further inland than at present during this time, the potential for preserved submerged Mesolithic and Neolithic sites within the GSA is very low.

10.4.1.18 After the Holocene marine transgression, the archaeological potential of the North Sea, including the GSA, shifts to the maritime history of the British Isles which is presented in Section 0.

10.4.2 Palaeogeographic Assessment Results

10.4.2.1 Due to the interpreted geological and relative sea-level history of the region, we anticipate the potential for submerged palaeolandscape features and prehistoric archaeological evidence is highest between present-day sea level and the -20m bathymetric contour (Figure 10-1). However, for the purposes of this assessment, and to account for any potential error in glacio-isostatic adjustment models, the SBP data has been assessed across a wider area as per the methodology outlined in Section 10.3.5.

10.4.2.2 Data at the landfall of the Caledonia OECC were acquired as close to shore as survey conditions allowed, and so a data gap of only up to 400m wide (and generally much narrower) was achieved. As such, as much of the area of anticipated high palaeolandscape potential as possible has been surveyed.

10.4.2.3 Four shallow geological units were identified within the SBP data; these can be summarised as follows (Table 10-6).

Table 10-6: Shallow stratigraphy of the GSA.

Unit	Era	Formation	Seismic Character/ Depositional Environment	Archaeological Potential
4	Holocene (MIS 1)	Modern seabed sediment	Modern mobile sands (marine), ranges from a thin veneer to localised accumulations and sand mega ripple fields.	Considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites and other cultural heritage
3	Late Weichselian/Early Holocene (MIS 2-1)	Forth Formation (Largo Bay Member)	Distinct deposit overlying Unit 1 and 2, characterised by sub-parallel internal reflectors. Often infilling depressions in the underlying units. Likely soft glaciomarine clays/sands.	Not of archaeological potential
2	Weichselian (MIS 5d-2)	Wee Bankie Formation	Generally, acoustically unstructured/chaotic in SBP data, present either infilling depressions within Unit 1 or as a thin veneer. Glacial till deposit, possible numerous lodgement/ablation/reworked internal members.	Not of archaeological potential
1	Pre-Quaternary	Various	Variable acoustic character in SBP data, but generally homogenous with a relatively strong, erosive upper reflector. Likely Various Pre-Quaternary bedrock lithologies.	Not of archaeological potential

10.4.2.4 Unit 1 is visible across the entire GSA and represents the pre-Quaternary bedrock. This is present at surface in some areas but is usually overlain by various combinations of Units 2 to 4. The unit is of variable acoustic character, but is generally homogenous with a relatively strong, erosive upper reflector. As a pre-Quaternary unit, this is not considered to be of archaeological potential.

10.4.2.5 Unit 2 is variably visible across the GSA; sometimes infilling depressions within the upper reflector of Unit 1, sometimes as a relatively thin blanket deposit, and absent in some areas. Legacy borehole data (BGS, 2024[20]) indicate this to be stiff silty/sandy clay and is likely to be Weichselian till of

the Wee Bankie Formation. As a glacial deposit, this is not considered to be of archaeological potential.

10.4.2.6 Unit 3 is visible across much of the GSA, often filling broad depressions in deeper water but also filling smaller channel features in the shallower parts of the array area. This unit is acoustically layered and characterised by multiple sub-parallel internal reflectors and some features potentially contain more than one phase of deposition. This is interpreted as the Largo Bay member of the Forth Formation based on the seismic character of the unit (Gatliff *et al*., 1994[27]) and is found by legacy borehole data to comprise soft silty clay/clayey sand (BGS, 2024[20]).

10.4.2.7 Unit 3 is interpreted as a glaciomarine deposit, created during and immediately after deglaciation of the Weichselian ice sheet, with marine sediment infilling channels and valleys of subglacial origin. As a glaciomarine deposit, Unit 3 is not considered to be of archaeological potential.

10.4.2.8 Unit 4 represents the modern seabed sediment and is identified in varying thicknesses from a thin veneer to thicker localised accumulations and mega-ripple fields (identified in the MBES data). This unit is considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites and other cultural heritage where it attains sufficient thickness.

10.4.2.9 No additional palaeogeographic features (for example buried palaeochannels, possible peat horizons) of archaeological potential were identified within the study area.

10.5 Marine Archaeological Assessment: Maritime and Aviation Sites

10.5.1 Introduction

10.5.1.1 As well as summarising the known archaeological resource, the baseline assessment underlines the potential for encountering unknown shipwreck and aircraft crash sites within the study area. Relevant primary and secondary source material has also been utilised to understand the nature of maritime and aviation activity across the region.

10.5.2 Known Maritime and Aviation Sites

10.5.2.1 The following assessment of the marine and aviation archaeological baseline resource is based on the assessment of geophysical survey datasets combined with the records of known shipwrecks, aircraft crash sites, and obstructions, and the Recorded Loss information.

10.5.2.2 This report covers the whole of the MSA, with further details on other geophysical anomalies identified within the GSA.

Designated Maritime and Aviation Sites

10.5.2.3 There are currently two sites that are subject to statutory designation under the PMRA 1986: HMS *Lynx* (WA 70175; Figure 10-6); and HMS *Exmouth* (WA 70093; Figure 10-4). The former is located within the Caledonia North Site, whilst the latter is located within the MSA buffer around the Caledonia North Site. No designated sites are located within the Caledonia South Site.

10.5.2.4 Wreck WA 70175 (HMS *Lynx*; Section 10.9.6, wreck sheet 7) is a partially broken up wreck orientated north-west to south-east, relatively intact and partially buried. Some internal angular dark reflectors suggest surviving internal structures. The wreck appears somewhat discontinuous and is higher and less degraded towards the south-east. It is associated with a 363 nT anomaly on the closest Mag. line which lies within 10m of the wreck extents to the east. The anomaly corresponds with the location of UKHO 1324, the wreck of HMS *Lynx*. The wreck was first located in 1984 and dived in 2000. It is described as upright, with the bow and stern missing, and with a strong magnetic anomaly.

10.5.2.5 HMS *Lynx* was completed in 1914 by the London and Glasgow Shipbuilding Company in Glasgow as an *Acasta* class destroyer. The ship was on patrol in the Moray Firth on 9th August 1915 when it struck a mine from the German surface raider Meteor and broke in two before sinking. 63 crew were lost with the ship. The wreck is now a Protected Place under PMRA 1986 (Maritime and Coastguard Agency (MCA), 2024[42]).

10.5.2.6 HMS *Exmouth* was built in 1934 at Portsmouth Dockyard as an E class destroyer for the Royal Navy. The ship was en route to Scapa Flow whilst escorting the smaller vessel Cyprian Prince that was laden with supplies. In the early hours of 21 January 1940, the German submarine U-22 was on patrol. Initially spotted by the convoy, the submarine shot a single torpedo that hit the starboard side of *Exmouth*. The destroyer sank in under two minutes, with an ammunition magazine blowing up soon after impact and there was a full loss of all 186 crew on board. The wreck site (WA 70093) is now a Controlled Site under PMRA 1986 which restricts any work being undertaken within a 750m radius of the central point of the site (MCA, 2024[42]). As the location of the wreck was not within the GSA there are no corresponding geophysical datasets and so it was discriminated as an A3 anomaly WA 70093.

10.5.2.7 A record exists for a possible aircraft crash site (WA 70365; Figure 10-12) within the Caledonia OECC with the record coming from a report from a fishing skipper. Later surveys found no evidence for aircraft material at the reported location and the assessment of the geophysical data for the Caledonia OECC also found nothing anomalous. However, if there were any

aircraft material from crashed military aircraft identified later at this location, or more widely within the MSA, it would automatically be legally protected under the PMRA 1986.

Geophysical Seabed Features Assessment

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

10.5.2.9 Where anomalies were interpreted solely from the SSS mosaic geotiffs, height measurements will not be available. Where height measurements are present these have been taken from the SSS raw data during checks of significant anomalies or have been taken from the MBES data. Within the gazetteer, the presence of a shadow for an anomaly seen on a SSS geotiff is mentioned in the text.

10.5.2.10 For the purposes of this assessment, we consider that magnetic anomalies closer to the flown Mag. line will have an increased likelihood of being detected. Larger or denser objects of ferrous material may be detected from further away, but smaller items may not be detected (see Methodology section 10.3.5).

10.5.2.11 Anomalies identified in the Mag. datasets have been classified according to magnetic amplitude. Those with a very large amplitude of over 500 nT have been classified as A1. Anomalies with a large amplitude between 100–499 nT have been classified as A2_h and those with a small or medium amplitude between 5–99 nT have been classified as A2_l, except for three within the nearshore area where professional judgement meant that three (WA 70624, WA 70655 and WA 70656) which had an amplitude of over 100 nT were assigned A2_l classification.

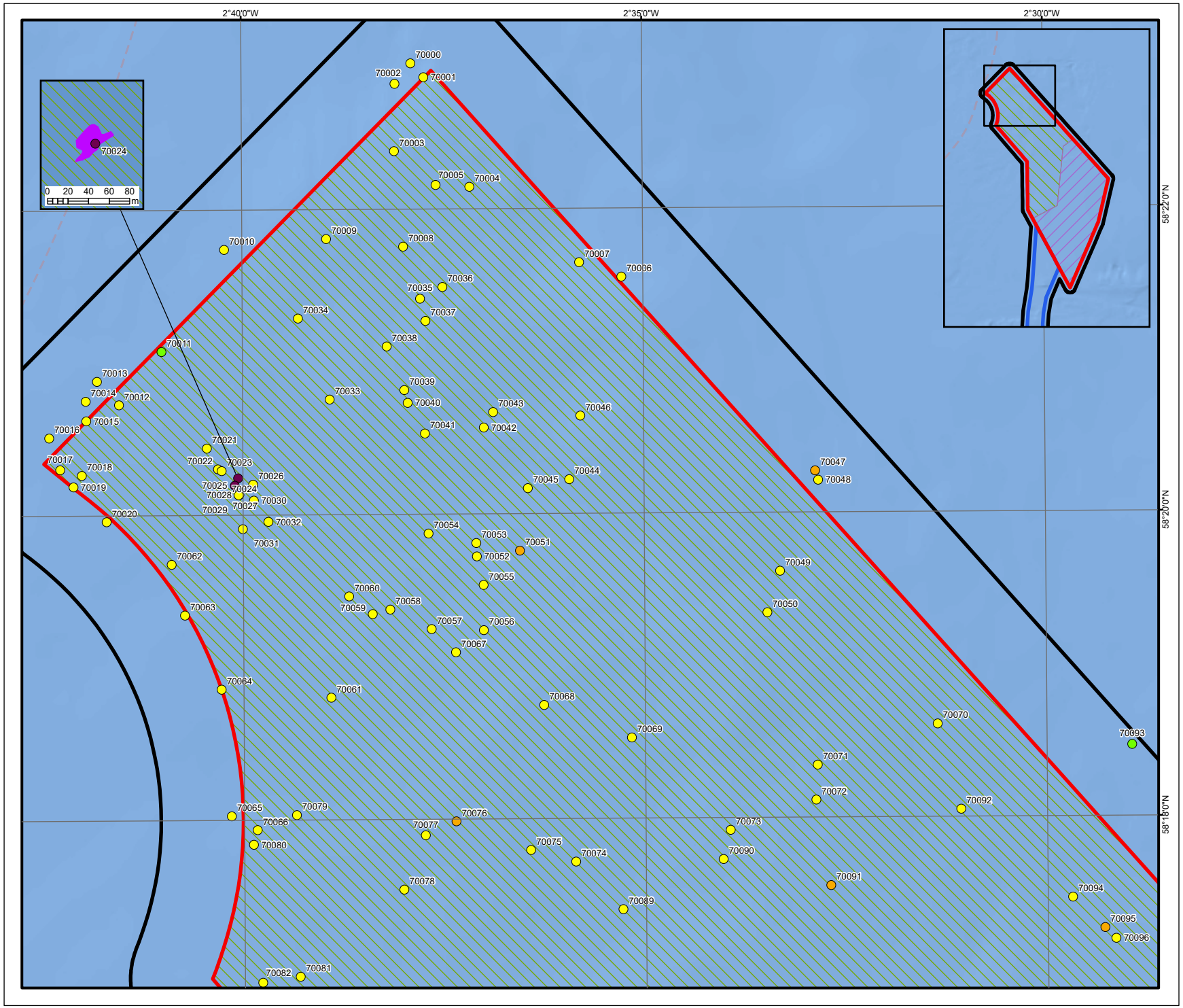
10.5.2.12 The results of this assessment are collated in gazetteer format detailed in Section 10.8.3 (Seabed Anomalies of Archaeological Potential in the Caledonia OWF) and Section 10.8.4 (Seabed Anomalies of Archaeological Potential in the OECC), and illustrated in Figure 10-4 to Figure 10-6 for the Caledonia North Site, Figure 10-7 to Figure 10-9 for the Caledonia South Site, and Figure 10-10 to Figure 10-14 for the Caledonia OECC. Further details on identified wrecks within the datasets are presented in the wreck sheets in Section 10.8.6 (Wreck Sheets).

10.5.2.13 A total of 716 features have been identified as being of possible archaeological potential within the study area and are discriminated as shown in Table 10-7.

10.5.2.14 Furthermore, these anomalies can be classified by probable type, which can further aid in assigning archaeological potential and importance (Table 10-8).

Table 10-7: Anomalies of archaeological potential within the MSA.

Archaeological Discrimination	Caledonia OWF and Buffer	Caledonia OECC and Buffer	Interpretation
A1	18	3	Anthropogenic origin of archaeological interest
A2_h	22	82	Anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature.
A2_l	247	323	Anomaly of possible anthropogenic origin but the interpretation is uncertain; may be anthropogenic or a natural feature.
A3	10	7	Historic record of possible archaeological interest with no corresponding geophysical anomaly
U2	4	0	Known non-archaeological feature / Feature of non-archaeological interest
Total	301	415	-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2°35'0"W
2°30'0"W
58°22'0"N
58°20'0"N
58°18'0"N
70000
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70002
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70095
70096
0 20 40 60 80 m
Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit
Anomalies of archaeological potential
A2_h – Anomaly of likely anthropogenic origin but of unknown date
A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly
U2 – Known non-archaeological feature / Feature of non-archaeological interest
Seabed feature boundaries
Wreck
Service Layer Credits: World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue
World Ocean Base: Esri, Garmin, NaturalVue
OpenStreetMap: Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri
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Pentland Firth
East
aithness
ffs Marine
rotected
Area
Moray Firth
0 0.5 1 1.5 2 km
01 27/08/2024 For Review KF BS AB
REV DATE DOC STATUS ORIGIN REVIEW APP
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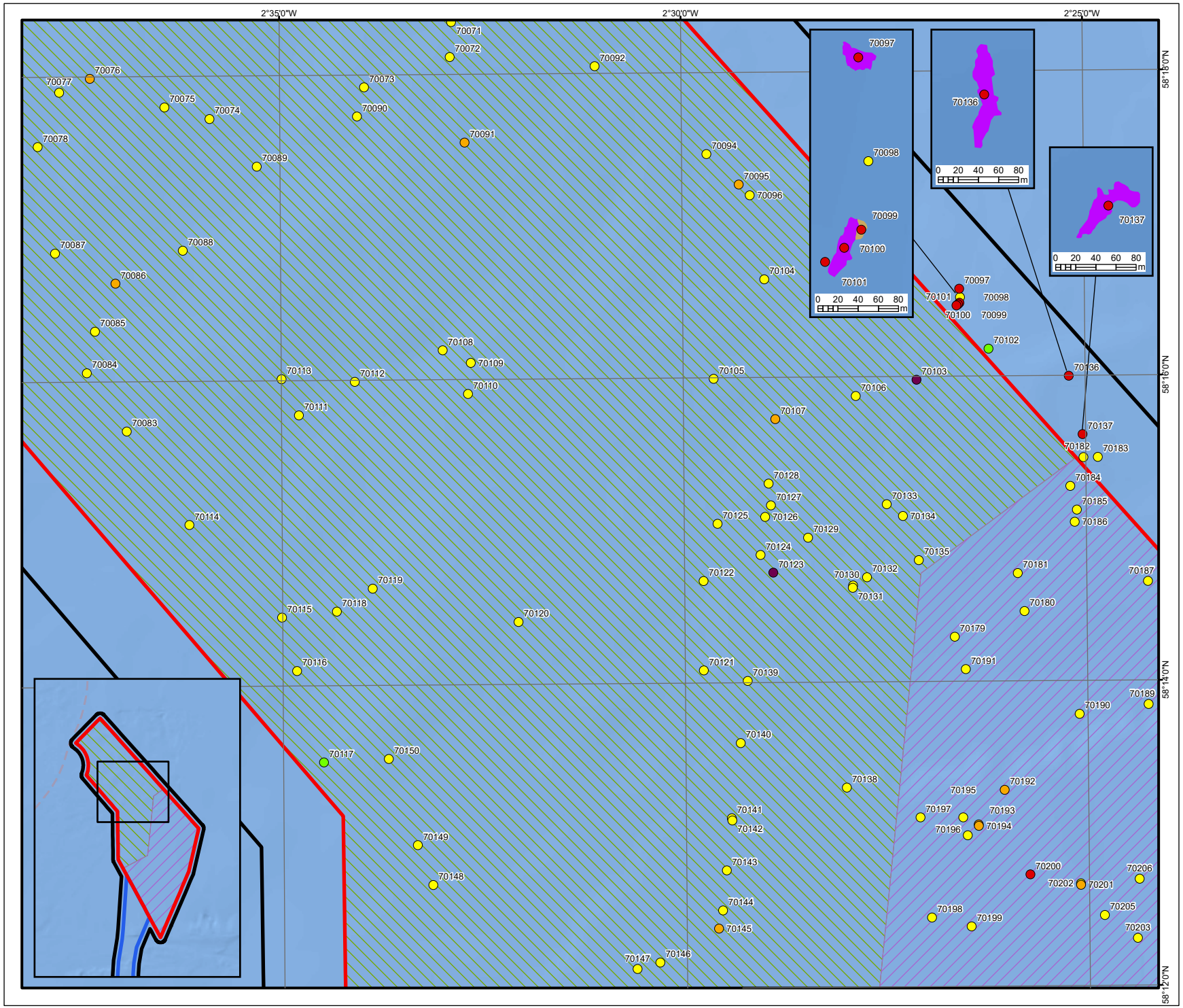
CONTRACTOR DRAWING NO 257360_Tech_10-4
CONTRACTOR REV 01
GEODETIC PARAMETERS WGS 84 UTM 30 N
DRAWING TITLE
Figure 10-4: Anomalies of archaeological potential – Caledonia OWF (Caledonia North Site)
STATUS Approved
SCALE 1:62,500
DRAWING NUMBER N/A
SHEET NO 01 of 03
REV N/A



Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
- A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly
- U2 – Known non-archaeological feature / Feature of non-archaeological interest

Seabed feature boundaries

- Wreck
- Debris field

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GEODETIC PARAMETERS: WGS 84 UTM 30 N	

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Figure 10-5: Anomalies of archaeological potential – Caledonia OWF (Caledonia North Site)

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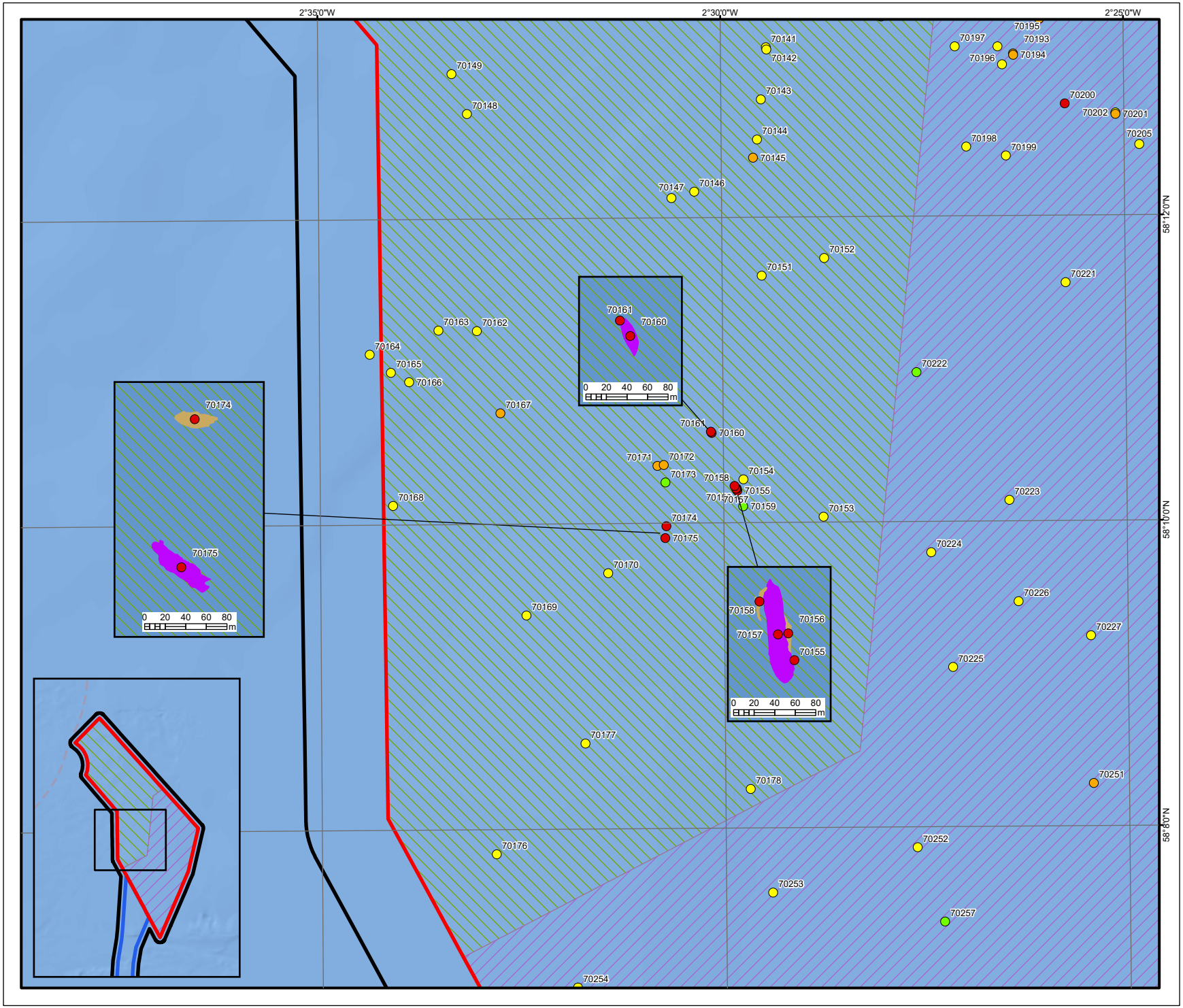


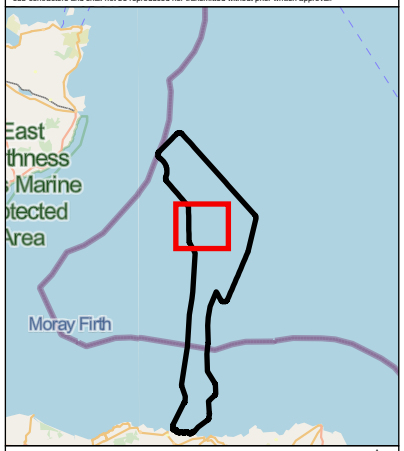
Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
- A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly

Seabed feature boundaries

- Wreck
- Debris field



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GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-6: Anomalies of archaeological potential – Caledonia OWF (Caledonia North Site)

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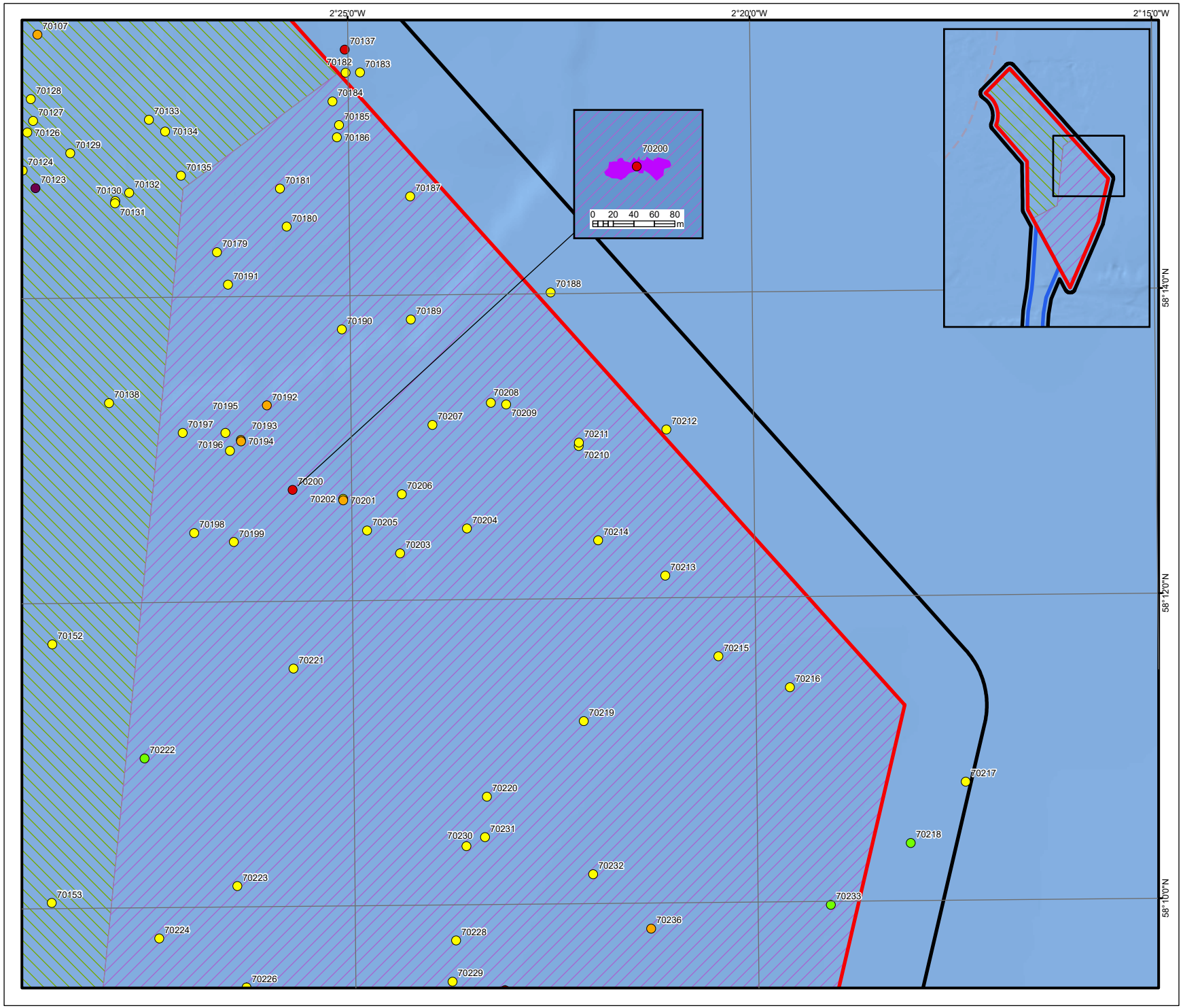

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GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-7: Anomalies of archaeological potential – Caledonia OWF (Caledonia South Site)

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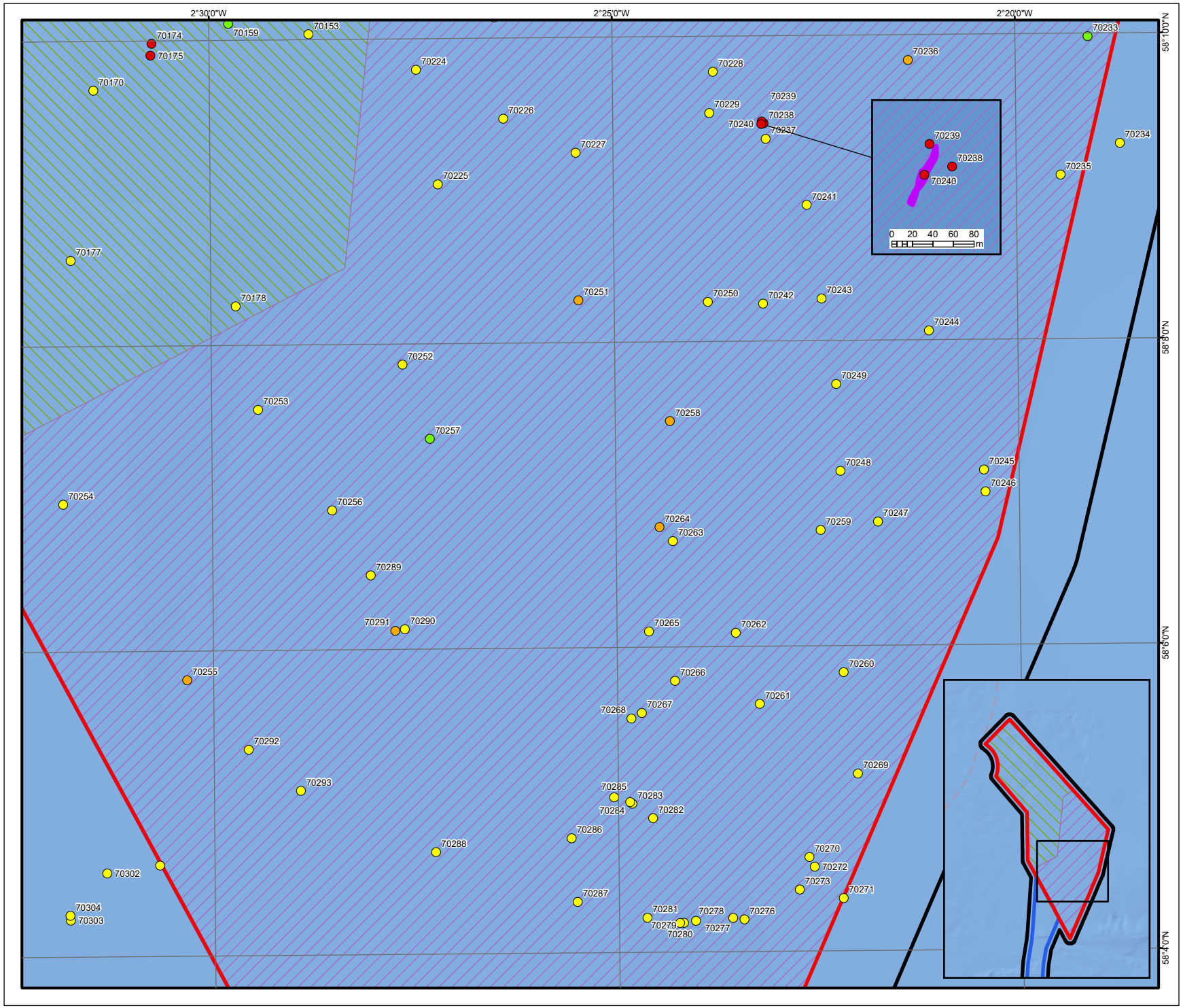
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58°4'0"N
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Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit
Anomalies of archaeological potential
A1 – Anthropogenic origin of archaeological interest
A2_h – Anomaly of likely anthropogenic origin but of unknown date
A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly
Seabed feature boundaries
Wreck
Debris field
Service Layer Credits: World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue
World Ocean Base: Esri, Garmin, NaturalVue
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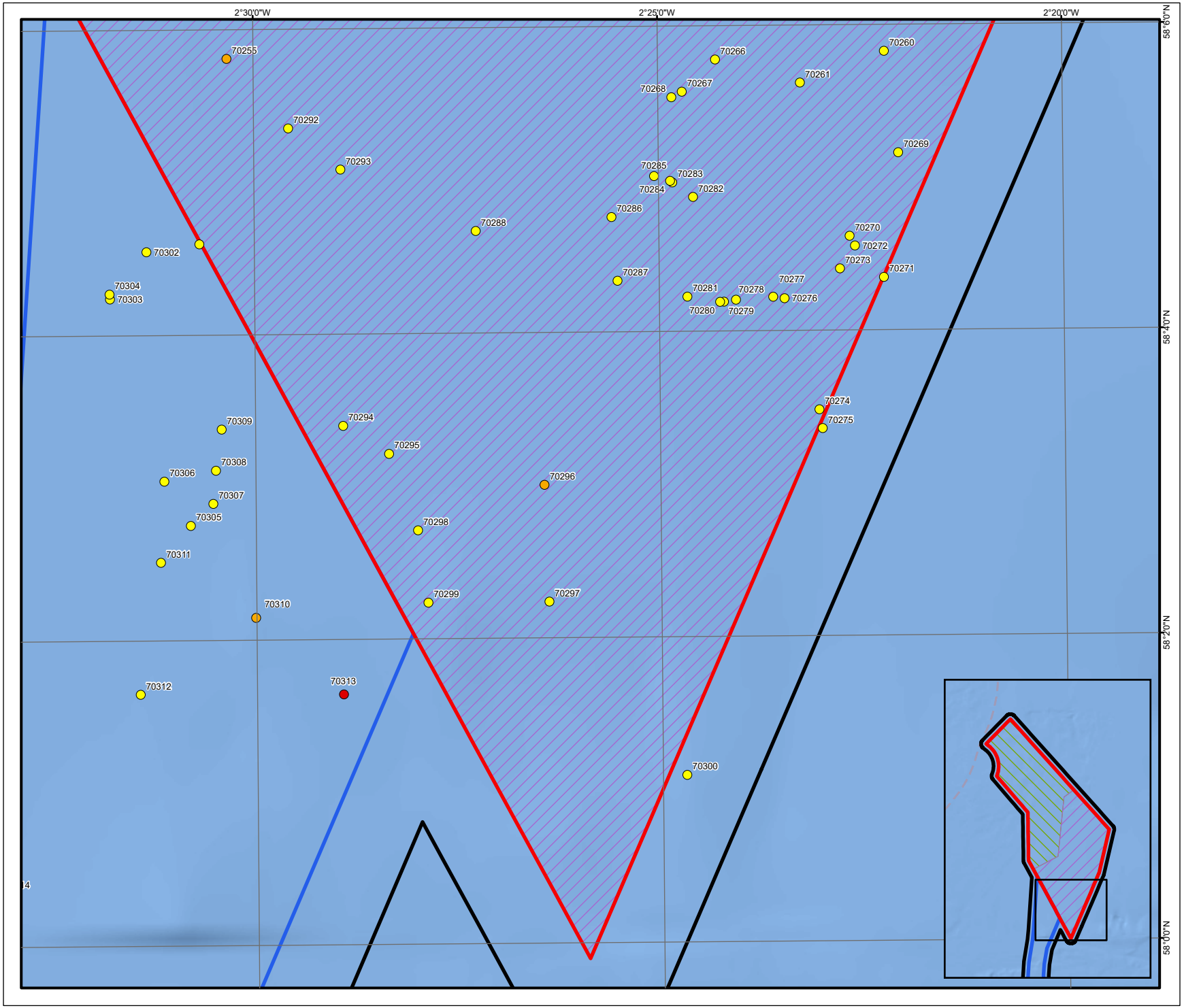
Moray Firth
0 0.5 1 1.5 2 km
01 27/08/2024 For Review KF BS AB
REV DATE DOC STATUS ORIGIN REVIEW APP
CALEDONIA Offshore Wind Farm
wessex archaeology
CONTRACTOR DRAWING NO 257360_Tech_10-8
CONTRACTOR REV 01
GEODETIC PARAMETERS WGS 84 UTM 30 N
DRAWING TITLE
Figure 10-8: Anomalies of archaeological potential – Caledonia OWF (Caledonia South Site)
STATUS Approved
SCALE 1:62,500
DRAWING NUMBER N/A
SHEET NO 02 of 03
REV N/A



