

**MORAY OFFSHORE WINDFARM (WEST) LIMITED**

## **Protocol for Archaeological Discoveries and Written Scheme of Investigation (Offshore)**

**Document Name: 8460005-DBHA15-MWW-PLN-000001**

**Revision: 2**

**Status: Final**

**Date: 10-10-2023**

**Moray Offshore Windfarm (West) Limited**  
**PAD and WSI (Offshore)**



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Document Approval				
Prepared by:	ECOW Review by:	Legal Review:	Approved by:	Approved by:
RHDHV (Victoria Cooper, Alexia Chapman)	RHDHV (Erin Snaith)	Shepherd and Wedderburn (Scott McCallum)	Catarina Rei (Senior Development Manager)	Adam Morrison (Project Director)

## Plan Overview

### Purpose and Objectives of the Plan

This Protocol for Archaeological Discoveries (PAD) and Written Scheme of Investigation (WSI) (Offshore) has been prepared to address the specific requirements of the relevant conditions attached to the Section 36 (S36) consent and Marine Licences issued to Moray Offshore Windfarm (West) Limited (Moray West).

The overall objective of the WSI (Offshore) is to provide the overarching framework for the delivery of archaeological investigation and mitigation prior to, and during, the construction of the Moray West Offshore Wind Farm and Offshore Transmission Infrastructure (OfTI) (collectively referred to as ‘the Development’). The PAD sets out what the Company must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development.

The PAD and WSI has been prepared by the retained archaeologist to ensure that those involved in the construction and operation of the Development, including Moray West personnel and all of the associated contractors, are aware of and understand archaeological mitigation measures, and how and when to apply them. These measures are set out to inform consultation with Historic Environmental Scotland (HES) and approval by the Scottish Ministers and are based on commitments made by Moray West and the requirements of the offshore consent conditions.

Written approval of the PAD and WSI (Revision 1) was received from MD-LOT on behalf of the Scottish Ministers, following consultation by Scottish Ministers with HES, on 29 June 2022. This version (Revision 2) has been updated to incorporate the results of geoarchaeological and archaeological assessments of marine geophysical data and is being resubmitted for reapproval by the Scottish Ministers.

All Moray West personnel and contractors involved in the Development must comply, as a minimum, with this WSI. The PAD must be implemented in full, at all times, by Moray West personnel and their contractors.

### Scope of the WSI and PAD

The scope and format of this WSI is based upon that set out in The Crown Estate guidance on *Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects* (The Crown Estate, 2021). This states that the WSI will form an umbrella document, for all survey, investigation and assessment required for an Offshore Wind Farm (OWF) project. The WSI is supported by activity-specific Method Statements (e.g., Unexploded Ordnance (UXO) investigation, boulder clearance and geotechnical vibrocore surveys). The WSI:

- sets out the roles and respective responsibilities of Moray West, contractors, retained archaeologist and archaeological contractor(s) and formal lines of communication between the parties and with Historic Environment Scotland (HES) (the archaeological curator);
- outlines the known and potential archaeological receptors that could be impacted by the scheme;

- outlines the agreed mitigation and archaeological actions that are to take place in various circumstances;
- sets out the importance of research frameworks in setting objectives that are delivered through realisation of the work; and
- provides summarised details on methodologies for these archaeological actions, which will be clarified in more detail in subsequent activity-specific Method Statements.

The PAD sets out the approach to the reporting and subsequent treatment of unexpected archaeological discoveries. The PAD will be implemented as a mitigation measure in conjunction with the proposed works, as set out in the WSI, and is designed to operate when it is not practical or safe for an archaeologist to be present. The PAD does not replace the process of archaeological assessment and evaluation, but rather acts as a safety net in the event of unexpected discoveries during the course of works.

## **Structure of the Plan**

Sections 1 and 2 give an overview of the Development, specify the scope and objectives of the PAD and WSI and details roles, responsibilities and training. The lines of communication and chains of command along with Development reporting requirements are also described.

Section 3 outlines the known and potential archaeological receptors that could be impacted by the scheme, including a summary of previous assessment.

Section 4 provides the overarching methodologies for archaeological investigations and mitigation measures based on commitments made by Moray West and the requirements of the offshore consents conditions. Detailed archaeological Method Statements will be produced prior to survey or construction work, in order to provide a detailed methodology for each package of development or survey works, as required. The PAD is detailed in Section 5.

Section 6 addresses monitoring requirements for the WSI and the PAD.

The accompanying Appendices present figures showing the distribution of seabed features, gazetteer and the Offshore Renewables Protocol for Archaeological Discoveries (ORPAD) Preliminary Record Form.

## **Plan Audience**

The WSI and PAD are intended to be referred to by personnel involved in the construction and operation of the Development, including Moray West personnel and contractors. The WSI and PAD has also been prepared to inform agreement on the overarching approach to archaeological investigation and mitigation with the Scottish Ministers in consultation with HES. All Method Statements and archaeological technical reports produced in relation to the Development must comply with this WSI.

Compliance with the WSI and PAD will be monitored by the Moray West Development Team, the Moray West ECoW, Moray West's retained archaeologist and Marine Directorate Licensing Operations Team (MD-LOT).

# Moray Offshore Windfarm (West) Limited PAD and WSI (Offshore)



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## Plan Locations

The latest version of this WSI and PAD can be obtained from Moray West's document management system, *Viewpoint For Projects*, and from Marine Directorate website<sup>1</sup>. Copies of this WSI and PAD are also to be held in the following locations:

- Moray West's main project office in Edinburgh;
- with the contractors;
- with Moray West retained archaeologist and the Environmental Clerk of Works (ECoW(s)); and
- aboard any vessels carrying out the Works.

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<sup>1</sup> <https://marine.gov.scot/ml/moray-west-offshore-windfarm>

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## Abbreviations and Acronyms

Abbreviation	Description
AC	Alternating Current
ACOP	Approved Code of Practice
ADS	Archaeological Data Service
AEZ	Archaeological Exclusion Zone
ALARP	As Low As Reasonably Possible
AMED	Approved Medical Examiner of Divers
ASA	Archaeological Study Area
CANMORE	National Record of the Historic Environment
CaP	Cable Plan
CIfA	Chartered Institute for Archaeologists
CPT	Cone Penetration Test
DBA	Desk Based Assessment
DP	Decommissioning Programme
ECOW	Environmental Clerk of Works
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
GIS	Geographical Information System
HDD	Horizontal Directional Drilling
HES	Historic Environment Scotland
HMPA	Historic Marine Protected Area
JCCC	Joint Casualty and Compassionate Centre
JNAPC	Joint Nautical Archaeology Policy Committee
MHWS	Mean High Water Springs
MOD	Ministry of Defence
MS-LOT	Marine Scotland Licensing and Operation Team
OASIS	Online Access to the Index of Archaeological Investigations
O&M	Operations and Maintenance
OftI	Offshore Transmission Infrastructure
OFTO	Offshore Transmission Owner
OMP	Operation and Maintenance Programme
ORPAD	Offshore Renewables Protocol for Archaeological Discoveries
OSP	Offshore Substation Platform
PAD	Protocol for Archaeological Discovery
PEMP	Project Environmental Monitoring Plan
PLGR	Pre-Lay Grapple Run
PS	Piling Strategy
ROV	Remotely Operated Vehicle
RoW	Receiver of Wreck
S36	Section 36



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Abbreviation	Description
ScARF	Scottish Archaeological Research Framework
TEZ	Temporary Exclusion Zone
UKHO	United Kingdom Hydrographic Office
UXO	Unexploded Ordnance
VMNSP	Vessel Management and Navigational Safety Plan
WSI	Written Scheme of Investigation
WTG	Wind Turbine Generator

# 1 Introduction

## 1.1 Background

The Moray West Offshore Wind Farm and associated Offshore Transmission Infrastructure (OfTI) (referred to as ‘the Development’) is being developed by Moray Offshore Windfarm (West) Limited (known as ‘Moray West’; see Appendix A for defined terms). Consent for the Development was granted on 14 June 2019 under Section 36 (S36) of the Electricity Act 1989 (as amended), Part 4 of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 from Scottish Ministers. One S36 consent was granted by Scottish Ministers for the wind farm (012/OW/MORLW – 8) and two Marine Licences were granted by Scottish Ministers, one for the Wind Farm and another for the OfTI.

Variations of the S36 consent and Wind Farm Marine Licence were granted by the Scottish Ministers on 7 March 2022, and further variations of the Wind Farm (licence number: MS-00009774) and OfTI Marine Licence (licence number: MS-00009813) were granted on 11 April 2022. The revised S36 consent and associated Marine Licences are referred to collectively as ‘offshore consents’.

The S36 consent and Marine Licences conditions (referred to as ‘offshore consent conditions’) require the production of a Protocol for Archaeological Discoveries (PAD) and Written Scheme of Investigation (WSI) as set out in Table 1.1. The PAD and WSI (8460005-DBHA15-MWW-PLN-000001) was submitted by Moray West to the Marine Directorate Licensing and Operation Team (MD-LOT) on 15 March 2022 and written approval by MD-LOT, on behalf of the Scottish Ministers, was received on 29 June 2022.

The Moray West PAD and WSI (Revision 2) has been updated to incorporate the results of geoarchaeological and archaeological assessments undertaken subsequent to the previously approved document and is being resubmitted for reapproval by the Scottish Ministers.

**Table 1.1 Consent conditions to be discharged by this PAD and WSI**

Consent Condition Reference	Condition	Addressed
S36 consent Condition 30	The Company/Licensee must, no later than six months prior to the Commencement of the Development/ Works, submit a Protocol for Archaeological Discoveries (“PAD”) and a Written Scheme of Investigation (“WSI”) which sets out what the Company/ Licensee must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development, in writing, to the Scottish Ministers for their written approval.  Such approval may be given only following consultation by the Scottish Ministers with Historic Environment Scotland (“HES”) and any such advisors as may be required at the discretion of the Scottish Ministers. Commencement of the Development/ Works cannot take place until such approval is granted. The Reporting Protocol must be implemented in full, at all times, by the Company/ Licensee.	Written approval of the PAD and WSI was received from MD-LOT on behalf of the Scottish Ministers on 29 June 2022.
Wind Farm Marine Licence Condition 3.2.2.24		The WSI includes a commitment by Moray West to ensuring that the PAD is implemented in full at all times by their contractors.
OfTI Marine Licence Condition 3.2.2.23		

Table 1.1 Consent conditions to be discharged by this PAD and WSI		
Consent Condition Reference	Condition	Addressed
	The final PAD and WSI must be sent to Aberdeenshire Council for information only.	Consultation was undertaken by the Scottish Ministers with HES and a response was received 06 May 2022.

## 1.2 Objectives of the Plan

The overall objective of the WSI is to provide the overarching framework for the delivery of archaeological investigation and mitigation prior to, and during, the construction of the Moray West Offshore Wind Farm and OfTI (collectively referred to as ‘the Development’). The PAD sets out what Moray West must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development.

The PAD and WSI has been prepared by the retained archaeologist in line with current legislation and best practice guidance (as set out in Section 2.2) to ensure that those involved in the construction and operation of the Development, including Moray West personnel and all of the associated contractors, are aware of and understand archaeological mitigation measures, and how and when to apply them. These measures are set out to inform consultation with HES and approval by the Scottish Ministers and are based on commitments made by Moray West in the Environmental Impact Assessment (EIA) and the requirements of the offshore consent conditions.

All Moray West personnel and contractors involved in the Development must comply, as a minimum, with this WSI. The PAD must be implemented in full, at all stages of the Development, by Moray West personnel and their contractors. Roles and responsibilities specific to the delivery of the WSI and implementation of the PAD are set out in Section 5.

## 1.3 Linkages with other Consent Plans

The environmental management framework during the construction of the Development is set out in the Environmental Management Plan (EMP) 8460005-DBHA06-MWW-PLN-000001). Together with the PAD and WSI, the EMP is part of a group of approved documents that provide the framework for environmental management of the Development – namely the other consent plans required under the consents. Table 1.2 lists further consent plans with linkages to this PAD and WSI.

Table 1.2 WSI linkage with other Consent Plans	
Other Consent Plans	Linkage with PAD and WSI
Construction Programme and Construction Method Statement (CoP & CMS)	Specifies the Development's construction programme, methods, setting out good practice construction measures and how agreed mitigation measures from the Moray West EIA Report, associated documents, consents and those stated within this WSI are implemented during construction.
Environmental Management Plan (EMP)	Provides the framework for environmental management during the construction phase. It sets out the roles and responsibilities of personnel and contractors in relation to environmental management measures, to prevent significant adverse impacts on the environment as identified in the Moray West EIA Report, during the construction of the Development. Describes the role of the retained archaeologist and compliance with the WSI and PAD in all archaeological matters.
Wind Farm Cable Plan (CaP)	Contains details on environmental sensitivities and design considerations to mitigate, as far as possible, the effects of cable laying and associated protection during installation and operation of the Development. This will include the avoidance of Archaeological Exclusion Zones (AEZs) in undertaking all activities during construction and operation, and any requirements for continued avoidance of features of possible archaeological interest where possible.
Export Cable Plan (ECP)	
Operation and Maintenance Programme (OMP)	Sets out the procedures and good working practices for the operation and maintenance (O&M) phase of the Development, including ongoing avoidance of AEZs for all activities during operation, and any requirements for continued avoidance/investigation of features of possible archaeological interest where required.
Piling Strategy (PS)	Piling methods and programme are detailed and includes the need to avoid AEZs in undertaking all activities during piling, and features of possible archaeological interest where possible.
Project Environmental Monitoring Plan (PEMP)	Outlines the monitoring strategy for proposed monitoring to be undertaken pre-construction, during construction and post construction including the integration of archaeological objectives. These objectives will be set out in subsequent activity-specific archaeological Method Statements prepared under the umbrella of this WSI.
Development Specification and Layout Plan (DSLPL)	Set out the final design and layout parameters associated with the Development, Presents seabed features of archaeological potential and exclusion zones.
Vessel Management and Navigational Safety Plan (VMNSP)	Provides the management and coordination of vessels to mitigate the impact of vessels, including the avoidance of AEZs when deploying vessel anchors.

#### 1.4 Document Structure and Control

The structure of this WSI is provided in Table 1.3.

Table 1.3 WSI document structure		
Section	Title	Summary of Content
1	Introduction	An overview of the Development and its associated consent requirements.
2	Approach to Written Scheme of Investigation	Defines the approach taken to the WSI and the delivery of archaeological investigation and mitigation and defines the roles, responsibilities and communications for all parties in agreeing the approach and delivering Moray West's commitments.
3	Archaeological Baseline and Impact Assessment Summary	Sets out the known and potential archaeological baseline and summarises the mitigation and management measures for any effects on the marine historic environment caused by the Development, including commitments made in the EIA.
4	Approach to Investigation and Mitigation	Sets out the framework for how marine archaeological investigation, mitigation and monitoring will be delivered and reported.
5	Protocol for Archaeological Discoveries	Sets out what Moray West and their contractors must do on discovering any marine archaeology during the construction, operation, maintenance and monitoring of the Development.
6	Monitoring Requirements	Sets out monitoring requirements for the WSI and PAD and to ensure the effective delivery of mitigation, including AEZs, and the relationship between these monitoring requirements and those applicable to the Development as a whole (i.e. pre-construction and post-construction geophysical survey).
Appendix A	Defined Terms	List of terms using in the WSI and PAD requiring definition
Appendix B	Seabed Features	Figures showing the distribution of seabed features within the Development Site.
Appendix C	Gazetteer	Full details of identified archaeological material and seabed features as relevant to the application of mitigation.
Appendix D	ORPAD Preliminary Record Form	A preliminary record form for staff and contractors to record initial information on the nature of discoveries to be reported under the PAD.

#### **1.4.1 Document Control**

This WSI and PAD was prepared for approval by the Scottish Ministers and to inform consultation on the approach to the delivery of archaeological investigation and mitigation prior to, and during, the construction of the Development, with Moray West, HES, and any other advisors as may be required at the discretion of the Scottish Ministers. Revision 1 of the WSI and PAD has now been updated to incorporate the results of geoarchaeological and archaeological assessments of marine geotechnical and geophysical data undertaken by Wessex Archaeology and is being resubmitted for reapproval by the Scottish Ministers.

This version of the WSI and PAD (Revision 2) is hereafter a ‘point-in-time’ document, with the specific methodology for any subsequent package of archaeological works (should these be required in the event of an unexpected discovery, for example, see Section 5) to be taken forward through archaeological Method Statements (see Section 2.3) produced under the umbrella of the WSI and agreed with HES. This WSI and PAD includes construction specific approaches to ensure avoidance of features of possible archaeological interest. Prior to commissioning, an Operation and Maintenance (O&M) Method Statement will be prepared to ensure continued adherence to the PAD and avoidance of AEZs throughout the operation phase of the Development.

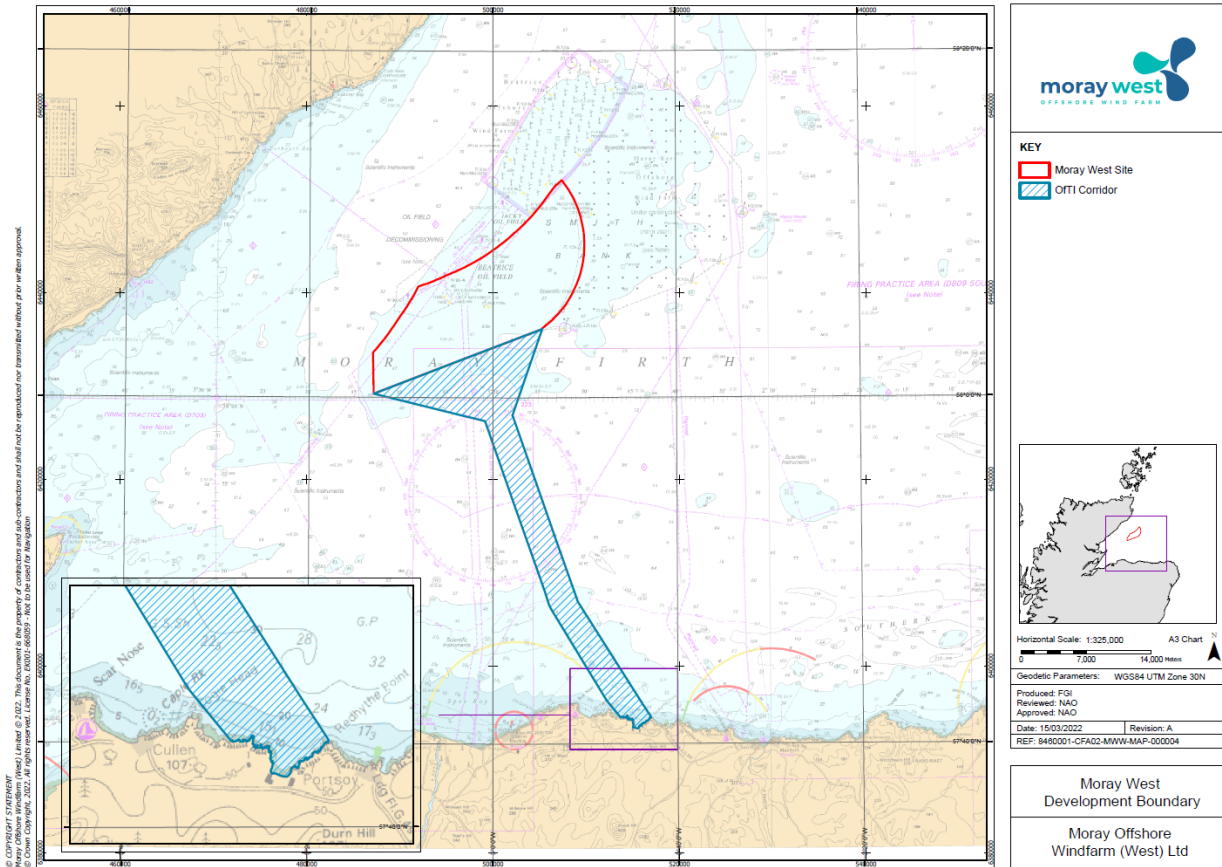
The WSI and PAD will not be further reviewed and revised unless there are material changes to the project which require revision of the archaeological baselines or approach to investigation and mitigation. Any revisions will be notified to the Scottish Ministers/Licensing Authority as soon as practicable and any proposed material revisions will be subject to prior approval by the Scottish Ministers/Licensing Authority.



## 2 Approach to Written Scheme of Investigation

### 2.1 Study Area

The Moray West Site covers an area of approximately 225 km<sup>2</sup> on the Smith Bank in the Outer Moray Firth approximately 22 km from the Caithness coastline (Figure 2-1).



**Figure 2-1 Geographical location of the Moray West Site and OfTI Corridor**

For the purpose of the archaeological assessment undertaken for the Moray West EIA Report (Moray West, 2018), a study area referred to as the Development Archaeological Study Area (ASA) was defined to include:

- Moray West Site ASA (including a 2 km buffer); and
- OfTI ASA (including a 2 km buffer except where this would overlap with the Moray West Site ASA and also excluding all areas above Mean High Water Springs (MHWS)).

The 2 km buffer around the two ASAs was included to account for potential effects associated with scour and sedimentation, to address uncertainty regarding the spatial accuracy of offshore cultural heritage

records and to account for the potential for cultural heritage features to extend beyond the boundaries of both the Moray West Site and the OfTI Corridor.

Construction footprints within the Development boundary (Figure 2-1) have subsequently been refined by Moray West comprising 60 Wind Turbine Generators (WTGs), two offshore substation platforms (OSPs), an OSP interconnector cable and inter array cables within the Moray West Site and two offshore export cable circuits within the OfTI Corridor. The study area for pre-construction archaeological assessment, therefore, comprises a nearshore study area, 50 m up to 150 m wide offshore export cable route corridors, 300 x 300 m WTG and OSP boxes and 50 m or 100 m inter array cable corridors and OSP interconnector corridor (Figure 2-2).

## 2.2 Scope of Document

This WSI has been prepared in accordance with 'Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects' (The Crown Estate, 2021). As stated in The Crown Estate guidance, a WSI forms an umbrella document, for all survey, investigation and assessment required for a project, supported by activity-specific method statements. A WSI:

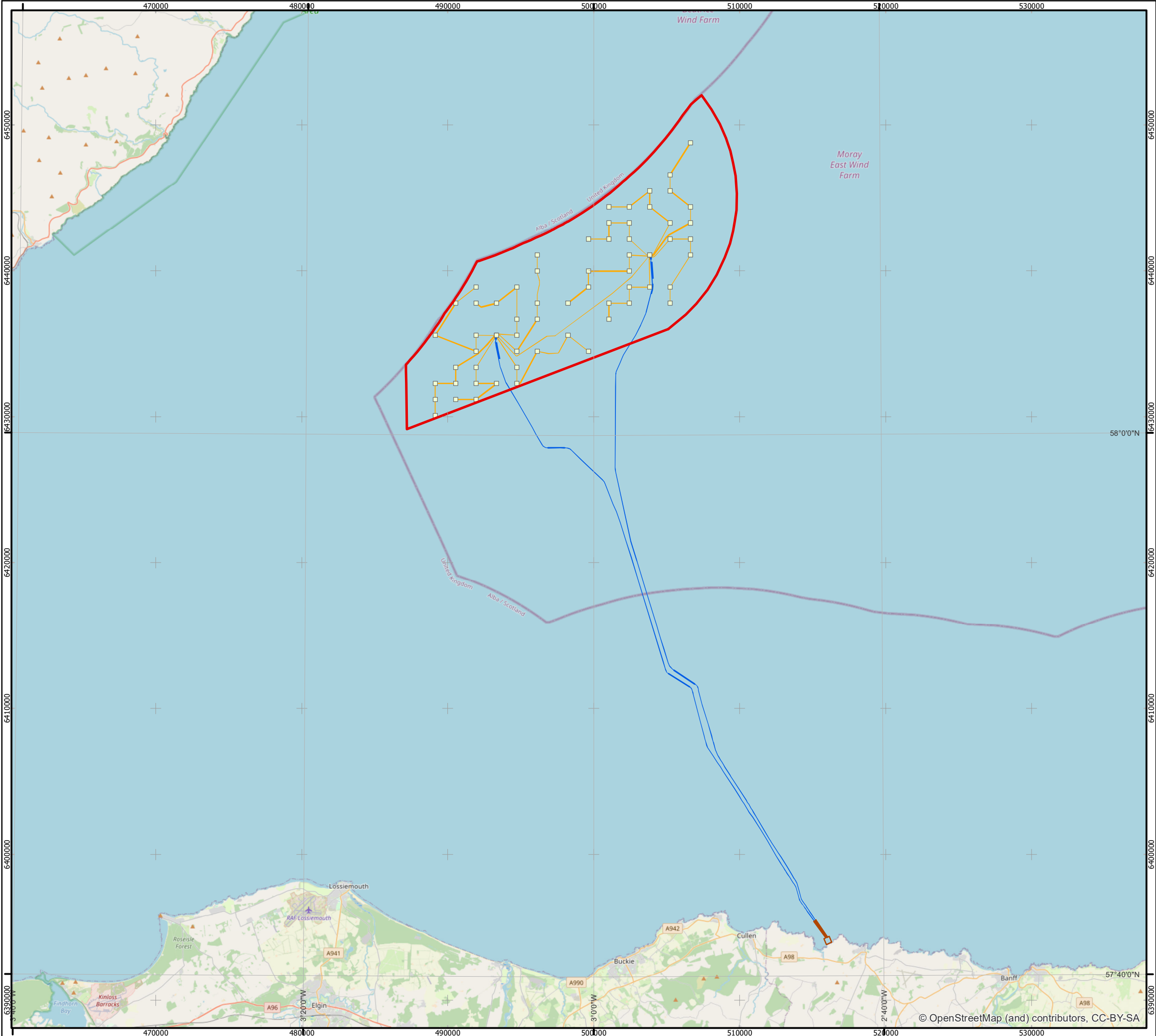
- sets out the roles and respective responsibilities of the project team, contractors, and retained archaeologist and archaeological contractor(s) and formal lines of communication between the parties and with archaeological curator(s) (Section 5);
- outlines the known and potential archaeological receptors that could be impacted by the scheme (Section 3.2, Section 3.3 and Section 3.4);
- outlines the agreed mitigation and archaeological actions that are to take place in various circumstances (Section 3.6);
- sets out the importance of research frameworks in setting objectives that are delivered through realisation of the work (see below); and
- provides summarised details on methodologies for these archaeological actions, which will be clarified in more detail in subsequent activity-specific method statements (Section 4 and Section 5).


Revision 1 of this document was prepared to set out the overarching approach to survey and archaeological investigations for agreement with the Scottish Ministers in accordance with the relevant offshore consent condition (Table 1.1). Following completion of these surveys and investigations this updated version has been prepared to take account of the results. Reapproval of this WSI and PAD may be given only following consultation by the Scottish Ministers with HES and, once approved, the final document will be sent to Aberdeenshire Council for information only.


The Crown Estate document sets out high level guidance on a range of archaeological methodologies that may be required in the production of WSIs and method statements. For each individual work package set out in Section 4, account has been taken of these standards, high level methodologies and each section sets out how these are relevant to the delivery of the Development and explain any necessary adaptations and amendments for approval by the Scottish Ministers in consultation with HES.








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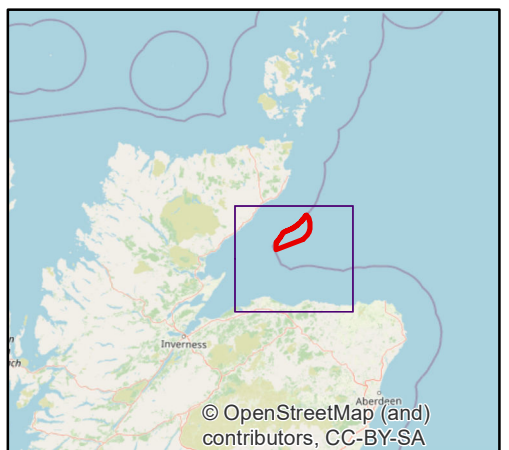
Produced by:  
  
Enhancing Society Together

On behalf of:  
  
OFFSHORE WIND FARM

**KEY**

-  Site Boundary
-  Nearshore UXO Survey Corridor
-  Foundation Boxes
-  IAC Survey Corridors
-  OEC Export Corridors

**Notes:**



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Horizontal Scale: 1:250,000 A3 Chart

0 5,400 10,800 Meters

Geodetic Parameters: WGS84 UTM Zone 30N

External Control	Internal Control
Produced: MCP	Produced: [INITIALS]
Reviewed: VC	Reviewed: [INITIALS]
Approved: VC	Approved: [INITIALS]
Date: 20/09/2023	Revision: 00

REF: 8460005-AAA0000-AAA-MAP-000000

**Figure 2-2**  
**Study Area for Pre-construction Archaeological Assessment**

Survey and work package specific archaeological objectives will be established on a case-by-case basis with reference to all relevant project datasets (and associated archaeological and geoarchaeological interpretations) and to other relevant research and investigations with specific reference to established research agendas, including (but not limited to) the Scottish Archaeological Research Framework (ScARF) and with specific reference to the ScARF Marine and Maritime theme (Atkinson and Hale, 2012).

In demonstrating adherence to industry good practice, this WSI also draws upon available archaeological guidance for offshore development including:

- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate 2014);
- Chartered Institute for Archaeologists (CifA) Code of Practice and Standards and Guidance (CifA 2014a, 2014b, 2014c, 2014d);
- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector (Gribble and Leather 2011);
- Historic Environment Guidance for the Offshore Renewable Energy Sector Guidance (Wessex Archaeology 2007); and
- Code of Practice for Seabed Development (Joint Nautical Archaeology Policy Committee (JNAPC) 2006).

## 2.3 Method Statements

Once reapproved, this WSI and PAD will become finalised, and represent a 'point in time' document. The methodology for any further archaeological work packages (should these be required in the event of an unexpected discovery, for example, see Section 5) will be set out in method statements as necessary, according to the requirements of the WSI. Each method statement will be prepared by the retained archaeologist (the archaeological consultant retained by Moray West to support and coordinate the implementation of the WSI) in consultation with MD-LOT and HES.

To date one method statement has been prepared under the umbrella of this WSI:

- Archaeological Method Statement for Remote Operated Vehicle (ROV) Investigation. Prepared by Royal HaskoningDHV (14 December 2022) for Moray West. Document reference: 8460005-DBHA15-MWW-MST-000001.

The objectives for each work package will be set out in the method statement and will take account of applicable objectives from the relevant research framework (ScARF) that will be addressed through the delivery of the work.

As set out in The Crown Estate (2021) guidance, method statements should cover the following key matters, as relevant to each work package:

- specific objectives of archaeological works;
- extent of investigation;

- investigation methodology, to cover:
  - intrusive methods;
  - non-intrusive methods;
  - recording system;
  - finds, including the policy for selection, retention and disposal and provision for immediate conservation and storage;
- environmental sampling strategy;
- relation between licence condition, WSI, PAD and the method statement;
- context in terms of relevant construction works;
- summary results of previous archaeological investigations in the vicinity;
- archaeological potential;
- anticipated post-investigation actions, including processing, assessment and analysis of finds and samples;
- reporting, including Intellectual Property Rights in the report and associated data, confidentiality and timescale for deposition of the report in a publicly accessible archive;
- timetable, to include investigation and post-investigation actions;
- monitoring arrangements, including monitoring by archaeological curator(s); and
- health, safety and welfare.

## 2.4 Roles and Responsibilities

Overall responsibility for the implementation of this WSI and PAD lies with Moray West who will ensure that its agents and contractors are contractually bound to adhere to the terms of the WSI and to implement the PAD. However, all Moray West staff and contractors also have a responsibility to comply with the requirements of the WSI.

Table 2-1 details the roles and responsibilities with respect to delivering the WSI and PAD.

Table 2.1 Key responsibilities of personnel relevant to this WSI and PAD	
Moray West Development Team	
Responsibilities:	<p>The Moray West Development Team will act as a first point of contact for Development staff and will liaise with the retained archaeologist regarding the implementation of mitigation measures with respect to archaeology and cultural heritage.</p> <p>Specifically, the Development Team will be responsible for:</p> <ul style="list-style-type: none"> <li>• Engagement of and continuing liaison with the retained archaeologist;</li> <li>• Approval of the WSI and associated method statements and technical reporting on behalf of Moray West;</li> </ul>

**Table 2.1 Key responsibilities of personnel relevant to this WSI and PAD**

	<ul style="list-style-type: none"> <li>Ensuring ongoing compliance with the WSI, supported by the retained archaeologist;</li> <li>Reporting, returns and notifications to MS-LOT and HES as required by the Development consents; and</li> <li>Distribution of archaeological briefing notes (see Section 2.5) to contractors and ensuring the inclusion of archaeological requirements at mobilisation/kick off meetings as advised by the retained archaeologist.</li> </ul> <p>Contact details for the Moray West Development Team are:</p> <ul style="list-style-type: none"> <li>Moray West Development Team</li> <li>Moray Offshore Windfarm (West) Limited</li> <li>Email: <a href="mailto:development@moraywest.com">development@moraywest.com</a></li> </ul>
<b>Moray West Environmental Clerk of Works (ECoW)</b>	
Responsibilities:	<p>With respect to this WSI and PAD the ECoW is responsible for:</p> <ul style="list-style-type: none"> <li>Quality assurance of final draft versions of all plans and programmes, including this WSI and PAD;</li> <li>Monitoring compliance of the Development with the consent conditions and Consent Plans; and</li> <li>Monitoring that the Development is being constructed in accordance with the Consent Plans (including this WSI), consent conditions and in compliance with all relevant regulations and legislation.</li> </ul>
<b>Moray West Retained Archaeologist</b>	
Responsibilities:	<p>Moray West has retained the services of Royal HaskoningDHV to act as the retained archaeologist and the initial point of contact for the Moray West Development Team. Specific responsibilities include:</p> <ul style="list-style-type: none"> <li>Compiling, reviewing and updating this WSI following consultation with Moray West, the regulators (MS-LOT) and curators (HES);</li> <li>Advising Moray West on their responsibilities regarding the implementation of the WSI and PAD;</li> <li>Compiling, agreeing and issuing any necessary method statements for archaeological contractors to adhere to, following consultation with Moray West and the regulators and curators (HES);</li> <li>Advising Moray West on the necessary interaction with the regulators, curators (HES) and other third parties;</li> <li>Develop and deliver training on relevant aspects of the WSI and PAD to Moray West personnel including input to inductions, presentations, and production of awareness materials;</li> </ul>

**Table 2.1 Key responsibilities of personnel relevant to this WSI and PAD**

	<ul style="list-style-type: none"> <li>Supporting Moray West in procuring, monitoring the work of, and liaising with specialist archaeological contractors, where necessary;</li> <li>Monitoring the preparation and submission of archaeological reports as appropriate and making them available to the regulators and curators (HES) for review and approval; and</li> <li>Advising Moray West on any final requirements and arrangements for further assessment, analysis, archive deposition, publication and popular dissemination.</li> </ul> <p>Contact details for the retained archaeologist at Royal HaskoningDHV, currently engaged to support the implementation of archaeological requirements is:</p> <ul style="list-style-type: none"> <li><b>Victoria Boothby</b></li> <li>Senior Marine Heritage Consultant</li> <li>Royal HaskoningDHV</li> <li>[Redacted]</li> <li>Email: victoria.boothby@rhdhv.com</li> </ul>
<b>Archaeological Contractors</b>	
Responsibilities:	<p>For each package of archaeological works considered necessary, as agreed the regulators and curators (HES), Moray West or their agents will, as required, procure the services of specialist archaeological contractors with the requisite experience and expertise to undertake the necessary works.</p> <p>The specific roles and responsibilities of the archaeological contractors will be set out in the relevant method statement for the works.</p>
<b>Moray West Personnel and Contractors</b>	
Responsibilities:	<p>All Moray West personnel and contractors shall ensure that their own procedures encompass and fully discharge the mitigation and management measures and commitments presented in this WSI and PAD. Adherence to the Moray West WSI and PAD will be a contractual requirement.</p> <p>All agents and contractors engaged by Moray West will:</p> <ul style="list-style-type: none"> <li>Familiarise themselves with the requirements of this document and make it available to their staff and sub-contractors, explaining the requirements and need for strict adherence;</li> <li>Ensure the implementation of and adherence to this document by their staff, including ensuring staff awareness of the PAD through dissemination of briefing notes and making staff available for mobilisation/kick off meetings;</li> <li>Assist and afford access to archaeological contractors as advised by Moray West and the retained archaeologist; and</li> <li>Inform the retained archaeologist and any archaeological contractors of any environmental or health and safety constraints of which they may be aware that is relevant to the archaeologist's activities on site.</li> </ul>