- Marine Study Area
- Caledonia OWF
- Caledonia OECC
- Caledonia North Site
- Caledonia South Site
- UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain

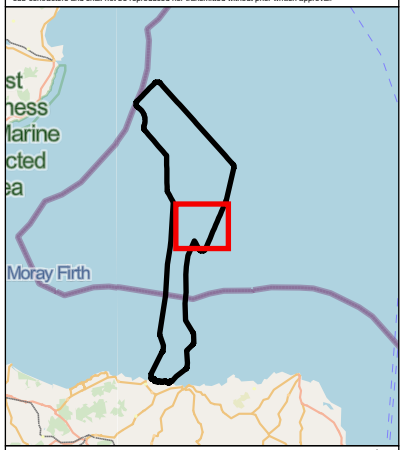


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Figure 10-9: Anomalies of archaeological potential – Caledonia OWF (Caledonia South Site)

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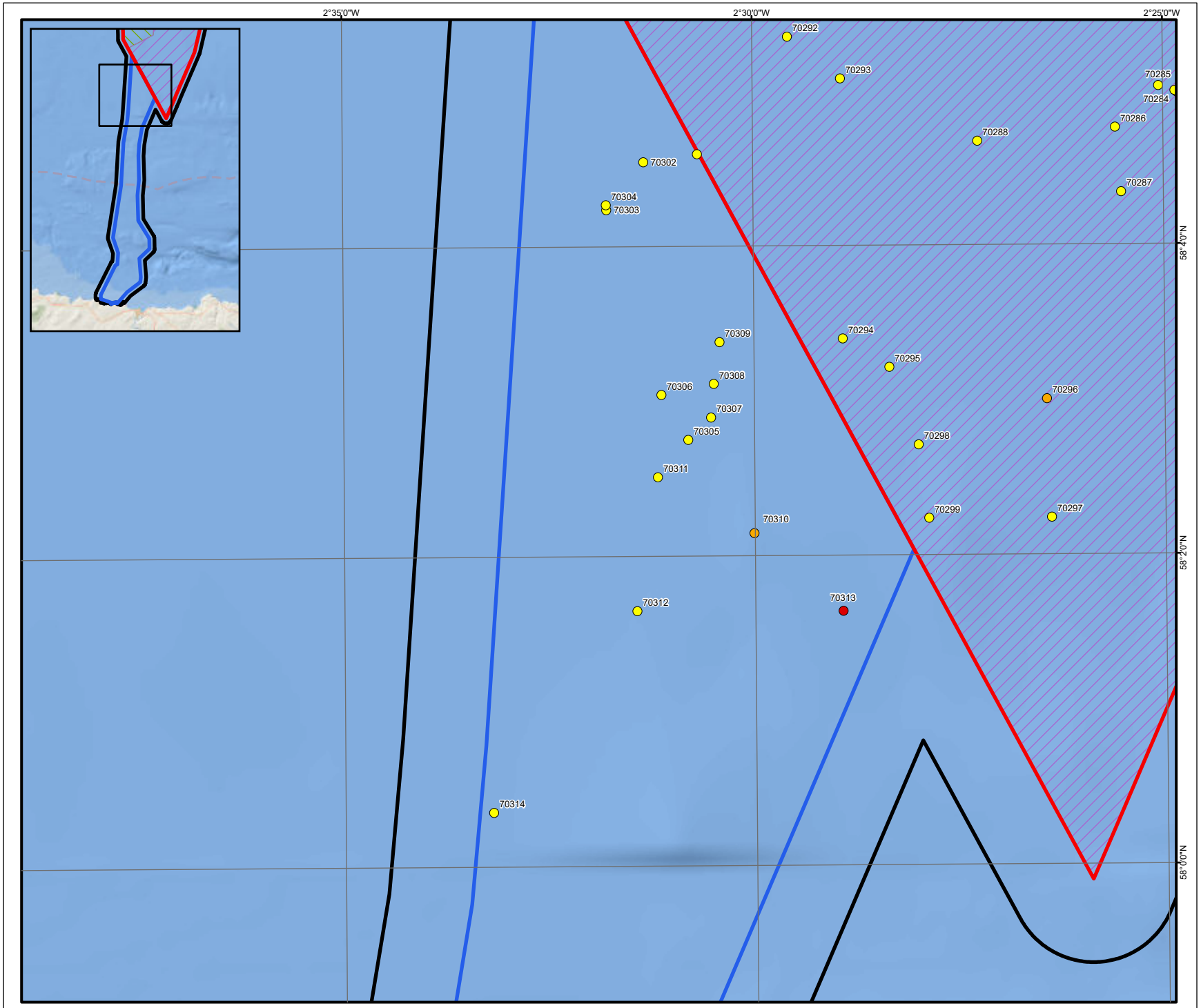


Marine Study Area

Caledonia OWF

Caledonia OECC

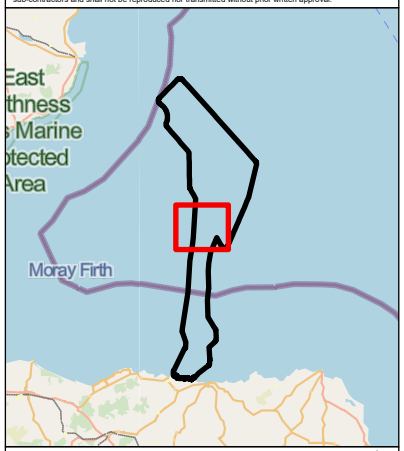
Caledonia North Site

Caledonia South Site

UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain



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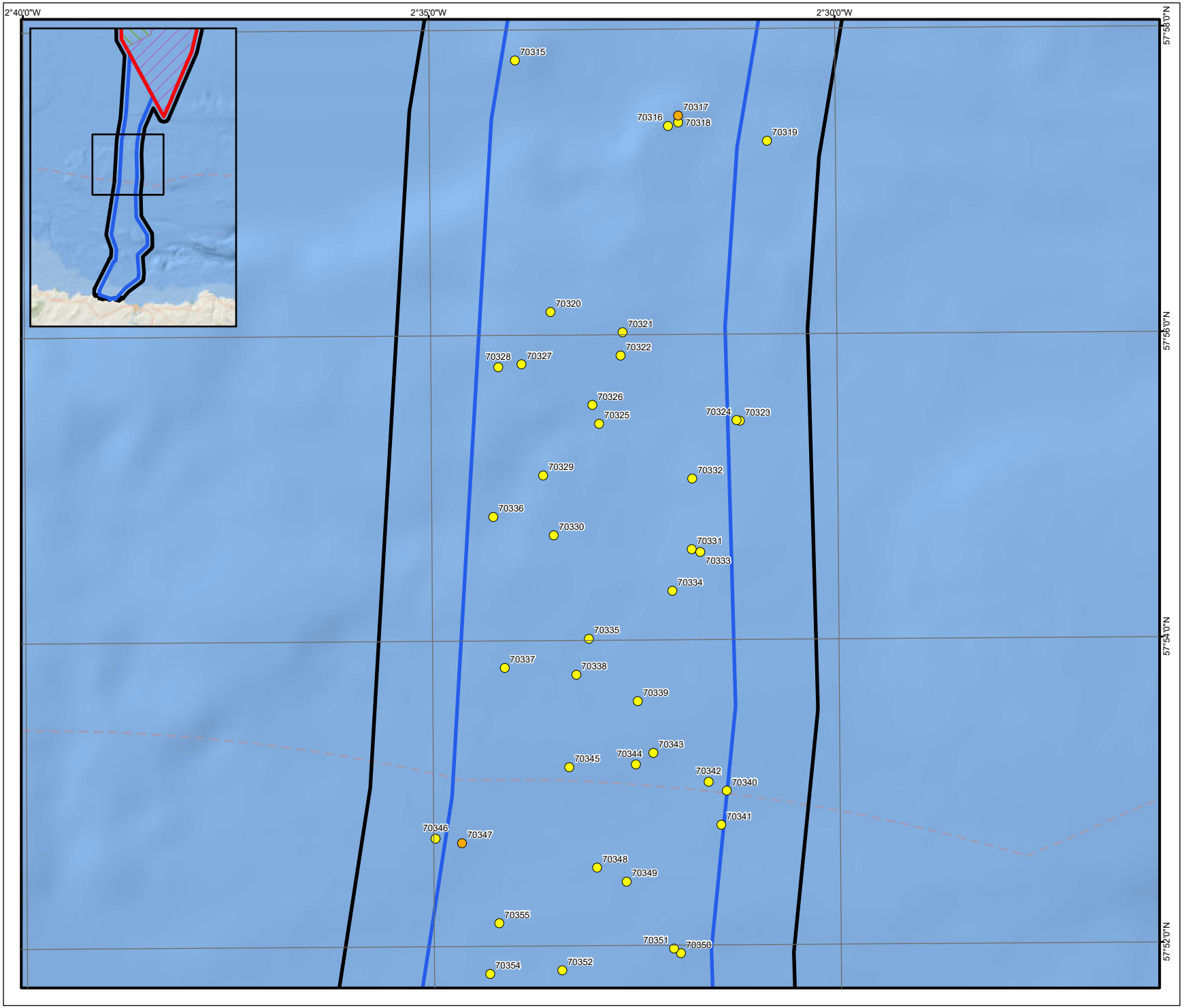
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-10: Anomalies of archaeological potential – OECC

STATUS: Approved	SCALE: 1:62,500	
DRAWING NUMBER: N/A	SHEET NO: 01 of 05	REV: N/A



Marine Study Area

Caledonia OWF

Caledonia OECC

Caledonia North Site

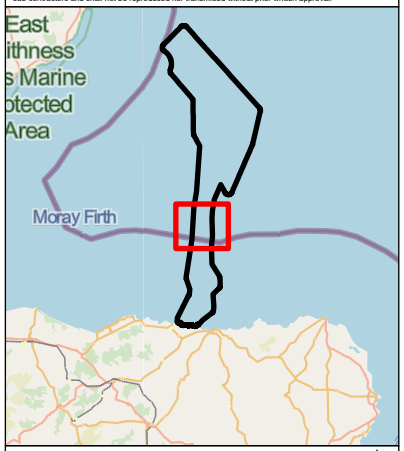
Caledonia South Site

UK 12 nautical mile limit

Anomalies of archaeological potential

A2_h – Anomaly of likely anthropogenic origin but of unknown date

A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain



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CALEDONIA Offshore Wind Farm

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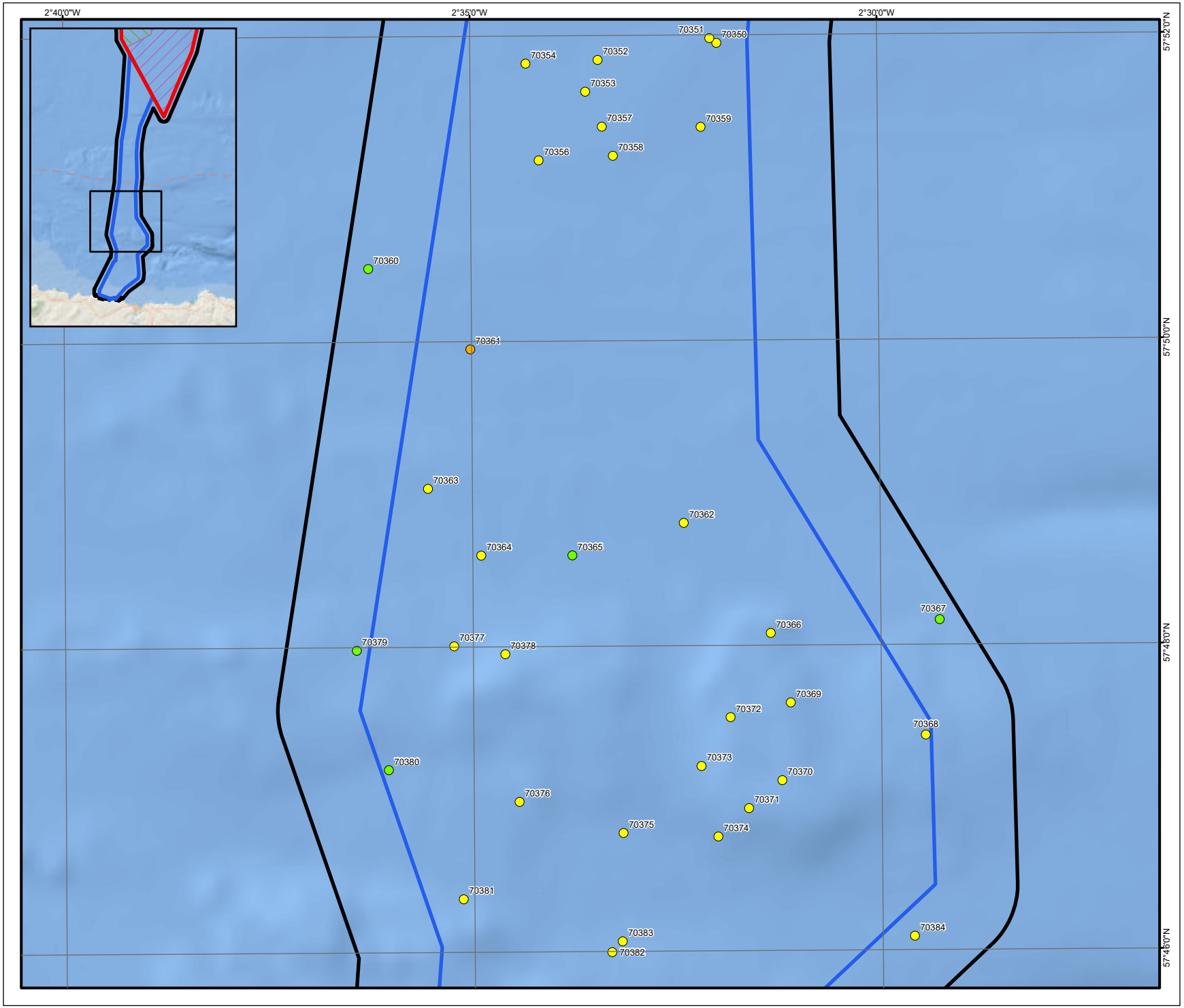
CONTRACTOR DRAWING NO	CONTRACTOR REV
257360_Tech_10-11	01

GEODETIC PARAMETERS: WGS 84 UTM 30 N

DRAWING TITLE

Figure 10-11: Anomalies of archaeological potential – OECC

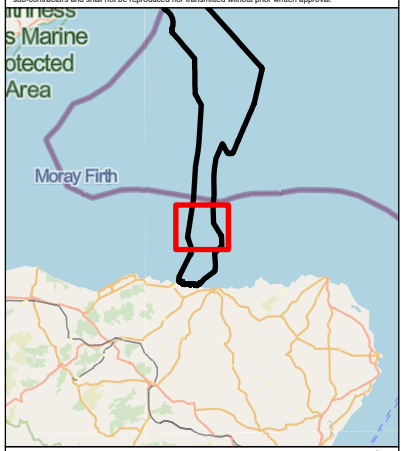
STATUS	SCALE	
Approved	1:62,500	
DRAWING NUMBER	SHEET NO	REV
N/A	02 of 05	N/A



- Marine Study Area
- Caledonia OWF
- Caledonia OECC
- Caledonia North Site
- Caledonia South Site
- UK 12 nautical mile limit

Anomalies of archaeological potential

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



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REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	27/08/2024	For Review	KF	BS	AB

CALEDONIA Offshore Wind Farm

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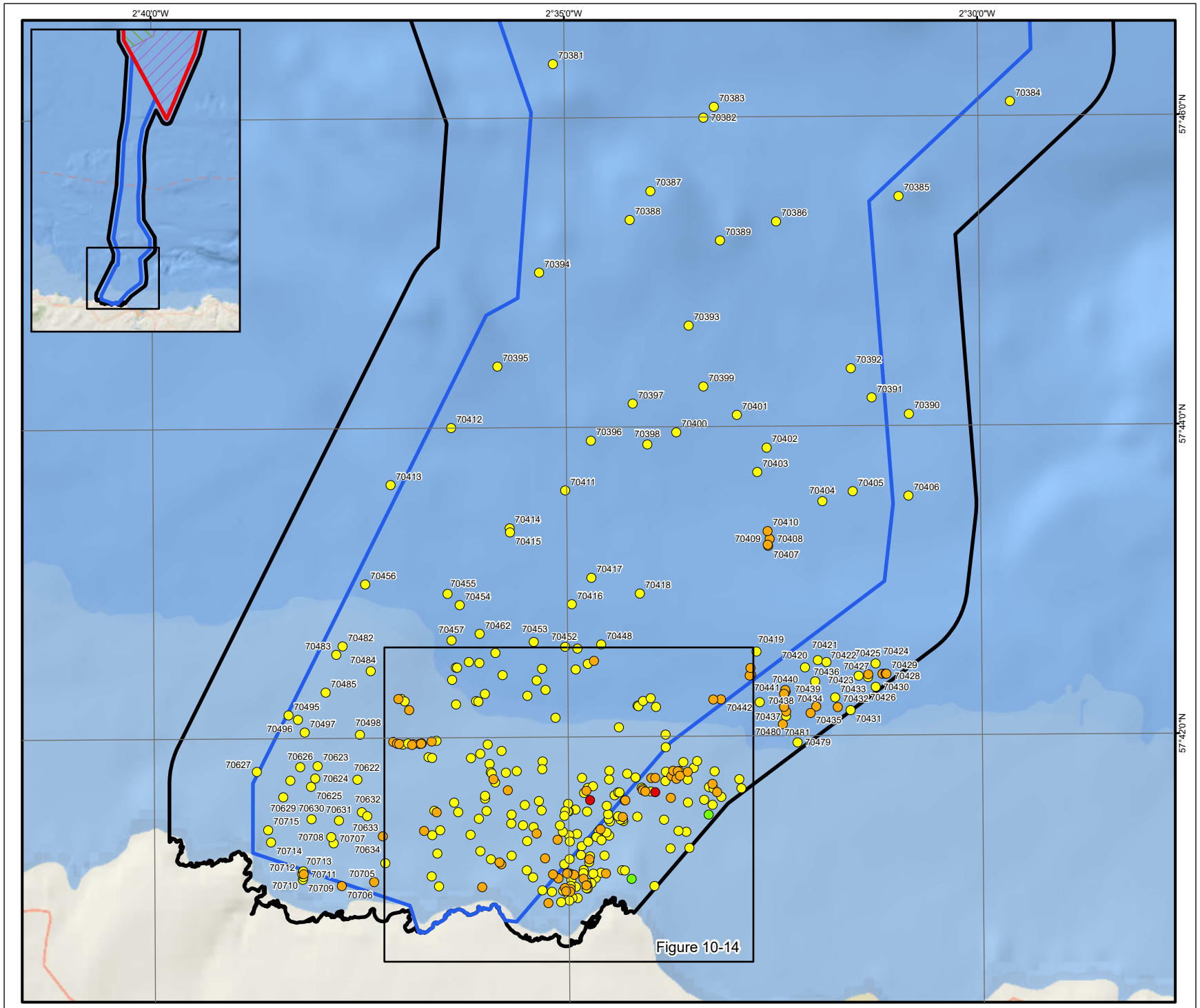
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-12: Anomalies of archaeological potential – OECC

STATUS: Approved	SCALE: 1:62,500	
DRAWING NUMBER: N/A	SHEET NO: 03 of 05	REV: N/A



Marine Study Area

Caledonia OWF

Caledonia OECC

Caledonia North Site

Caledonia South Site

UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
- A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly

0 0.5 1 1.5 2 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	27/08/2024	For Review	KF	BS	AB

CALEDONIA Offshore Wind Farm

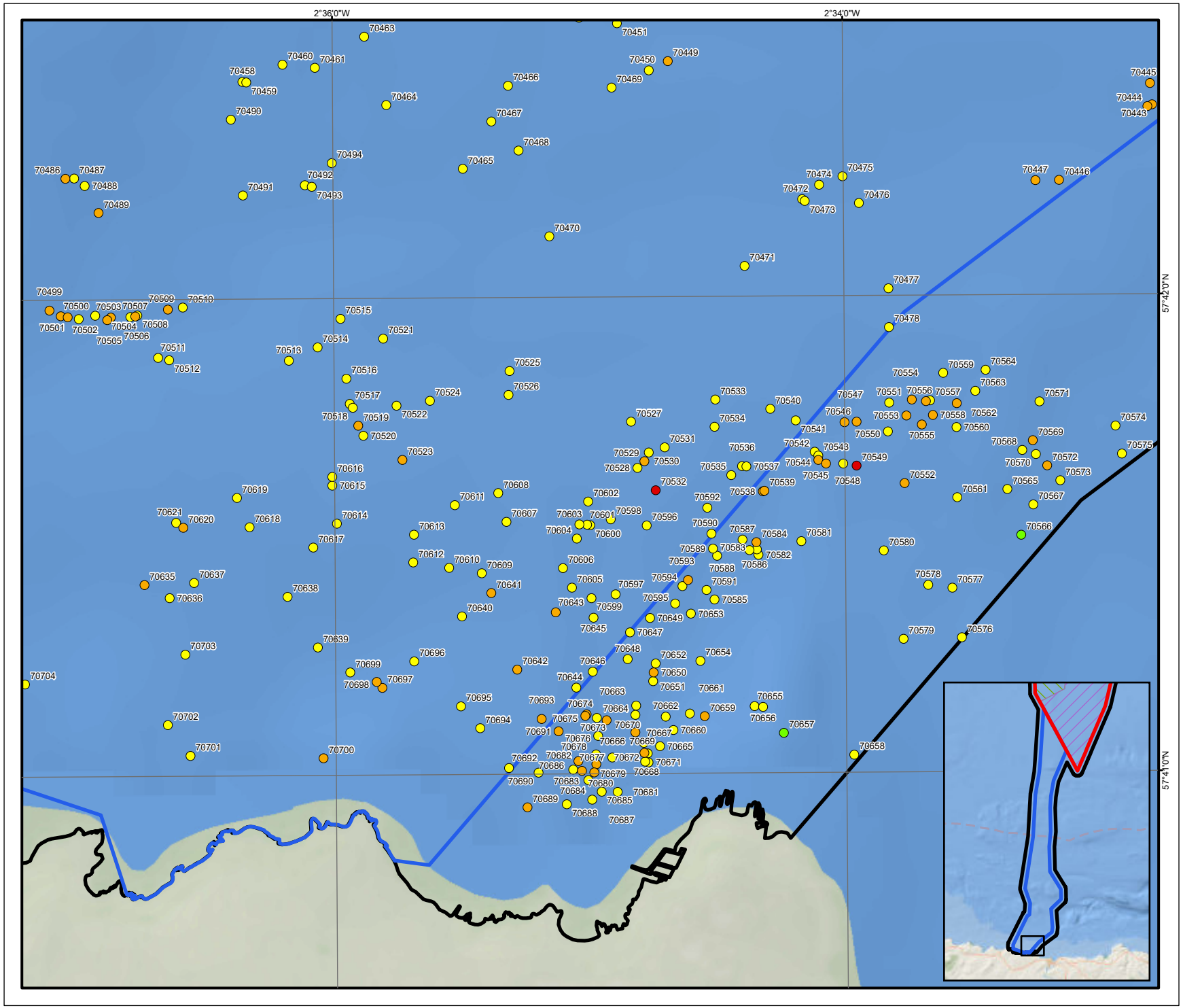
wessex archaeology

CONTRACTOR DRAWING NO: 257360_Tech_10-13	CONTRACTOR REV: 01
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-13: Anomalies of archaeological potential – OECC

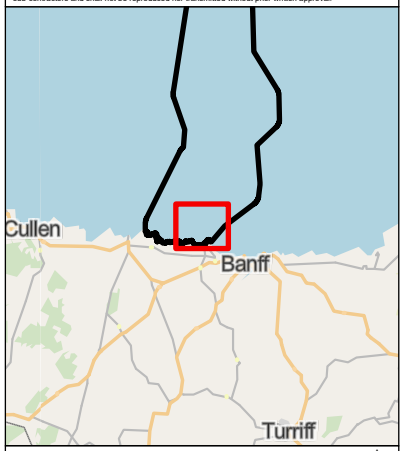
STATUS: Approved	SCALE: 1:62,500	
DRAWING NUMBER: N/A	SHEET NO: 04 of 05	REV: N/A



Marine Study Area
Caledonia OWF
Caledonia OECC
Caledonia North Site
Caledonia South Site
UK 12 nautical mile limit

Anomalies of archaeological potential

- A1 – Anthropogenic origin of archaeological interest
- A2_h – Anomaly of likely anthropogenic origin but of unknown date
- A2_l – Anomaly of possible anthropogenic origin but the interpretation is uncertain
- A3 – Historic record of possible archaeological interest with no corresponding geophysical anomaly



0 200 400 600 800 m

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
01	27/08/2024	For Review	KF	BS	AB

CALEDONIA Offshore Wind Farm

wessex archaeology

CONTRACTOR DRAWING NO: 257360_Tech_10-14	CONTRACTOR REV: 01
GEODETIC PARAMETERS: WGS 84 UTM 30 N	

DRAWING TITLE

Figure 10-14: Anomalies of archaeological potential – OECC

STATUS: Approved	SCALE: 1:20,000	
DRAWING NUMBER: N/A	SHEET NO: 05 of 05	REV: N/A

Table 10-8: Types of anomalies identified.

Anomaly Classification	Definition	Caledonia OWF	Caledonia OWF Buffer	Caledonia OECC	Caledonia OECC Buffer
Wreck	Areas of coherent structure including wrecks of ships, submarines and some aircraft (where coherent structure survives)	6	4		
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	7	3	1	
Debris	Distinct objects on the seabed, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin	7		3	2
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.	15	1	24	35
Seabed disturbance	An area of disturbance without individual, distinct objects. Potentially indicates wreck debris or other anthropogenic features buried just below the seabed.	45	1	25	4
Dark reflector	Individual objects or areas of high reflectivity, displaying some anthropogenic characteristics. Precise nature is uncertain	140	18	69	21
Mound	A mounded feature with height not considered to be natural. Mounds may form over wreck sites or other debris.	7	2	6	3
Magnetic	No associated seabed surface expression, and have the potential to represent possible buried ferrous debris or buried wreck sites	31	2	139	76

Anomaly Classification	Definition	Caledonia OWF	Caledonia OWF Buffer	Caledonia OECC	Caledonia OECC Buffer
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.	5	2	3	4
Recorded obstruction	Position of a recorded obstruction (such as foul ground, fisherman's fastener recorded by the UKHO), but for which no associated feature has been identified within the current data set	4	1		
Total		267	34	270	145

Seabed Features Assessment Results – Caledonia OWF

A1 Anomalies

10.5.2.15 18 features within the Caledonia OWF have been discriminated as A1 – anthropogenic origin of archaeological interest (Figure 10-4 to Figure 10-9) including the designated wreck of HMS *Lynx* (WA 70175) discussed above.

10.5.2.16 Nine of these anomalies were classified as wrecks (WA 70097, WA 70100, WA 70136, WA 70137, WA 70157, WA 70160, WA 70175, WA 70200 and WA 70240).

10.5.2.17 Wreck WA 70097 (Figure 10-5; Section 10.8.6, Wreck Sheet 1) is an irregular and fairly coherent area of debris; no coherent vessel structure is visible. It appears as a debris field made up of multiple elongate and sub-angular dark reflectors, with distinct shadows. The largest dark reflector is elongate and measures 15.4 x 3.2m, although this may be several objects, and is located centrally in the field. Due to the slightly irregular shape of the debris field, with a centrally compact area that becomes more dispersed, it does not have a particular orientation. The feature corresponds with the location of UKHO 71120, the partial remains of SS *Tekla* (probably) which was first identified on 23rd January 2008 with further investigation in September of that year. *Tekla* was a Danish steam ship built in 1920 that was torpedoed by U-55 while en route from Burntisland to Aarhus and sank on 21st January 1940 with the loss of nine men. Wreck WA 70100, located 150m directly south, is another substantial part of the same vessel.

10.5.2.18 Wreck WA 70100 (Figure 10-5; Section 10.8.6, Wreck Sheet 2) is an upright, partially broken up wreck orientated north-east to south-west, measuring 62.5 x 16.9 x 2.5m. The feature shows a coherent hull outline, which is less distinct in the north-east, and includes several elongate and sub-rounded dark reflectors with distinct shadows indicating some surviving internal structure, with some debris spread indicating partial disintegration. This is associated with a 72 nT anomaly on the closest Mag. line which lies within 55m of the wreck extents to the west. The anomaly corresponds with the location of UKHO 1190, the remains of part of SS *Tekla*. The feature is listed as being highly degraded, with a strong magnetic anomaly. It is described as the main section of the wreck, with another feature, UKHO 71122 (wreck WA 70097, located 150m to the north), being a separated section.

10.5.2.19 There were two associated anomalies attributed an A1 classification due to their proximity to wreck WA 70100. Debris field WA 70099 is comprised of three or four elongate dark reflectors and one L-shaped dark reflector with a distinct shadow. It lies adjacent to the north-eastern section of the wreck. Debris field WA 70101 is comprised a

cluster of small, angular dark reflectors, and lies within 6m of the south-western section of the wreck to the west.

10.5.2.20 Wreck WA 70136 (Figure 10-5; Section 10.8.6, Wreck Sheet 3) is an indistinct, severely degraded wreck orientated north–south, measuring 101.2 x 22.7 x 2.0m. It is visible as an elongate area of mounds; the northern extent has an area of conjoined mounds, forming a rough triangle shape approximately 30m long, which represent a faint hull outline. The other mounds that comprise the feature are more dispersed and may represent broken-up debris. The anomaly corresponds with the location of UKHO 1188, the wreck of *Makalla* (probably), a British steam ship built in 1918 and sunk due to an aerial bomb strike on 23rd August 1940 while in convoy from Liverpool to Calcutta via London. 12 crew were lost in the sinking. It is described as collapsed and broken up, with lots of nearby associated debris and a strong magnetic anomaly, which could not be confirmed in the 2022 or 2023 magnetometer datasets due to a lack of coverage of this feature.