**Table 2.1 Key responsibilities of personnel relevant to this WSI and PAD**

Offshore Client Representatives	
Responsibilities:	<p>Offshore Client Representatives will act as ‘Site Champions’ under the PAD, a single person on each vessel (or within each worksite team) who is responsible for reporting discoveries to the Nominated Contact (the Moray West Development Team). The responsibilities of a Site Champion are to:</p> <ul style="list-style-type: none"> <li>• Implement and ensure observation of Temporary Exclusion Zones (TEZ) (see Section 4.3) if required;</li> <li>• Confirm details of discovery and ensure preliminary record forms are completed;</li> <li>• Inform the Moray West Nominated Contact (the Moray West Development Team); and</li> <li>• Feed back information to site staff.</li> </ul>
Relevant Authorities	
Responsibilities	<p>MD-LOT, acting on behalf of Scottish Ministers, is responsible for discharging / ensuring compliance with Moray West’s consent conditions.</p> <p>HES is the statutory body for archaeology and cultural heritage within Scotland including marine archaeology in waters adjacent to the Scottish coast up to the mean high water mark and out to 200 nautical miles.</p> <p>In the event of a significant discovery, HES and MD-LOT will be informed of any archaeological or cultural heritage finds, and will as soon as reasonably practicable:</p> <ul style="list-style-type: none"> <li>• Liaise with other relevant archaeological authorities;</li> <li>• Advise on proposals to further evaluate any finds; and</li> <li>• Advise on proposals to mitigate the effects of work activities upon any finds, if required.</li> </ul>

## 2.5 Training and Awareness

Moray West and their contractors shall ensure that all employees and sub-contractors are made aware of the content of the WSI and PAD that is applicable to them.

A briefing note has been prepared by the retained archaeologist to set out the responsibilities of all staff and contractors engaged in undertaking works within the project boundaries of the Development with respect to archaeology and cultural heritage. Moray West and their contractors will be responsible for ensuring that all relevant staff are issued the briefing note in advance of works commencing and will also ensure awareness through kick off and mobilisation meetings. This may be delivered as a targeted induction or as part of a larger site induction. Inductions to the site shall include, as a minimum:

- identification of specific archaeological impacts associated with the work to be undertaken on site by the inductee;



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- any site or task specific mitigation that is required in order to comply with commitments made in the WSI including, for example, the avoidance of AEZs and additional anomalies and adherence to the PAD in the event of an unexcepted discovery;
- role of the retained archaeologist and contact details;
- key roles defined in the PAD (i.e., Nominated Contact and Site Champions) and contact details; and
- any other relevant information including work package specific tasks to support the delivery of this WSI and PAD.

### 3 Archaeological Baseline and Impact Assessment Summary

#### 3.1 Summary of Assessments to Date

Assessment to inform the archaeology and cultural heritage baseline for the Moray West offshore EIA report (Moray West, 2018) was undertaken by Wessex Archaeology within an ASA comprising the extents of the Development plus a 2 km buffer. This included:

- A desk based assessment (DBA) to inform the offshore and intertidal baseline, including reference to:
  - The United Kingdom Hydrographic Office (UKHO) data for charted wrecks and obstructions;
  - The National Record of the Historic Environment (CANMORE) maintained by HES, comprising data on designated heritage assets including sites protected under the Protection of Military Remains Act 1986 and the Marine (Scotland) Act 2010 (i.e. Historic Marine Protected Area (HMPAs);
  - Relevant mapping including Admiralty Charts, historic maps and Ordnance Survey; and
  - Relevant documentary sources and grey literature held by Wessex Archaeology, and those available through the Archaeological Data Service (ADS) and other websites.
- The archaeological assessment of marine geophysical data (sidescan sonar, magnetometer, sub-bottom profiler and multibeam bathymetry) acquired from the Moray West Site only by Osiris Projects in 2010;
- Geophysical data were not acquired from the OfTI corridor at this time although impacts were assessed using desk-based sources.

Pre-construction geophysical survey data were acquired by multiple survey companies between 2019 and 2023:

- Multibeam bathymetry and magnetometer data acquired from the nearshore section of the OfTI corridor by Aspect Land & Hydrographic Surveys Ltd in 2019;
- Sidescan sonar, multibeam bathymetry and magnetometer data acquired from offshore export cable circuits one and two by Technoambiente in 2019;
- Sidescan sonar, multibeam bathymetry and magnetometer data acquired from offshore export cable circuits one and two, WTGs and OSPs by MMT in 2019;
- Sidescan sonar, multibeam bathymetry and magnetometer data acquired from the nearshore section of the OfTI corridor by Titan Environmental Surveys Ltd in 2022; and
- Sidescan sonar, multibeam bathymetry and Unexploded Ordnance (UXO) specification magnetometer data acquired from offshore export cable circuits one and two, WTGs and OSPs by Gardline Limited in 2022 to 2023.



The data were processed by Wessex Archaeology and assessed for quality and suitability for archaeological assessment. It was concluded that, through the various phases of survey, all areas of the study area were covered by datasets which were considered suitable for archaeological assessment.

Following interpretation, the results were grouped with the results of desk-based assessment and the gazetteer of anomalies created during the previous assessment where the current development overlaps (Wessex Archaeology, 2018). If numbers were assigned to each feature and for any identified anomaly which matched a previously identified feature, the original anomaly number from the previous Wessex Archaeology report was retained. Following grouping a discrimination flag (based on Wessex Archaeology's proprietary criteria) was added as defined in Table 2.1.

Table 3.1 Criteria discriminating relevance of identified features to proposed scheme	
Discrimination	Criteria
A1	Anthropogenic origin of archaeological interest
A2_h	Anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature.
A2_l	Anomaly of possible anthropogenic origin but the interpretation is uncertain; may be anthropogenic or a natural feature.
A3	Historic record of possible archaeological interest with no corresponding geophysical anomaly

The results are set out in the archaeological assessment report (8460005-DBHA15-MWW-REP-000003) prepared by Wessex Archaeology (2023) for submission to HES in order to demonstrate completion of this work package.

A number of the seabed features identified by Wessex Archaeology were subsequently investigated using as part of a wider programme of UXO investigation and clearance in order to ground truth selected targets and confirm their archaeological interest. Works were undertaken in accordance with a method statement agreed with HES (Royal HaskoningDHV, 2022a) across three phases:

- UXO inspections by divers in the nearshore area of the OfTI corridor carried out by Eodex from the vessel *Titan Discovery* between 7 January and 10 January 2023;
- UXO inspections using an ROV within the offshore export cable circuits and the western and eastern array areas carried out by Eodex from the vessel *Glomar Wave* between 28 February and 13 April 2023; and
- Inspections of additional archaeological targets using an ROV by Eodex from the vessel *Glomar Wave* during UXO disposal phase which commenced in May 2023 and was completed in September 2023.

A number of the inspected targets were identified as both potential archaeology (by Wessex Archaeology) and as potential UXO (pUXO) by Moray West's UXO consultants, 6 Alpha. Target Investigation Reports (TIRs) for all targets investigated as pUXO have been made available to Royal HaskoningDHV for review, 225 (of 272 in total) of which also correspond to targets identified as potential archaeology. Archaeological investigation reports have been prepared for each target investigated as potential archaeology only. The results of the archaeological review of ROV and diver investigation have been set out in an archaeological report for review by HES (8460005-DBHA15-MWW-REP-000004).

In addition, in 2021 a total of 184 vibrocores were acquired during a geotechnical survey within the OfTI corridor. Vibrocore logs and photographs were provided to Wessex Archaeology and, following review, six cores were geoarchaeologically recorded by a specialist from Wessex Archaeology at the laboratory of In Situ Site Investigation in Sussex (Wessex Archaeology, 2022). In 2022, a further geotechnical survey, comprising 89 vibrocores within the Moray West site was undertaken and the logs were provided to Royal HaskoningDHV for geoarchaeological review (Royal HaskoningDHV, 2022b).

The results of these geoarchaeological and archaeological assessments are set out in Section 3.2, Section 3.3 and Section 3.4 below.

### 3.2 Seabed Prehistory

There are no known prehistoric sites within the Development boundary (Figure 2-1).

The potential for previously undiscovered archaeological material of prehistoric date to exist within the ASA was assessed by Wessex Archaeology (2018) with reference to a generalised Quaternary stratigraphy based on the sub-bottom profiler data acquired by Osiris Projects in 2010, secondary sources (Andrews *et al.* 1990; BGS 1984a; BGS 1984b) and boreholes from the adjacent lease area for Moray East Offshore Wind Farm (Wessex Archaeology 2014; MORL 2012). This potential is summarised with respect to interpreted stratigraphic units in Table 3.2.

Table 3.2 Generalised Stratigraphy of the ASA				
Stratigraphic Unit	Formation Unit	Description	Environment	Archaeological Potential
Seabed sediments	Holocene Marine	Silty, gravelly sand with occasional shell and organics	Outer estuarine/Marine	Considered of low potential in itself, but possibly contains re-worked artefacts and can cover wreck sites and other cultural heritage.
7	Holocene Estuarine	Well laminated soft silty clays and fine sands with some peaty clays	Possible estuarine, alluvial or terrestrial	High archaeological and palaeoenvironmental potential. Could contain in-situ and/or reworked artefacts and environmental material

Table 3.2 Generalised Stratigraphy of the ASA				
Stratigraphic Unit	Formation Unit	Description	Environment	Archaeological Potential
6	Devensian	Muds and sandy muds	Periglacial, possible glaciolacustrine	Very low potential due to proximity to ice sheet
5	Devensian	Muddy sands and sandy clays with sands and gravels – Ablation till	Sub glacial/Glacial	Very low potential due to period of ice coverage
4	Devensian	Laminated gravelly, silty clays	Glaciomarine	Very low potential due to period of submersion and close proximity to ice sheet
3	Devensian	Laminated silty clays – Possible reworked Unit 1	Glaciomarine	Very low potential due to period of submersion and close proximity to ice sheet
2	Devensian	Sands	Sub glacial/Glacial	Very low potential due to period of ice coverage
1	Devensian	Gravelly Clay – Till	Sub glacial/Glacial	Very low potential due to period of ice coverage
Bedrock	Cretaceous Bedrock	Mudstone and Sandstone		None – too old to be of archaeological potential

In summary, only Unit 7 was considered to have relatively high potential for the presence of prehistoric archaeological and palaeoenvironmental material. Wessex Archaeology (2018) suggest that this Unit, defined as Holocene in age, was potentially deposited at a time when the ASA was exposed as a terrestrial environment after the last glacial period, post ice retreat but prior to the Holocene marine transgression. The layers of peats and silts suggest the presence of organic material within these sediments which would support the evidence of a land surface, and therefore suitable for human occupation and settlement.

No individual paleogeographic features (e.g., individual buried palaeochannels) of archaeological interest were identified within the sub-bottom data assessed by Wessex Archaeology (2018). Unit 7 was interpreted as present across a large expanse of the ASA, ranging from 0.5 m to approximately 40 m below the seabed. Some stronger reflective layers of sediments were observed within this unit, which may have indicated the presence of more organic or peaty material. A sporadic coverage of gas chimneys was also visible within this layer, which further implied the presence of organic material within or at the base of this layer.

The geoarchaeological assessment of the 2021 vibrocores, however, indicated that the deposits within the Moray West OfTI corridor formed in glacial or marine environments and as a result, have low geoarchaeological potential and no further work was recommended (Wessex Archaeology, 2021).