10.5.2.21 Wreck WA 70137 (Figure 10-5; Section 10.8.6, Wreck Sheet 4) is visible as a degraded wreck, orientated north-east to south-west, measuring 75.1 x 30.8 x 2.6m. The wreck outline appears mostly intact but is more degraded towards the north-east, where part of the structure appears to have become separated from the main hull, with the north-east section curving southwards to become perpendicular to the south-west section. There is a disturbed area of seabed between the sections suggesting the presence of debris. The anomaly corresponds with the location of UKHO 71122, an unknown wreck first identified in 2008 and described as broken into two main parts, with debris between. It is described as having a strong magnetic anomaly, which could not be confirmed in the 2022 or 2023 magnetometer datasets due to a lack of coverage of this feature.

10.5.2.22 Wreck WA 70157 (Figure 10-6; Section 10.8.6, Wreck Sheet 5) is a degraded, upright wreck measuring 102.7 x 22.1 x 6.7m and orientated north–south Multiple internal dark reflectors show potential surviving internal structure, with a taller rectangular feature visible in the northern extents. One large, sub-rounded mound measuring approximate 9.0 x 6.0 x 1.9m is located in the centre of the structure. The wreck is associated with a 282 nT anomaly on the closest Mag. line which lies within 41m of the wreck extents to the east. The wreck corresponds with the location of UKHO 58699, an unknown wreck described as upright and not fully intact, with a strong magnetic anomaly.

10.5.2.23 There were three associated anomalies attributed an A1 classification due to their proximity to wreck WA 70157. Debris WA 70155 is an elongate dark reflector with a distinct shadow, which lies adjacent to the southern section of the wreck to the east. Debris field WA 70156 is a

series of sub-angular and linear dark reflectors, the largest of which measures 4.1 x 1.6m, and lies adjacent to the central section of the wreck to the east. Debris field WA 70158 is comprised of four or five sub-rounded dark reflectors with shadows and lies adjacent to the northern section of the wreck in the west.

10.5.2.24 Wreck WA 70160 (Figure 10-6; Section 10.8.6, Wreck Sheet 6) is an intact but partially degraded wreck orientated NNW–SSE and measures 38.5 x 12.8 x 2.0m. Sub-rounded and linear dark reflectors show potential surviving internal structure, whilst two discontinuous curvilinear dark reflectors form an elongate hull shape, with a small associated shadow. The anomaly corresponds with the location of UKHO 79582, the wreck of an unknown fishing vessel, described as upright and intact with a partially collapsed bow.

10.5.2.25 Debris WA 70161 was attributed an A1 classification due to its proximity to wreck WA 70160. It is a linear dark reflector orientated north-west to south-east, with a distinct shadow, and lies within 2m of the northern section of the wreck to the north-west.

10.5.2.26 Debris field WA 70174 (Figure 10-6) was attributed an A1 classification due to its proximity to wreck WA 70175 (HMS *Lynx*, see designated maritime and aviation sites section above; Section 10.8.6, Wreck Sheet 7). This feature was visible as an oval area of seabed comprising many small, linear dark reflectors with no visible shadows. It has an associated 73 nT Mag. anomaly and lies 142m north of the wreck.

10.5.2.27 Wreck WA 70200 (Figure 10-7; Section 10.8.6, Wreck Sheet 8) is a highly degraded wreck measuring 65.5 x 25.4 x 3.7m, orientated east–west. The feature comprises an elongate group of dark reflectors with bright shadows, the largest of which measures 4.3 x 2.4 x 1.6m. The wreck is associated with a 36 nT anomaly on the closest Mag. line which lies within 25m of the wreck extents to the east. The anomaly corresponds with the location of UKHO 1180, the wreck of HMS *Jasper* (probably), a trawler built in 1912 and converted to a minesweeper, sunk due to a mine strike on 26th August 1915 with the loss of 11 crew. It is described as upright and intact, and having a strong magnetic anomaly.

10.5.2.28 Wreck WA 70240 (Figure 10-8; Section 10.8.6, Wreck Sheet 9) is visible as a continuous, elongate dark reflector with a clear, uneven shadow along its length, measuring 65.9 x 11.2 x 4.2m and orientated north-east-south-west. The south-western end appears broken-up, with a cluster of small dark reflectors visible. This is associated with a 693 nT anomaly on the closest Mag. line which lies within 13m of the wreck extents to the west. The anomaly corresponds with the location of UKHO 1180, the wreck of U-309. It was last surveyed in 2012 and described as intact and on its side, with a strong magnetic anomaly.

10.5.2.29 This U-Boat was sunk following a depth charge attack by the Canadian frigate HMCS St John on 16th February 1945 with the loss of all 47 crew. The UKHO report (UKHO 1176) notes that the wreck is intact with bows to the north-east and the conning tower intact.

10.5.2.30 There were two associated anomalies attributed an A1 classification due to their proximity to wreck WA 70240. Debris WA 70238 is an angular dark reflector with a bright shadow, which lies within 4m of the north-eastern section of the wreck to the west. Debris WA 70239 is a sub-rounded dark reflector with a narrow shadow, and lies within 20m of the central section of the wreck to the east.

A2_h Anomalies

10.5.2.31 A total of 22 anomalies within the Caledonia OWF have been discriminated as A2_h - anomalies of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature.

10.5.2.32 A total of 12 A2_h anomalies were classified as linear debris in the SSS datasets, generally interpreted as a length of rope or chain. The longest of these was 118.4m long (WA 70172) with the majority being less than 50m in length. None had corresponding magnetic anomalies

10.5.2.33 Three A2_h anomalies have been classified as debris within the SSS and MBES datasets: WA 70086, WA 70251 and WA 70296. These measured between 10 x 6.4 x 0.8m (WA 70086) to 8.5 x 1.9 x 1.3m (WA 70296). None had a corresponding Mag. anomaly and so have been interpreted as non-ferrous debris.

10.5.2.34 Four A2_h anomalies (WA 70047, WA 70095, WA 70167 and WA 70255) have been classified as debris fields identified through the SSS and MBES datasets. These measure between 36.2 x 6.4 x 2.2m (WA 70047) to 20 x 3.4m (WA 70167), and one (WA 70255) has a corresponding Mag. anomaly of 40 nT and so may contain ferrous material.

10.5.2.35 A total of three A2_h anomalies have been classified as magnetic only anomalies, none of which have a clearly corresponding anomalous SSS or MBES feature associated. These have been discriminated as A2_h primarily on amplitude (all are between 100 – 499 nT) suggesting a significant amount of ferrous material at these locations. These anomalies are considered to represent possible ferrous debris that is either buried or has no surface expression.

A2_l Anomalies

10.5.2.36 Further to these anomalies a total of 247 anomalies within the Caledonia OWF have been discriminated as A2_l – anomalies of possible anthropogenic origin but the interpretation is uncertain; may be anthropogenic or a natural feature.

10.5.2.37 The majority of these (158 anomalies) have been classified as dark reflectors. These anomalies vary in shape and size and have been interpreted to be possible natural features or possible debris.

10.5.2.38 A further 46 A2_l anomalies have been classified as seabed disturbance, again with a variation in shape and size. The origin of these seabed disturbances is uncertain and they have been interpreted to be possible natural features or possible debris.

10.5.2.39 A total of 30 A2_l anomalies have been classified as magnetic only anomalies, none of which have a clearly corresponding anomalous SSS or MBES feature associated. These have been discriminated as A2_l primarily on amplitude (all are less than 100 nT). All are therefore considered to be of lower archaeological potential and may represent possible natural features with ferrous content or possible ferrous debris that is either buried or has no surface expression.

10.5.2.40 A total of 9 A2_l anomalies have been classified as mound features. These are varied in shape and size. None of these features have an associated magnetic anomaly. All these features are uncertain in origin, and all have been interpreted as possible natural features or possible debris that may be covered with seabed sediments.

10.5.2.41 Four A2_l anomalies have been classified as linear debris features due to their narrow width and extensive length (shortest is 123.4m and longest is 546.9m in length). These have been interpreted as likely to be modern features such as fishing gear or uncharted pipeline/cable material but this cannot be confirmed without further investigation.

A3 Anomalies

10.5.2.42 The ten A3 anomalies within the Caledonia OWF MSA reflect a documented feature which was covered by the geophysical survey but had no corresponding geophysical anomaly. This does not mean that there is necessarily no archaeological material there, as it may be buried in seabed sediments and so not picked up by the surveys, or lies outwith the coverage of the geophysical surveys.

10.5.2.43 These sites include two recorded wreck sites outside the extent of the GSA: the Controlled Site of the wreck of HMS *Exmouth* (WA 70093; Figure 10-4) discussed above; and an unknown wreck from the UKHO records (WA 70102) which is listed as a 'dead' wreck having first been surveyed in 1945 but not seen on surveys in 2008. A further record located within the MSA but outside the limits of geophysical survey datasets is recorded obstruction WA 70218, which is also listed as not located on a survey in 2012 and amended to 'dead'. A wreck being described as 'dead' does not mean that it is not there, only that it hasn't been observed in recent surveys, and so there is potential for wreck material to be at the location, for instance buried within mobile sediments.

10.5.2.44 The A3 sites within the limits of the GSA did not have corresponding anomalies at their recorded locations, however as above this may only mean that the site has become buried and so has no surface expression on the seabed. These sites include three recorded obstructions from the UKHO datasets (WA 70011, WA 70117 and WA 70257), one recorded wreck site of an unknown wreck (WA 70159) and the recorded wreck sites of the early 20th century fishing trawler *Commander Boyle* (WA 70222), sunk in 1915 by a mine and the merchant vessel *Dalveen* (WA 70233), sunk by a German bomber in 1940 while en route between Montreal and Hull with the loss of 11 crew. Both of these recorded wrecks (Figure 10-7) have been listed as 'dead' by the UKHO as they were not located on surveys in 2012 either.

10.5.2.45 In addition to these 'dead' wrecks a second UKHO record for the wreck of HMS *Lynx* (WA 70173) is located approximately 400m to the north of the main wreck identified in the geophysical datasets. This record has also been amended to 'dead'; however, the record has been retained on a precautionary basis as there is still potential for some wreck material related to HMS *Lynx* to be in this location.

U2 Anomalies

10.5.2.46 Four anomalies were discriminated as U2 – known non-archaeological feature/Feature of non-archaeological interest. These included one recorded obstruction identified as modern (WA 70123; Figure 10-5) which the UKHO record listed as a marker buoy from the drilling rig Sinbad Saxon which sank while being retrieved.

10.5.2.47 The wreck of a modern fishing vessel dating to the second half of the 20th century was identified in the geophysical assessment. This was the wreck of the *Trident* (WA 70024 with potentially associated debris field WA 70025; Figure 10-4) sunk in 1974 with the loss of all seven crew. A second recorded wreck of a modern fishing vessel, the *Virginia Rose* (WA 70103- Figure 10-5), which sunk in 1981 while under tow was not identified at its recorded location, and the UKHO record listed the wreck as 'dead' having not been identified in surveys in 2008.

Seabed Features Assessment Results – Caledonia OECC

A1 Anomalies

10.5.2.48 Three features within the Caledonia OECC have been discriminated as A1 – anthropogenic origin of archaeological interest (Figure 10-10 to Figure 10-14).

10.5.2.49 One item of isolated debris has been assigned an A1 archaeological discrimination. Anomaly WA 70549 (Figure 10-14) has been interpreted as a distinct, oval dark reflector with a rounded shadow and has a very large associated Mag. anomaly of 977 nT. This has been interpreted as ferrous debris.

10.5.2.50 Two magnetic anomalies with no associated visible seabed features were ascribed an A1 discrimination. Anomalies WA 70313 (Figure 10-10) and WA 70532 (Figure 10-14) were identified in the Mag. data only and have magnetic amplitudes of 740 nT and 800 nT respectively. These represent significant ferrous debris that are either buried or without surface expression.

A2_h Anomalies

10.5.2.51 A total of 82 anomalies within the Caledonia OECC have been discriminated as A2_h - anomalies of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature.

10.5.2.52 A total of 50 A2_h anomalies were classified as linear debris in the SSS datasets, generally interpreted as a length of rope or chain. The longest of these was 190.1m long (WA 70505) with the majority being less than 100m in length. Four (WA 70425, WA 70441, WA 70501 and WA 70505) had a corresponding Mag. anomaly between 14 nT and 77 nT and so were interpreted as ferrous linear debris.

10.5.2.53 Four A2_h anomalies have been classified as debris within the SSS datasets: WA 70446, WA 70447, WA 70489 and WA 70674. These measured between 7 x 0.6 x 0.1m (WA 70446) to 1.6 x 0.2 x 0.1m (WA 70674) and were identified through the SSS datasets. One, WA 70489, had a corresponding Mag. Anomaly and so has been interpreted as ferrous debris.

10.5.2.54 One A2_h anomaly (WA 70310) has been classified as a debris field identified through the SSS datasets. The anomaly measures 22.4 x 20.8m, but did not have a corresponding MBES or Mag. anomaly.

10.5.2.55 A total of 27 A2_h anomalies have been classified as magnetic only anomalies, none of which have a clearly corresponding anomalous SSS or MBES feature associated. These have been discriminated as A2_h primarily on amplitude (all are between 100 – 499 nT) suggesting a significant amount of ferrous material at these locations. These anomalies are considered to represent possible ferrous debris that is either buried or has no surface expression.

A2_l Anomalies

10.5.2.56 Further to these anomalies a total of 323 anomalies within the OECC have been discriminated as A2_l – anomalies of possible anthropogenic origin but the interpretation is uncertain; may be anthropogenic or a natural feature.

10.5.2.57 The majority of these (186 anomalies) have been classified as magnetic only anomalies, none of which have a clearly corresponding anomalous SSS or MBES feature associated. These have been discriminated as A2_l primarily on amplitude (all are less than 100 nT other than WA 70624, WA 70655 and WA 70656). These three had amplitudes of 107 nT, 134 nT and 105 nT respectively but were located in areas of already

increased magnetic background or had other likely interference. All are therefore considered to be of lower archaeological potential and may represent possible natural features with ferrous content or possible ferrous debris that is either buried or has no surface expression.

10.5.2.58 A further 90 A2_l have been classified as dark reflector anomalies within the SSS datasets, with some also being present in the MBES datasets. These anomalies vary in shape and size and have been interpreted to be possible natural features or possible debris.

10.5.2.59 29 A2_l anomalies have been classified as seabed disturbance within the SSS and/or MBES datasets, again with a variation in shape and size. The origin of these seabed disturbances is uncertain and they have been interpreted to be possible natural features or possible debris.

10.5.2.60 A total of nine A2_l anomalies have been classified as mound features within the SSS and/or MBES datasets. These are varied in shape and size. None of these features have an associated magnetic anomaly. All these features are uncertain in origin, and all have been interpreted as possible natural features or possible debris that may be covered with seabed sediments.

10.5.2.61 Nine A2_l anomalies have been classified as linear debris features within the SSS datasets due to their narrow width compared to length and their sinuous shape. One also had a small magnetic amplitude of 33 nT (WA 70588). These have been interpreted as likely to be modern features such as lost fishing gear but this cannot be confirmed without further investigation.

A3 Anomalies

10.5.2.62 The eight A3 anomalies within the Caledonia OECC MSA reflect a documented feature which was covered by the geophysical survey but had no corresponding geophysical anomaly.

10.5.2.63 This does not mean that there is necessarily no archaeological material there, as it may be buried in seabed sediments and so not picked up by the surveys, or lies outwith the coverage of the geophysical surveys.

10.5.2.64 The Norwegian sailing barque *Ebenezer* (WA 70657; Figure 10-14) and an unknown craft (WA70566; Figure 10-14) are the only two wrecks to be recorded as having wrecked due to navigational hazards and error. The UKHO record for the *Ebenezer* notes it was wrecked on Salt Rock off Whitehills west of Banff on 19th February 1900 whilst en route from Porsgrunn to Grimsby with a cargo of coal. The vessel broke in half with the bow sinking at the rock and the stern drifting west and disappearing. Debris and parts of wreckage, such as a bell had been recovered from amongst the gulleys. The UKHO record for the unknown wreck notes that the vessel hit rocks at Guthrie in Banff and sank in the bay. This record has been suggested to relate to one of two reported losses: a

vessel that sank on 21st January 1745, making it the oldest vessel in the study area; or another unknown craft sunk on 16th February 1853.

10.5.2.65 Four of the remaining A3s (WA 70380, WA 70379, WA 70367 and WA 70360; Figure 10-12) are listed as possible wrecks or foul ground which could be wreck material that were reported by a local fishing skipper, but have since not been identified on surveys. One of these (WA 70360) has been updated to 'dead' by the UKHO.

10.5.2.66 One recorded seabed obstruction (HER_NJ77NW0001) from the Aberdeenshire HER was grouped with anomaly WA 70367 as it was within 2.5m of the UKHO record position.

Value and Sensitivity

10.5.2.67 The perceived value of an individual asset is generally assessed and assigned on a site-by-site basis. Those regarded as being of special interest may be designated under relevant legislation.

10.5.2.68 As the value of potential shipwrecks cannot be evaluated until they are discovered, potential wrecks of all periods should be expected to be of high sensitivity and value, in accordance with the precautionary approach. Aircraft are considered to have significance for remembrance and commemoration, but also have an implicit heritage value as historic artefacts, providing information on the aircraft itself and also the circumstances of its use and loss (English Heritage (now Historic England), 2002[3]). In addition, all UK aircraft that crash while in military service are protected under the PMRA 1986, and therefore should be considered as designated sites until proven to be non-military. On this basis, all potential aircraft sites are of high sensitivity and value.

10.5.2.69 Derived artefacts are likely to be of limited archaeological value as individual discoveries. However, the occurrence of a number of seemingly isolated objects within a particular area has the potential to indicate shipping routes or maritime battlegrounds, or possibly even indicate the presence of a hitherto unknown wreck site, or may provide insight into patterns of historical aviation or indicate the presence of uncharted aircraft crash sites. Isolated maritime and aircraft finds are, therefore, regarded as being of more moderate archaeological value.

Setting

10.5.2.70 The setting of the known sites should be taken into consideration. Although the sites are underwater and have limited views, they are a part of a wider historical context. An emphasis on the wider military conflict due to the many wrecks caused by the First and Second World Wars and the military landscape of their loss location along the north coastline generally shows the significance of the North Sea war channels as well as the convoy routes.

10.5.3 Maritime and Aviation Archaeological Potential

10.5.3.1 The assessment of potential for the discovery of shipwreck, shipwreck-derived, aircraft and aircraft-derived material within the study area draws on the results of the desk-based research combined with further research of the wider area.

10.5.3.2 There is potential for discoveries of maritime craft from the Mesolithic to the modern period. Post-medieval and modern wrecks, as they were generally made of more substantial material, are more likely to have been discovered through surveys undertaken by the UKHO and others, and thus recorded in the archaeological record. However, there is still potential for the discovery of previously unrecorded wreck sites, particularly of wooden wrecks, broken up wrecks or partially buried wrecks that are more difficult to detect through geophysical survey. The 28 UKHO and two Canmore records help showcase the potential for discovery of further maritime heritage.

10.5.3.3 The area is also encompassed by zones of significant activity during both World Wars, and therefore there is significant potential for wartime related debris, ordnance, discarded and lost equipment, both from direct military action, but also from training and non-operational losses and accidents.

10.5.3.4 There is also significant potential for 20th century aircraft, particularly in relation to the Second World War and North Sea attacks. There is one record of known aviation archaeology receptors within the MSA. The local area contained a number of RAF bases, including RAF Dyce, RAF Elgin, RAF Fraserburgh, RAF Kinloss, RAF Banff and RAF Dallachy. Aircraft crash sites are also difficult to identify through archaeological assessments of geophysical survey, although experience indicates material from the site, such as engines or other material may be recorded as small obstructions or anomalies.

10.5.3.5 Marine aviation archaeology assets comprise the remains or associated remains of military and civilian aircraft that have been lost at sea. Evidence is divided into three primary time periods based on major technological advances in aircraft design: Pre-1939; 1939-1945; and post-1945. Maritime aircraft crash sites can retain a significant amount of material, whilst being an ephemeral target to identify, with the potential for in situ human remains. Aircraft are protected under the PMRA 1986.

Navigational Hazards

10.5.3.6 The MSA is within the Moray Firth, a triangular area of the North Sea that the River Ness, River Findhorn, River Spey and other minor rivers

flow into. It experiences a general southward coastal flow, north easterly winds, but is protected from westerly winds. Although the location is generally protected from the dynamic swell of the North Sea, it faces fierce weather during the winter months.

10.5.3.7 The main navigational hazard immediately off the coast at Whitehills is Salt Rock, which is a rocky outcrop c. 200m north of The Knock. Predominantly vessels in this region would have hugged the coastline to avoid the tide and currents further offshore in the firth, making potential collisions with Salt Rock a distinct possibility to passing vessels, especially during times of adverse weather.

Seabed (or Potential for Preservation)

10.5.3.8 The seabed in the MSA consists of Holocene sediments that rests on glacial and post glacial sediments, and solid rock. These represent previous glaciation, and the hydrodynamic regime experienced from North Sea weather and wave energy. The dynamic coastline reworks older deposits, modifying the seabed sediments. Large quantities of fluvial sediments flow into the Moray Firth with fifty percent of this deposit peat, which does not contribute to the mineral matter of the seabed. The beaches are made up of extending rocky outcrops and fine-grained sand, with the later providing a very high potential for the preservation of all types of archaeological material.

Recorded Losses

10.5.3.9 Recorded Losses refer to ships and aircraft that are recorded as having been lost, but for which the exact locations are not known. The records for these losses provide additional documentary evidence for the potential discovery of sites and material relating to maritime and aviation activity within the MSA.

10.5.3.10 The MSA contains 44 Recorded Losses (Section 10.8.5: Recorded Losses) that have no established archaeological position. These losses have vague directional positions, such as 'Off Banff' and 'Off Whitehills' and so have not been presented on the figures for this report. They contribute to the potential for the discovery of further wrecks from maritime activity commercially, leisurely and through wartime.

10.5.3.11 It can be common for vessels to be closer inshore than their initial reported location, due to weather conditions and the desire to be closer to the shoreline during sinking and wrecking events. Many of the Recorded Losses have documentary evidence being near rocky inshore locations.

10.5.3.12 The positions of aircraft crash sites at sea are rarely recorded with any degree of accuracy and the vast majority were based solely on eyewitness estimations or the discovery of wreckage on the surface of the sea, both of which can lead to erroneous assumptions.

Consequently, the presence and distribution of aircraft wrecks within the study area should not be underestimated. Three wrecks are reported within the Recorded Losses in the Canmore data; two off Whitehills, the latter with German registration, and one between Buckie and Fraserburgh.

Potential for Unrecorded Maritime Archaeology

10.5.3.13 A maritime site may comprise an articulated or partially articulated shipwreck and/or associated debris or infrastructure. Debris can comprise a single artefact through to an entire scatter of material that was either accidentally or deliberately lost from a vessel. As an island nation, the UK has a long maritime history and as such there is potential for archaeological evidence of maritime sites since the area started to become inundated during the Mesolithic period through to the present day within the study area.

10.5.3.14 Many vessels were lost without a record being made and sometimes even records that were created have since been lost (Cant, 2013[43]). Consequently, in addition to the charted maritime sites and Recorded Losses, there is also the considerable potential for the discovery of archaeological material of a maritime nature, currently uncharted, to exist within the study area spanning from the Mesolithic period to the present day.

10.5.3.15 The exploitation of the marine environment could have begun in the late Mesolithic after the inundation of the Dogger Bank, as the landscape of the study area would have been inundated from a terrestrial surface over multiple transgressions until the final gradual inundation mid-way through the Mesolithic when the study area would have become completely submerged.

10.5.3.16 The evidence for Mesolithic (10,000-4000 BC) maritime craft is very sparse with the earliest example in Northern Europe coming in the form of a logboat from Pesse, Netherlands (c. 7,920 - 6,740 BC; McGrail, 2004[44]). Towards the end of the Mesolithic period, it is likely that these types of craft could have been used on the ever-increasing water levels within the MSA and the wider region. The landscape of the study area would have been subject to a great change during the inundation of the Mesolithic period and undoubtedly would have provided a wetland/seascape suitable for logboats.

10.5.3.17 Although generally believed to be used for transport and fishing in inland and sheltered waters, ethnographic evidence suggests that logboats have been modified for sea journeys in calm conditions (Wessex Archaeology, 2010[45]). Other simple craft seen in later contexts, such as the hide boat, may also have been used, although their light construction would make them much less likely to survive in the archaeological record.

10.5.3.18 By the Neolithic (4000-2400BC), the coastline and sea-level was very similar to that of the present day. Marine traffic passing through the study area would most likely have been related to trade and the movement of people, using such craft as logboats and hide boats. The comparatively low frequency of this activity compared with later periods, together with the rate of survival of these vessels built from organic materials, would suggest that the likelihood for archaeological remains to survive within the study area is low; however, there is still potential for the preservation of Neolithic watercraft to exist buried within seabed sediments, although the discovery of such material would be exceptionally rare.

10.5.3.19 The Bronze Age (2400-700BC) saw greater technological advances within Britain and North-west Europe, that brought greater human interaction, resulting in the transference of materials, belief, concept, traditions, and ideas, either reciprocal or forced (Agbe-Davies and Bauer, 2010[46], 15-20). The maritime industry and boat building technology also advanced significantly during this period. The development from simple dugout boats into modified dugouts and plank-built boats is an example of this. The evidence for continental trade during this period is vast and widespread suggesting that regular organised crossings of the open ocean around Britain occurred during this time. It is suggested that the Bronze Age sewn plank boat recovered from Dover, Kent is an example of the type of vessel that could have been involved within this seafaring trade network (Clark, 2004[47], 210). Equally, the discovery of a small jet plaque object from a multi-period occupation site at South Lowestoft suggests that large scale trade networks already existed with the north of England (Wessex Archaeology, 2010[45], 52).

10.5.3.20 The MSA has produced no evidence for maritime activity from either the Neolithic or the Bronze Age periods to date. Logboats provide the only archaeological evidence in the UK directly relating to watercraft during the Neolithic period (Wessex Archaeology, 2010[45], 50). However, the lack of finds to date does not suggest a sterile time for maritime activity. Bronze Age and Iron Age pits and structures were discovered and excavated in 2008/2009 in North Kessock. Production of axe and spear heads, gouges, knives and sickles were found. Further along the coastline excavations at Sculptors Cave at Covesea uncovered objects of the late Bronze Age that included arm rings, ring money, pottery and worked bone. These finds and locations suggest prehistoric industry and settlement along the Moray Firth (ScARF, 2018[48]), which could suggest increased feasibility for the discovery of maritime activity in either the Neolithic or Bronze Age.

10.5.3.21 There is very little evidence for seafaring within Britain during the Iron Age (700 BC-AD 43), however, the distribution of artefact types and the variety of examples found across North-West Europe suggests a high

level of cross-channel trade and it is clear that from at least the Iron Age onwards, seagoing vessels passed through the study area. Evidence in Portmahomack shows Iron Age pits and metalworking technology (ScARF, 2016[49]).

10.5.3.22 The Romano-British period (AD 43-410) brought with it considerable changes in many aspects of life within Britain. The evidence of this is widespread and can be seen in the archaeological record by way of the influx of new styles and materials. This is also believed to be the case in terms of maritime technology, which included the development of more substantial wooden vessels (Nayling and McGrail, 2004[50]). The more substantial construction would have a better chance of survival in harsher ocean environments. However, no Romano-British remains have been discovered within the study area to date.

10.5.3.23 Along with the scale and variety of maritime activity that was being undertaken within North-West Europe, some of the most important maritime technological advances occurred during the Anglo-Saxon and Medieval periods (AD 410-1500). The key advances within the region during these periods were the development of several phases of specialised boat building techniques, each of which came from the influence of foreign technologies and ideas. For example, the Saxon settlers that succeeded the Roman occupation introduced a network of trade and migration routes that extended throughout the seas around the British Isles, as evidenced by Scandinavian-style clinker-built vessels during the early medieval period. Pictish monastic settlements found in the region of the Proposed Development (Offshore), as well as a Viking hoard and burials c. AD1000 in Portmahomack (ScARF, 2016[49]), suggest extensive coastal vessel trading networks along the eastern side of the country.

10.5.3.24 The archaeological record also suggests another introduction into Northern European shipbuilding by the Saxon people and later the Vikings. This comes by way of specialised vessels for specific tasks. Larger boats with the capability of carrying more cargo 50-60 tons sometimes became prevalent within the Hanseatic trading league. At this same time sleeker, shallow drafted and quicker vessels were used for aggressive actions on other boats and even the invasion of coastal settlements across Europe and the British Isles. There is a very low level of maritime finds from this period within the British Isles which is surprising given the amount of international trade that was passing through Britain. The rarity of the remains means that any maritime material deemed to be of this period discovered within the study area would be considered to be of special interest.

10.5.3.25 The medieval period brought with it further advances in shipbuilding technology to the British Isles. The carvel planking technique, believed to have originated from Iberian shipbuilders, allowed for stronger hulled

vessels capable of taking a variety of full-rigged sail plans, which meant longer ocean voyages and more cargo carrying capacity. These maritime advances meant vessels could transport goods, people, and ideas to new colonies around the world, creating the first global trade network. The only evidence for this new style of ship within Northern Europe is the iconographic evidence of cogs and hulcs (a towed ship design) depicted on town seals and coins, along with the extremely rare examples of partial timbers.

10.5.3.26 Trade between Scotland and the continent is highlighted with the arrival of Flemish settlers during the medieval period. They had a role in establishing centres in Scotland and granted burgesses in the Moray Firth. They established a growth in early trading in this region (French, 2015[51]).

10.5.3.27 The scarcity of evidence for maritime losses during the medieval period is mostly due to the lack of accurate navigation records being taken when and where losses occur. This is why there is an apparent gap in the records given by shipping registers of the time. However, it goes without saying that the level of trade and transport traffic on the seas at this time would have been high, inaccuracies in positioning make it impossible to map where and when these wrecks might have occurred with the necessary accuracy to locate them today. This, coupled with the time period that any shipwrecks would have to survive within the harsh ocean environment, is why very few examples of medieval vessels survive within the archaeological record to date. Therefore, if any remains of a medieval date were discovered within the study area they would be of special interest.

10.5.3.28 The recording of vessel losses became much more reliable during the modern period which is why the weighting of vessel losses for this period is so high, and not surprisingly, there are numerous vessels in the Canmore and HER dataset for Recorded Losses dating to the 19th century and modern periods.

10.5.3.29 The post medieval and modern periods are undoubtedly one of the most dramatic in terms of development in shipbuilding. It was during this period that metal became prevalent in ship construction, starting as composite vessels where metal replaced some of the wooden parts to vessels built entirely of iron or steel. In parallel to this physical development, was the change from sail to mostly steam power then later diesel engines as new technologies provided the means of propulsion that powered the vessels of the Industrial Revolution.

10.5.3.30 The modern period is also characterised by the two World Wars of the 20th century, which saw a sudden rise in military activity for two relatively short periods attracting intensive enemy action throughout both wars. This took the form of attacks by submarine, aircraft, with English fishing trawlers being machine gunned by German planes, and

most commonly mines. Coastal military defences are dotted along the coastline of the Moray Firth.

10.5.3.31 The combination of more accurate casualty recordings and the more favourable preservation potential of metal hulled vessels mean that the confidence level that can be ascribed to this assessment of the modern period on the basis of the known resource is higher than that of preceding periods. However, for much of the 19th century and to some extent, the early to mid-20th century (particularly the two World Wars) the quality of positional information being recorded was variable. This is still the case today with many of the smaller fishing vessels working areas on bearings and distances from known locations, rather than relying on modern navigation aids that they all are carrying. Additionally, the partial use of wooden hulled vessels, particularly of small local craft which are unlikely to have been viewed to merit recording when lost, may also be present in the study area.

Value

10.5.3.32 If encountered, currently unknown wreck and debris would, as a precautionary measure, be considered of high potential value, until an assessment of value could be undertaken. Wreck material is required to be reported to the Receiver of Wreck in accordance with the Merchant Shipping Act 1995.

Potential for Unrecorded Aviation Archaeology

10.5.3.33 Within the MSA, there is high potential for the presence of aircraft crash sites and associated aviation material and debris dating from the early 20th century until more recent times, with a concentration dating to the World Wars and in particular the Second World War, 1939-45. The area of the Moray Firth was on the flight path for German units operating from Norway and Denmark into the industrial areas of Inverness and the naval anchorage in the Cromarty Firth, as well as units attacking coastal shipping. Defensive patrols were operated by aircraft based at the airfields of Milltown, Dallachy, Lossiemouth and Kinloss in Moray, Wick and Skitten in Caithness, Banff in Aberdeenshire and the flying boat bases at Alness and Evanton in the Cromarty Firth.