Similarly, the 2022 vibrocores from the Moray West Site encountered principally recent marine sediments (sands and clays). Given the low geoarchaeological potential of the deposits no further geoarchaeological or palaeoenvironmental work was deemed necessary.

A technical report setting out the results of geoarchaeological assessment of 2021 geotechnical cores undertaken by Wessex Archaeology (8460005-DBHA15-MWW-REP-000001) and a technical note setting out the results of a review of 2022 geotechnical cores undertaken by the marine geoarchaeologist at Royal HaskoningDHV (8460005-DBHA15-MWW-TNO-000001) were issued to HES on 15 December 2022 to inform consultation and a response was received on 23 January 2023 confirming that HES were content with the document and no further work was required.

### 3.3 Maritime and Aviation Sites

The DBA and the assessment of the 2010 geophysical survey data, acquired by Osiris Projects from the Moray West Site, resulted in the identification of 39 features of archaeological interest within the ASA. Following grouping with the results of the assessment of the 2019-2023 data, a total of 346 features were identified as being of possible archaeological potential within the refined study area, discriminated as shown in Table 3.3. There are no A1 anomalies which have been identified on the basis of the assessments undertaken to date.

Table 3.3 Anomalies of archaeological potential within the study area		
Archaeological discrimination	Quantity	Interpretation
A2_h	42	Anomaly of likely anthropogenic origin but of unknown date; may be of archaeological interest or a modern feature
A2_l	304	Anomaly of possible anthropogenic origin but interpretation is uncertain; may be anthropogenic or a natural feature
Total	346	

The anomalies were also classified by probable type, which can further aid in assigning archaeological potential and importance (Table 3.4).

Table 3.4 Types of anomaly identified		
Anomaly classification	Definition	Number of anomalies
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	4

Table 3.4 Types of anomaly identified

Anomaly classification	Definition	Number of anomalies
Debris	Distinct objects on the seabed, generally exhibiting height or with evidence of structure, that are potentially anthropogenic in origin	11
Seabed disturbance	An area of disturbance, occasionally containing objects of uncertain origin. May indicate wreck debris or other anthropogenic features, or items buried just below the seabed, but lacking any definite anthropogenic structures. Precise nature is uncertain	6
Rope/chain	Curvilinear dark reflectors, often with a small amount of height, indicating rope or chain (if ferrous)	1
Bright reflector	Individual objects or areas of low reflectivity, characteristic of materials that absorb acoustic energy, such as waterlogged wood or synthetic materials. Precise nature is uncertain	2
Dark reflector	Individual objects or areas of high reflectivity, displaying some anthropogenic characteristics. Precise nature is uncertain	64
Mound	A mounded feature with height not considered to be natural. Mounds may form over wreck sites or other debris.	13
Magnetic	Magnetic only anomaly without associated seabed surface expression. Have the potential to represent possible buried ferrous debris or buried wreck sites	243
Magnetic area	A discrete area of individual or continuous magnetic anomalies seen over a number of adjacent profile lines with no associated seabed surface expression, and have the potential to represent possible buried ferrous debris or buried wreck sites	1
Magnetic trend	A linear trend of individual or continuous magnetic anomalies with no associated seabed surface expression, and have the potential to represent possible buried ferrous debris	1
Total		346

The distribution of the assessed features which remain within the Development boundary following ROV investigation is shown on the figures in Appendix B.

Of the original 39 features from the Moray West EIA, only one was seen in the 2019 to 2023 data (7213, possible debris identified as a boulder during ROV inspections). Twenty five correspond to A2 anomalies which were not covered by the 2019-2023 data and are retained in the updated gazetteer (Appendix C).

Two (7203 and 7208) correspond to A2 anomalies which were covered by the 2019-2023 data but were not seen in the data and have been removed from the updated gazetteer (Appendix C).

Of 11 A3 records identified in the Moray West EIA, one is located within the Moray West Site corresponding to a wreck (7228) recorded by the UKHO as the *Sunbeam* (Possibly), last identified by geophysical survey for the UKHO in 2008. This wreck location was not covered by the 2010 geophysical survey data and is located outside the revised construction boundaries, so was not covered by the 2019-2023 pre-construction data. As such, its position was not validated, although it can be assumed that it still exists at the recorded location and an AEZ is retained around the location (Figure 3-1, see Section 4.3).

Of the ten A3 records within the OfTI Corridor, five recorded obstructions (7233, 7235, 7236, 7237 and 7238) relate to features that were surveyed by the UKHO in the 1980s, assigned as possibly wreckage, with one (7237) classed as 'dead'. This record refers to an old steamship located 1 mile north east of Cullen and may correspond to a reported loss rather than actual wreck remains. All of these locations are outside the revised construction boundaries for the export cable circuits and were not covered by the 2019-2023 pre-construction data. It is unlikely that any archaeological remains are present at the recorded locations and they are retained in the updated gazetteer for reference only and no AEZs have been recommended.

Similarly, all of the five wrecks recorded by the UKHO are located beyond the construction footprint and, of these five, four are assessed as being unlikely to constitute actual remains on the seabed:

- U77 (7229) a WWI German UE-class minelaying submarine, sunk by gunfire on 7<sup>th</sup> July 1916. In 1988 no wreck was located within one mile to the north of the original position;
- *Moray Firth* (Probably) (7230) a British steamship which sank on the 28<sup>th</sup> March 1943 following a collision. In 1987 a search for this record was undertaken, but no wreck was found;
- *Artemis* (7232) a motor fishing vessel that sank on 2<sup>nd</sup> September 1974 after grounding in dense fog. In 1987 no wreck was found at the original position; and
- Record 7234 is a possible aircraft wreck of an A/C Day Jet. The aircraft was ditched, although the year of loss isn't recorded and the wreck was not located during the 1987 and 1988 searches.

Only one of these wrecks is thought likely to correspond to actual remains at the recorded location (7231, the *Mayflower*, a motor fishing vessel last located in 1986). The location is outside the construction footprint, so was not covered by the 2019-2023 pre-construction data. As such, its position was not validated, although it can be assumed that it still exists at the recorded location and an AEZ is retained around the location (see Section 4.3).

Within the construction boundaries, Wessex Archaeology (2023) have interpreted the presence of 346 A2 anomalies of possible archaeological interest (Table 3.3 and Table 3.4). Of these 346, 197 were investigated using an ROV. In summary:

- 70 were positively identified as non-archaeological, including modern fishing gear, other modern debris (such as steel wire rope, metal bars or pipes, scrap metal, tyres or other



recently discarded items) or unidentifiable items of ferrous debris for which the age cannot be determined, but which are not assessed as being of archaeological interest;

- Eight were positively identified as natural geological features, including boulders and rocky outcrops;
- Six were identified as being of possible archaeological interest including a stone clump weight (70082) two possible capstans (70084 and 70087 and three objects of uncertain origin or archaeological interest (70153, 70293 and 70092);
- 76 were of archaeological interest but confirmed as UXO dating, from the first or second world war, and comprising a large number (74) of naval projectiles, all of which have been confirmed as non-explosive (filled with solid materials) and likely to have been used as practice rounds. The remaining two confirmed UXO included a 'Luftmine B' parachute mine (70079) and a 500lb air dropped bomb (70099);
- Seven were of archaeological interest and confirmed as non-UXO comprising:
  - a ballistic cap (70273);
  - a Bofor cartridge case (70317);
  - a torpedo air vessel (70292);
  - a Danforth or Union type anchor (70259);
  - a large amount of concreted chain (70131);
  - a spoked wooden wheel with a metallic hub (70019) and a metal bar with a large wooden spar attached (70018) found in close proximity to each other in the nearshore area and possibly part of a (gun) carriage); and
- 30 were locations where nothing was found.

All non-archaeological finds, natural features, locations where nothing was found, and confirmed UXO (which have subsequently been disposed of) have been removed from the gazetteer (Appendix C) as there is no archaeological material present at the recorded locations.

The gazetteer (Appendix C) has been updated with further details of the four finds of possible archaeological interest and seven finds of archaeological interest.

Two further finds have been added to the gazetteer (Appendix C) which were not recorded in the geophysical data by Wessex Archaeology but which were confirmed as an archaeological find of a further ballistic cap (6A\_MAG\_0165) and a small cylinder with a hoop attached which is of possible archaeological interest (6A\_MAG\_0085).

Following the completion of the archaeological assessment of marine geophysical data (Wessex Archaeology, 2023) and the review of the diver and ROV investigations (Royal HaskoningDHV, forthcoming) the potential for the presence of further wrecks, or aircraft, which have not previously been discovered is anticipated to be low within the construction footprint. Isolated finds which may be encountered during construction activities will be addressed through the PAD (Section 5).

### 3.4 Intertidal Heritage Assets

Wessex Archaeology (2018) did not record the presence of any known intertidal heritage assets, although it is noted that the intertidal zone was likely to have been exploited for subsistence, as well as potentially containing the remains of vessels, boats and other watercraft. This is reflected in the number of documented losses recorded at positions that place them in or on the edge of the intertidal zone.

### 3.5 Potential Impacts

The Moray West Offshore Wind Farm comprises 60 WTGs, associated substructures and seabed foundations, inter-array cables and any scour protection around substructures or cable protection. The OfTI comprises two OSPs, located within the Moray West Site, one OSP interconnector cable and two offshore export cable circuits located within the OfTI Corridor and will be used to transmit the electricity generated by the offshore wind farm to shore.

The offshore export cable circuits will come ashore at east of Sandend Bay, which is located on the Aberdeenshire Coast at Broad Craig, approximately 65 km south of the Moray West Site. Cable installation at the landfall will be via horizontal directional drilling (HDD), with offshore cables connected to the onshore cables via transition joint bays landward of the intertidal zone. The cable will pass beneath the intertidal zone to exit points located in the nearshore zone at a point where marine installation equipment can operate. Moray West will transfer ownership of the transmission asset to an Offshore Transmission Owner (OFTO) who will operate and maintain the transmission infrastructure.

Prior to installation works commencing, UXO investigation and clearance and boulder clearance have been carried out and a pre-lay grapnel run (PLGR) will be conducted to remove linear seabed surface debris (i.e., fishing gear, wires, and ropes) along the cable routes.

The development is aiming to be fully operational in 2024/25 with an operational life of over 25 years.

Impacts were assessed in the Moray West EIA Report against a realistic worst case envelope encapsulating the parameters described above. As identified by Wessex Archaeology (2018), offshore developments can affect heritage assets in two ways:

- from the direct effect of the physical siting of the project; and
- from indirect changes to the physical marine environment.

In summary, as described by Wessex Archaeology (2018), “impacts to heritage assets and their historic environment occur as a result of changes to their physical environment in terms of loss and/or degradation, which can subsequently reduce the significance of a heritage asset and its wider historic environment. The management and mitigation of such change is based on the principle that archaeological assets are finite, non-renewable and cannot adapt, tolerate or recover from direct impacts”.

Activities described by Wessex Archaeology (2018) which may result in impacts that have potential direct and/or indirect effects can include:

- seabed preparation prior to substructure installation and cable laying;



- survey and clearance of UXO;
- installation of turbine substructures (monopile foundations);
- placing of scour protection around turbine locations;
- installation of OSPs (monopile foundations);
- laying of inter-array, OSP inter-connector and export cables (methods include jet trenching and / or mechanical trenching);
- backfilling of cable trenches and protection/stabilisation of surface laid marine cables (options include rock placement, concrete/frond mattresses, or uraduct);
- scour associated with the disturbances listed above; and
- seabed contact by legs of jack-up vessels and/or anchors on vessels associated with the installation, maintenance and decommissioning phases of the Development.

All direct physical impacts on recorded and potential marine archaeology assets have the potential to be high magnitude. However, with embedded and additional mitigation (as set out in Section 3.6 below and in accordance with the methodologies set out in Section 4 and the PAD in Section 5) to reduce, remove or offset the impacts on heritage assets, the significance of any associated effects is reduced. The EIA Report (Moray West, 2018) concluded that, with the implementation of the embedded mitigation measures, the physical impacts to the potential receptors will be reduced to negligible magnitude. This would result in effects of minor adverse significance and therefore not significant in EIA terms.

Indirect physical impacts on marine archaeology assets may occur where changes to normal tide, current and sedimentation patterns lead to physical effects on receptors. These may lead to adverse effects on the asset where protective cover is removed or positive effects where protection is increased. However, Wessex Archaeology (2018) concluded that, based on the assessment of physical processes set out in the EIA Report, changes in hydrodynamic and sedimentary regimes within the Moray West Site and along the OfTI Corridor are predicted to be limited to the mobilisation of fine sand-sized sediments, resulting in a negligible magnitude of impact. The potential significance of the effect on marine archaeology assets is therefore minor and therefore not significant in EIA terms.

Effects upon the setting of onshore cultural heritage assets from the presence of offshore infrastructure were also assessed. However, all potential effects were concluded to be of minor significance. Embedded mitigation as relevant to the assessment of Landscape and Visual Impact Assessment (LVIA) includes the use of a regular grid, similar dimensions for all WTGs and the colour and finish of WTGs. As this embedded mitigation will be delivered through LVIA design principles, mitigation as relevant to the setting of onshore heritage assets are not considered further in this WSI.

### **3.6 Embedded and Additional Mitigation**

As set out in the EIA Report (Moray West, 2018), mitigation for the Development includes a range of embedded mitigation measures to minimise effects which for offshore and intertidal archaeology comprise the following:

- A Development-specific WSI will be prepared, in consultation with HES, once the layout of the Development and infrastructure is established. The WSI will set out the design and implementation of a programme of detailed mitigation works (this document);
- Mitigation strategies for known shipwreck sites will include maintenance of appropriate AEZs between the Development infrastructure including OSP(s) and cables. AEZs preclude development-related activity within their extents (see Section 4.3);
- Analysis of pre-construction survey data will be undertaken to refine the identified potential marine archaeology assets at infrastructure locations. Appropriate micro-siting allowance for identified assets will be agreed in consultation with HES (see Section 4.1);
- Both the micro-siting allowance and AEZs will be detailed in the WSI (this document). This will reduce any potential impacts on marine archaeology; and
- The WSI will include a PAD which will be prepared in consultation with HES. This will mitigate the risk of damage to any previously unrecorded archaeological remains (see Section 5).

It was concluded that implementation of these measures will ensure that the magnitude of impact of the Development will be reduced to a negligible level.

## 4 Approach to Investigation and Mitigation

### 4.1 Marine Geophysical Investigations

As set out in the EIA Report (Moray West, 2018), embedded mitigation for the Development included the analysis of pre-construction survey data, undertaken to refine the identified potential marine archaeology assets at infrastructure locations. As summarised in Section 3.1, this was undertaken by Wessex Archaeology and the results detailed in a technical report (8460005-DBHA15-MWW-REP-000001) and summarised in Section 3.3.

No further geophysical surveys are currently planned and no further assessment work is recommended in advance of construction. However, in the event of a unexpected discovery during construction, the acquisition of geophysical data may be proposed should a site require further investigation, as advised by the retained archaeologist in consultation with HES.

Should further work be required, the approach to survey and assessment will be informed by the advice of a specialist archaeological contractor and co-ordinated by the retained archaeologist. The approach to survey will be detailed in a method statement prepared by the retained archaeologist, in consultation with HES, to ensure the suitability of any data to meet defined archaeological objectives. The method statement will be issued by the Moray West Development Team in advance of any further geophysical survey commencing. They will be responsible for ensuring that all surveys proceed in line with any planned method statement as agreed with MD-LOT and HES.

It should be noted that not all archaeological remains can be identified through geophysical survey, particularly non-ferrous buried remains such as wooden vessels. Specific consideration will, therefore, need to be given to the scope of geophysical surveys which incorporate archaeological objectives. The limitations of geophysical equipment to penetrate deep into mobile sediment where archaeological material, particularly non-ferrous material, could be buried must also be considered.

On completion of the geophysical surveys the data will be processed, assessed and interpreted by an experienced and qualified archaeological contractor. Geophysical survey data, supplied to an agreed technical standard and specification, at the same level of fidelity as recorded, will be interpreted by an archaeological geophysicist with an appropriate level of expertise. Survey data, together with operational reports and trackplots, should be made available in digital formats to the archaeological geophysicist. Where possible full-fidelity data unreduced in range, frequency, sampling and dimensionality from that recorded must be used as the input for archaeological interpretation. Full detail on the provision of data for assessment is provided in The Crown Estate guidance (2021).

The results of further geophysical interpretation will be compiled as an archaeological technical report consistent with the methodologies for reporting set out in The Crown Estate (2021) guidance and will form part of the project archive as set out in Section 4.9. The resulting spatial interpretation data, such as the locations and extents of identified features and/or deposits of archaeological potential, will be provided alongside the compiled report in a suitable digital format, such as Geographic Information System (GIS)

shapefiles or CAD drawing files as agreed with Moray West and, where appropriate, the archaeological curator(s).

All reports and digital deliverables relating to previous assessments should be available for subsequent data interpretations that may be required during the operation or decommissioning phases of the Development.

#### 4.2 Marine Geoarchaeological Investigations

There are currently no known prehistoric sites within Moray West site or OfTI corridor. No individual paleogeographic features (e.g., individual buried palaeochannels) of archaeological interest were identified within the geophysical data assessed by Wessex Archaeology for the EIA Report and the geoarchaeological assessment (see Section 3.2) did not indicate the presence of deposits with geoarchaeological potential. Based upon the results of the EIA Report and geoarchaeological assessments, therefore, no further assessment was recommended.

#### 4.3 Archaeological Exclusion Zones

No AEZs were recommended by Wessex Archaeology following the archaeological assessment of the pre-construction marine geophysical survey data. AEZs have not been recommended for anomalies that have been interpreted as A2s (uncertain origin of possible archaeological interest) although an avoidance strategy with respect to these anomalies has been advised, where possible, if they are proposed to be directly impacted by development in the future.

On the basis of the assessment undertaken for the EIA Report, only two AEZs have recommended to date by Wessex Archaeology (2018) (as shown on the figures in Appendix B). Neither of the AEZs are located within the refined construction footprint and, consequently, neither was covered by the pre-construction survey data. It is therefore recommended that the AEZs are retained during construction, operation and decommissioning as a precautionary measure:

- Record 7228 is located within the Moray West Site, consisting of a recorded wreck, (possibly) Sunbeam. Although the 2010 geophysical survey did not locate its position, it can be assumed to still be exist at the recorded location and therefore, a precautionary AEZ of 100m radius is recommended around the location; and
- Record 7231 is located within the OfTI Corridor and was last located in 1986, classified as recorded MFV *Mayflower*. As the record is a known and located wreck an AEZ of 100m radius is recommended around the boundary of the wreck.

Two 8m AEZs have also been implemented around the locations of the wagon wheel (70019, 8m around 516174.1, 6394283.3) and associated metal bar with an attached wooden spar (70018, 8m around 516174.1, 6394270.6 ) which may form part of a (gun)carriage lost from a ship.

However, new AEZs agreed between Moray West and MD-LOT and HES may also be required to preserve features or remains of archaeological interest or potential in situ in the event of unexpected discoveries during construction, operation or decommissioning.

The principal objective of an AEZ is to prevent damage to or disturbance of a wreck, aircraft or features of potential archaeological interest on the seafloor during activities that may cause damage or disturbance. A requirement for provisions to be made, where feasible, for the in-situ conservation of heritage assets is established through the European Convention on the Protection of the Archaeological Heritage (revised) (Valletta 1992) (Article 4).

The implementation, monitoring and modification of AEZs will take place in accordance with the measures specified in The Crown Estate (2021) guidance.

AEZs comprise a boundary placed around a heritage asset or potential assets where no development activities can be undertaken. The AEZ will extend from the boundary of the assets and will include a buffer to ensure that all material associated with that asset is encapsulated inside the boundary, as well as to reduce the risk of unintentional impacts.

The position, extent and design of any AEZs, including the size of the buffer, will take into account all available information including geology, hydrology and sediment transport. As most AEZs will not be a standard shape (i.e., they comprise a buffer around the known extents of the site rather than a circle consisting of a centre-point with a radius distance), the AEZs agreed during the EIA process must be supplied as a GIS shapefile. The list of AEZs is 'live' and will be held in the project GIS maintained by the retained archaeologist. At all stages of the Development, Moray West should supply the retained archaeologist (if different from the previous process) and all contractors with the agreed AEZs as shapefile data. In addition, all documentation required for project delivery provided to contractors will include the lists and illustrated locations of AEZs.

As set out in The Crown Estate (2021) guidance, AEZs may be altered (enlarged, reduced, moved or removed) as a result of further data assessment or archaeological field evaluation covering those areas that are subject to AEZs. If new finds of potential archaeological significance come to light during the assessment of marine geophysical data (such as that currently being undertaken by Wessex Archaeology as set out in Section 4.1), during the course of construction, or during operation or decommissioning phases, for example, as reported through the PAD (Section 5), they may be subject to the implementation of a TEZ. A TEZ which will prevent impact to the seabed within their extents but allow activities in other areas to continue. The need for and the design (position, extent) and implementation of any new exclusion zones (TEZs, which may be formalised and converted to AEZs), or any alterations to existing AEZs, will be subject to discussions between the retained archaeologist and Moray West, and in consultation with MS-LOT and HES, confirmed with a formal response. Following alteration, a new plan giving details of the AEZs will be drawn up and issued to each relevant party.

#### **4.4 Avoidance or Further Mitigation**

Following completion of the archaeological assessment of geophysical data and review of diver and ROV investigation, all identified archaeological, or possibly archaeological, finds have been relocated beyond the construction footprint or will be avoided during construction activities. Over half of all 346 seabed features identified by Wessex Archaeology have been subject to ground truthing and of the 197 that were investigated 108 were confirmed as non-archaeological, or locations where nothing was found, 76 were

confirmed as UXO, and which have been subject to a subsequent disposal campaign, and 13 were confirmed as non-UXO and of archaeological (or possibly archaeological) interest.

Any seabed features which have not been subject to investigation and remain within the construction boundaries are considered to be low potential. As such, no further investigation is recommended and should any further finds of archaeological interest be encountered during construction these will be addressed through the PAD (Section 5).

#### **4.5 Non-archaeological Diver/ROV Surveys**

Prior to construction, both ROV and diver surveys have been undertaken for the purpose of identifying pUXO and seabed features of potential archaeological interest. The data has been archaeologically assessed and no identified archaeological finds remain within the construction footprint (8460005-DBHA15-MWW-REP-000004).

No further non-archaeological diver or ROV surveys are planned and no further requirements have been identified.

Sites that are no longer of archaeological interest have been removed from the gazetteer and applicable digital data, including gazetteers and GIS shapefiles, will be updated by the retained archaeologist and reissued to Moray West and relevant contractors.

#### **4.6 Archaeological Diver/ROV-Based Site Assessment**

In the event of an unexpected discovery requiring further investigation during construction, operation or decommissioning, archaeological diver or ROV-based investigations may be required, where the primary objectives are archaeological, and the diving is led by archaeologists.

Any planned survey will be carried out in accordance with good practice as set out in The Crown Estate (2021) guidance and the survey methodology will be set out in a method statement, prepared by the retained archaeologist (or the archaeological contractor, if appointed) and agreed between Moray West and MD-LOT in consultation with HES.

Diver/ROV assessment for archaeological purposes will be directed by an archaeological contractor, with the appropriate expertise and experience of the environment/conditions likely to be encountered.

ROV surveys for archaeological purposes may either be undertaken by a suitably qualified and experienced archaeological contractor with an ROV, or by an archaeologist directing an ROV contractor.

Recording will take place in accordance with The Crown Estate (2021) guidance and should be conducted to a level whereby a statement can be made as to the date, character, and extent of archaeological importance of the site, to inform an assessment of archaeological potential.

If a site is determined to be of high archaeological interest but cannot be avoided a plan for additional mitigation will be required, such as the relocation of material and/or full excavation of a site. This work would require a method statement, to be prepared by the retained archaeologist and/or archaeological contractor through discussions with Moray West and agreed with MS-LOT in consultation with HES.