10.5.3.34 Aircraft which crash over the sea tend to break up on impact, spreading wreckage over a wider area. Similarly, where two aircraft collide in midair, and both are subsequently lost at sea, the recorded site of the loss can incorporate a larger debris field, stretching hundreds of metres in diameter. However, controlled ditching or sunken aircraft may remain considerably more intact. An aircraft crash site in the marine zone may comprise an articulated or partially articulated aircraft and/or associated debris or infrastructure. Debris can comprise a single artefact through to an entire scatter of material. Additionally, there is material related to rescuing aircrews during the Second World War, including both German

and British examples of rescue buoys or Rettungsbojen, that were lost or sunk, and rescue aircraft that were also lost to various causes.

10.5.3.35 Prior to the First World War there was limited commercial civil aviation, however the First World War saw the early development of military aviation and the beginnings of naval aviation. During this period, aircraft were lightweight, and made of wood and other light materials. In the inter-war years, there was increasing cross-channel services to various European and worldwide destinations, and metal largely replaced wood in airframe construction.

10.5.3.36 By the Second World War, aircraft technology had developed considerably. Luftwaffe attacks on the UK early in the war were the predominant reason for flights over the Moray Firth. By the middle of the war, this emphasis had shifted, and the Allied air effort in the Moray Firth was more based around Coastal Command patrols and occasional bomber raids on targets in Norway and Denmark. There was mass production of aircraft, leading to considerable quantities of aircraft, and a significant amount of flying occurred over the sea.

10.5.3.37 Most aircraft losses at sea are attributed to military aircraft and date from the Second World War, most of which occurred along the south and east coasts of England and east coast of Scotland. As the high levelled Allied and Axis air movement was concentrated over the southern North Sea and English Channel during the Battle of Britain and later bombing campaigns over Continental Europe, activity in the MSA would have been less intense than further south, however there was still repeated raids from both Allied and Axis aircraft as well as maritime patrols and a significant number of active airfields, serving both the RAF and naval aviation through the Fleet Air Arm (FAA). The likely intensity of aviation activity suggests there is high potential for aircraft remains to be encountered from within the MSA, which is also highlighted by analyses of UK-wide records (Wessex Archaeology, 2008[19]). This is illustrated by the reported aircraft wreck at WA 70365 which was not found by later surveys.

10.5.3.38 From the end of the war to the present, civilian air travel has increased. Military aircraft was, until the 1990s, dominated by the Cold War. These aircraft crash events are more likely to have been accurately recorded and positioned, however there is still potential for material due to the proximity of the two large RAF and FAA bases at Kinloss and Lossiemouth on the Moray coast.

10.5.3.39 All aircraft that crashed while in military service are automatically protected under the PMRA 1986. If present, such sites would represent statutory constraints (mitigated through methodologies such as implementation of AEZs) within the Proposed Development (Offshore). This legislation means any activities impacting upon the aircraft remains must cease pending assessment by the Ministry of Defence.

10.6 Marine Archaeological Assessment: Intertidal Sites

10.6.1.1 No intertidal heritage assets other than the Recorded Losses discussed above were present within the intertidal section of the MSA west of Whitehills on the Moray coast.

10.6.1.2 The intertidal zone within the MSA is largely made up of a rocky shelf of exposed bedrock up to 75m wide with areas of broken bedrock and a narrow section of stony beach at the landward edge. Small areas of finer grained sediment beaches are present towards the western edge of the MSA within small bays and coves, while the harbour at Whitehills is within the eastern extent of the MSA. Traffic in and out of this harbour would have largely been small fishing craft, some of which are reflected in the Recorded Losses. Above MHWS and therefore outside the MSA west of the landfall is the 12th – 13th century Craig of Boyne castle, whose occupants may have utilised the beaches around the mouth of the Burn of Boyne as landing points. There is therefore low to medium potential for currently unknown wreck material to be present within the intertidal zone, with low potential in the areas of exposed bedrock and medium potential within the areas of finer sediment within the small bays.

10.7 Conclusions

10.7.1 Overview

10.7.1.1 The objectives of this technical report were to identify known and potential maritime, aviation and seabed prehistory features or archaeological significance within the MSA.

- There are no known sites of seabed prehistory or currently identified palaeogeographic features in the MSA;
- The combined assessment of geophysical data and documentary sources identified 301 features of known or potential archaeological interest within the Caledonia OWF, and 415 features within the Caledonia OECC;
- No intertidal features other than Reported Losses of vessels with poor spatial details were identified within the MSA; and
- There is potential for unknown cultural heritage assets within the MSA (for example smaller, dispersed, buried and partially buried debris and other artefacts and material of archaeological interest.

10.7.2 Palaeogeographic Features

10.7.2.1 The assessment of the geophysical data within the study area resulted in a total of four shallow geological units, none of which are considered to be of archaeological potential. No individual palaeogeographic features of archaeological potential were identified within the study area.

10.7.3 Seabed Features

Caledonia OWF and Buffer

Caledonia North Site

10.7.3.1 The assessment of the geophysical data within the Caledonia North Site resulted in a total of 179 anomalies identified as being of known or possible archaeological interest. These are summarised as follows:

- 14 anomalies were assigned an A1 archaeological discrimination, with a confirmed location and extent and regarded as being of high value and sensitivity;
- A total of 11 anomalies were assigned an A2_h archaeological discrimination, with a confirmed location and extent and regarded as being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic;
- A total of 144 anomalies were assigned an A2_l archaeological discrimination, with a confirmed location and extent and regarded as being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic;
- Six historic wreck records were assigned an A3 archaeological discrimination, with a reported location but no confirmed location and extent through geophysical survey, on a precautionary basis regarded as being of potentially high value and sensitivity; and
- A total of four anomalies were assigned a U2 non-archaeological discrimination, regarded as being of low value and sensitivity archaeologically but have been retained for reporting purposes.

Caledonia South Site

10.7.3.2 The assessment of the geophysical data within the Caledonia South Site resulted in a total of 122 anomalies identified as being of known or possible archaeological interest. These are summarised as follows:

- Four anomalies were assigned an A1 archaeological discrimination, with a confirmed location and extent and regarded as being of high value and sensitivity;
- A total of 11 anomalies were assigned an A2 archaeological discrimination, with a confirmed location and extent and regarded as

being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic;

- A total of 103 anomalies were assigned an A2_l archaeological discrimination, with a confirmed location and extent and regarded as being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic; and
- Four historic wreck records were assigned an A3 archaeological discrimination, with a reported location but no confirmed location and extent through geophysical survey, on a precautionary basis regarded as being of potentially high value and sensitivity.

10.7.3.3 The totals for the Caledonia South Site are greater as they include additional anomalies which are located within the Caledonia North Site because they were within the 1km study area along the north-west edge of the Caledonia South Site.

Caledonia OECC and Buffer

10.7.3.4 The assessment of the geophysical data within the Caledonia OECC resulted in a total of 415 anomalies identified as being of possible archaeological interest. These are summarised as follows:

- Three anomalies were assigned an A1 archaeological discrimination, with a confirmed location and extent and regarded as being of high value and sensitivity;
- A total of 85 anomalies were assigned an A2_h archaeological discrimination, with a confirmed location and extent and regarded as being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic;
- A total of 320 anomalies were assigned an A2_l archaeological discrimination, with a confirmed location and extent and regarded as being of currently unknown value, but which may be of high value and sensitivity if subsequently confirmed to be anthropogenic; and
- Seven historic wreck records were assigned an A3 archaeological discrimination, with a reported location but no confirmed location and extent through geophysical survey, on a precautionary basis regarded as being of potentially high value and sensitivity.

10.8 Additional Information

10.8.1 Terminology

10.8.1.1 A glossary and a chronology definitions guide are provided below.

Glossary

Term	Definition
Archaeological interest	There will be archaeological interest in a heritage asset if it holds, or potentially may hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Caledonia OWF Site	The Proposed Development (Offshore) boundary area within which the wind turbine generators (WTGs), inter-array cables (IACs) and the Offshore Substation Platform (OSP) are proposed.
Environmental Impact Assessment (EIA)	A procedure to be followed for certain types of projects to ensure that decisions are made in full knowledge of any likely significant effects on the environment.
Heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated and undesignated assets.
Mean High Water Mark (MHWM)	The line of high water of ordinary or medium tides of the sea or tidal river or estuary
Historic environment	All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.
Historic environment record (HER)	Information services that seek to provide access to comprehensive and dynamic resources relating to the historic environment of a defined geographic area for public benefit and use.

Term	Definition
Offshore Export Cable Corridor (OECC)	The area between the array area and the landfall, within which the offshore export cables will be installed along with cable protection and other temporary works for construction.
Proposed Development (Offshore)	The offshore Caledonia Offshore Wind Farm project elements, seaward of MHWS
Significance	The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

Chronology

10.8.1.2 Where referred to in the text, the main archaeological periods are broadly defined by the following date ranges (adopted from ScARF (https://scarf.scot/national/panel-report-chronology-and-downloads/)):

Period Name	Date Range
Palaeolithic and Mesolithic	12,700 BCE – 4,100 BCE
Mesolithic	8,500 – 4,100 BCE
Neolithic	4,100 – 2,500 BCE
Bronze Age	2,500 - 800 BCE
Iron Age	800 BCE – AD 400
Roman	AD 77 - 211
Early Medieval	AD 400 – 1100
Medieval	AD 1100 – 1500
Post-medieval	AD 1500 – 1800
19th Century	AD 1800 – 1899
Modern	1900 – present day

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

Period	Date range	MIS
Holocene	11,700 – present day	1
Weichselian	115,000 – 11,700 BP	5d – 2
Eemian	130,000 – 115,000 BP	5e
Saalian	374,000 – 130,000 BP	10 – 6
Holsteinian	424,000 – 374,000 BP	11
Elsterian	478,000 – 424,000 BP	12
Cromerian	>478,000 BP	>12

10.8.2 Legislation and Policy

10.8.2.1 A summary of global, European and Scottish policy and legislation is provided below. More detail is presented in Section 10.2 of Volumes 2, 3 and 4, Chapter 10: Marine Archaeology and Cultural Heritage.

Global Policy and Legislation

Legislation/Policy	Summary
The World Heritage Convention 1972	The Convention provides for the identification, protection, conservation and presentation of cultural and natural sites of 'outstanding universal value' for inscription on the World Heritage List. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The 1972 UNESCO World Heritage Convention was ratified by the UK in 1984 and the UK currently has 29 World Heritage Sites.
The United Nations Convention on the Law of the Sea 1982	UNCLOS 1982 was ratified by the UK in 1997. Article 149 applies only to those archaeological and historical objects that lie outside national jurisdiction and stipulates that 'all objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin'. Article 303 stipulates that 'states have the duty to protect objects of an archaeological and historical nature found at sea and shall co-operate for this purpose'. Article 303 also provides for coastal states to exert a degree of control over the archaeological heritage to 24 nm, though the UK has not introduced any measures to implement this right.
International Council of Monuments and Sites Charter on the Protection and Management of Underwater Cultural Heritage 1996 (the Sofia Charter)	The Charter upon which the Annex of the UNESCO Convention is largely based includes a series of statements regarding best practice, intending 'to ensure that all investigations are explicit in their aims, methodology and anticipated results so that the intention of each project is transparent to all'. The UK is a member of the International Council of Monuments and Sites.
UNESCO Convention on the Protection of the Underwater Cultural Heritage (2001)	The UNESCO Convention was concluded in 2001, and is a comprehensive attempt to codify the law internationally with regards to underwater archaeological heritage. The UK abstained in the vote on the final draft of the Convention, however, it has stated that it has adopted the Annex of the Convention, which governs the conduct of archaeological investigations, as best practice for archaeology. Although the UK is not a signatory, the convention entered into force on 2nd January 2009 having been signed or ratified by 20 member states.

European Policy and Legislation

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

Scottish Policy and Legislation

Legislation/Policy	Summary
Marine and Coastal Access Act 2009	Scottish Ministers are responsible for marine planning, licensing and conservation over the Scottish Marine Area from 12nm to 200nm offshore. The inshore area (to 12nm) is covered by Scottish Legislation.
Marine (Scotland) Act 2010	The Marine (Scotland) Act 2010 provides a framework to achieve sustainable development in Scottish waters, implementing marine planning, licensing, conservation and enforcement. This Act replaces the Protection of Wrecks Act 1973, and is the responsibility of the Scottish Ministers and public authorities to act as best to protect and enhance the marine biodiversity and the preservation of 'a marine historic asset of national importance located, or believed to be located, in the area'.
Protection of Wrecks Act 1973: Section Two	Section Two provides protection for wrecks that are designated as dangerous due to their contents and is administered by the Maritime and Coastguard Agency through the Receiver of Wreck.
Ancient Monuments and Archaeological Act 1979 (as amended)	This Act is primarily land based, but in recent years it has also been used to provide some level of protection for underwater sites. Scheduled Monuments and Areas of Archaeological Importance (AAIs or their equivalent) are afforded statutory protection by the Secretary of State, and consent is required for any major works. The law is administered by Historic England and the Department of Culture, Media and Sport.
Protection of Military Remains Act 1986	Under the Protection of Military Remains Act 1986, all aircraft that have crashed in military service are automatically protected. Maritime vessels lost during military service are not automatically protected although the Ministry of Defence (MoD) has powers to protect any vessel that was in military service when lost. The MoD can designate 'controlled sites' around wrecks whose position is known and can designate named vessels as 'protected places' even if the position of the wreck is not known. It is not necessary to demonstrate the presence of human remains at either 'controlled sites' or 'protected places'. Beyond the 12nm limit the Merchant Shipping Act 1995 covers wreck found or taken into possession outside UK waters and stipulates that, if brought into UK waters, finds must be reported to the Receiver of Wreck. The provisions of the Protection of Military Remains Act 1986 regarding Controlled Sites are applicable in international waters, though they are only enforceable with respect to British-controlled ships, British citizens and British companies.
Merchant Shipping Act 1995	This Act sets out the procedures for determining the ownership of underwater finds that turn out to be 'wreck', defined as any flotsam, jetsam, derelict and lagan found in or on the shores of the sea or any tidal water. It includes ship, aircraft, hovercraft, parts of these, their cargo or equipment. If any such finds are brought ashore, the salvor is required to give notice to the Receiver of Wreck that he/she has found or taken possession of them and, as directed by the Receiver, either hold them pending the Receiver's order or deliver them to the Receiver. The act is administered by the Maritime and Coastguard Agency (MCA).
National Planning Framework for Scotland 4 2023	Long term spatial strategy for Scotland's development including the protection of the environment, with a focus on the conservation and enhancement of Scotland's distinctive natural and cultural heritage and a commitment to protect, promote and support the sustainable management of these assets. Policy 7 protects the embodied carbon in the historic built environment. The Policy intent is to protect and enhance historic environment assets and places, and to enable positive change as a catalyst for the regeneration of places. The suite of policies in NPF4 should be read as a whole, and Policy 10 and Policy 32 are particularly relevant to underwater heritage.

10.8.3 Seabed Anomalies of Archaeological Potential in the Caledonia OWF

10.8.3.1 Seabed Anomalies of Archaeological Potential identified in the Caledonia OWF have been presented below.

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70000	Dark reflector	521553	6471370	A2_l	4.4	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70001	Dark reflector	521711	6471201	A2_l	4.7	4.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70002	Linear debris	521360	6471121	A2_l	208.9	2.4	-	-	Linear	This is interpreted as a linear trend of features interpreted as a possibly modern feature 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.	-	Gardline 2023 SSS Mosaic	Caledonia North Site Buffer	-
70003	Seabed disturbance	521354	6470302	A2_l	8.8	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70004	Seabed disturbance	522271	6469869	A2_l	4.8	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70005	Dark reflector	521860	6469891	A2_l	6.2	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70006	Dark reflector	524120	6468777	A2_l	5.1	2.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70007	Seabed disturbance	523606	6468952	A2_l	7.7	3.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70008	Dark reflector	521465	6469141	A2_l	4.2	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia North Site	-
70009	Seabed disturbance	520528	6469233	A2_l	5.1	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70010	Dark reflector	519287	6469101	A2_l	4.3	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70011	Recorded obstruction	518526	6467859	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia North Site	UKHO 98198
70012	Dark reflector	518009	6467211	A2_l	6.0	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70013	Dark reflector	517741	6467496	A2_l	3.5	0.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70014	Dark reflector	517604	6467254	A2_l	4.3	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70015	Dark reflector	517611	6467016	A2_l	5.2	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2022 MBES	Caledonia North Site	-
70016	Dark reflector	517160	6466807	A2_l	12.8	3.3	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70017	Seabed disturbance	517294	6466421	A2_l	10.4	3.9	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70018	Seabed disturbance	517557	6466352	A2_l	8.9	5.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70019	Seabed disturbance	517456	6466213	A2_l	11.3	6.4	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70020	Dark reflector	517859	6465789	A2_l	4.0	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70021	Seabed disturbance	519078	6466685	A2_l	6.5	4.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70022	Dark reflector	519213	6466432	A2_l	4.1	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70023	Dark reflector	519258	6466411	A2_l	3.6	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70024	Wreck	519458	6466323	U2	40.3	16.0	-	350	Boundary	Interpreted as a modern wreck. UKHO record for the wreck of the *Trident*, a fishing vessel sunk in October 1974 with the loss of all seven crew.	70025	Gardline 2022 SSS Mosaic, Gardline 2022 MBES Mosaic, Gardline 2022 Mag. Mosaic	Caledonia North Site	UKHO 1315

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										Retained for recording purposes.				
70025	Debris field	519418	6466233	U2	5.6	1.8	-	-	Point	Interpreted as debris possibly associated with wreck located 74m away.	70024	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70026	Dark reflector	519641	6466246	A2_l	7.5	2.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70027	Dark reflector	519468	6466121	A2_l	4.3	3.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70028	Dark reflector	519474	6466122	A2_l	4.1	3.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70029	Dark reflector	519464	6466117	A2_l	4.5	3.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70030	Seabed disturbance	519650	6466052	A2_l	5.6	4.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70031	Dark reflector	519516	6465705	A2_l	5.6	4.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70032	Seabed disturbance	519827	6465794	A2_l	5.8	4.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70033	Dark reflector	520572	6467281	A2_l	20.0	0.8	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70034	Seabed disturbance	520186	6468266	A2_l	5.7	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70035	Dark reflector	521671	6468508	A2_l	2.7	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70036	Seabed disturbance	521943	6468650	A2_l	4.7	2.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70037	Seabed disturbance	521737	6468238	A2_l	3.6	2.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70038	Dark reflector	521266	6467927	A2_l	3.6	0.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70039	Dark reflector	521480	6467397	A2_l	3.5	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES, Gardline 2023 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70040	Dark reflector	521521	6467241	A2_l	4.5	2.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70041	Dark reflector	521731	6466868	A2_l	5.4	4.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70042	Dark reflector	522447	6466941	A2_l	4.5	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70043	Dark reflector	522560	6467129	A2_l	4.1	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70044	Seabed disturbance	523486	6466313	A2_l	5.3	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70045	Dark reflector	522983	6466204	A2_l	9.2	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70046	Dark reflector	523621	6467087	A2_l	5.8	4.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70047	Debris field	526477	6466421	A2_h	36.2	6.4	2.2	-	Boundary	Interpreted as possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site Buffer	-
70048	Dark reflector	526514	6466307	A2_l	5.5	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site Buffer	-
70049	Dark reflector	526051	6465200	A2_l	6.5	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70050	Dark reflector	525897	6464695	A2_l	9.0	2.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70051	Linear debris	522887	6465444	A2_h	26.0	1.2	-	-	Linear	Interpreted as a possible length of linear debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70052	Dark reflector	522363	6465374	A2_l	3.9	1.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70053	Dark reflector	522356	6465537	A2_l	7.0	3.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2022 MBES	Caledonia North Site	-
70054	Seabed disturbance	521775	6465652	A2_l	11.0	3.0	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70055	Seabed disturbance	522445	6465027	A2_l	8.0	3.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70056	Dark reflector	522448	6464477	A2_I	7.5	4.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70057	Seabed disturbance	521813	6464490	A2_I	6.0	4.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70058	Dark reflector	521310	6464727	A2_I	6.2	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70059	Seabed disturbance	521096	6464672	A2_I	8.9	8.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70060	Dark reflector	520809	6464887	A2_I	3.7	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70061	Dark reflector	520593	6463656	A2_I	5.0	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70062	Magnetic	518650	6465271	A2_I	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70063	Dark reflector	518812	6464654	A2_I	3.8	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70064	Seabed disturbance	519258	6463753	A2_I	8.8	4.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70065	Dark reflector	519382	6462213	A2_I	6.4	3.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70066	Dark reflector	519697	6462045	A2_I	7.2	4.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70067	Seabed disturbance	522109	6464208	A2_I	7.6	6.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70068	Dark reflector	523182	6463567	A2_I	3.6	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70069	Dark reflector	524249	6463172	A2_I	3.8	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70070	Dark reflector	527969	6463343	A2_I	5.4	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70071	Dark reflector	526510	6462842	A2_l	19.9	1.0	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70072	Dark reflector	526493	6462417	A2_l	3.2	0.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70073	Dark reflector	525451	6462049	A2_l	5.5	3.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70074	Dark reflector	523571	6461663	A2_l	3.9	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70075	Magnetic	523023	6461804	A2_l	-	-	-	38	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2022 Mag.	Caledonia North Site	-
70076	Linear debris	522115	6462152	A2_h	20.2	0.8	-	-	Linear	Interpreted as a possible length of linear debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70077	Dark reflector	521742	6461983	A2_l	5.6	3.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70078	Seabed disturbance	521481	6461322	A2_l	9.1	3.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70079	Seabed disturbance	520174	6462227	A2_l	10.1	5.9	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70080	Dark reflector	519651	6461867	A2_l	4.5	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70081	Dark reflector	520220	6460262	A2_l	3.2	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70082	Dark reflector	519764	6460189	A2_l	3.8	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2022 MBES	Caledonia North Site	-
70083	Seabed disturbance	522565	6457863	A2_l	7.6	4.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70084	Seabed disturbance	522079	6458571	A2_l	8.1	4.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70085	Dark reflector	522178	6459077	A2_l	8.5	3.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70086	Debris	522427	6459661	A2_h	10.0	6.4	0.8	-	Boundary	Interpreted as debris.	-	Gardline 2022 MBES	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70087	Seabed disturbance	521692	6460026	A2_l	42.1	2.7	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70088	Dark reflector	523246	6460062	A2_l	6.2	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70089	Dark reflector	524146	6461084	A2_l	3.9	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70090	Mound	525365	6461694	A2_l	7.3	5.3	2.0	-	Point	Interpreted as a possible natural feature or possible debris.	-	Gardline 2022 MBES	Caledonia North Site	-
70091	Linear debris	526674	6461377	A2_h	35.2	1.9	-	-	Linear	Interpreted as a possible length of linear debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70092	Dark reflector	528256	6462306	A2_l	4.8	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70093	Recorded wreck	530335	6463094	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly. This location was not covered by the 2022 or 2023 geophysical surveys as it is outside the Proposed Development (Offshore). The Controlled Site of HMS *Exmouth*, an E class destroyer built at Portsmouth Dockyard in 1934 and sunk when it was torpedoed by U-22 in January 1940 with the loss of all 189 crew. It remains collapsed and degraded with evidence of torpedo hit on starboard bow. It has been designated as a Protected Military Wreck with a restricted area radius of 750m.	-	-	Caledonia North Site Buffer	UKHO 1191
70094	Dark reflector	529616	6461237	A2_l	5.0	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70095	Debris field	530009	6460867	A2_h	17.0	11.3	1.4	-	Boundary	Interpreted as debris.	-	Gardline 2023 MBES	Caledonia North Site	-
70096	Dark reflector	530143	6460736	A2_l	5.1	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70097	Wreck	532691	6459600	A1	36.3	20.3	1.7	-	Boundary	Part of the wreck of the *Tekla*. This is an irregular and fairly coherent area of debris; no coherent vessel structure is visible. It appears	70099, 70100, 70101	Gardline 2022 MBES, Gardline 2023 SSS Mosaic,	Caledonia North Site Buffer	UKHO 71120

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										as a debris field made up of multiple elongate and sub-angular dark reflectors, with distinct shadows. The largest dark reflector is elongate and measures 15.4 x 3.2m, although this may be several objects, and is located centrally in the field.. Due to the slightly irregular shape of the debris field, with a centrally compact area that becomes more dispersed, it does not have a particular orientation. The feature corresponds with the location of UKHO 71120, the partial remains of *Tekla* (probably) which was first identified on 23rd January 2008 with further investigation in September of that year. *Tekla* was a steam ship built in 1920 that was torpedoed by U-55 and sank on 21st January 1940 with the loss of nine men.		Gardline 2023 SSS raw		
70098	Dark reflector	532701	6459497	A2_l	4.8	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70099	Debris field	532694	6459429	A1	20.5	8.8	2.8	-	Boundary	Interpreted as a debris field adjacent to the wreck of the *Tekla* - see associated anomalies. It is comprised of three or four elongate dark reflectors and one L-shaped dark reflector with a distinct shadow. It lies adjacent to the north-eastern section of the wreck.	70097, 70100, 70101	Gardline 2022 SSS raw	Caledonia North Site Buffer	-
70100	Wreck	532677	6459411	A1	62.5	16.9	2.5	72	Boundary	Main section of the wreck of the *Tekla*. This is an upright, partially broken up wreck orientated north-east to south-west, measuring 62.5 x 16.9 x 2.5m. The feature shows a coherent hull outline, which is less distinct in the north-east, and includes several elongate and sub-rounded dark reflectors with distinct shadows indicating some surviving internal structure, with some debris spread indicating partial disintegration. This is associated with a 72 nT anomaly on the closest Mag. line which lies within 55m of the wreck extents to the west. The anomaly corresponds	70097, 70099, 70101	Gardline 2022 SSS Mosaic, Gardline 2022 MBES, Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES, Gardline 2022 Mag.	Caledonia North Site Buffer	UKHO 1190

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										with the location of UKHO 1190, the remains of part of *Tekla*, a steam ship built in 1920 and sunk by torpedo strike in 1940. The feature is listed as being highly degraded, with a strong magnetic anomaly. It is described as the main section of the wreck.				
70101	Debris field	532658	6459397	A1	4.4	3.1	-	-	Point	Interpreted as a debris field adjacent to the wreck of the *Tekla* - see associated anomalies. It is comprised a cluster of small, angular dark reflectors, and lies within 6m of the south-western section of the wreck to the west	70097, 70099, 70100	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70102	Recorded wreck	533048	6458871	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly. UKHO record lists an unknown wreck. First surveyed in 1945. Last surveyed on 23.01.2008 and was not located. Has been amended to dead.	-	-	Caledonia North Site Buffer	UKHO 1186
70103	Recorded wreck	532172	6458493	U2	-	-	-	-	Point	Interpreted as a modern wreck. UKHO record for the fishing vessel *Virgina Rose*, which sank under tow in 1981, crew rescued. Was last surveyed on 23.01.2008 and was not located and amended to dead. Retained for recording purposes.	-	-	Caledonia North Site	UKHO 1305
70104	Dark reflector	530320	6459714	A2_l	3.7	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70105	Dark reflector	529704	6458504	A2_l	76.3	0.8	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70106	Seabed disturbance	531433	6458295	A2_l	14.5	11.8	-	85	Boundary	Interpreted as a possible natural feature with ferrous content or may be possible ferrous debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 Mag.	Caledonia North Site	-
70107	Magnetic	530454	6458014	A2_h	-	-	-	162	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag., Gardline 2022 Mag.	Caledonia North Site	-
70108	Dark reflector	526408	6458851	A2_l	66.5	0.5	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70109	Magnetic	526750	6458698	A2_l	-	-	-	67	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70110	Magnetic	526716	6458320	A2_l	-	-	-	24	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70111	Dark reflector	524659	6458059	A2_l	5.1	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70112	Seabed disturbance	525339	6458467	A2_l	8.6	3.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70113	Magnetic	524448	6458499	A2_l	-	-	-	41	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2022 Mag.	Caledonia North Site	-
70114	Dark reflector	523327	6456726	A2_l	3.0	0.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70115	Dark reflector	524454	6455600	A2_l	4.9	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70116	Dark reflector	524637	6454950	A2_l	4.3	1.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70117	Recorded obstruction	524964	6453839	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly. UKHO record lists it as a port anchor and shackle. Not found in 08.01.2023 and amended to dead.	-	-	Caledonia North Site	UKHO 64280
70118	Dark reflector	525121	6455673	A2_l	14.6	2.4	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70119	Dark reflector	525557	6455952	A2_l	4.8	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70120	Dark reflector	527331	6455547	A2_l	5.4	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70121	Dark reflector	529585	6454958	A2_l	30.1	4.7	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70122	Seabed disturbance	529582	6456045	A2_l	19.8	13.1	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70123	Recorded obstruction	530430	6456147	U2	-	-	-	-	Point	Interpreted as a modern obstruction. Retained for recording purposes.	-	-	Caledonia North Site	UKHO 1310
70124	Magnetic	530275	6456362	A2_l	-	-	-	26	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70125	Dark reflector	529752	6456741	A2_l	5.3	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70126	Magnetic	530331	6456825	A2_l	-	-	-	31	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70127	Dark reflector	530401	6456965	A2_l	4.5	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES, Gardline 2023 SSS Mosaic	Caledonia North Site	-
70128	Magnetic	530373	6457230	A2_l	-	-	-	31	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70129	Dark reflector	530853	6456572	A2_l	9.5	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70130	Dark reflector	531401	6455991	A2_l	5.0	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70131	Seabed disturbance	531397	6455963	A2_l	7.0	3.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70132	Dark reflector	531570	6456091	A2_l	5.3	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70133	Dark reflector	531810	6456979	A2_l	7.9	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70134	Dark reflector	532007	6456836	A2_l	5.4	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70135	Dark reflector	532200	6456299	A2_l	8.6	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70136	Wreck	534024	6458542	A1	101.2	22.7	2.0	-	Boundary	Wreck of the *Makalla* (probably). This is an indistinct, severely degraded wreck orientated north–south, measuring 101.2 x 22.7 x 2.0m. It is visible as an elongate area of mounds; the northern extent has an area of conjoined mounds,	-	Gardline 2023 MBES	Caledonia North Site Buffer	UKHO 1188

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										forming a rough triangle shape approximately 30m long, which represent a faint hull outline. The other mounds that comprise the feature are more dispersed and may represent broken-up debris. The anomaly corresponds with the location of UKHO 1188, the wreck of *Makalla* (probably), a steam ship built in 1918 and sunk due to an aerial bomb strike in 1940. It is described as collapsed and broken up, with lots of nearby associated debris and a strong magnetic anomaly, which could not be confirmed in the 2022 or 2023 magnetometer datasets due to a lack of coverage of this feature.				
70137	Wreck	534192	6457832	A1	75.1	30.8	2.6	-	Boundary	Unknown wreck This is visible as a degraded wreck, orientated north-east to south-west, measuring 75.1 x 30.8 x 2.6m. The wreck outline appears mostly intact but is more degraded towards the north-east, where part of the structure appears to have become separated from the main hull, with the north-east section curving southwards to become perpendicular to the south-west section. There is a disturbed area of seabed between the sections suggesting the presence of debris. The anomaly corresponds with the location of UKHO 71122, an unknown wreck first identified in 2008 and described as broken into two main parts, with debris between. It is described as having a strong magnetic anomaly, which could not be confirmed in the 2022 or 2023 magnetometer datasets due to a lack of coverage of this feature.	-	Gardline 2022 MBES	Caledonia North Site Buffer	UKHO 71122
70138	Dark reflector	531325	6453533	A2_l	12.4	2.7	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70139	Magnetic	530119	6454830	A2_l	-	-	-	29	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70140	Magnetic	530034	6454074	A2_l	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70141	Magnetic	529926	6453160	A2_l	-	-	-	23	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70142	Magnetic	529932	6453133	A2_l	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70143	Magnetic	529865	6452526	A2_l	-	-	-	29	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70144	Dark reflector	529819	6452039	A2_l	45.2	1.5	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70145	Magnetic	529770	6451818	A2_h	-	-	-	125	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70146	Dark reflector	529056	6451405	A2_l	3.4	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70147	Seabed disturbance	528779	6451327	A2_l	5.1	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70148	Dark reflector	526294	6452348	A2_l	3.8	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70149	Magnetic	526106	6452833	A2_l	-	-	-	65	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70150	Dark reflector	525753	6453881	A2_l	4.9	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70151	Dark reflector	529876	6450384	A2_l	48.7	7.1	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70152	Dark reflector	530635	6450599	A2_l	5.5	2.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70153	Dark reflector	530628	6447455	A2_l	3.1	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70154	Dark reflector	529654	6447909	A2_l	11.3	2.2	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70155	Debris	529580	6447771	A1	15.5	3.7	0.6	-	Point	Interpreted as a debris field adjacent to an unknown wreck - see associated anomalies. The anomaly is an elongate dark reflector with a distinct shadow, which lies adjacent to the southern section of the wreck to the east.	70156, 70157, 70158	Gardline 2023 SSS raw	Caledonia North Site	-
70156	Debris field	529574	6447797	A1	37.1	6.2	0.9	-	Boundary	Interpreted as a debris field adjacent to an unknown wreck - see associated anomalies. This is a series of sub-angular and linear dark reflectors, the largest of which measures 4.1 x 1.6m, and lies adjacent to the central section of the wreck to the east.	70155, 70157, 70158	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw	Caledonia North Site	-
70157	Wreck	529564	6447796	A1	102.7	22.1	6.7	282	Boundary	Unknown wreck This is a degraded, upright wreck measuring 102.7 x 22.1 x 6.7m and orientated north–south. Multiple internal dark reflectors show potential surviving internal structure, with a taller rectangular feature visible in the northern extents. One large, sub-rounded mound measuring approximate 9.0 x 6.0 x 1.9m is located in the centre of the structure. The wreck is associated with a 282 nT anomaly on the closest Mag. line which lies within 41m of the wreck extents to the east. The wreck corresponds with the location of UKHO 58699, an unknown wreck described as upright and not fully intact, with a strong magnetic anomaly. .	70155, 70156, 70158	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES, Gardline 2023 Mag.	Caledonia North Site	UKHO 58699
70158	Debris field	529546	6447828	A1	33.6	8.3	1.1	-	Boundary	Interpreted as a debris field adjacent to an unknown wreck - see associated anomalies. This is comprised of four or five sub-rounded dark reflectors with shadows and lies adjacent to the northern section of the wreck in the west.	70155, 70156, 70157	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw	Caledonia North Site	-
70159	Recorded wreck	529651	6447581	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia North Site	UKHO 58701

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										UKHO record lists it as a non-dangerous wreck. Last survey on 26.11.2012 indicated it was not located and has been amended to dead.				
70160	Wreck	529268	6448473	A1	38.5	12.8	2.0	-	Boundary	Unknown wreck This is an intact but partially degraded wreck orientated NNW–SSE and measures 38.5 x 12.8 x 2.0m. Sub-rounded and linear dark reflectors show potential surviving internal structure, whilst two discontinuous curvilinear dark reflectors form an elongate hull shape, with a small associated shadow. The anomaly corresponds with the location of UKHO 79582, the wreck of an unknown fishing vessel, described as upright and intact with a partially collapsed bow.	70161	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES	Caledonia North Site	UKHO 79582
70161	Debris	529258	6448488	A1	10.1	8.6	0.7	-	Point	Interpreted as debris adjacent to an unknown wreck- see associated anomalies. It is a linear dark reflector orientated north-west to south-east, with a distinct shadow, and lies within 2m of the northern section of the wreck to the north-west.	70160	Gardline 2023 SSS raw	Caledonia North Site	-
70162	Dark reflector	526415	6449710	A2_l	5.9	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70163	Dark reflector	525948	6449716	A2_l	4.6	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70164	Dark reflector	525113	6449423	A2_l	14.2	2.4	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site Buffer	-
70165	Dark reflector	525370	6449203	A2_l	16.6	7.4	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70166	Seabed disturbance	525592	6449089	A2_l	3.7	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70167	Debris field	526701	6448711	A2_h	20.0	3.4	-	-	Linear	Interpreted as debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70168	Seabed disturbance	525397	6447585	A2_l	17.6	4.3	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70169	Dark reflector	527018	6446254	A2_l	9.2	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2022 MBES	Caledonia North Site	-
70170	Dark reflector	528011	6446768	A2_l	5.5	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70171	Linear debris	528609	6448072	A2_h	40.5	1.6	-	-	Linear	Interpreted as a possible length of linear debris.	70172	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70172	Linear debris	528686	6448083	A2_h	118.4	1.6	-	-	Linear	Interpreted as a possible length of linear debris.	70171	Gardline 2023 SSS Mosaic	Caledonia North Site	-
70173	Recorded wreck	528707	6447871	A3	-	-	-	-	Point	Historic record of possible archaeological interest with no corresponding geophysical anomaly. UKHO record lists it as the wreck of a destroyer, with the information matching that of HMS *Lynx.* This is likely to be from poor locational accuracy. Last survey on 26.11.2012 indicated it was not located and was amended to dead.	-	-	Caledonia North Site	UKHO 58700
70174	Debris field	528718	6447339	A1	42.0	16.5	0.4	73	Boundary	Interpreted as an area of potential debris located 142m to the north of the wreck of HMS *Lynx* - see associated anomalies. This feature was visible as an oval area of seabed comprising many small, linear dark reflectors with no visible shadows. It has an associated 73 nT Mag. anomaly and lies 142m north of the wreck	70175	Gardline 2022 SSS mosaic, Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES, Gardline 2023 Mag.	Caledonia North Site	-
70175	Wreck	528705	6447195	A1	70.3	19.4	2.0	363	Boundary	Wreck of HMS *Lynx*. This is a partially broken up wreck orientated north-west to south-east, relatively intact and partially buried. Some internal angular dark reflectors suggest surviving internal structures. The wreck appears somewhat discontinuous and is higher and less degraded towards the south-east. It is associated with a 363 nT anomaly on the closest Mag. line which lies within 10m of the wreck extents to	70174	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES, Gardline 2023 Mag.	Caledonia North Site	UKHO 1324

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
										the east. The anomaly corresponds with the location of UKHO 1324, the wreck of HMS *Lynx*, a Destroyer built in 1912 and sunk by mine strike in 1915. The wreck was first located in 1984 and dived in 2000.It is described as upright, with the bow and stern missing, and with a strong magnetic anomaly.				
70176	Dark reflector	526657	6443352	A2_l	6.9	4.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70177	Magnetic	527735	6444698	A2_l	-	-	-	20	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia North Site	-
70178	Dark reflector	529743	6444146	A2_l	5.0	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia North Site	-
70179	Dark reflector	532638	6455368	A2_l	6.3	2.2	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic, Gardline 2022 MBES	Caledonia South Site	-
70180	Dark reflector	533486	6455680	A2_l	5.7	1.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70181	Magnetic	533404	6456142	A2_l	-	-	-	69	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2022 Mag.	Caledonia South Site	-
70182	Magnetic	534203	6457552	A2_l	-	-	-	84	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site Buffer	-
70183	Dark reflector	534378	6457555	A2_l	11.9	2.0	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site Buffer	-
70184	Dark reflector	534043	6457202	A2_l	6.7	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70185	Magnetic	534123	6456914	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-

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70186	Magnetic	534097	6456766	A2_l	-	-	-	41	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70187	Dark reflector	534988	6456047	A2_l	4.4	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70188	Dark reflector	536697	6454879	A2_l	5.3	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site Buffer	-
70189	Linear debris	534996	6454550	A2_l	123.4	2.0	-	-	Linear	This is interpreted as a possibly modern feature such as a section of uncharted pipeline or cable 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.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70190	Dark reflector	534157	6454430	A2_l	6.1	4.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70191	Dark reflector	532772	6454974	A2_l	4.8	4.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70192	Linear debris	533245	6453506	A2_h	25.1	1.7	-	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70193	Linear debris	532929	6453085	A2_h	14.5	0.8	-	-	Linear	Interpreted as a possible length of linear debris.	70194	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70194	Linear debris	532931	6453068	A2_h	9.2	0.5	-	-	Point	Interpreted as a possible length of linear debris.	70193	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70195	Dark reflector	532741	6453171	A2_l	8.2	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70196	Dark reflector	532796	6452953	A2_l	3.0	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70197	Seabed disturbance	532221	6453171	A2_l	5.8	2.7	-	-	Point	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70198	Dark reflector	532361	6451953	A2_l	8.0	7.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70199	Dark reflector	532843	6451845	A2_l	11.6	9.0	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70200	Wreck	533558	6452478	A1	65.5	25.4	3.7	36	Boundary	Wreck of HMS *Jasper*. This is a highly degraded wreck measuring 65.5 x 25.4 x 3.7m, orientated east–west. The feature comprises an elongate group of dark reflectors with bright shadows, the largest of which measures 4.3 x 2.4m x 1.6m. The wreck is associated with a 36 nT anomaly on the closest Mag. line which lies within 25m of the wreck extents to the east. The anomaly corresponds with the location of UKHO 1180, the wreck of HMS *Jasper* (probably), a trawler built in 1912 and converted to a minesweeper, sunk due to a mine strike in 1915. It is described as upright and intact, and having a strong magnetic anomaly.	-	Gardline 2023 SSS Raw, Gardline 2023 SSS Mosaic, Gardline 2022 SSS Mosaic, Gardline 2022 MBES, Gardline 2023 MBES, Gardline 2022 Mag.	Caledonia South Site	UKHO 1180
70201	Linear debris	534174	6452351	A2_h	7.5	0.8	-	-	Point	Interpreted as a possible length of linear debris.	70202	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70202	Dark reflector	534173	6452369	A2_l	8.3	1.6		-	Point	Interpreted as a possible natural feature or may be possible debris.	70201	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70203	Dark reflector	534866	6451706	A2_l	5.5	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70204	Dark reflector	535679	6452009	A2_l	15.3	1.0	-	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70205	Magnetic	534464	6451984	A2_l	-	-	-	31	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia South Site	-
70206	Magnetic	534887	6452425	A2_l	-	-	-	40	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70207	Dark reflector	535259	6453268	A2_l	19.2	0.5	-	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70208	Dark reflector	535970	6453537	A2_l	3.5	3.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70209	Dark reflector	536156	6453517	A2_l	6.1	4.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-

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70210	Dark reflector	537039	6453012	A2_l	56.1	1.1	-	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70211	Dark reflector	537041	6453053	A2_l	6.8	6.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70212	Dark reflector	538105	6453213	A2_l	21.4	3.7	-	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site Buffer	-
70213	Dark reflector	538092	6451436	A2_l	9.0	8.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70214	Seabed disturbance	537275	6451865	A2_l	16.3	4.7	-	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70215	Mound	538738	6450455	A2_l	6.1	6.0	1.2	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70216	Dark reflector	539608	6450078	A2_l	6.7	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70217	Mound	541747	6448930	A2_l	10.0	6.6	0.8	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site Buffer	-
70218	Recorded Obstruction	541078	6448184	A3	-	-	-	-	Point	Position of a UKHO record for an obstruction first reported in 1945. The location was last surveyed in 2012 not located by MBES, and the record was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia South Site Buffer	UKHO 1178
70219	Magnetic	537100	6449666	A2_l	-	-	-	81	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70220	Dark reflector	535922	6448747	A2_l	6.0	3.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70221	Dark reflector	533569	6450305	A2_l	5.4	4.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70222	Recorded Wreck	531757	6449212	A3	-	-	-	-	Point	Position of a UKHO record for the wreck of the *Commander Boyle* a fishing vessel sunk in 1915 by a mine. The location was last surveyed in 2012 not located by MBES, and the record was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia South Site	UKHO 1179
70223	Dark reflector	532886	6447660	A2_l	5.2	4.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70224	Dark reflector	531936	6447023	A2_l	7.7	5.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70225	Dark reflector	532202	6445629	A2_l	3.9	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70226	Dark reflector	532998	6446428	A2_l	4.4	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70227	Dark reflector	533878	6446014	A2_l	3.3	1.4	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia South Site	-
70228	Magnetic	535547	6446999	A2_l	-	-	-	35	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70229	Magnetic	535504	6446497	A2_l	-	-	-	26	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70230	Magnetic	535673	6448145	A2_l	-	-	-	30	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70231	Dark reflector	535899	6448255	A2_l	4.8	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70232	Seabed disturbance	537214	6447804	A2_l	18.5	6.1	-	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70233	Recorded Wreck	540106	6447432	A3	-	-	-	-	Point	Position of a UKHO record for the wreck of the steam ship *Dalveen* first reported in 1979. The Dalveen was	-	-	Caledonia South Site	UKHO 1177

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										built in 1927 and was enroute from Montreal to Hull when it was bombed and sunk with the loss of 11 crew. The location was last surveyed in 2012 not located by MBES, and the record was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.				
70234	Magnetic	540499	6446135	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site Buffer	-
70235	Dark reflector	539778	6445749	A2_l	4.0	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70236	Linear debris	537920	6447142	A2_h	27.5	1.4	-	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70237	Dark reflector	536190	6446183	A2_l	3.0	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70238	Debris	536164	6446372	A1	4.1	3.1	0.8	-	Point	Interpreted as debris.	70240	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw	Caledonia South Site	-
70239	Debris	536142	6446394	A1	2.1	1.3	0.5	-	Point	Interpreted as debris.	70240	Gardline 2023 SSS raw	Caledonia South Site	-
70240	Wreck	536137	6446364	A1	65.9	11.2	4.2	693	Boundary	Wreck of U-309. This is visible as a continuous, elongate dark reflector with a clear, uneven shadow along its length, measuring 65.9 x 11.2 x 4.2m and orientated north-east-south-west. The south-western end appears broken-up, with a cluster of small dark reflectors visible. This is associated with a 693 nT anomaly on the closest Mag. line which lies within 13m of the wreck extents to the west. The anomaly corresponds with the location of UKHO 1180, the wreck of U-309, a submarine suck by depth charge in 1945. It was last surveyed in 2012 and described as intact and	70238, 70239	Gardline 2023 SSS Mosaic, Gardline 2023 SSS raw, Gardline 2023 MBES, Gardline 2022 Mag.	Caledonia South Site	UKHO 1176

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										on its side, with a strong magnetic anomaly				
70241	Dark reflector	536689	6445380	A2_l	7.5	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70242	Dark reflector	536158	6444179	A2_l	4.1	3.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70243	Dark reflector	536870	6444241	A2_l	7.6	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70244	Dark reflector	538176	6443853	A2_l	4.7	2.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70245	Mound	538846	6442162	A2_l	8.3	7.2	1.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70246	Mound	538865	6441896	A2_l	8.0	5.2	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70247	Dark reflector	537557	6441529	A2_l	7.8	2.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70248	Dark reflector	537100	6442146	A2_l	3.7	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70249	Magnetic	537048	6443202	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia South Site	-
70250	Seabed disturbance	535487	6444200	A2_l	71.0	5.6	-	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70251	Debris	533912	6444219	A2_h	7.8	3.1	2.1	-	Point	Interpreted as debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia South Site	-
70252	Dark reflector	531772	6443438	A2_l	3.7	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70253	Dark reflector	530015	6442887	A2_l	5.7	1.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70254	Seabed disturbance	527644	6441733	A2_l	12.3	10.4	1.0	23	Boundary	Interpreted as a possible natural feature or may be possible partially buried ferrous debris.	-	Gardline 2022 MBES, Gardline 2022 Mag.	Caledonia South Site	-
70255	Debris field	529153	6439599	A2_h	32.3	32.0	1.0	40	Boundary	Interpreted as ferrous debris.	-	Gardline 2023 SSS Mosaic, Gardline	Caledonia South Site	-

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												2022 SSS Mosaic, Gardline 2022 MBES, Gardline 2022 Mag.		
70256	Magnetic	530916	6441664	A2_l	-	-	-	98	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia South Site	-
70257	Recorded Obstruction	532105	6442535	A3	-	-	-	-	Point	Position of a UKHO record for an obstruction. The location was last surveyed in 2012 and not located by MBES and the record was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia South Site	UKHO 1172
70258	Linear debris	535025	6442751	A2_h	13.8	1.7	-	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70259	Dark reflector	536859	6441427	A2_l	3.9	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70260	Dark reflector	537139	6439698	A2_l	6.0	2.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70261	Dark reflector	536119	6439312	A2_l	4.5	2.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70262	Seabed disturbance	535827	6440176	A2_l	3.5	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70263	Linear debris	535061	6441291	A2_l	546.9	1.0	-	-	Linear	This is interpreted as a possibly 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.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70264	Linear debris	534899	6441462	A2_h	62.7	0.8	-	-	Linear	Interpreted as a possible length of linear debris such as rope or chain.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70265	Dark reflector	534771	6440192	A2_l	4.5	3.4	1.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic,	Caledonia South Site	-

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												Gardline 2022 MBES		
70266	Dark reflector	535088	6439592	A2_I	6.4	5.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70267	Dark reflector	534684	6439201	A2_I	5.8	2.5	0.7	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2022 MBES	Caledonia South Site	-
70268	Dark reflector	534557	6439133	A2_I	5.2	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70269	Seabed disturbance	537313	6438465	A2_I	10.1	7.3	-	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70270	Dark reflector	536723	6437450	A2_I	6.5	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70271	Mound	537140	6436950	A2_I	12.2	10.1	0.8	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 MBES	Caledonia South Site Buffer	-
70272	Dark reflector	536788	6437332	A2_I	7.5	5.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70273	Dark reflector	536606	6437054	A2_I	4.2	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70274	Dark reflector	536357	6435341	A2_I	5.5	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70275	Dark reflector	536397	6435113	A2_I	5.1	1.6	0.5	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia South Site Buffer	-
70276	Seabed disturbance	535933	6436691	A2_I	17.7	8.4	0.9	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70277	Seabed disturbance	535795	6436709	A2_I	29.5	15.2	0.6	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2023 MBES	Caledonia South Site	-
70278	Seabed disturbance	535343	6436673	A2_I	23.8	21.5	1.1	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2023 MBES	Caledonia South Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70279	Seabed disturbance	535197	6436649	A2_l	44.0	23.9	0.8	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70280	Dark reflector	535150	6436647	A2_l	3.4	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70281	Seabed disturbance	534753	6436710	A2_l	24.6	14.0	0.6	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70282	Dark reflector	534821	6437922	A2_l	4.8	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70283	Dark reflector	534569	6438098	A2_l	4.7	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70284	Linear debris	534542	6438117	A2_l	204.5	2.2	-	-	Linear	This is interpreted as a possibly 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.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70285	Dark reflector	534347	6438175	A2_l	5.0	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70286	Mound	533830	6437677	A2_l	6.7	6.0	0.3	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 MBES	Caledonia South Site	-
70287	Magnetic	533904	6436903	A2_l	-	-	-	38	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 UXO Mag.	Caledonia South Site	-
70288	Magnetic	532181	6437508	A2_l	-	-	-	27	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2022 Mag.	Caledonia South Site	-
70289	Mound	531386	6440874	A2_l	9.0	8.6	0.9	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70290	Seabed disturbance	531801	6440220	A2_l	9.0	6.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia South Site	-
70291	Magnetic	531685	6440200	A2_h	-	-	-	102	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia South Site	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70292	Mound	529902	6438754	A2_l	6.6	6.0	1.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 MBES	Caledonia South Site	-
70293	Dark reflector	530537	6438254	A2_l	6.2	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic	Caledonia South Site	-
70294	Dark reflector	530571	6435139	A2_l	3.8	0.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70295	Seabed disturbance	531129	6434799	A2_l	23.4	14.7	0.8	-	Boundary	Interpreted as a possible natural feature or may be possible partially buried debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia South Site	-
70296	Debris	533017	6434423	A2_h	8.5	1.9	1.3		Point	Interpreted as debris.		Gardline 2022 SSS Mosaic, Gardline 2023 SSS Mosaic, Gardline 2022 MBES	Caledonia South Site	-
70297	Dark reflector	533077	6433004	A2_l	4.8	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70298	Dark reflector	531481	6433870	A2_l	7.8	2.6	0.6	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2022 MBES	Caledonia South Site	-
70299	Dark reflector	531607	6432991	A2_l	2.6	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site	-
70300	Dark reflector	534752	6430898	A2_l	4.5	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2022 SSS Mosaic	Caledonia South Site Buffer	-

10.8.4 Seabed Anomalies of Archaeological Potential in the Caledonia OECC

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70301	Dark reflector	528824	6437345	A2_l	7.4	3.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70302	Magnetic	528181	6437249	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70303	Dark reflector	527738	6436675	A2_l	10.7	2.7	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70304	Seabed disturbance	527733	6436734	A2_l	10.1	7.8	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70305	Dark reflector	528721	6433923	A2_l	4.1	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70306	Magnetic	528399	6434461	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70307	Dark reflector	528994	6434191	A2_l	2.5	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70308	Dark reflector	529026	6434594	A2_l	3.0	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70309	Dark reflector	529095	6435094	A2_l	5.0	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70310	Debris field	529514	6432806	A2_h	22.4	20.8	-	-	Boundary	Interpreted as debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70311	Dark reflector	528358	6433475	A2_l	2.9	2.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70312	Seabed disturbance	528112	6431871	A2_l	6.5	5.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70313	Magnetic	530581	6431876	A1	-	-	-	740	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70314	Magnetic	526396	6429454	A2_l	-	-	-	42	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70315	Mound	525698	6424718	A2_l	9.1	7.1	1.8	-	Point	Interpreted as a possible natural feature or possible debris.	-	Gardline 2023 MBES	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70316	Linear debris	527558	6423922	A2_l	58.6	2.8	-	-	Linear	This is interpreted as a possibly 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.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70317	Linear debris	527680	6424049	A2_h	116.8	0.5	-	-	Linear	Interpreted as a possible length of linear debris, such as rope or chain.	70318	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70318	Linear debris	527681	6423965	A2_l	30.0	1.5	-	-	Linear	This is interpreted as a possibly 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.	70317	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70319	Seabed disturbance	528760	6423743	A2_l	4.8	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70320	Magnetic	526131	6421661	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70321	Magnetic	527006	6421415	A2_l	-	-	-	32	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70322	Dark reflector	526982	6421132	A2_l	5.0	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70323	Dark reflector	528431	6420340	A2_l	20.0	0.5	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70324	Dark reflector	528391	6420348	A2_l	38.0	0.5	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70325	Dark reflector	526721	6420303	A2_l	6.6	1.6	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70326	Dark reflector	526639	6420532	A2_I	4.4	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70327	Dark reflector	525778	6421026	A2_I	7.0	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70328	Dark reflector	525496	6420990	A2_I	5.6	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70329	Dark reflector	526041	6419674	A2_I	6.8	5.5	0.7	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70330	Dark reflector	526170	6418947	A2_I	5.0	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70331	Dark reflector	527846	6418779	A2_I	3.1	0.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70332	Dark reflector	527852	6419637	A2_I	5.4	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70333	Dark reflector	527950	6418745	A2_I	4.1	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70334	Dark reflector	527611	6418273	A2_I	5.5	3.7	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70335	Dark reflector	526597	6417690	A2_I	6.0	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70336	Mound	525436	6419170	A2_I	9.0	7.0	1.1	-	Point	Interpreted as a possible natural feature or possible debris.	-	Gardline 2023 MBES	Caledonia OECC	-
70337	Dark reflector	525575	6417336	A2_I	5.9	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70338	Dark reflector	526445	6417253	A2_I	3.2	2.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70339	Dark reflector	527191	6416932	A2_I	4.1	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70340	Seabed disturbance	528272	6415845	A2_I	8.5	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70341	Dark reflector	528206	6415430	A2_l	16.4	0.8	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70342	Dark reflector	528052	6415952	A2_l	6.1	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70343	Dark reflector	527380	6416303	A2_l	4.1	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70344	Dark reflector	527168	6416163	A2_l	5.9	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70345	Seabed disturbance	526358	6416129	A2_l	5.8	5.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70346	Seabed disturbance	524734	6415260	A2_l	8.1	6.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70347	Linear debris	525056	6415205	A2_h	34.1	0.5	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70348	Dark reflector	526697	6414909	A2_l	42.0	0.5	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70349	Seabed disturbance	527056	6414738	A2_l	5.4	2.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70350	Seabed disturbance	527716	6413869	A2_l	3.0	0.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70351	Dark reflector	527631	6413926	A2_l	4.4	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70352	Seabed disturbance	526274	6413661	A2_l	11.8	5.3	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70353	Seabed disturbance	526123	6413275	A2_l	3.9	3.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70354	Dark reflector	525398	6413616	A2_l	4.2	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70355	Dark reflector	525509	6414233	A2_l	5.5	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70356	Dark reflector	525558	6412440	A2_l	3.8	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70357	Mound	526325	6412850	A2_l	5.2	3.9	1.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70358	Dark reflector	526460	6412496	A2_l	3.7	2.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70359	Dark reflector	527525	6412848	A2_l	10.2	1.2	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70360	Recorded wreck	523488	6411119	A3	-	-	-	-	Point	Position of a UKHO record for an unknown wreck first reported in 1986. The location was last surveyed in 1987 and not located by sonar. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia OECC Buffer	UKHO 2189, CAN 101802; HER NJ68SW0001
70361	Linear debris	524728	6410143	A2_h	14.8	0.8	-	-	Linear	Interpreted as a possible length of linear debris such as rope or chain.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70362	Magnetic	527321	6408035	A2_l	-	-	-	22	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70363	Dark reflector	524214	6408448	A2_l	5.1	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70364	Magnetic	524861	6407637	A2_l	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70365	Recorded wreck	525968	6407640	A3	-	-	-	-	Point	Position of a UKHO record for an unknown aircraft wreck first reported in 1986. The location was last surveyed in 1987 and not located by sonar and was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia OECC	UKHO 2190; CAN 101803; HER NJ68SE0001
70366	Seabed disturbance	528378	6406697	A2_l	5.5	4.4	0.7	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic,	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
												Gardline 2023 MBES		
70367	Recorded wreck	530430	6406865	A3	-	-	-	-	Point	Position of a UKHO record for an unknown wreck first reported in 1986. The location was last surveyed in 1987 and not located by sonar and was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia OECC	UKHO 2194; CAN 101805; HER NJ77NW0001
70368	Dark reflector	530262	6405463	A2_l	6.6	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70369	Linear debris	528621	6405853	A2_l	23.8	0.9	-	-	Linear	This is interpreted as a possibly 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.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70370	Seabed disturbance	528519	6404908	A2_l	15.9	5.1	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70371	Mound	528115	6404568	A2_l	4.2	4.1	0.9	-	Point	Interpreted as a possible natural feature or possible debris.	-	Gardline 2023 MBES	Caledonia OECC	-
70372	Seabed disturbance	527890	6405674	A2_l	59.5	7.8	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70373	Seabed disturbance	527537	6405080	A2_l	6.5	3.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70374	Magnetic	527742	6404224	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70375	Dark reflector	526590	6404266	A2_l	3.6	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70376	Seabed disturbance	525327	6404644	A2_l	18.1	1.7	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70377	Magnetic	524533	6406534	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70378	Linear debris	525154	6406438	A2_l	30.8	10.3	-	-	Boundary	This is interpreted as a possibly 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.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70379	Recorded Wreck	523350	6406480	A3	-	-	-	-	Point	Position of a UKHO record for an unknown wreck first reported in 1986. The location was last surveyed in 1987 and not located by sonar and was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia OECC	UKHO 2192; CAN 101804; HER NJ67NW0004
70380	Recorded wreck	523739	6405029	A3	-	-	-	-	Point	Position of a UKHO record for an unknown wreck first reported in 1986. The location was last surveyed in 1987 and not located by sonar and was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	Caledonia OECC Buffer	UKHO 2200; CAN 101811; HER NJ67NW0002
70381	Magnetic	524649	6403460	A2_l	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70382	Dark reflector	526453	6402818	A2_l	4.2	0.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70383	Dark reflector	526580	6402949	A2_l	6.1	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-

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70384	Dark reflector	530130	6403018	A2_I	3.0	0.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70385	Seabed disturbance	528794	6401879	A2_I	5.6	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70386	Seabed disturbance	527326	6401574	A2_I	6.3	3.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70387	Seabed disturbance	525818	6401937	A2_I	9.8	3.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70388	Dark reflector	525570	6401592	A2_I	3.3	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70389	Dark reflector	526653	6401347	A2_I	3.6	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70390	Mound	528919	6399268	A2_I	37.7	15.9	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70391	Seabed disturbance	528472	6399465	A2_I	3.4	1.9	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70392	Mound	528222	6399814	A2_I	5.3	2.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70393	Mound	526277	6400325	A2_I	7.0	3.4	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic, Gardline 2023 MBES	Caledonia OECC	-
70394	Dark reflector	524484	6400960	A2_I	4.1	1.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70395	Seabed disturbance	523984	6399834	A2_I	12.3	4.1	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70396	Seabed disturbance	525105	6398945	A2_I	3.5	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-

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70397	Dark reflector	525606	6399390	A2_l	3.0	2.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70398	Dark reflector	525782	6398901	A2_l	2.8	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70399	Dark reflector	526454	6399596	A2_l	11.1	3.4	-	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70400	Dark reflector	526129	6399046	A2_l	5.5	1.3	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70401	Seabed disturbance	526856	6399255	A2_l	8.7	3.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70402	Seabed disturbance	527213	6398862	A2_l	6.7	1.1	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70403	Magnetic	527100	6398570	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70404	Dark reflector	527881	6398221	A2_l	3.2	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70405	Dark reflector	528245	6398341	A2_l	4.3	0.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70406	Dark reflector	528913	6398288	A2_l	6.6	2.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70407	Linear debris	527231	6397685	A2_h	13.2	0.5	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70408, 70409, 70410	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70408	Linear debris	527249	6397769	A2_h	51.1	0.7	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70407, 70409, 70410	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70409	Linear debris	527226	6397699	A2_h	7.8	0.5	-	-	Point	Interpreted as a possible length of linear debris, such as a rope or chain.	70407, 70408, 70410	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70410	Linear debris	527224	6397862	A2_h	67.0	0.5	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70407, 70408, 70409	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70411	Dark reflector	524797	6398349	A2_l	6.1	1.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-

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70412	Dark reflector	523429	6399097	A2_l	6.4	0.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70413	Dark reflector	522703	6398413	A2_l	4.9	1.2	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70414	Magnetic	524131	6397895	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70415	Dark reflector	524135	6397846	A2_l	3.4	1.0	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70416	Dark reflector	524876	6396985	A2_l	4.5	1.7	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70417	Seabed disturbance	525111	6397302	A2_l	7.5	6.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70418	Seabed disturbance	525692.5	6397113	A2_l	5.1	1.8	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70419	Magnetic	527091	6396418	A2_l	-	-	-	77	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70420	Magnetic	527673	6396228	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70421	Magnetic	527827	6396315	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70422	Magnetic	527930	6396292	A2_l	-	-	-	14	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70423	Magnetic	528316	6396128	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70424	Dark reflector	528520	6396275	A2_l	6.8	2.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC Buffer	-
70425	Linear debris	528432	6396145	A2_h	185.6	0.2	0.1	14	Linear	Interpreted as a possible length of partially ferrous linear debris, such as a rope or chain.	70427, 70428, 70429	Gardline 2023 SSS raw	Caledonia OECC Buffer	-

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70426	Magnetic	528429	6396111	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70427	Linear debris	528602	6396152	A2_h	5.1	0.1	0.1	-	Point	Interpreted as a possible length of linear debris, such as a rope or chain.	70425, 70428, 70429	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70428	Linear debris	528639	6396153	A2_h	21.0	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70425, 70427, 70429	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70429	Linear debris	528649	6396152	A2_h	12.9	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70425, 70427, 70428	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70430	Magnetic	528522	6395995	A2_l	-	-	-	7	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70431	Dark reflector	528220	6395716	A2_l	29.0	0.3	-	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70432	Linear debris	528066	6395752	A2_h	4.7	0.7	0.2	-	Point	Interpreted as a possible short length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70433	Magnetic	528035	6395868	A2_l	-	-	-	63	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70434	Linear debris	527808	6395760	A2_h	26.9	0.2	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70435	Linear debris	527740	6395681	A2_h	46.9	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70436	Magnetic	527795	6396060	A2_l	-	-	-	30	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70437	Linear debris	527447	6395699	A2_h	43.3	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70438	Linear debris	527422	6395755	A2_h	26.0	0.2	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-

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70439	Linear debris	527441	6395934	A2_h	20.2	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70440	Linear debris	527437	6395957	A2_h	11.7	0.2	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70441	Linear debris	527422	6395911	A2_h	12.3	0.2	0.1	30	Linear	Interpreted as a possible length of partially ferrous linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw, Gardline 2023 Mag	Caledonia OECC Buffer	-
70442	Magnetic	527130	6395811	A2_l	-	-	-	86	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70443	Linear debris	527027	6396138	A2_h	13.1	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70444	Linear debris	527009	6396131	A2_h	11.6	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70445	Linear debris	527019	6396221	A2_h	41.1	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70446	Debris	526665	6395844	A2_h	7.0	0.6	0.1	-	Point	Interpreted as debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70447	Debris	526573	6395843	A2_h	6.1	1.2	0.5	-	Point	Interpreted as debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70448	Magnetic	525229	6396503	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70449	Linear debris	525142	6396306	A2_h	25.6	0.2	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70450	Magnetic	525068	6396270	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70451	Magnetic	524944	6396453	A2_l	-	-	-	6	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-