The results of any archaeological diver / ROV assessment will be compiled as an archaeological technical report consistent with the methodologies for reporting set out in The Crown Estate (2021) guidance and will form part of the project archive as set out in Section 4.9. The report should include any findings that may lead to the alteration of AEZs or TEZs, as well as a statement of the likely requirements (if any) for further archaeological work.

#### **4.7 Archaeological Watching Briefs**

As defined in The Crown Estate (2021) guidance, a watching brief is a formal programme of archaeological monitoring that involves attendance by a suitably qualified and experienced archaeologist during groundworks or other site activities/interventions associated with the scheme in the terrestrial or inter-tidal zone, and/ or marine activities such as during offshore obstruction clearance (where considered appropriate).

With the use of HDD to install cables at the landfall, passing below the beach deposits, watching briefs are not anticipated to be required.

Offshore, should activities be undertaken which may result in disturbance to archaeological remains or remains being brought to the surface (e.g. clearance operations and PLGR), an archaeological watching brief may be required, comprising on board supervision by a suitably qualified and experienced archaeologist. If areas subject to clearance are considered to be of medium or high archaeological potential, on board monitoring may be required to ensure consideration is given to any archaeological material brought to the surface. In areas of low archaeological potential any material brought to the surface will be dealt with through the PAD as set out in Section 5.

However, based upon the results of the archaeological assessment of pre-construction survey data, and subsequent inspection of selected archaeological features using an ROV, no areas of increased archaeological potential have been identified within the construction boundaries. Furthermore, all anomalies of possible archaeological interest which remain have been avoided by project infrastructure.

Therefore, no offshore watching briefs are currently proposed.

Should an on-board watching brief be required, following an unexpected discovery, for example, the approach will accord with that set out in The Crown Estate (2021) guidance and will be set out in a method statement prepared by the retained archaeologist in consultation with MD-LOT and HES. If significant archaeological material is encountered during the watching brief then Moray West, in consultation with MD-LOT and HES, will make provision for the retained archaeologist (or the archaeological contractor, if appointed), to undertake a programme of investigation commensurate with the evidence discovered.

Recording and reporting for any watching briefs, should these be required, will be undertaken in line with the approaches set out in The Crown Estate (2021) guidance.

#### **4.8 Archaeological Recording, Samples and Artefacts**

As required by The Crown Estate (2021) guidance, archaeological recording and assessment of samples and artefacts should be undertaken with the goal of addressing objectives set out in published research

frameworks, for example, local research frameworks and research frameworks for specific periods or specialisms (such as the ScARF).

The Crown Estate (2021) guidance sets out high-level methodologies for:

- indexing and recording systems;
- position-fixing and levelling;
- environmental sampling strategies;
- environmental samples: handling, labelling, packaging and storage;
- artefacts: handling, labelling, packaging and storage;
- ordnance;
- human remains;
- aircraft;
- wreck; and
- materials conservation and storage.

Any archaeological remains or environmental samples that are found during activities associated with the Development will be treated in accordance with this guidance and best practice as set out, for example, in:

- Standards and guidance for the collection, documentation, conservation and research of archaeological materials (ClfA 2014d); and
- First Aid for Underwater Finds (Robinson 1998).

Isolated discoveries of artefacts that may come to light during the course of the Development will be dealt with through the PAD as set out in Section 5.

Each method statement for activities where archaeological materials might be encountered will set out the approach to recording and dealing with samples and artefacts as relevant for each work package based on all relevant and specific guidance and best practice. A general summary of key requirements is included below.

Any finds recovered or exposed during archaeological works will, at the point of discovery, be held by the archaeological contractor in appropriate conditions pending further recording, investigation, study, or conservation. All finds will be recorded and labelled appropriately. Where it is impracticable to recover finds these will need recorded.

Contingency will be made for specialist conservation advice from an appropriately qualified and experienced Archaeological Conservator should unexpected, unusual, or extremely fragile and delicate objects be recovered. All retained finds will be processed in accordance with the ClfA 's Standard and



Guidance for the collection, documentation, conservation and research of archaeological material (ClfA, 2014d).

Recovered objects will be selected, retained, or disposed of in accordance with the policy agreed with the institution receiving the archive, and in consultation with the archaeological contractors.

Should ordnance be discovered, it should be treated with extreme care as it may still be active. Guidelines on addressing UXO discoveries provided to contractors by Moray West must be followed prior to any recording of items for archaeological purposes.

If human remains are identified, they should be treated with due care and respect. For each situation, the following actions are to be undertaken and, in any event, the retained archaeologist will inform Moray West, who will immediately inform the local Police, and the archaeological curators (HES). If the Police do not propose to investigate the remains the relevant Procurator Fiscal will be contacted by Moray West.

Where practical, the human remains will be left in situ, covered, and protected. Where human remains have been found and the Development will unavoidably disturb them, the remains will be fully recorded, excavated, and removed from the site only once the appropriate licence has been obtained. An appropriate Human Skeletal Biologist will, if required, be available to advise on and assist with the recovery and storage of human remains. The excavation, recording, analysis and storage of any human remains will be undertaken in line with the Guidelines to the Standards for Recording Human Remains (Mitchell and Brickley, 2017) and follow best practice as appropriate (Historic Scotland, 2006; BABAO 2010).

With regard to the remains of crashed aircraft, the majority of aircraft wrecks are military and so fall under the legal protection of the Protection of Military Remains Act 1986 and would have to be avoided without a licence. Any finds that are suspected of being military aircraft will be reported immediately to the retained archaeologist. Should human remains be discovered, they should not be touched, but must be reported immediately to the Ministry of Defence (MOD).

All archaeological artefacts that have come from a ship are 'wreck' for the purposes of the Merchant Shipping Act 1995. For all items of wreck that have been recovered, Moray West, via their retained archaeologist or archaeological contractors, should ensure that the RoW is notified within 28 days of recovery.

All recovered materials will be subject to a conservation assessment to determine whether special measures are required while the material is being held. This conservation assessment will be carried out by the retained archaeologist or an archaeological contractor with an appropriate level of expertise, with advice from appropriate specialists.

The retained archaeologist or an archaeological contractor with appropriate expertise will implement recommendations arising from the conservation assessment. Where no special measures are recommended, finds will be conserved, bagged, boxed and stored in accordance with industry guidelines.

## 4.9 Archaeological Reporting, Data Management and Archiving

### 4.9.1 Data Management

All data management will take place in accordance with the approaches set out in The Crown Estate (2021) guidance.

The retained archaeologist has overall responsibility for all matters related to archaeological data management. Issues regarding data storage and management, such as how long and in what format data should be stored, will be confirmed through discussions between the retained archaeologist and Moray West. Should a different retained archaeologist be appointed for different stages of a project, Moray West should ensure that all relevant data is provided to the new retained archaeologist (for example, shapefiles of AEZs, geophysical anomalies of archaeological potential, areas of high archaeological potential, etc.).

On completion of the construction phase of the Development, the retained archaeologist will produce an Online Access to the Index of Archaeological Investigations (OASIS) form for the whole scheme, and copies of all archaeological reports will be attached. When the OASIS form is submitted, it is automatically sent to the relevant HERs, and notification is also sent to HES, so that they may advise the respective competent authority on compliance with relevant consent conditions.

### 4.9.2 Reports

Each package of work outlined in the WSI will give rise to one or more archaeological reports, as set out in the method statement relating to the work. To date, reports have been prepared following the completion of the archaeological assessment of marine geophysical data (8460005-DBHA15-MWW-REP-000003), marine geoarchaeological assessments (8460005-DBHA15-MWW-REP-000001 and 8460005-DBHA15-MWW-TNO-000001) and archaeological assessment of ROV and diver investigation (8460005-DBHA15-MWW-REP-000004). Further reports may be prepared following the completion of:

- watching briefs (see Section 4.7, not currently anticipated to be required); and
- any further work packages which may be required in the event of an unexpected discovery reported under the PAD (see Section 5) or in the event that avoidance of site is not possible and further investigation or mitigation (such as excavation) is required (see Sections 4.4. and 4.5).

Each archaeological report will be consistent with this WSI, and The Crown Estate (2021) guidance on reporting, and will demonstrate sufficient planning, recording and data management, with a commitment to archiving and the public dissemination of results. The report will satisfy the method statement for the investigation and will present the project information in sufficient detail to allow interpretation without recourse to the project archive.

Archaeological reports will be prepared in accordance with the guidance given in the relevant ClfA's Standards and Guidance documents. Reports will typically include:

- a non-technical summary;
- the aims and methods of the work;

- the results of the work including finds and environmental remains;
- a statement of the potential of the results;
- proposals for further analysis and publication; and
- illustrations and appendices to support the report.

Each archaeological report will be submitted in draft to the retained archaeologist for submission to Moray West. If the report is prepared by the retained archaeologist, it will be submitted directly to Moray West. Arrangements and timescales for submitting draft archaeological reports by Moray West to HES will be set out in the WSI or method statement relating to the work. The timescales will ensure that HES have sufficient time to comment on findings prior to the next stage of archaeological work commencing

On completion of archaeological works relating to construction of the scheme and to a timetable agreed with Moray West and HES, an overarching report on the archaeology of the scheme will be prepared in draft and final copies in accordance with the methods set out above. The overarching report should serve as an index to, and summary of, the archaeological investigations as a whole.

#### **4.9.3 Post-Fieldwork Assessment**

Where required, provisions will be made for post-fieldwork assessment. This will address where possible, the character, extent, date, integrity, state of preservation and relative quality of any archaeological features or remains that are recorded. Costs will be provided for any further research, analysis, publication, and archiving.

Decisions regarding the scope of any post-fieldwork assessment will be made by agreement between Moray West and HES following submission of investigation reports, based on the possible importance of the results in terms of their contribution to archaeological knowledge, understanding or methodological development.

As set out in The Crown Estate (2021) guidance, as a minimum, a single assessment may be carried out after the archaeological work packages associated with the Development have been completed. Such an assessment may be carried out by expanding the overarching archaeological report to include proposals in respect of analysis, publication, and archiving. An assessment of the potential of the archive for further analysis may include (but is not limited to):

- the dating and dendrochronological assessment of timbers;
- the conservation of appropriate materials, including the X-raying of metalwork;
- the spot-dating of all pottery from any investigation. This will be corroborated by scanning of other categories of material;
- the preparation of site matrices with supporting lists of contexts by type, by spot-dated phase and by structural grouping supported by appropriate scaled plans;
- an assessment statement will be prepared for each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources; and

- a statement of potential for each material category and for the data set as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national investigation priorities.

#### **4.9.4 Analysis and Publication**

Based on recommendations made by the post-fieldwork assessment, and as agreed by the relevant archaeological curators (HES), mitigation requirements will be satisfied by carrying out analysis and reporting of the post-fieldwork assessment. If appropriate, this may include publication of important results in a recognised peer-reviewed journal or as a monograph. The retained archaeologist would confirm the timeframe for the distribution and/or publishing of reports, in consultation with Moray West, MS-LOT and HES, and this would be included in the relevant method statement.

#### **4.9.5 Archive**

It is accepted practice to keep project archives, including written, drawn, photographic and artefactual elements (together with a summary of the contents of the archive) together wherever possible and to deposit them in appropriate receiving institutions once their contents are in the public domain. Archives will be developed in line with guidance including:

- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (CIfA 2014c)
- Environmental Guidelines for the Permanent Storage of Excavated Material from Archaeological Sites (Institute of Conservation 1984)
- Guidelines for the preparation of excavation archives for long-term storage (Walker, 1990)

The relevant archaeological curators (HES) and the archaeological contractor will agree with the receiving institution a policy for the selection, retention and disposal of excavated material. They will confirm requirements in respect of the format, presentation and packaging of archive records and materials, and will notify the receiving institution in advance of any fieldwork.

The timetable for depositing archives with the receiving institution after completion of the post-fieldwork programme will be agreed based on a method statement prepared for Moray West by the retained archaeologist following fieldwork. For Scotland, HES is the repository for all fieldwork records generated during archaeological fieldwork.

## 5 Protocol for Archaeological Discoveries

In order to account for unexpected discoveries of archaeological material during construction, operation and decommissioning of the Development, a formal protocol (PAD) will be required. To this end, if any objects of possible archaeological interest are encountered, they will be reported using a PAD based on the Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate 2014) (ORPAD). This will establish whether the objects are of archaeological interest and allow for appropriate mitigation measures to be recommended where necessary.