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70452	Magnetic	524796	6396475	A2_I	-	-	-	7	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70453	Magnetic	524420	6396533	A2_I	-	-	-	34	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70454	Dark reflector	523532	6396974	A2_I	4.6	2.4	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70455	Dark reflector	523386	6397109	A2_I	4.7	0.6	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70456	Dark reflector	522398	6397222	A2_I	4.5	1.5	-	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS Mosaic	Caledonia OECC	-
70457	Dark reflector	523434	6396551	A2_I	4.0	1.5	1.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70458	Magnetic	523486	6396225	A2_I	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70459	Magnetic	523501	6396223	A2_I	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70460	Seabed disturbance	523642	6396292	A2_I	23.6	2.8	0.5	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70461	Magnetic	523768	6396280	A2_I	-	-	-	29	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70462	Magnetic	523771	6396630	A2_I	-	-	-	10	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70463	Magnetic	523960	6396401	A2_I	-	-	-	10	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70464	Magnetic	524046	6396135	A2_I	-	-	-	85	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70465	Magnetic	524344	6395887	A2_I	-	-	-	8	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-

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70466	Dark reflector	524520	6396210	A2_I	4.5	2.8	2.0	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw, Gardline 2023 MBES	Caledonia OECC	-
70467	Magnetic	524455	6396071	A2_I	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70468	Magnetic	524561	6395958	A2_I	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70469	Magnetic	524923	6396203	A2_I	-	-	-	11	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70470	Magnetic	524681	6395624	A2_I	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70471	Magnetic	525441	6395509	A2_I	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70472	Dark reflector	525665	6395769	A2_I	3.9	3.5	2.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	70473	Gardline 2023 SSS raw	Caledonia OECC	-
70473	Seabed disturbance	525675	6395762	A2_I	21.4	5.1	0.5	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	70472	Gardline 2023 SSS raw	Caledonia OECC	-
70474	Magnetic	525731	6395825	A2_I	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70475	Magnetic	525822	6395858	A2_I	-	-	-	40	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70476	Magnetic	525886	6395754	A2_I	-	-	-	8	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70477	Magnetic	526001	6395422	A2_I	-	-	-	12	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70478	Magnetic	526003	6395271	A2_I	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-

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70479	Magnetic	527584	6395329	A2_l	-	-	-	6	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70480	Linear debris	527407	6395547	A2_h	29.0	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70481	Dark reflector	527446	6395645	A2_l	2.8	2.4	0.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70482	Magnetic	522127	6396479	A2_l	-	-	-	7	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70483	Dark reflector	522052	6396378	A2_l	10.1	0.7	0.4	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw, Gardline 2023 MBES	Caledonia OECC	-
70484	Magnetic	522465	6396183	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70485	Dark reflector	521924	6395925	A2_l	5.1	4.8	1.9	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw, Gardline 2023 MBES	Caledonia OECC	-
70486	Linear debris	522797	6395848	A2_h	73.4	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as rope or chain.	70487	Gardline 2023 SSS raw	Caledonia OECC	-
70487	Dark reflector	522831	6395849	A2_l	4.0	0.3	0.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	70486	Gardline 2023 SSS raw	Caledonia OECC	-
70488	Dark reflector	522872	6395820	A2_l	3.8	2.6	0.7	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70489	Debris	522926	6395715	A2_h	5.8	0.8	0.8	152	Point	Interpreted as ferrous debris.	-	Gardline 2023 SSS raw, Gardline 2023 Mag.	Caledonia OECC	-
70490	Magnetic	523441	6396078	A2_l	-	-	-	56	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70491	Dark reflector	523488	6395783	A2_l	4.6	2.9	1.9	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw,	Caledonia OECC	-

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												Gardline 2023 MBES		
70492	Magnetic	523729	6395823	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70493	Seabed disturbance	523756	6395817	A2_l	5.8	4.0	0.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70494	Magnetic	523834	6395909	A2_l	-	-	-	10	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70495	Dark reflector	521479	6395652	A2_l	2.7	0.3	0.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC	-
70496	Dark reflector	521592	6395598	A2_l	3.9	2.1	1.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC	-
70497	Magnetic	521673	6395446	A2_l	-	-	-	7	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70498	Magnetic	522335	6395419	A2_l	-	-	-	68	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70499	Linear debris	522735	6395335	A2_h	78.0	0.2	0.0	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC	-
70500	Magnetic	522779	6395313	A2_h	-	-	-	161	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70501	Linear debris	522806	6395309	A2_h	34.0	0.6	0.1	77	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Gardline 2023, Titan 2023 SSS raw, Titan 2023 Mag.	Caledonia OECC	-
70502	Magnetic	522849	6395302	A2_l	-	-	-	56	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70503	Dark reflector	522913	6395315	A2_l	4.4	1.4	1.5	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC	-

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70504	Linear debris	522974	6395308	A2_h	49.4	0.3	0.2	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70505, 70506, 70507, 70508, 70509	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC	-
70505	Linear debris	522960	6395298	A2_h	190.1	0.6	0.1	47	Linear	Interpreted as a possible length of ferrous linear debris such as a rope or chain.	70504, 70506, 70507, 70508, 70509	Gardline 2023 SSS raw Titan 2023 Mag., Titan 2023 SSS Raw, Gardline 2023 SSS Mosaic	Caledonia OECC	-
70506	Dark reflector	523050	6395310	A2_l	5.4	0.5	0.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	70504, 70505, 70507, 70508, 70509	Titan 2023 SSS Raw	Caledonia OECC	-
70507	Linear debris	523069	6395312	A2_h	106.7	0.4	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70504, 70505, 70506, 70508, 70509	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC	-
70508	Dark reflector	523077	6395316	A2_l	3.5	2.4	0.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	70504, 70505, 70506, 70507, 70509	Gardline 2023 SSS raw	Caledonia OECC	-
70509	Linear debris	523196	6395339	A2_h	110.9	0.4	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70504, 70505, 70506, 70507, 70508	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC	-
70510	Magnetic	523254	6395347	A2_l	-	-	-	78	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag., Titan 2023 Mag.	Caledonia OECC	-
70511	Magnetic	523158	6395151	A2_l	-	-	-	14	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70512	Magnetic	523201	6395142	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

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70513	Magnetic	523667	6395140	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70514	Magnetic	523779	6395192	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70515	Magnetic	523868	6395303	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70516	Magnetic	523891	6395070	A2_l	-	-	-	13	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70517	Magnetic	523904	6394972	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70518	Magnetic	523916	6394957	A2_l	-	-	-	24	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70519	Magnetic	523937	6394887	A2_h	-	-	-	114	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70520	Magnetic	523957	6394848	A2_l	-	-	-	64	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70521	Magnetic	524034	6395226	A2_l	-	-	-	9	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70522	Magnetic	524086	6394965	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-
70523	Magnetic	524109	6394754	A2_h	-	-	-	155	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70524	Magnetic	524216	6394984	A2_l	-	-	-	95	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag., Titan 2023 Mag.	Caledonia OECC	-
70525	Magnetic	524526	6395100	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC	-

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70526	Magnetic	524522	6395007	A2_l	-	-	-	31	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70527	Magnetic	524999	6394903	A2_l	-	-	-	27	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70528	Magnetic	525024	6394723	A2_l	-	-	-	26	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70529	Magnetic	525051	6394749	A2_h	-	-	-	213	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70530	Magnetic	525068	6394783	A2_l	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70531	Magnetic	525130	6394803	A2_l	-	-	-	72	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag., Gardline 2023 Mag.	Caledonia OECC	-
70532	Magnetic	525095	6394636	A1	-	-	-	800	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70533	Magnetic	525327	6394989	A2_l	-	-	-	28	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70534	Magnetic	525324	6394883	A2_l	-	-	-	60	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag., Titan 2023 Mag.	Caledonia OECC	-
70535	Magnetic	525389	6394695	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70536	Dark reflector	525431	6394730	A2_l	32.2	0.8	0.3	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	70537	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC	-
70537	Dark reflector	525448	6394729	A2_l	4.9	2.4	0.9	-	Point	Interpreted as a possible natural feature or may be possible debris.	70536	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC	-

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70538	Linear debris	525512	6394632	A2_h	13.8	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70539	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70539	Linear debris	525518	6394634	A2_h	37.4	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70538	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70540	Magnetic	525541	6394953	A2_l	-	-	-	56	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70541	Magnetic	525640	6394908	A2_l	-	-	-	14	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70542	Magnetic	525714	6394786	A2_l	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70543	Magnetic	525728	6394771	A2_l	-	-	-	33	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70544	Linear debris	525728	6394754	A2_h	15.4	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70545	Linear debris	525758	6394740	A2_h	15.1	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70546	Linear debris	525830	6394901	A2_h	25.4	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70547	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70547	Linear debris	525877	6394903	A2_h	62.2	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70546	Gardline 2023 SSS raw, Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70548	Magnetic	525825	6394740	A2_l	-	-	-	62	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70549	Debris	525877	6394732	A1	7.3	2.7	0.3	977	Point	Interpreted as ferrous debris.	-	Gardline 2023 SSS raw, Titan 2023 SSS raw, Titan 2023 Mag.,	Caledonia OECC Buffer	-

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70550	Dark reflector	525999	6394865	A2_l	67.9	0.2	0.1	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70551	Magnetic	526004	6394977	A2_l	-	-	-	13	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70552	Linear debris	526064	6394664	A2_h	27.8	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70553	Linear debris	526071	6394927	A2_h	34.1	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70554	Linear debris	526092	6394989	A2_h	16.8	0.1	-	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	70556	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70555	Linear debris	526131	6394892	A2_h	71.0	0.2	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70556	Linear debris	526147	6394983	A2_h	21.3	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70554	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70557	Dark reflector	526163	6394986	A2_l	3.6	1.7	0.6	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70558	Linear debris	526174	6394929	A2_h	28.3	0.4	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70559	Magnetic	526214	6395093	A2_l	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70560	Mound	526266	6394882	A2_l	5.8	4.5	2.0	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 MBES, Titan 2023 MBES	Caledonia OECC Buffer	-
70561	Mound	526269	6394609	A2_l	4.4	2.0	0.7	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 MBES	Caledonia OECC Buffer	-
70562	Linear debris	526267	6394975	A2_h	33.9	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris, such as a rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-

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70563	Magnetic	526339	6395023	A2_l	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70564	Dark reflector	526379	6395105	A2_l	12.4	0.8	0.3	-	Linear	Interpreted as a possible natural feature or may be possible debris.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-
70565	Magnetic	526464	6394641	A2_l	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70566	Recorded wreck	526518	6394463	A3	-	-	-	-	Point	Position of the wreck of an unknown craft broken into two parts that hit rocks at Guthrie (Banff) and sank in the bay in January 1745. Wreckage could also be from an unknown craft that sank in February 1853. No anomalous features were identified in the 2022 or 2023 geophysical datasets. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	-	CAN 327709; CAN 329485
70567	Dark reflector	526565	6394581	A2_l	2.4	0.8	0.4	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70568	Dark reflector	526522	6394793	A2_l	2.4	0.6	0.8	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70569	Linear debris	526563	6394831	A2_h	129.4	0.4	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70570	Dark reflector	526575	6394777	A2_l	2.5	1.0	0.3	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70571	Magnetic	526589	6394982	A2_l	-	-	-	30	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70572	Linear debris	526619	6394733	A2_h	76.1	0.1	-	-	Linear	Interpreted as a possible length of linear debris, such as rope or chain.	-	Gardline 2023 SSS raw	Caledonia OECC Buffer	-

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70573	Magnetic	526670	6394675	A2_I	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70574	Magnetic	526885	6394888	A2_I	-	-	-	87	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Gardline 2023 Mag.	Caledonia OECC Buffer	-
70575	Magnetic	526910	6394779	A2_I	-	-	-	6	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70576	Magnetic	526287	6394064	A2_I	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70577	Dark reflector	526250	6394257	A2_I	2.6	1.2	0.5	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70578	Dark reflector	526156	6394268	A2_I	19.4	0.2	0.1	-	Linear	Interpreted as a possible natural feature or may be possible linear debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70579	Magnetic	526060	6394058	A2_I	-	-	-	11	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70580	Linear debris	525983	6394402	A2_I	51.2	0.4	0.2	-	Linear	This is interpreted as a possibly 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.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70581	Magnetic	525662	6394438	A2_I	-	-	-	40	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70582	Linear Debris	525495	6394385	A2_I	17.1	3.1	0.6	-	Linear	This is interpreted as a possibly 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.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-

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70583	Linear Debris	525489	6394406	A2_l	40.5	0.3	0.1	-	Linear	This is interpreted as a possibly 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.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70584	Magnetic	525487	6394434	A2_h	-	-	-	106	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70585	Magnetic	525324	6394211	A2_l	-	-	-	22	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70586	Magnetic	525460	6394403	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70587	Magnetic	525433	6394444	A2_l	-	-	-	77	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70588	Linear debris	525334	6394381	A2_l	43.4	0.2	0.1	33	Linear	This is interpreted as a possibly 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.	-	Titan 2023 Mag., Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70589	Linear debris	525318	6394409	A2_l	12.6	0.2	0.1	-	Linear	This is interpreted as a possibly 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.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70590	Magnetic	525312	6394467	A2_l	-	-	-	12	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70591	Magnetic	525293	6394248	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-

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70592	Magnetic	525296	6394568	A2_l	-	-	-	56	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70593	Linear debris	525221	6394287	A2_h	44.8	0.1	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70594	Magnetic	525199	6394263	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70595	Magnetic	525171	6394195	A2_l	-	-	-	29	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70596	Magnetic	525060	6394499	A2_l	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70597	Magnetic	524939	6394231	A2_l	-	-	-	22	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70598	Magnetic	524920	6394523	A2_l	-	-	-	23	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70599	Magnetic	524845	6394216	A2_l	-	-	-	60	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70600	Magnetic	524840	6394500	A2_l	-	-	-	58	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70601, 70603	Titan 2023 Mag.	Caledonia OECC	-
70601	Magnetic	524828	6394502	A2_l	-	-	-	49	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70600, 70603	Titan 2023 Mag.	Caledonia OECC	-
70602	Magnetic	524832	6394592	A2_l	-	-	-	34	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70603	Magnetic	524798	6394503	A2_l	-	-	-	75	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70600, 70601	Titan 2023 Mag.	Caledonia OECC	-
70604	Magnetic	524788	6394448	A2_l	-	-	-	30	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

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70605	Magnetic	524769	6394257	A2_I	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70606	Magnetic	524734	6394333	A2_I	-	-	-	22	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70607	Magnetic	524514	6394513	A2_I	-	-	-	23	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70608	Magnetic	524482	6394625	A2_I	-	-	-	67	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70609	Magnetic	524418	6394313	A2_I	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70610	Magnetic	524291	6394334	A2_I	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70611	Magnetic	524313	6394578	A2_I	-	-	-	64	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70612	Magnetic	524151	6394355	A2_I	-	-	-	27	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70613	Magnetic	524154	6394463	A2_I	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70614	Magnetic	523854	6394506	A2_I	-	-	-	10	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70615	Magnetic	523836	6394654	A2_I	-	-	-	33	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70616	Magnetic	523836	6394688	A2_I	-	-	-	13	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70617	Magnetic	523762	6394413	A2_I	-	-	-	16	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

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70618	Magnetic	523514	6394492	A2_l	-	-	-	14	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70619	Magnetic	523465	6394606	A2_l	-	-	-	17	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70620	Magnetic	523256	6394490	A2_h	-	-	-	163	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70621	Magnetic	523228	6394509	A2_l	-	-	-	12	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70622	Magnetic	522305	6394881	A2_l	-	-	-	10	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70623	Magnetic	521828	6395043	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70624	Magnetic	521799	6394895	A2_l	-	-	-	107	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70625	Magnetic	521749	6394796	A2_l	-	-	-	97	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70626	Magnetic	521619	6395031	A2_l	-	-	-	46	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70627	Magnetic	521501	6394869	A2_l	-	-	-	32	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70628	Magnetic	521099	6394974	A2_l	-	-	-	34	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70629	Magnetic	521416	6394670	A2_l	-	-	-	50	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70630	Magnetic	521755	6394407	A2_l	-	-	-	86	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

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70631	Magnetic	522084	6394391	A2_l	-	-	-	51	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70632	Magnetic	522358	6394491	A2_l	-	-	-	43	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70633	Magnetic	522423	6394444	A2_l	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70634	Magnetic	522610	6394202	A2_h	-	-	-	149	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70635	Magnetic	523105	6394267	A2_h	-	-	-	190	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70636	Magnetic	523203	6394216	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70637	Magnetic	523298	6394275	A2_l	-	-	-	40	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70638	Magnetic	523662	6394221	A2_l	-	-	-	15	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70639	Magnetic	523780	6394024	A2_l	-	-	-	45	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70640	Magnetic	524341	6394145	A2_l	-	-	-	18	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70641	Magnetic	524455	6394236	A2_h	-	-	-	303	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70642	Magnetic	524556	6393938	A2_h	-	-	-	321	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70643	Magnetic	524706	6394161	A2_h	-	-	-	169	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

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70644	Magnetic	524786	6393868	A2_l	-	-	-	55	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70645	Magnetic	524853	6394140	A2_l	-	-	-	50	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70646	Magnetic	524850	6393930	A2_l	-	-	-	49	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70647	Magnetic	524995	6394083	A2_l	-	-	-	39	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70648	Magnetic	524986	6393979	A2_l	-	-	-	22	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70649	Magnetic	525073	6394139	A2_l	-	-	-	53	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70650	Magnetic	525087	6393927	A2_h	-	-	-	112	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70651, 70652	Titan 2023 Mag.	Caledonia OECC Buffer	-
70651	Magnetic	525085	6393893	A2_l	-	-	-	52	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70650, 70652	Titan 2023 Mag.	Caledonia OECC Buffer	-
70652	Magnetic	525095	6393962	A2_l	-	-	-	27	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70650, 70651	Titan 2023 Mag.	Caledonia OECC Buffer	-
70653	Magnetic	525232	6394156	A2_l	-	-	-	54	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70654	Magnetic	525269	6393972	A2_l	-	-	-	40	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70655	Magnetic	525480	6393796	A2_l	-	-	-	134	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70656	Magnetic	525513	6393793	A2_l	-	-	-	105	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-

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70657	Recorded Wreck	525594	6393692	A3	-	-	-	-	Point	Position of a UKHO record for the wreck of the *Ebenezer*, a sailing vessel wrecked on Salt Rock off Whitehill, Banffshire. The ship was enroute from Porsgrunn for Grimsby. The vessel broke in half and the bow sank at Rock and the stern drifted west and was not found. The location was last surveyed in 1987 and no wreckage was detected, and the record was amended to dead. No anomalous features were identified in the 2022 or 2023 geophysical datasets at this location. Historic record of possible archaeological interest with no corresponding geophysical anomaly.	-	-	-	UKHO 2150, CAN 101788, HER NJ66NE0002
70658	Dark reflector	525868	6393607	A2_l	2.6	0.9	0.2	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70659	Magnetic	525286	6393757	A2_h	-	-	-	446	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70660	Seabed disturbance	525164	6393703	A2_l	11.0	8.8	0.4	-	Boundary	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70661	Magnetic	525228	6393767	A2_l	-	-	-	42	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70662	Dark reflector	525134	6393755	A2_l	2.4	0.5	0.3	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70663	Magnetic	525019	6393798	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70664	Magnetic	525016	6393762	A2_l	-	-	-	27	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70665	Dark reflector	525112	6393640	A2_l	11.7	0.3	0.1	65	Linear	Interpreted as a possible natural feature or may be possible ferrous linear debris.	-	Titan 2023 Mag., Titan 2023 SSS Raw	Caledonia OECC Buffer	-

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70666	Magnetic	525016	6393694	A2_h	-	-	-	168	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70667, 70668, 70669, 70671, 70672	Titan 2023 Mag.	Caledonia OECC Buffer	-
70667	Magnetic	525049	6393653	A2_l	-	-	-	75	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70666, 70668, 70669, 70671, 70672	Titan 2023 Mag.	Caledonia OECC Buffer	-
70668	Magnetic	525064	6393612	A2_l	-	-	-	72	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70666, 70667, 70669, 70671, 70672	Titan 2023 Mag.	Caledonia OECC Buffer	-
70669	Magnetic	525051	6393614	A2_h	-	-	-	193	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70666, 70667, 70668, 70671, 70672	Titan 2023 Mag.	Caledonia OECC Buffer	-
70670	Magnetic	524904	6393741	A2_h	-	-	-	115	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70671	Magnetic	525067	6393577	A2_l	-	-	-	80	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70666, 70667, 70668, 70669, 70672	Titan 2023 Mag.	Caledonia OECC Buffer	-
70672	Magnetic	525054	6393580	A2_l	-	-	-	59	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70666, 70667, 70668, 70669, 70671	Titan 2023 Mag.	Caledonia OECC Buffer	-
70673	Magnetic	524866	6393750	A2_l	-	-	-	64	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70674	Debris	524826	6393764	A2_h	1.6	0.2	0.1	-	Point	Interpreted as debris.	70675	Titan 2023 SSS Raw	Caledonia OECC Buffer	-
70675	Linear debris	524821	6393758	A2_h	16.1	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70674	Titan 2023 SSS Raw	Caledonia OECC Buffer	-

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70676	Magnetic	524871	6393680	A2_l	-	-	-	66	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70677	Magnetic	524926	6393596	A2_l	-	-	-	34	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70678	Magnetic	524863	6393608	A2_l	-	-	-	72	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70679, 70680	Titan 2023 Mag.	Caledonia OECC Buffer	-
70679	Magnetic	524864	6393570	A2_h	-	-	-	195	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70678, 70680	Titan 2023 Mag.	Caledonia OECC Buffer	-
70680	Magnetic	524856	6393538	A2_h	-	-	-	144	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70678, 70679	Titan 2023 Mag.	Caledonia OECC Buffer	-
70681	Magnetic	524947	6393462	A2_l	-	-	-	57	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70682	Magnetic	524794	6393582	A2_h	-	-	-	201	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70683	Magnetic	524808	6393544	A2_h	-	-	-	109	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70684	Magnetic	524833	6393508	A2_l	-	-	-	44	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70685	Magnetic	524885	6393463	A2_l	-	-	-	45	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70686	Magnetic	524774	6393549	A2_l	-	-	-	91	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70687	Magnetic	524848	6393432	A2_l	-	-	-	57	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70688	Magnetic	524749	6393414	A2_l	-	-	-	45	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-

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70689	Magnetic	524596	6393402	A2_h	-	-	-	298	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70690	Magnetic	524639	6393537	A2_l	-	-	-	21	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70691	Magnetic	524717	6393698	A2_h	-	-	-	105	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70692	Magnetic	524524	6393555	A2_l	-	-	-	43	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70693	Magnetic	524651	6393746	A2_h	-	-	-	180	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70694	Magnetic	524412	6393710	A2_l	-	-	-	70	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70695	Magnetic	524337	6393795	A2_l	-	-	-	25	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70696	Dark reflector	524155	6393970	A2_l	4.4	0.6	0.1	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC	-
70697	Linear debris	524031	6393867	A2_h	73.8	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70698	Titan 2023 SSS Raw	Caledonia OECC	-
70698	Linear debris	524009	6393890	A2_h	16.1	0.3	0.1	-	Linear	Interpreted as a possible length of linear debris such as a rope or chain.	70697	Titan 2023 SSS Raw	Caledonia OECC	-
70699	Dark reflector	523906	6393927	A2_l	4.8	0.6	0.3	-	Point	Interpreted as a possible natural feature or may be possible debris.	-	Titan 2023 SSS Raw	Caledonia OECC	-
70700	Magnetic	523802	6393593	A2_h	-	-	-	329	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70701	Magnetic	523284	6393602	A2_l	-	-	-	94	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
70702	Magnetic	523196	6393722	A2_l	-	-	-	97	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70703	Magnetic	523264	6393996	A2_l	-	-	-	19	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70704	Magnetic	522640	6393880	A2_l	-	-	-	89	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70705	Magnetic	522506	6393654	A2_h	-	-	-	433	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70706	Magnetic	522118	6393606	A2_h	-	-	-	150	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC Buffer	-
70707	Magnetic	522020	6394118	A2_l	-	-	-	38	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70708	Magnetic	521991	6394193	A2_l	-	-	-	48	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70709	Magnetic	521651	6393682	A2_l	-	-	-	44	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70710, 70711, 70712, 70713	Titan 2023 Mag.	Caledonia OECC Buffer	-
70710	Magnetic	521657	6393714	A2_l	-	-	-	68	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70709, 70711, 70712, 70713	Titan 2023 Mag.	Caledonia OECC Buffer	-
70711	Magnetic	521661	6393748	A2_h	-	-	-	156	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70709, 70710, 70712, 70713	Titan 2023 Mag.	Caledonia OECC Buffer	-
70712	Magnetic	521643	6393751	A2_l	-	-	-	99	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70709, 70710, 70711, 70713	Titan 2023 Mag.	Caledonia OECC Buffer	-
70713	Magnetic	521655	6393783	A2_l	-	-	-	29	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	70709, 70710,	Titan 2023 Mag.	Caledonia OECC Buffer	-

ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Magnetic Amplitude (nT)	Anomaly Geometry	Interpretation	Associated Anomalies	Dataset	Section	External Refs
											70711, 70712			
70714	Magnetic	521269	6394129	A2_I	-	-	-	8	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-
70715	Magnetic	521235	6394275	A2_I	-	-	-	38	Point	Interpreted as possible ferrous debris either buried or with no surface expression.	-	Titan 2023 Mag.	Caledonia OECC	-

10.8.5 Recorded Losses

10.8.5.1 Recorded losses identified in the Caledonia OWF have been presented below

Canmore	Aberdeenshire HER	Name	Type	Lost	Description
310659		Unknown	Craft	1785	Classified as sloop, no cargo specified but date of loss cited as 8th November 1785. This vessel was lost at Whitehills.
	NJ66NE0003	Adventure	Unknown	1800	The ADVENTURE, under Captain Stedman, travelling from London to Norway, was wrecked on the Buchan coast on the 7th January 1800. Crew saved.
208715	NJ66NE0098	HMS Widgeon	Schooner	1808	HMS WIDGEON, a 4-gun schooner under Captain Elliot was wrecked at Blackpotts, 2 miles NW of Banff on the 20th April 1808. HMS WIDGEON was a Royal Navy Cuckoo-class schooner of four 12-pounder carronades with a crew of 20. She was built by William Wheaton at Brixham and launched in 1806. She was commissioned in 1807 under Lieutenant William Morgan for the North Sea. In 1808 she came under the command of Lieutenant George Elliot. WIDGEON was on the Scottish coast helping to assemble a convoy for America when she received orders to proceed to Banff to notify the ships waiting there that the convoy was about to depart. She arrived there on 18 April 1808 and the next day sent a boat into the port. Widgeon then remained four to five miles offshore while waiting for her boat to return. During a heavy snowstorm on 20 April, at 2:30am she ran into a reef two miles to the north-west of Banff. Her crew threw shot overboard and fired guns of distress. However, there was a heavy swell and she filled with water within 10 minutes. Although she soon was bilged, her crew took to the boats and were saved. The subsequent court martial on her loss sentenced WIDGEON's pilot, Alexander Layell, to six months incarceration in the Marshalsea Prison and to be fined all pay due to him. Elliot had ordered Layell to remain at least four miles from shore throughout the night. Instead, Layell had gone below, leaving a bosun's mate in charge, who had let WIDGEON drift towards the shore.
208719	NJ66NE0097	William Henry	Schooner	1813	The schooner WILLIAM HENRY, under Captain Myers, was wrecked at Knock head on the 10th February 1813, a few miles West of Banff.
311288		Isabella	Schooner	1821	Classified as schooner, with cargo of coal: date of loss cited as 19th November 1821. Isabella: this vessel was wrecked at Whitehills, Banff[shire]. Capt. Smith.
269614	NJ66NE8012	Marchioness	Schooner	1826	The MARCHIONESS, of and for Wick, from Leith, was driven on shore a little to the southward of Blackpotts on the 25th November 1826. The crew and passengers were saved, although one passenger died on being landed. The cargo was damaged, but it was anticipated at the time that the vessel would be got off.
269615	NJ66NE0014	Unknown	Brig	1826	It was reported on the 19th November 1826 that about a quarter of a mile west of Blackpotts, a vessel, name unknown, was seen to come in among the breakers, where masses of large rock extend a considerable way out, and immediately become an entire wreck.
327081		Unknown	Craft	1826	Hull of a vessel washed ashore 2 miles west of Banff
329186		Unknown	Schooner	1836	It was reported on the 19th February 1836 that a schooner had been cast ashore bottom-up between Portsoy and Banff, with all hands lost. No further information.
327054	NJ66NW0033	Unknown	Sloop	1836	It was reported on the 19th February 1836 that a sloop had been cast ashore bottom-up between Portsoy and Banff, with all hands lost. No further information.
329639		Unknown	Fishing vessel	1842	Run down (off Macduff?). 2 lost
311136		Bee	Craft	1843	No classification or cargo specified: date cited as January 1843. Bee: this vessel had been wrecked at Cromarty. Wreckage washed ashore at Whitehills.

Canmore	Aberdeenshire HER	Name	Type	Lost	Description
275499	NJ66NE0016	Jane	Schooner	1843	The schooner JANE, under Captain Reid, carrying a cargo of barley from Portgordon to Aberdeen, was struck on stranded on Salt Stane Rock, Whitehills on the 22nd December 1843. The crew were saved.
275447	NJ66NE0015	Linnet	Schooner	1843	The schooner LINNET, of Sunderland, was stranded near Cromarty, sold on, drifted off, and was wrecked at Links of Boyndie on the 10th January 1843.
247638	NJ66NW0032; NJ66NW0031	Perth	Sloop	1851	The sloop PERTH, of Newcastle, with a crew of three men under Captain Crowie, travelling from Newcastle to Dingwall, was wrecked 5 miles west of Banff on the 10th January 1851. The crew were saved.
282993	NJ66NE0018	Ann		1853	It was reported on the 19th February 1853 that a great deal of wreck was washed on shore about six or eight miles East and West of Banff, supposed to have come from the North Sea, including spars, yards, rails, bulwarks, one top-gallant bulwark, with 'JEAN' in yellow letters, the rim of a top with 'ANN', two oars painted black, on one of which is cut 'OIO, Lynn', and the stern of a ship's boat 'MELDON, of Newcastle, Thos. Sykes', also some timber, supposed to be railway sleepers.
N/A	NJ66NE0021	Clio	Unknown	1853	It was reported on the 22nd February 1853 that a name board marked 'CLIO', in large broad yellow letters, with a quantity of wreck supposed to have belonged to a vessel of about 200 tons, was washed on shore on the 18th February 1853, about 8 miles East of Banff.
N/A	NJ66NE0017	Jean	Unknown	1853	It was reported on the 19th February 1853 that a great deal of wreck was washed on shore about six or eight miles East and West of Banff, supposed to have come from the North Sea, including spars, yards, rails, bulwarks, one top-gallant bulwark, with 'JEAN' in yellow letters, the rim of a top with 'ANN', two oars painted black, on one of which is cut 'OIO, Lynn', and the stern of a ship's boat 'MELDON, of Newcastle, Thos. Sykes', also some timber, supposed to be railway sleepers.
N/A	NJ66NE0020	Meldon	Unknown	1853	It was reported on the 19th February 1853 that a great deal of wreck was washed on shore about six or eight miles East and West of Banff, supposed to have come from the North Sea, including spars, yards, rails, bulwarks, one top-gallant bulwark, with 'JEAN' in yellow letters, the rim of a top with 'ANN', two oars painted black, on one of which is cut 'OIO, Lynn', and the stern of a ship's boat 'MELDON, of Newcastle, Thos. Sykes', also some timber, supposed to be railway sleepers.
N/A	NJ66NE0019	Oio	Unknown	1853	It was reported on the 19th February 1853 that a great deal of wreck was washed on shore about six or eight miles East and West of Banff, supposed to have come from the North Sea, including spars, yards, rails, bulwarks, one top-gallant bulwark, with 'JEAN' in yellow letters, the rim of a top with 'ANN', two oars painted black, on one of which is cut 'OIO, Lynn', and the stern of a ship's boat 'MELDON, of Newcastle, Thos. Sykes', also some timber, supposed to be railway sleepers.
283926	NJ66NE0022	Dunairn	Craft	1857	The DUNAIRN, of Sunderland, under Captain Watson, carrying a cargo of coal from Shields to a port in the Moray Firth, was stranded on Salt Stone Rocks, off Blackpotts, on the 27th August 1857. The crew were saved.
326931		Earl of Clarendon	Schooner	1857	Stranded on Collie Rock, Banff with a cargo of coal. Floated off and sank in 7 fathoms. Capt. Ritchie
209118	NJ66NE0023	Janet and Ann	Schooner	1857	The schooner JANET AND ANN, with a crew of 3, carrying a cargo of timber, was wrecked 3 miles W of Banff on the 24th November 1857. All hands lost.
309827		Penelope	Sloop	1857	Classified as sloop: no cargo specified, but date of loss cited as February 1857. Penelope: this vessel was lost between Lossiemouth and Fraserburgh.
N/A	NJ77SW0001	Penelope	Smack	1858	It was reported on the 12th March 1858 that some wreck had been washed ashore on the Banffshire coast, which resembled the cargo etc. of the PENELOPE, which sailed from Lossiemouth on the 5th March for Fraserburgh with a cargo of sawn timber, and had not been heard of since.

Canmore	Aberdeenshire HER	Name	Type	Lost	Description
284503	NJ66NE0025	Balaclava	Craft	1859	A large boat, named BALACLAVA, under Captain McGregor, for Gardenstown, was driven on shore near Whitehills on the 10th September 1859. The crew were saved.
N/A	NJ66NE0024	Jean	Skiff	1859	On the 9th March 1859, a fisherman's skiff, marked 'JEAN, of Nairn' on the outside, and 'J.B.' inside, was washed ashore two miles West of Banff.
285523	NJ77SW0003	Lark	Schooner	1867	The schooner LARK, under Captain Thompson, carrying a cargo of herring from Burghead to the Elbe or the Rhine, was abandoned off Macduff in a sinking state on the 24th November 1867. The crew were saved.
N/A	NJ77NW0002	Jessie Ann	Lugger	1874	The 6 year old lugger JESSIE ANN, with a crew of six under Captain and Owner James Imlach, fishing out of Macduff, in ballast, foundered about 11 miles north-east by north of Banff on the 14th August 1874. 6 lives lost.
209358	NJ66NE0006	Alpha	Schooner	1879	The 13 year old schooner ALPHA, of Sandefjord, with a crew of eight under Captain T. Eversen, carrying a cargo of coals, soda, and fire bricks from Sunderland to Burg-on-Fehmern, Germany, was stranded 0.5 miles north of Whitehills on the 11th April 1879. The crew and part of the cargo were saved.
209365	NJ66NE0007	Kitty Lass	Lugger	1881	On the 11th June 1881, the lugger KITTY LASS, of Whitehills, with a crew of 4 under Captain Lovie, departed Whitehills, in ballast, for fishing but foundered at the entrance to Black Pots Haven, 2 miles W of Banff. Four of crew lost.
209387	NJ66NE0008	Sappemeer	Schooner	1885	The 23 year old schooner SAPPEMEER, with a crew of 6 under Captain G. Junner, carrying a cargo of 200 tons coal from Sunderland to Lossiemouth was stranded White Stones Rock, near Banff, on the 25th January 1885. The SAPPEMEER was built at Sappemeer, Holland, in 1862, and registered at Inverness in February 1884. She was schooner-rigged, and owned by Mr. James Sime, of Elgin, who purchased her in January 1884, and was registered as managing owner.
311289		Unknown	Craft	1887	200 yards from Whitehills Harbour.
251582	NJ66NE0011	Pioneer	Ketch	1893	The wooden ketch PIONEER, with a crew of 4 men under Captain R. McLeod, carrying a cargo of coal from Sunderland to Nairn, was stranded on Boyndie Links on the 17th November 1893.
251592	NJ66NE0012	Supply	Lugger	1893	The 5 year old lugger SUPPLY, in ballast, was driven from moorings and stranded on the E side of Whitehills harbour on the 18th November 1893.
209506	NJ66NE0009	Young Peter	Ketch	1896	The ketch YOUNG PETER, with a crew of 4 under Captain W, Young, carrying a cargo of potatoes from Balintore to Sunderland, was stranded near the entrance to Whitehills harbour on the 20th February 1896.
209561	NJ66NE0010	Favourite	Fishing vessel	1898	The fishing smack FAVOURITE, was driven from anchor, stranded and lost at the Boat Harbour, Blackpotts, Banff, on the 29th November 1897.
209706	NJ66NW0030	Clara Ellen	Dandy	1914	The wooden dandy CLARA ELLEN, carrying a cargo of timber was stranded one mile West of Whitehills Harbour on the 20th March 1914.
311142		Leader	Steam drifter	1930	Classified as wooden steam drifter: registration cited as BF 1338, and date of loss as 2 December 1930. Leader: foundered 2 miles off Whitehills. Capt. Geddes.
311121		Unknown	Aircraft	1941	No classification specified: date of loss cited as 1st March 1941. Unknown: this German aircraft crashed between Buckie and Whitehills. Reported near Boyndie.
309841		Unknown	Aircraft	1942	This aircraft crashed into the sea between Buckie and Fraserburgh.

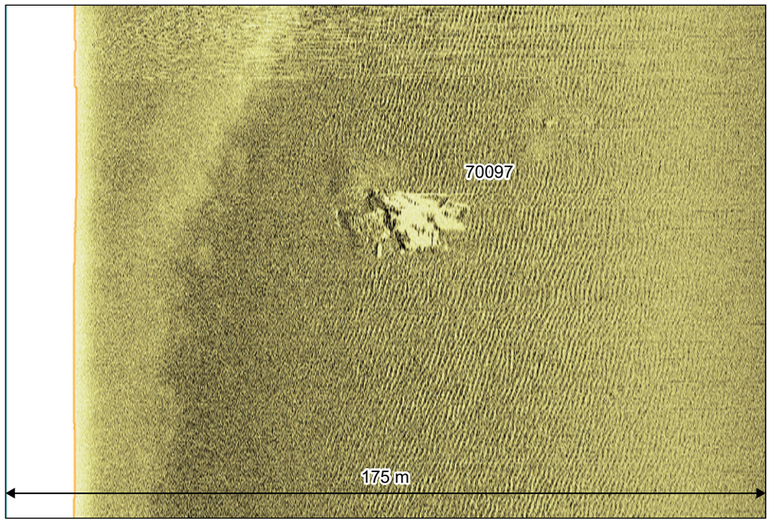
Canmore	Aberdeenshire HER	Name	Type	Lost	Description
310238		Unknown	Aircraft	1943	Aircraft reported lost off Whitehills.
N/A	NJ66NE0004	Farmer	Unknown		Supposed site of wreck.
N/A	NJ77SW0001	Agenes	Unknown		Supposed site of wreck.

10.8.6 Wreck Sheets

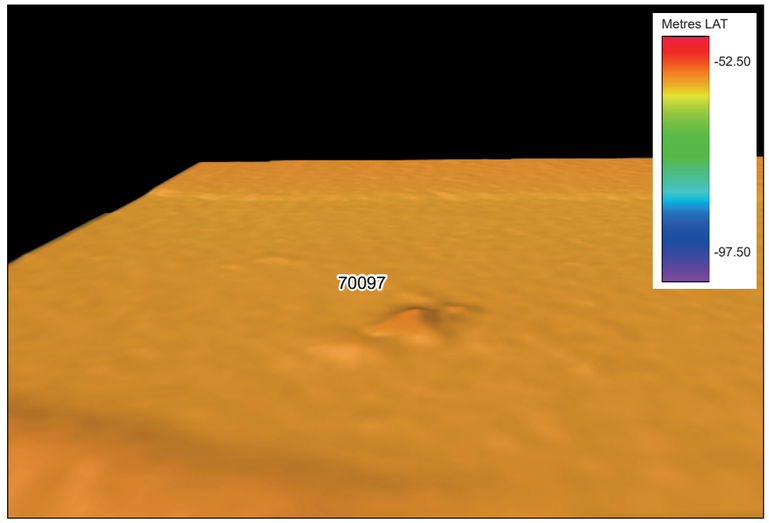
10.8.6.1 A series of Wreck Sheets have been presented below.

ID 70097 – *Tekla* (Part of) (Probably) – UKHO 71120

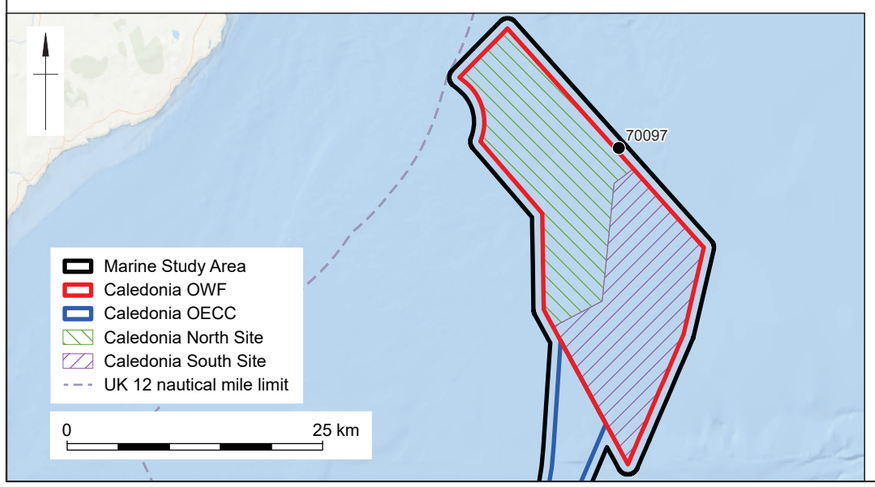
Location		532691 E 6459600 N	**Area**	Caledonia OWF North Site Buffer
Geophysical survey dimensions and notes		**70097** is a wreck situated in the north of the Caledonia OWF Site, on a roughly NNW-SSE alignment. The wreck is recorded by the UKHO (71120) as a non-dangerous wreck, part of the Danish steamship *Tekla* (probably). In the SSS data it appears as a debris field with dimensions of 36.3 x 20.3 x 1.7 m, made up of multiple elongate and sub-angular dark reflectors, with distinct shadows. The largest measures 15.4 x 3.2 m in the centre of the field, although it could be made up of several objects. In the MBES data the wreck is visible as a sub-rounded mound, measuring 15.5 x 13.1 x 1.3 m with a smaller rounded mound located just to its south-west, measuring approximately 5 m across. There is no magnetic response associated with the wreck as it was not covered by the data.		
Build	**Type**	Steamship		
	Construction	Metal		
	Dimensions (m)	75.9 x 11.6 x 4.6		
	Shipyard	Helsingors Jernsk & MSK, Elsinore (1920)		
Loss	**Cause**	Torpedoed by U-55 (21 January 1940)		
Extent of Survival Lorem ipsum		The ship is recorded as having two boilers and a triple expansion engine of 158 NHP with a single shaft. The ship was on passage from Burntisland to Aarhus when it was torpedoed by U-55. 9 men were lost. A survey on 23 January 2008 found the least depth of the wreck to be 51.7 m, lying in a general depth of 54.9 m. The wreck had dimensions of 36 x 30 x 2.6 m and was oriented 135/315°. A strong magnetic anomaly was detected. It is noted in the record that a separated section of the *Tekla* (UKHO 1190) is located nearby. The wreck appears in the current data as a highly degraded smaller part of a larger wreck located to the south. There is no surviving structure, and it appears more as a debris field than a coherent wreck. The length is the same as observed in 2008 but both the width and height are now much reduced, suggesting possible collapse and/or burial. The wreck is located within an area of sand waves, which may move and cover/uncover parts of the wreck. Further outlying debris may be buried. The other part of the *Tekla* (UKHO 1190) is located approximately 190 m to the south, see Sheet 2.		



Sidescan sonar waterfall image, 175 m range per channel



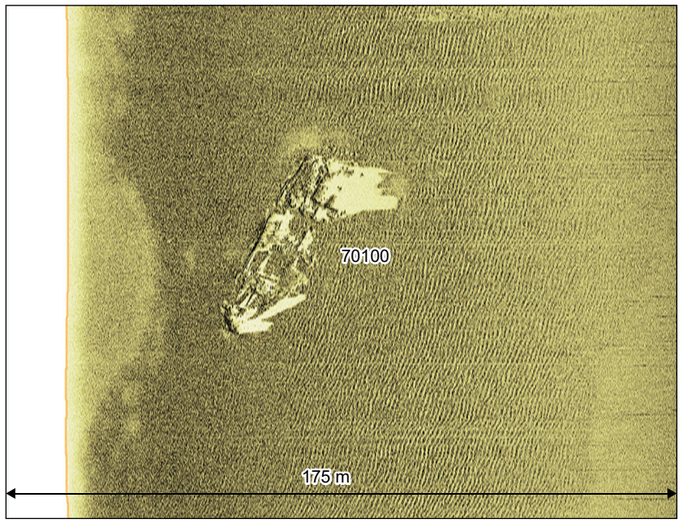
Multibeam echosounder grid image, x1 vertical exaggeration, looking west



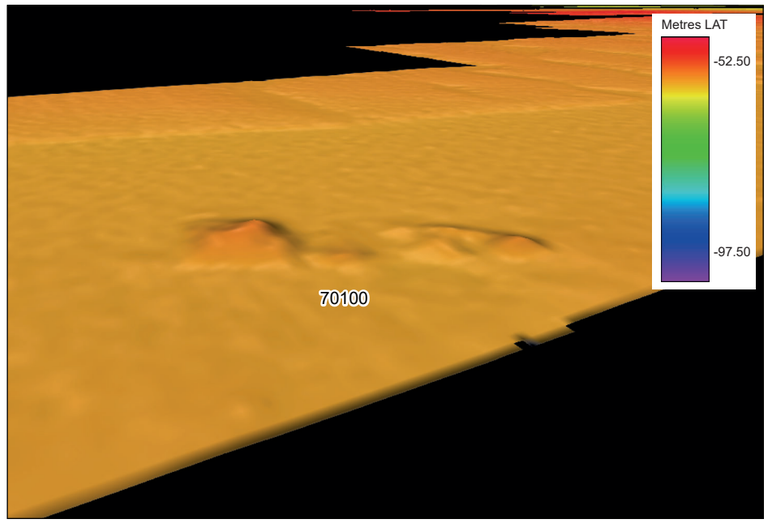
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 1			

ID 70100 – *Tekla* (Part of) – UKHO 1190

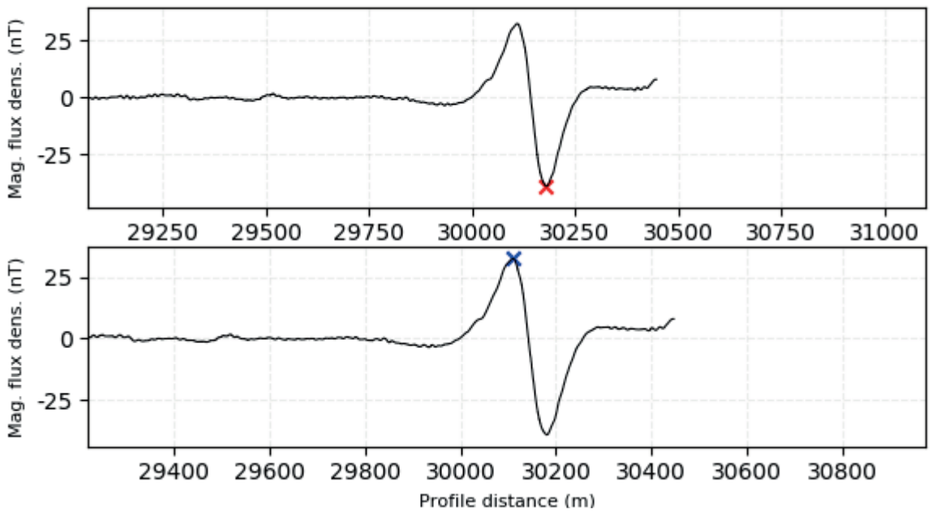
Location		532677 E 6459411 N	**Area**	Caledonia OWF North Site Buffer
Geophysical survey dimensions and notes		**70100** is a wreck situated in the north of the Caledonia OWF Site on a roughly north-east to south-west alignment. The wreck is recorded by the UKHO (71120) as non-dangerous, part of the Danish steamship *Tekla*. In the SSS data the wreck appears to be mostly intact and coherent, although less distinct to the north-east. Multiple internal elongate and sub-rounded dark reflectors are present indicating internal structure. Overall dimensions of 62.5 x 16.9 x 2.5 m were observed. Debris field **70099** (20.5 x 8.8 x 2.8 m) extends from its north-eastern end. A second debris field (**70101**) comprises a cluster of small, angular dark reflectors and lies within 6 m west of the south-western section of the wreck. There is a medium magnetic response of 72 nT, from the closest line of Mag. data 55 m west of the wreck, indicating the presence of ferrous material or construction. In the MBES data the wreck is visible as an elongate collection of several sub-rounded mounds oriented NNE-SSW, tapered at the SSW extent with a rounded mound at the SSW point and a distinct irregular mound at the NNE extent measuring 21.4 x 18.8 x 2.2 m, forming the shape of an incomplete, partially degraded wreck. A potential hull outline is visible at the SSW extent, but there is no coherent structure towards the centre and NNE extent.		
Build	**Type**	Steamship		
	Construction	Metal		
	Dimensions (m)	75.9 x 11.6 x 4.6		
	Shipyard	Helsingors Jernsk & MSK, Elsinore (1920)		
Loss	**Cause**	Torpedoed by U-55 (21 January 1940)		
Extent of Survival		The ship is recorded as having two boilers and a triple expansion engine of 158 NHP with a single shaft. It was on passage from Burntisland to Aarhus when it was torpedoed by U-55. 9 men were lost. After surveys in 1978, 1993 and a dive investigation in 2001, a survey in 2008 found the wreck to be at a general depth of 54.9 m with no scour. The wreck was recorded as being highly degraded and broken in two with dimensions of 79 x 40 x 3.4 m. A further survey in 2012 found it is apparently only part of the wreck, with dimensions of 58 x 18.3 x 3.36 m. The wreck had no scour, was lying with an orientation of 030/210° and had a strong magnetic anomaly. The wreck was covered by both the 2022 and 2023 surveys and a comparison of the two datasets indicates the wreck has become marginally less exposed between surveys. The dimensions of the wreck in the current datasets are similar to those previously observed although the height has reduced, suggesting some collapse or burial has occurred. The other part of the *Tekla* (UKHO 71120) is located approximately 190 m to the north, see Sheet 1.		



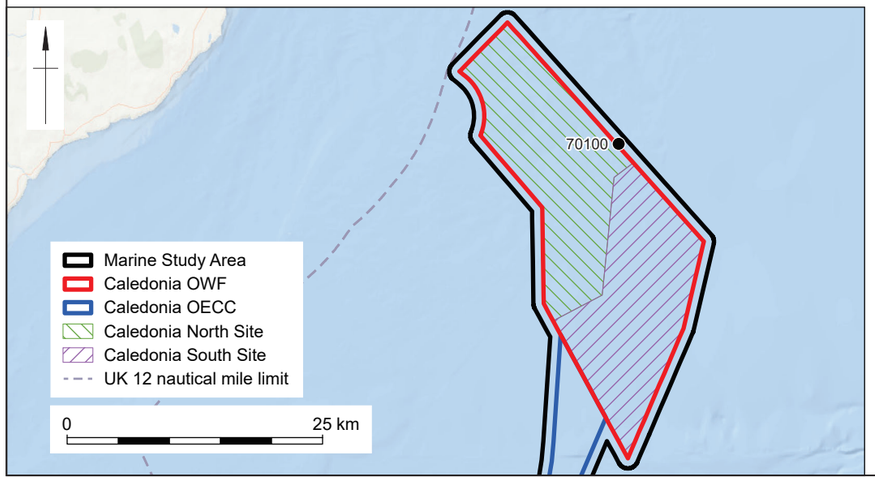
Sidescan sonar waterfall image, 175 m range per channel



Multibeam echosounder grid image, x1 vertical exaggeration, looking WSW



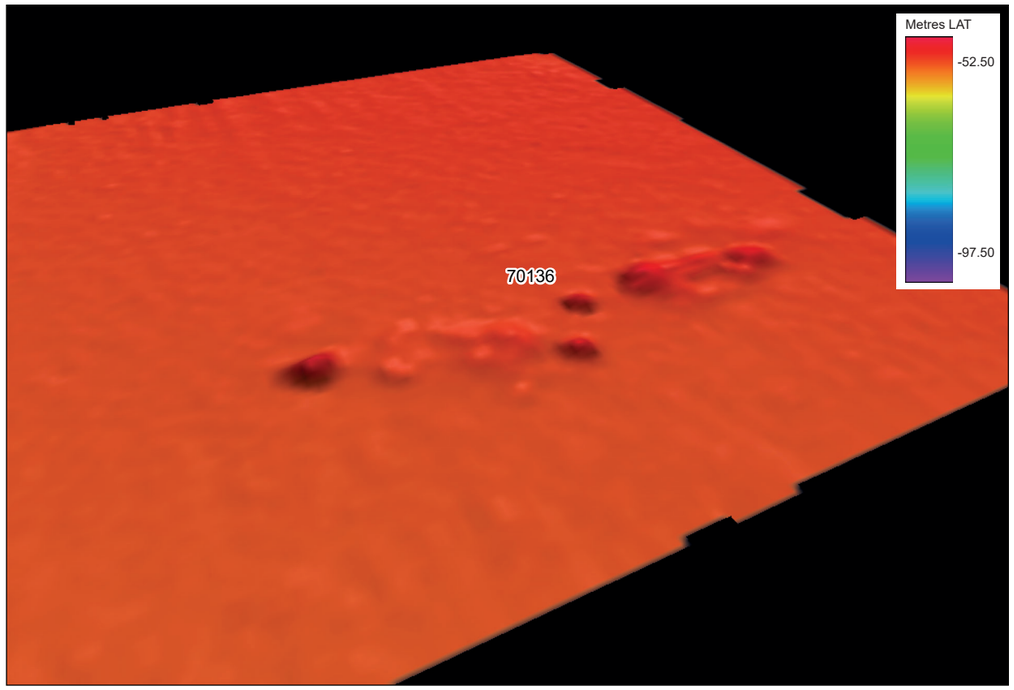
Profile image of magnetic anomaly associated with **70100**, measuring 72 nT



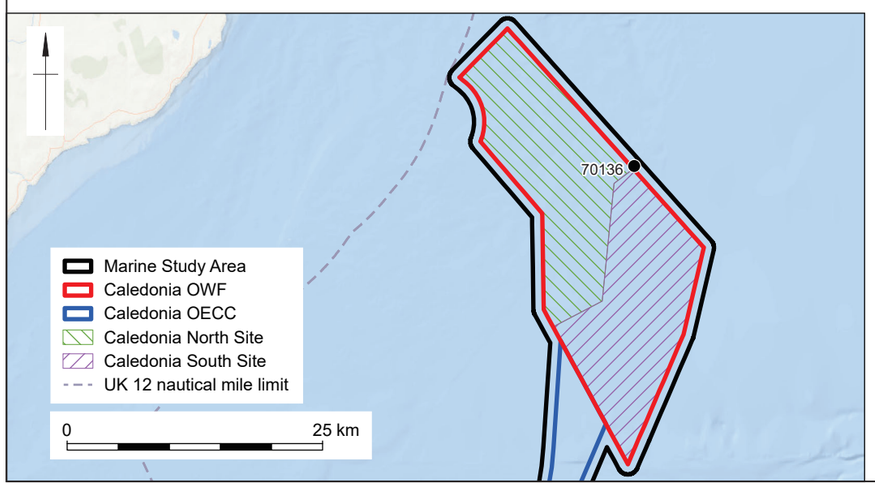
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 2			

ID 70136 – *Makalla* (Probably) – UKHO 1188

Location		534024 E 6458542 N	**Area**	Caledonia OWF North Site Buffer
Geophysical survey dimensions and notes		**70136** is a wreck situated in the north of the Caledonia OWF Site, on a north to south alignment. The wreck is recorded by the UKHO (1188) as a non-dangerous wreck, the British steamship *Makalla* (Probably). In the MBES data the wreck is visible as an elongate area of mounds, with overall dimensions of 101.2 x 22.7 x 2.0 m. The mounds to the south are sparsely spaced, while the mounds to the north form an approximate triangle about 30 m x 18 m x 0.8 m and indicate the shape of the hull. There are two mounds between the two main areas of the wreck, measuring approx. 7.8 m x 6.7 m x 1.3 m and 6.6 m x 6.2 m x 1.1 m. The wreck is not covered by SSS or Mag. data.		
Build	**Type**	Steamship		
	Construction	Unknown		
	Dimensions (m)	135.6 x 17.7 x 9.4		
	Shipyard	R Duncan & Co. (1918)		
Loss	**Cause**	Bombed (23 August 1940)		
Extent of Survival		The ship is recorded to have a triple expansion engine of 701 NHP. *Makalla* was in convoy on passage from London to Calcutta when it was bombed by German aircraft and sunk. 12 men were lost. The wreck was first surveyed in 1978 but no information is given. A survey on 15 July 2006 found the wreck to lie at a general depth of 49.3 m with no scour and dimensions of 118 x 30 x 3.4 m. The wreck was described as having a strong magnetic anomaly and being well broken up with possibly two boilers lying amidships. The most recent survey in the record was on 8 October 2012, which found the wreck to be broken up with lots of associated debris nearby. Dimensions were 99.1 x 41.3 x 3.6 m, and a strong magnetic anomaly was reported. No scour was visible, and the orientation of the wreck was 010/190°. The wreck appears in the current data as an indistinct, highly degraded wreck. The length is similar to that observed on previous surveys, but the width and height are reduced. This suggests some burial of the remains has occurred, particularly of outlying debris, and possibly also that the higher portions have undergone partial collapse.		



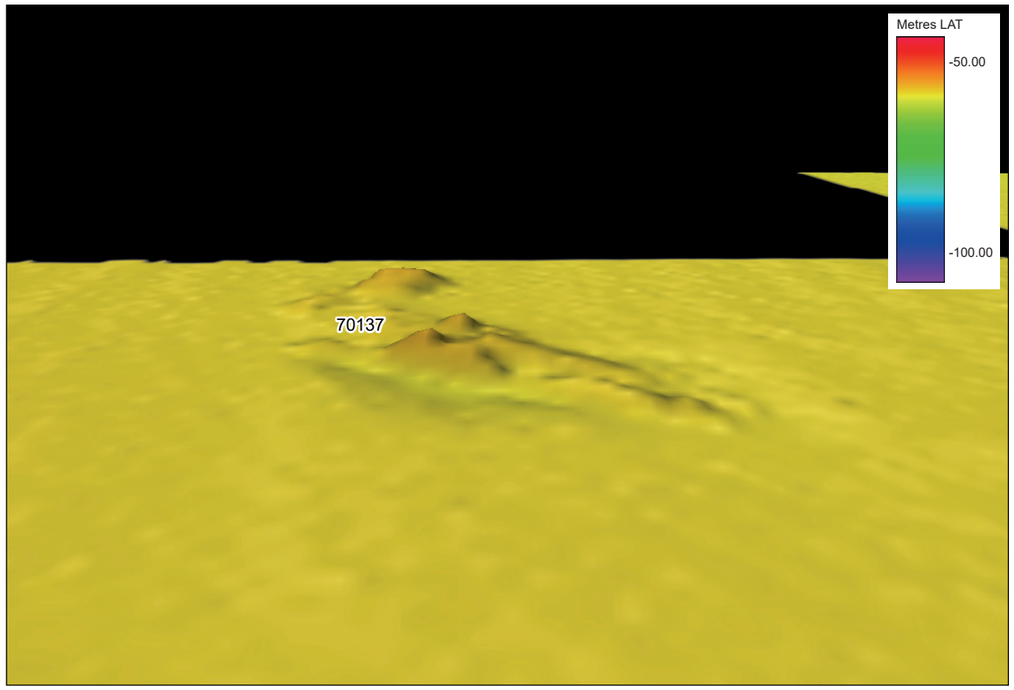
Multibeam echosounder grid image, x1 vertical exaggeration, looking ENE



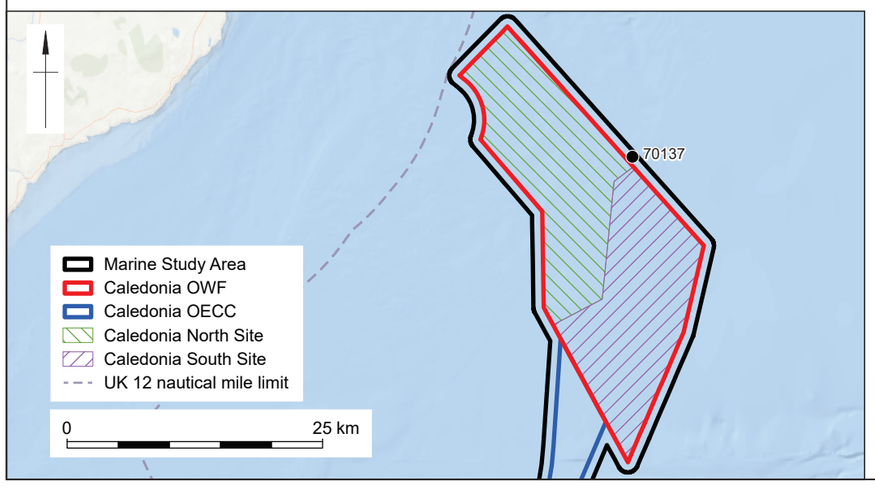
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 3			

ID 70137 – Unknown – UKHO 71122

Location		534192 E 6457832 N	**Area**	Caledonia OWF North Site Buffer
Geophysical survey dimensions and notes		**70137** is a wreck situated in the north of the Caledonia OWF Site, on a north-east to south-west alignment, and very close to the boundary with the South Site. The wreck is recorded by the UKHO (71122) as an unknown, non-dangerous wreck. In the MBES data the wreck is visible as a highly degraded wreck, aligned roughly north-east to south-west, with observed dimensions of 75.1 x 30.8 x 2.6 m. The hull outline appears more coherent and pointed at the south-west end and becomes more broken and degraded towards the north-east, where part of the structure appears to have become separated from the main hull, with the north-east section curving southwards to become perpendicular to the south-west section. A disturbed area of seabed containing small mounds is visible between the wreck sections, suggesting the presence of debris. The wreck is not covered by SSS or Mag. data.		
Build	**Type**	Unknown		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Unknown		
Extent of Survival		The wreck was first surveyed on 15 July 2006, which found it lying in a general depth of 53.7 m, with a 2 m deep scour extending 10 m to its north-west. Dimensions of the wreck were found to be 79 x 41 x 4.2 m with a moderate magnetic anomaly present and it had an orientation of 040/220°. It was recorded as being upright and in two parts perpendicular to each other, with the south-west part being larger. A later survey on 22 May 2012 found the wreck to be broken up with the main parts and debris covering an area of 72.6 x 39 m and a strong magnetic anomaly. Only minor scour close to the north-west was observed. In the current datasets the north-east end of the wreck is clearly more degraded than the larger south-west section. The overall length of the wreck is similar to that observed in previous surveys, but the width is reduced and may suggest burial of the outlying extents by mobile sediments has occurred. The changes in scour patterns between surveys also indicate the sediments in the area are mobile and areas of the wreck may be periodically buried or uncovered. The height of the wreck has reduced by approximately 2 m since 2006 and this is likely due to further collapse and degradation of the wreck coupled with an increase in overlying/surrounding sediments.		



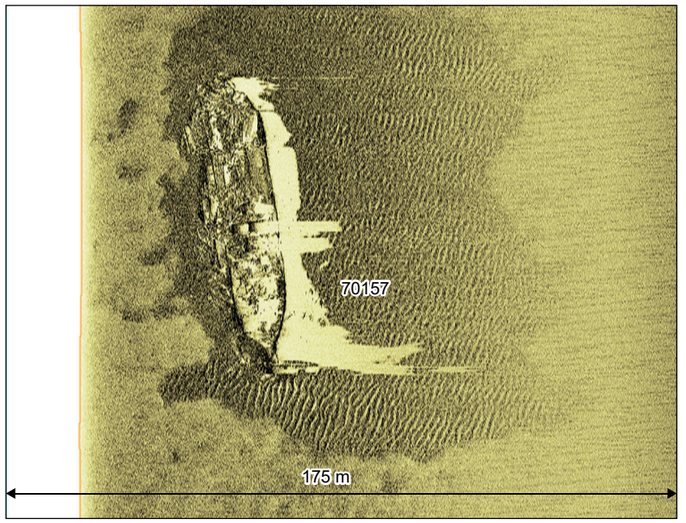
Multibeam echosounder grid image, x1 vertical exaggeration, looking west



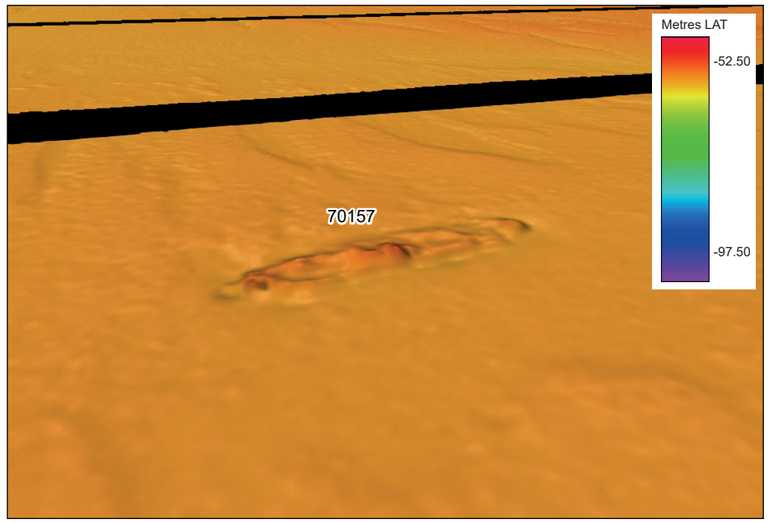
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 4			

ID 70157 – Unknown – UKHO 58699

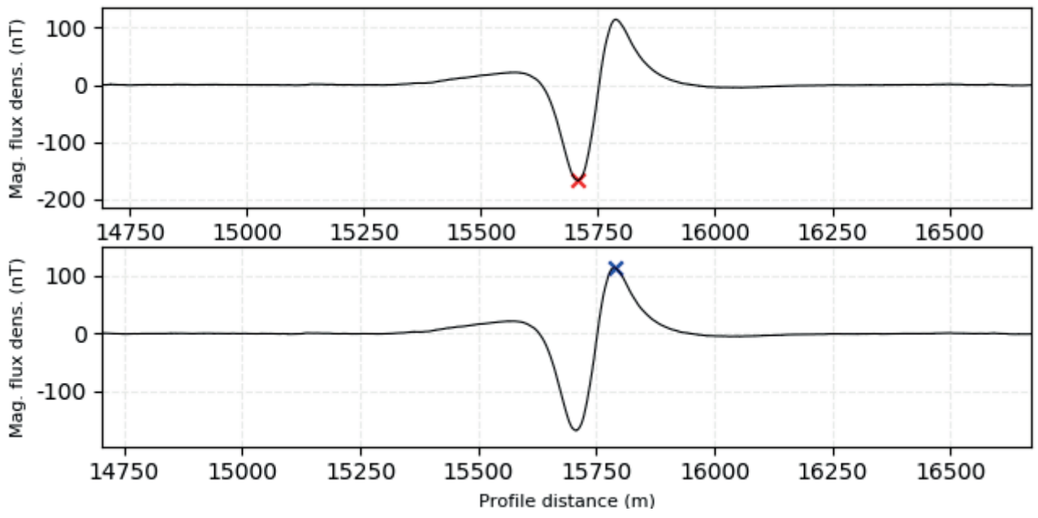
Location		529564 E 6447796 N	**Area**	Caledonia OWF North Site
Geophysical survey dimensions and notes		**70157** is a wreck situated in the north of the Caledonia OWF Site, on a north-south alignment. The wreck is recorded by the UKHO as an unknown, non-dangerous wreck. In the SSS data, it is visible as a distinct, coherent wreck with a distinct shadow and dimensions of 102.7 x 22.1 x 6.7 m. It appears to lie upright and multiple dark reflectors show surviving internal structure. Two debris fields (**70156** and **70158**) lie adjacent to the wreck, along with an elongate item of debris (**70155**). There is a large magnetic anomaly of 282 nT associated with the wreck, occurring on the closest line of Mag. data 41 m east of the wreck, indicating the presence of ferrous material or construction. In the MBES data is a clear outline of a degraded wreck. The bow and stern are well defined but small breaks are visible in the remainder of the hull, particularly at the southern extents. Taller rectangular internal structures visible to the northern extents, with smaller more degraded internal structures towards the southern extent. In the centre is a tall mound (9 x 6 x 1.9 m).		
Build	**Type**	Unknown		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Unknown		
Extent of Survival		Found on 23 August 2000, when a substantial echosounder contact was located whilst searching for a fastener. A further survey on 3 July 2012 found the wreck to be at a general depth of 54 m, with no scour present. Dimensions were 96.4 x 17.2 x 8.6 m and it was lying 170/350°. The wreck was described as upright on a flat seabed, not intact and having sunk into the seabed. It had a strong magnetic anomaly. In the current data, the wreck also appears upright and partially sunken into the seabed. In the SSS, it is clear to see that the structure of the ship is disintegrating, particularly the northern end. Several surrounding debris fields illustrate the disintegration. The height of the wreck appears to have decreased by approximately 2 m, suggesting that either the wreck has sunk further into the seabed, sediment has built up around it or that the taller areas have collapsed further.		



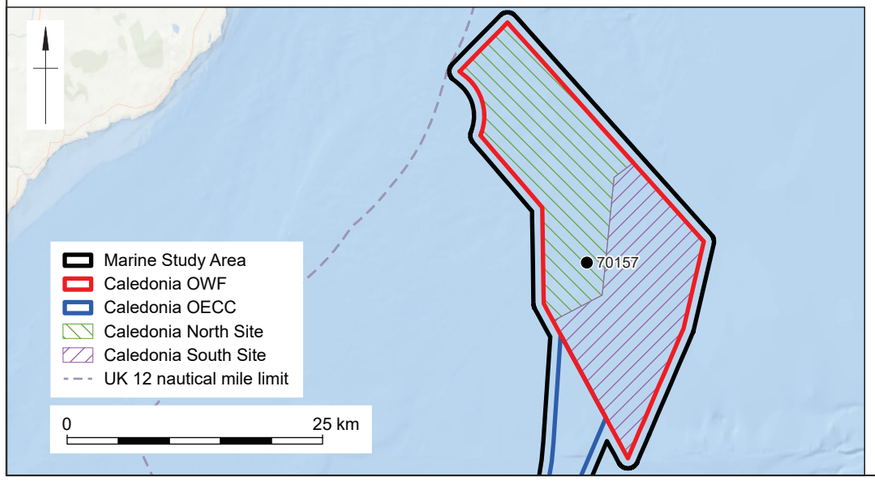
Sidescan sonar waterfall image, 175 m range per channel



Multibeam echosounder grid image, x1 vertical exaggeration, looking WSW



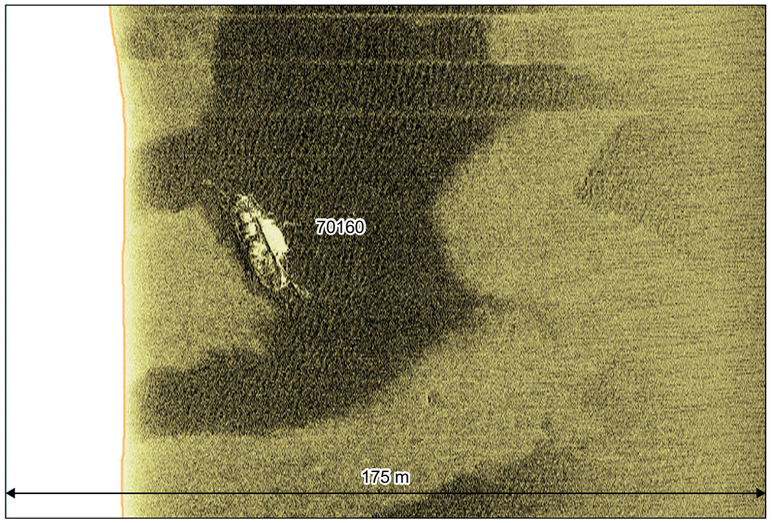
Profile image of magnetic anomaly associated with **70157**, measuring 282 nT



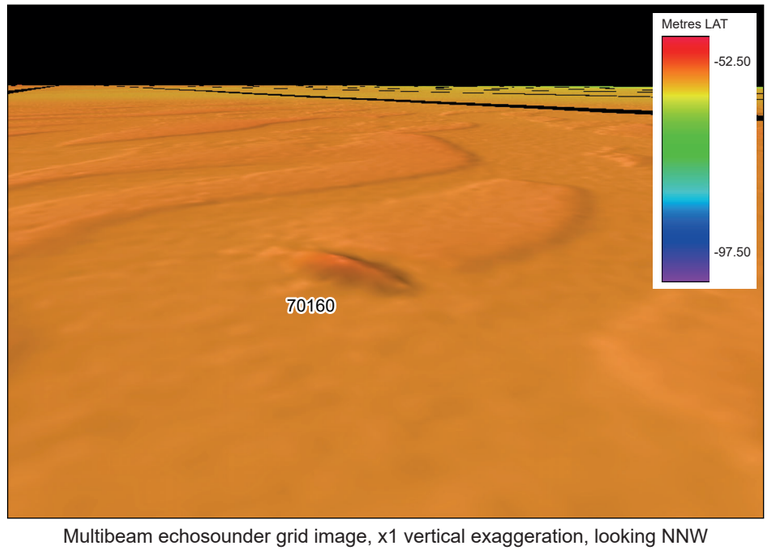
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 5			

ID 70160 – Unknown – UKHO 79582

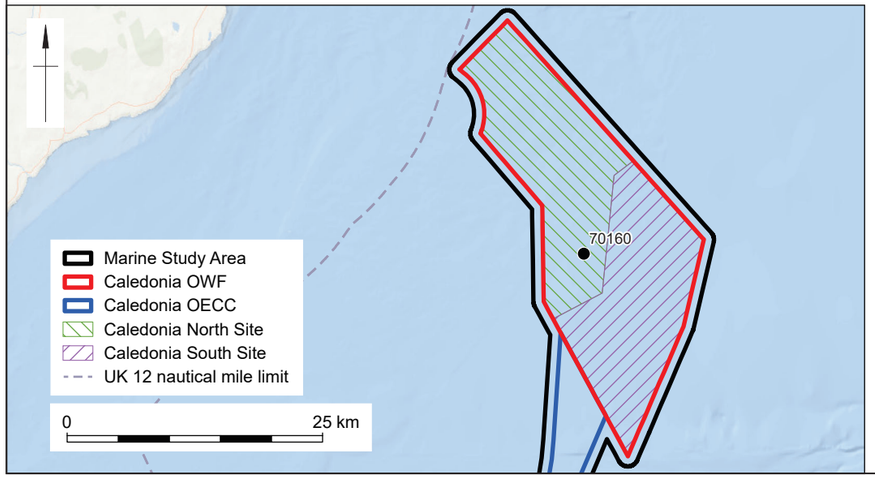
Location		529268 E 6448473 N	**Area**	Caledonia OWF North Site
Geophysical survey dimensions and notes		**70160** is a wreck situated in the north of the Caledonia OWF Site, on a NNW-SSE alignment. The wreck is recorded by the UKHO as an unknown, non-dangerous wreck. In the SSS data it is visible as a coherent wreck on the edge of an area of sand waves. Sub-rounded and linear dark reflectors show potential surviving internal structure, whilst two discontinuous curvilinear dark reflectors form an elongate hull shape. It was found to measure 38.5 x 12.8 x 2 m. A linear item of debris, **70161**, lies 2 m from the NNW section of the wreck. There is no magnetic anomaly associated with the wreck in the Mag. data. In the MBES data it is visible as an isolated, elongate mound, to the approximate south-west of a raised area of seabed. It lies perpendicular to nearby bedforms.		
Build	**Type**	Fishing vessel		
	Construction	Unknown		
	Dimensions (m)	Unknown		
	Shipyard	Unknown		
Loss	**Cause**	Unknown		
Extent of Survival		The wreck is recorded as having previously been surveyed, with MBES, on 3 July 2012. It was found to be upright and partly intact from midships to bow, with the bow to the north-west and the forward part collapsed. The wreck was found to be at a general depth of 53 m and no scour was visible. The dimensions were 22.7 x 6.8 x 3.8 m, and the orientation was 150/330°. In the current survey data the wreck appears mostly intact with some degradation visible. Further outlying debris may be present. The length and width appear considerably larger than those found previously but this may be a consequence of different datasets as the vessel does not appear to have broken up considerably and the hull outline is clearly visible in the SSS data. The height is much reduced, suggesting possible partial collapse or possibly a build-up of the adjacent sediments.		



Sidescan sonar waterfall image, 175 m range per channel



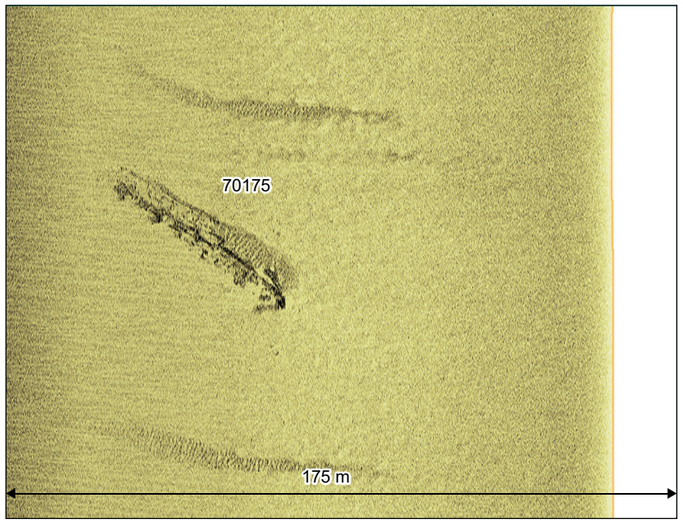
Multibeam echosounder grid image, x1 vertical exaggeration, looking NNW



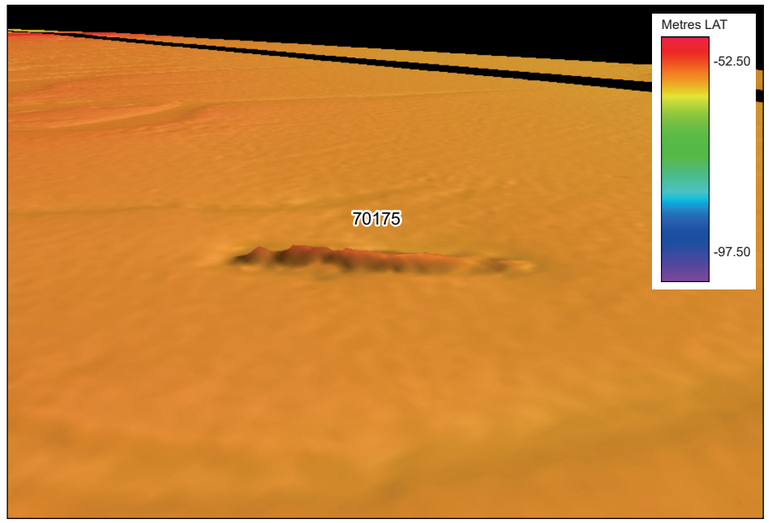
Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 6			

ID 70175 – HMS *Lynx* – UKHO 1324

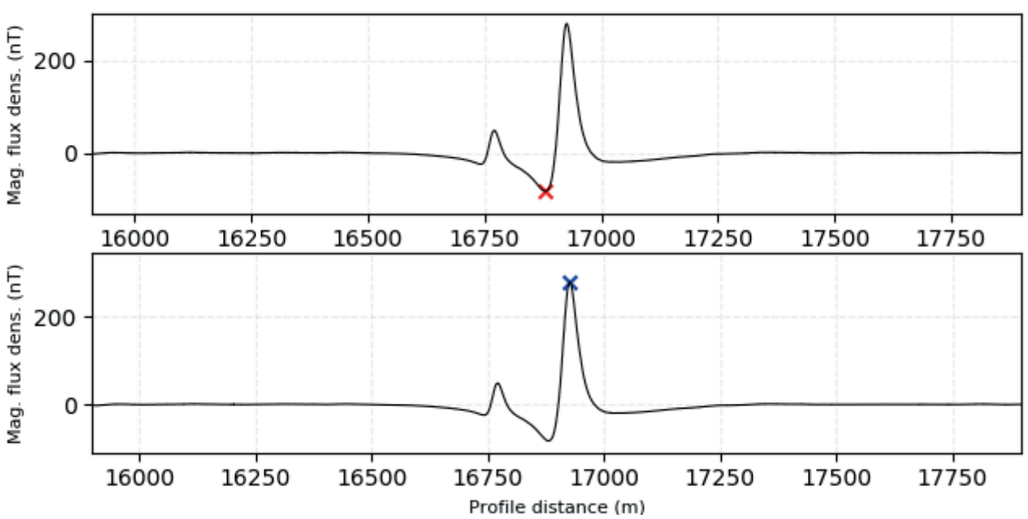
Location		528705 E 6447195 N	**Area**	*Caledonia OWF North Site*
Geophysical survey dimensions and notes		**70175** is a wreck situated in the north of the Caledonia OWF Site, on a north-west to south-east alignment. The wreck is recorded by the UKHO (1324) as the wreck of British destroyer HMS *Lynx*. In the SSS data, the wreck appears mostly intact and partially buried. Multiple internal dark reflectors point to some internal structure surviving, with the wreck appearing less degraded towards the south-east. It was found to measure 70.3 x 19.4 x 2.0 m. A debris field (**70174**) 142 m north may be associated. A large magnetic response of 363 nT is associated with the wreck in the Mag. data, indicating the presence of ferrous material or construction. In the MBES data, it is visible as an elongate mound, which appears more heavily degraded at the north-west end. The mound is taller near the centre, likely showing surviving structure of the ship in this area. The wreck appears to be surrounded by shallow scour.		
Build	**Type**	Destroyer		
	Construction	Metal		
	Dimensions (m)	81.1 x 8.2 x 2.7		
	Shipyard	London & Glasgow Shipbuilding Company (1912)		
Loss	**Cause**	Struck a mine (9 August 1915)		
Extent of Survival		HMS *Lynx* is noted in the UKHO record as having 4 x 3-drum boilers with turbine engines of 25000 shp. The destroyer struck a mine which had been laid by the German raider *Meteor*. It split in two and sank. 70 men were lost. The wreck was first located in 1984. It was dived in 2000, when divers could not locate the bow, stern or engine. Four inverted 'V' shapes were later identified as the boilers. The wreck was measured at 50 x 12 x 4 m and was lying on a seabed of sand and mud with no scour present. A geophysical survey in 2012 found the wreck lying in a general depth at 54 m, with dimensions of 59.8 x 9.6 x 4.3 m and a strong magnetic anomaly. The wreck was upright. not intact and no scour was present. In the current data, the vessel appears upright and coherent. The length and width are greater, suggesting more of the vessel may now be exposed. The reduced height suggests some collapse may have occurred or the more upstanding area is now buried more. Sand waves around the wreck indicate the surrounding sediments are mobile. No outlying debris is visible, but it may be concealed by the sediments.		



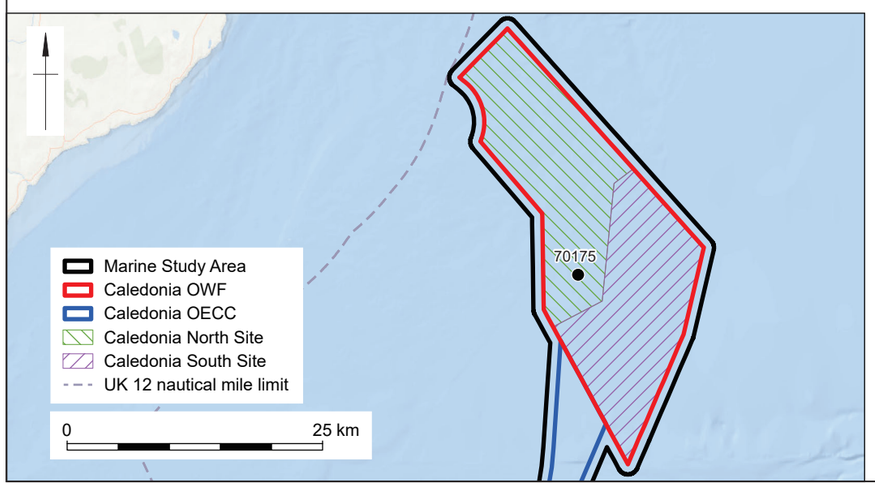
Sidescan sonar waterfall image, 175 m range per channel



Multibeam echosounder grid image, x1 vertical exaggeration, looking south-east



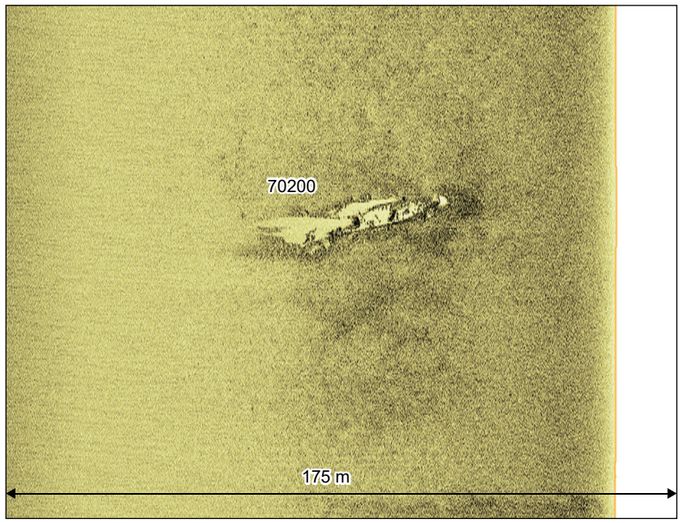
Profile image of magnetic anomaly associated with **70175**, measuring 363 nT



Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 7			

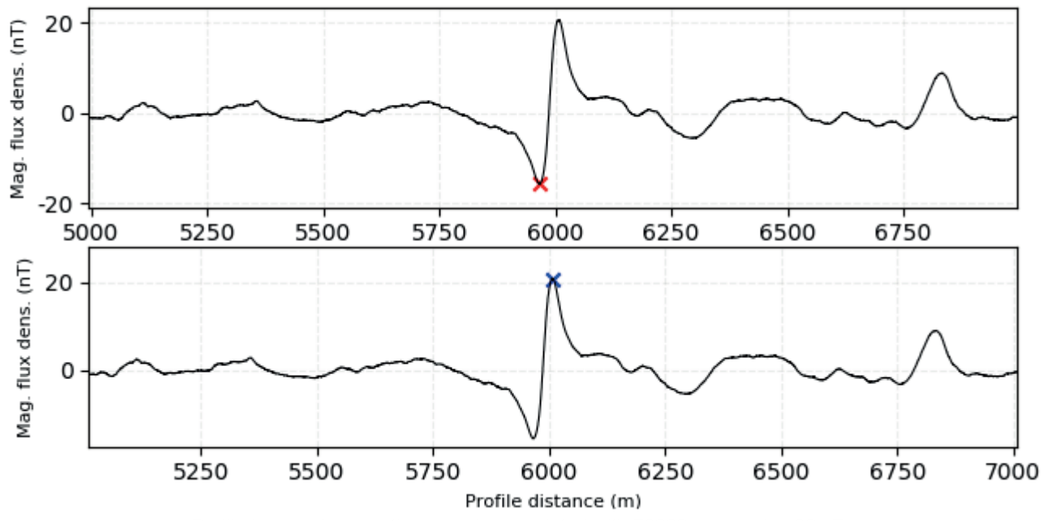
ID 70200 – HMS *Jasper* (Probably) – UKHO 1180

Location		533558 E 6452478 N	**Area**	Caledonia OWF South Site
Geophysical survey dimensions and notes		**70200** is a wreck situated in the south of the Caledonia OWF Site, oriented east-west. The wreck is recorded by the UKHO as a non-dangerous wreck, the British trawler HMS *Jasper* (Probably). In the SSS data, it is visible as a highly degraded, broken up wreck that appears more like a debris field. It is seen as an elongate group of angular dark reflectors with shadows, the largest of which measures 4.3 x 2.4 x 1.6 m. An area of disturbed seabed and scouring surrounds the wreck and the overall dimensions are 65.5 x 25.4 x 3.7 m. The extents of the wreck itself are difficult to discern but are approximately 42 x 18 x 3.7 m. There is a small magnetic response of 36 nT from the closest line of Mag. data 25 m east of the wreck, indicating the presence of ferrous material or construction. In the MBES data it is visible as an elongate mound, measuring 38.6 x 11.6 x 2.1 m, rising to an angular peak at the eastern end. Internally the feature has multiple sub-angular low-lying mounds, the largest of which measures 5.9 x 5.5 x 1.6 m.		
Build	**Type**	Trawler		
	Construction	Unknown		
	Dimensions (m)	30.8 x 6.2 x 3.4		
	Shipyard	Cochrane, Cooper & Schofield, Beverley (1912)		
Loss	**Cause**	Struck a mine (26 August 1915)		
Extent of Survival		The HMS *Jasper* is recorded as a single boiler, triple expansion, single shaft trawler It was purchased from the Kingston Steam Fishing Co. in 1914 and converted into a minesweeper. It sank after detonating a German-laid mine. 11 men were lost. The wreck was surveyed in 1982, when it was described as having a length of approximately 35 m and a height of 3.5 m. It was last examined in 2012, when it was described as intact and upright, lying 090/270° with the bows to the east. It had a strong magnetic anomaly, and its dimensions were 36 x 7 x 3.4 m. No scour was observed. The wreck appears in the current datasets as highly degraded with some surviving internal structure and is situated within slight scour. Areas of sand waves nearby suggest the surrounding sediments are possibly mobile and may conceal outlying debris. The wreck appears more broken up and rather larger than in the previous surveys, suggesting it has become further degraded and spread across a wider area.		

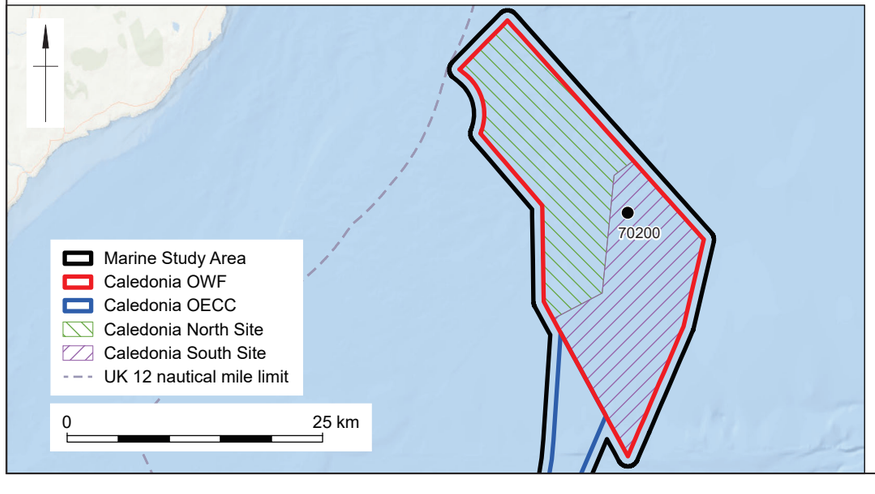


Sidescan sonar waterfall image, 175 m range per channel

Multibeam echosounder grid image, x1 vertical exaggeration, looking NNE



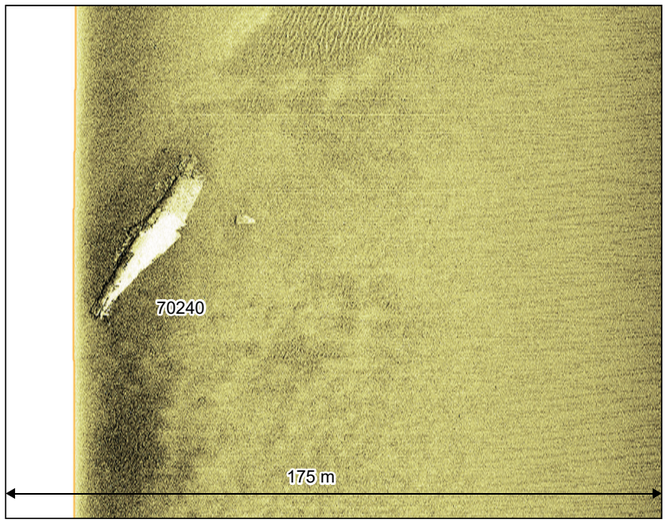
Profile image of magnetic anomaly associated with **70200**, measuring 36 nT



Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 8			

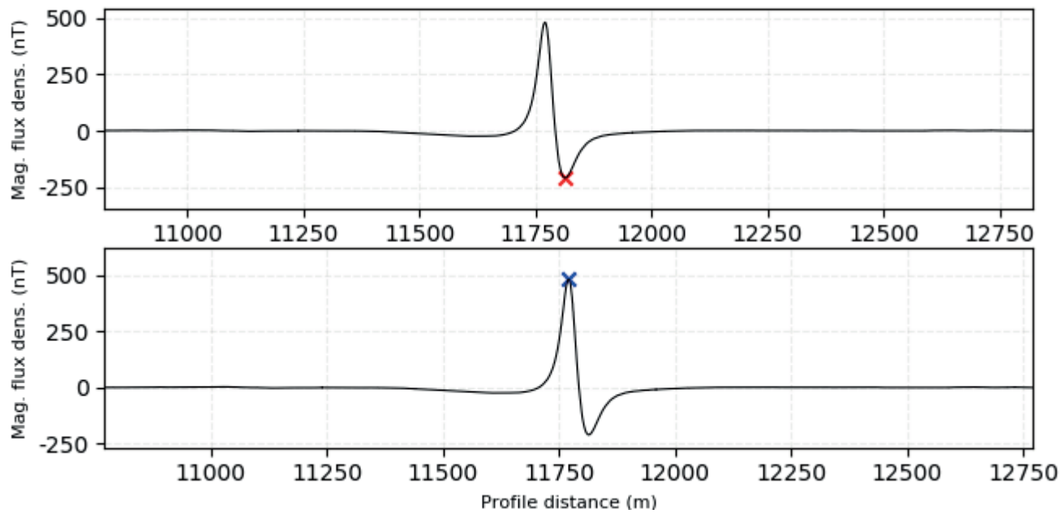
ID 70240 – U-309 – UKHO 1176

Location		536137 E 6446364 N	**Area**	Caledonia OWF South Site
Geophysical survey dimensions and notes		**70240** is a wreck situated in the south of the Caledonia OWF Site, on a roughly north-east to south-west alignment. The wreck is recorded by the UKHO as a non-dangerous wreck, the German submarine U-309. In the SSS data it is visible as an elongate dark reflector. It has a clear shadow along its length, which is tallest at the centre of the wreck.. The wreck was found to measure 65.9 x 11.2 x 4.2 m. Debris **70238** is an angular dark reflector with a bright shadow, which lies close to the north-eastern section of the wreck. Debris **70239** is a sub-rounded dark reflector with a narrow shadow and lies within 20 m of the central section of the wreck to the east. There is a large magnetic response of 693 nT, from the closest line of Mag. data 13 m west of the wreck, indicating the presence of ferrous material or construction. In the MBES data it is visible as an elongate mound, measuring 58.1 x 11.8 x 3.1 m with some shallow scour on its south-west end.		
Build	**Type**	Submarine		
	Construction	Metal		
	Dimensions (m)	67.1 x 6.1 x 4.9		
	Shipyard	Unknown		
Loss	**Cause**	Depth charged (16 February 1945)		
Extent of Survival		The ship is recorded as having been depth charged by the frigate HMCS *St John* 55 miles north-east of Cromarty. It is unclear from the UKHO record when the wreck was first surveyed but it was known to be a U-boat prior to 1978. Video footage from 2004 confirmed the wreck to be U-309. A survey in 2012 found the wreck to be at a depth of 59 m, measuring 53.8 x 7.6 x 3.6 m and lying 030/210°. A strong magnetic anomaly was present. The wreck was described as intact, including the conning tower, and lying on its side with the bows to the north-east. In the current data, the wreck appears to be mostly intact with some deterioration to the structure, particularly the south-west end. The data also show a possible large hole halfway down the length of the wreck, which may be associated with the boat being sunk by depth charges. The dimensions appear larger than those from 2012, which is likely a consequence of degradation since then, particularly at the south-west end. Some outlying debris is visible, and it is possible that more may be buried beneath surrounding sediments, which may be mobile.		

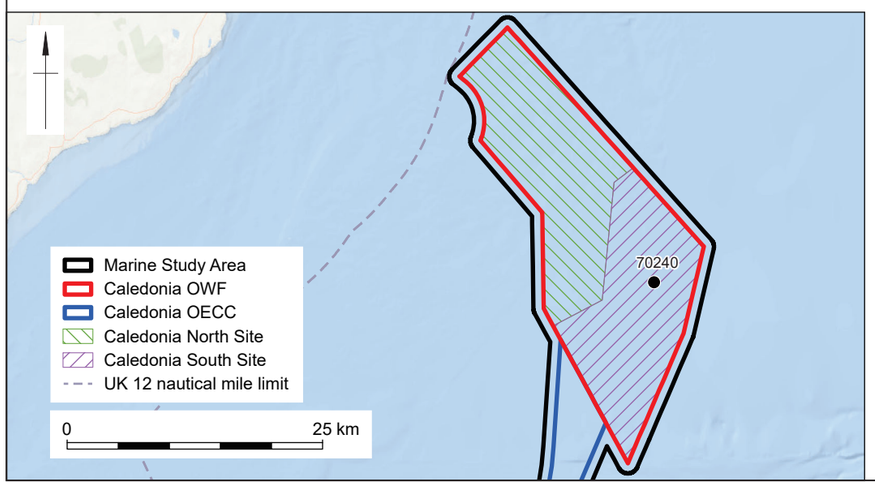


Sidescan sonar waterfall image, 175 m range per channel

Multibeam echosounder grid image, x1 vertical exaggeration, looking west



Profile image of magnetic anomaly associated with **70240**, measuring 693 nT



Date: 28/08/2024	Created by: CM	Revision: 1	Scale: Location inset 1:600,000 at A3
Sheet 9			

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