Activities during which previously unidentified sites or unexpected discoveries of material which may be encountered include:

- Seabed clearance PLGR (e.g., finds brought to the surface) and clearance of boulders and other debris.
- Vessel anchoring (e.g., anchor caught on obstruction).
- Installation of cables (e.g., obstruction interactions during cable lay and burial).
- Installation of WTG and OSP foundations (e.g., obstruction interactions with jack-up legs).

The PAD will apply to construction and installation, and operation and maintenance activities when an archaeologist is not present on site. The PAD will allow for the effective reporting of discoveries of archaeological material to ensure that advice, concerning measures to address discoveries, is received, and implemented, in a timely and efficient manner.

Under ORPAD, each vessel or worksite team has a Site Champion (anticipated to be the Offshore Client Representative), a single person who is responsible for reporting discoveries to a Nominated Contact within the Developer's core team. The Nominated Contact will report any new discoveries to the retained archaeologist who will be responsible for implementing the PAD. The Nominated Contact at Moray West is:

- Moray West Development Team
- Moray Offshore Windfarm (West) Limited
- Email: [development@moraywest.com](mailto:development@moraywest.com)

The project retained archaeologist, currently engaged to support the implementation of archaeological requirements, including ORPAD is:

- **Victoria Boothby**
- Principal Marine Heritage Consultant
- Royal HaskoningDHV
- [Redacted]
- Email: [victoria.boothby@rhdhv.com](mailto:victoria.boothby@rhdhv.com)

Individual Site Champions for specific activities will be specified in work package method statements and the identity of the Site Champion will be clearly communicated to work teams, via pre-commencement briefings.

Moray West will be responsible for ensuring that teams are provided with appropriate briefings in the application of the PAD and that all staff and contractors are aware of their responsibilities under the PAD. The PAD documentation, including a full description of the methodology and requirements for implementing the protocol will mirror that of the ORPAD which can be found via the following web link:

- [https://www.wessexarch.co.uk/sites/default/files/field\\_file/2\\_Protocol%20For%20Archaeological%20Discoveries.pdf](https://www.wessexarch.co.uk/sites/default/files/field_file/2_Protocol%20For%20Archaeological%20Discoveries.pdf)

A preliminary record form for recording initial information on the nature of discoveries is included in Appendix D.

Briefings will be provided to construction staff, site crews and work teams about the practical application of the PAD in their day to day work. Briefing notes setting out specific responsibilities for relevant work packages will be prepared by the retained archaeologist and issued to work teams in advance of works commencing. This will include detail on the appropriate timescales for reporting finds. Specific information on the implementation of the PAD will also be provided through kick off/mobilisation meetings as relevant.

Provision will be made by Moray West, in accordance with the PAD, for the prompt reporting / recording to MS-LOT and HES of archaeological remains encountered or suspected during works. If the find is a wreck within the meaning of the Merchant Shipping Act (1996) then a report will also be made to the RoW.

In Scotland, if an object that might be treasure trove is found, it must be reported to the Treasure Trove Unit at the National Museums of Scotland or to a local museum or the local council archaeologist. However, the Scots common law right relating to found archaeological and historic items in Scotland (and dealt with through the system of Treasure Trove) does not extend to the marine environment except to the foreshore.

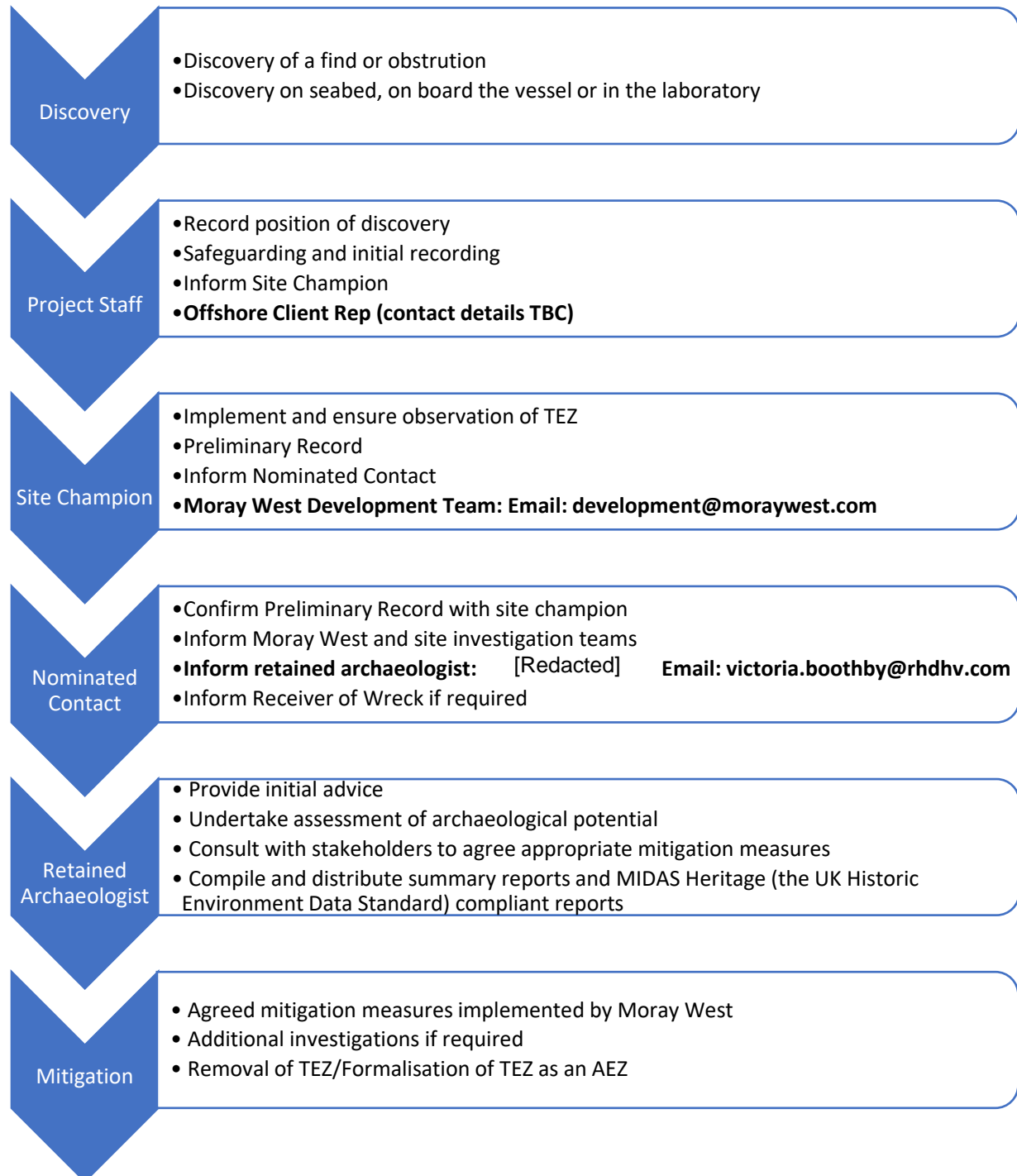
Following completion of the construction phase of the Development, a report will be prepared presenting the results of the PAD implementation during construction activities and submitted to MS-LOT in a timely manner. In the event that no discoveries are made, a nil discoveries report should be compiled in order to demonstrate adherence to the scheme.

A flowchart setting out the process for reporting discoveries under ORPAD is included below.

## Moray Offshore Windfarm (West) Limited PAD and WSI (Offshore)



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## 6 Monitoring Requirements

The performance of this WSI will be monitored over the course of the Development. If changes are made to the Development design or if particular archaeological issues come to the fore, revisions would be made to the WSI after agreement with MD-LOT in consultation with HES. Any changes would be made through method statements submitted for approval by Moray West.

The reports prepared for each archaeological work package will be distributed to MD-LOT and HES by Moray West. This will allow for results to be reviewed and any archaeological concerns to be addressed.

All assessment reports undertaken for the purposes of archaeological evaluation will be submitted to MD-LOT and HES within a specified timescale of the survey being completed to be agreed with the regulator.

Prior to the start of any work on site that may impact archaeology, MD-LOT and HES will be notified. They will be informed at this time of the name and contact details of the retained archaeologist.

During any site evaluation, investigations, or construction work with the potential to impact archaeology, the retained archaeologist, with notification to Moray West, may liaise directly with HES about monitoring and reporting. Moray West will be kept informed of all contact between the retained archaeologist and the archaeological curators (HES).

As required by The Crown Estate (2021) guidance, provision for monitoring any AEZs that are established will be set out in a method statement agreed between Moray West and MD-LOT (in consultation with HES) in reference to any relevant regulatory consent. Monitoring will take place relative to the baseline data used to establish the AEZ and continue for the duration agreed between Moray West and MD-LOT (in consultation with HES), as set out in the WSI and subsequent method statements.

This may include, for example, periodic archaeological reports prepared by the retained archaeologist, to monitor the effectiveness of the AEZs. These reports will review whether any incursions have been made into any of the AEZs and whether there is still an archaeological need for maintaining them. The frequency of the reports would be agreed with MD-LOT through consultation with HES but would likely include reports at key phases of construction and a post-construction report. This would include an assessment of post-construction geophysical data. If it becomes clear that activities have encroached upon an AEZ, Moray West will seek advice from the retained archaeologist.

A post-construction monitoring report including the archaeological assessment of post-construction geophysical survey data relative to the baseline data will also assess the effects of any indirect impacts that may have occurred to heritage assets as a result of the construction of the Development. Based on the results of the initial post-construction review, any further requirements during the operation phase will be agreed with MD-LOT in consultation with HES. Further monitoring may only be necessary if significant changes to coastal and / or offshore processes are identified or if new information relevant to the integrity of archaeologically important items comes to light.

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**Moray Offshore Windfarm (West) Limited**  
**PAD and WSI (Offshore)**



8460005-DBHA15-MWW-PLN-000001

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## Appendix A – Defined Terms

Term	Description
Construction Footprint	The area of the seabed within the Development Site impacted by construction activities and the installation of generation and transmission infrastructure.
Design Envelope	The range of design parameters used to inform the assessment of impacts.
Marine Licence for the Generating Station	Marine Licence for the Moray West Offshore Wind Farm - Licence Number: MS-00008731 - granted under the Marine and Coastal Access Act 2009, Part 4 Marine Licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the UK Marine Licensing Area granted to Moray West on 14 June 2019 and varied on 7 March 2022.
Marine Licence for the Transmission Works	Marine Licence for the Offshore Transmission Infrastructure – Licence Number MS-06764/19/0 – granted under the Marine and Coastal Access Act 2009, & Marine (Scotland) Act 2010, Part 4 Marine Licensing for marine renewables construction works and deposits of substances or objects in the Scottish Marine Area and the UK Marine Licensing Area (referred to as the “OfTI Marine Licence”), granted to Moray West on 14 June 2019.
Moray Offshore Windfarm (West) Limited	The legal entity submitting this Protocol for Archaeological Discoveries and Written Scheme of Investigation (PAD and WSI).
Moray West EIA Report	The Environmental Impact Assessment Report for the Moray West Offshore Wind Farm and Associated Transmission Infrastructure, submitted August 2018.
Moray West Offshore Wind Farm	The wind farm to be developed in the Moray West Site (also referred as the Wind Farm).
Offshore Consents	Collective term for the two Marine Licences and the Section 36 consent
Offshore Consent Conditions	Collective term for the conditions attached to the Section 36 Consent and Marine Licences
Offshore Transmission Infrastructure (OfTI)	The offshore elements of the transmission infrastructure.
OfTI Corridor	The export cable route corridor, i.e., the OfTI area excluding the Moray West Site.
Procurator Fiscal	In the event of the discovery of human remains, the Procurator Fiscal is responsible for determining any requirement for further investigation if criminal conduct may have caused to contributed to the death.
Protocol for Archaeological Discoveries (PAD)	Protocol for reporting unexpected discoveries of archaeological material to the retained archaeologist when an archaeologist is not on site. Based on the Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate 2014) (ORPAD).

# Moray Offshore Windfarm (West) Limited PAD and WSI (Offshore)



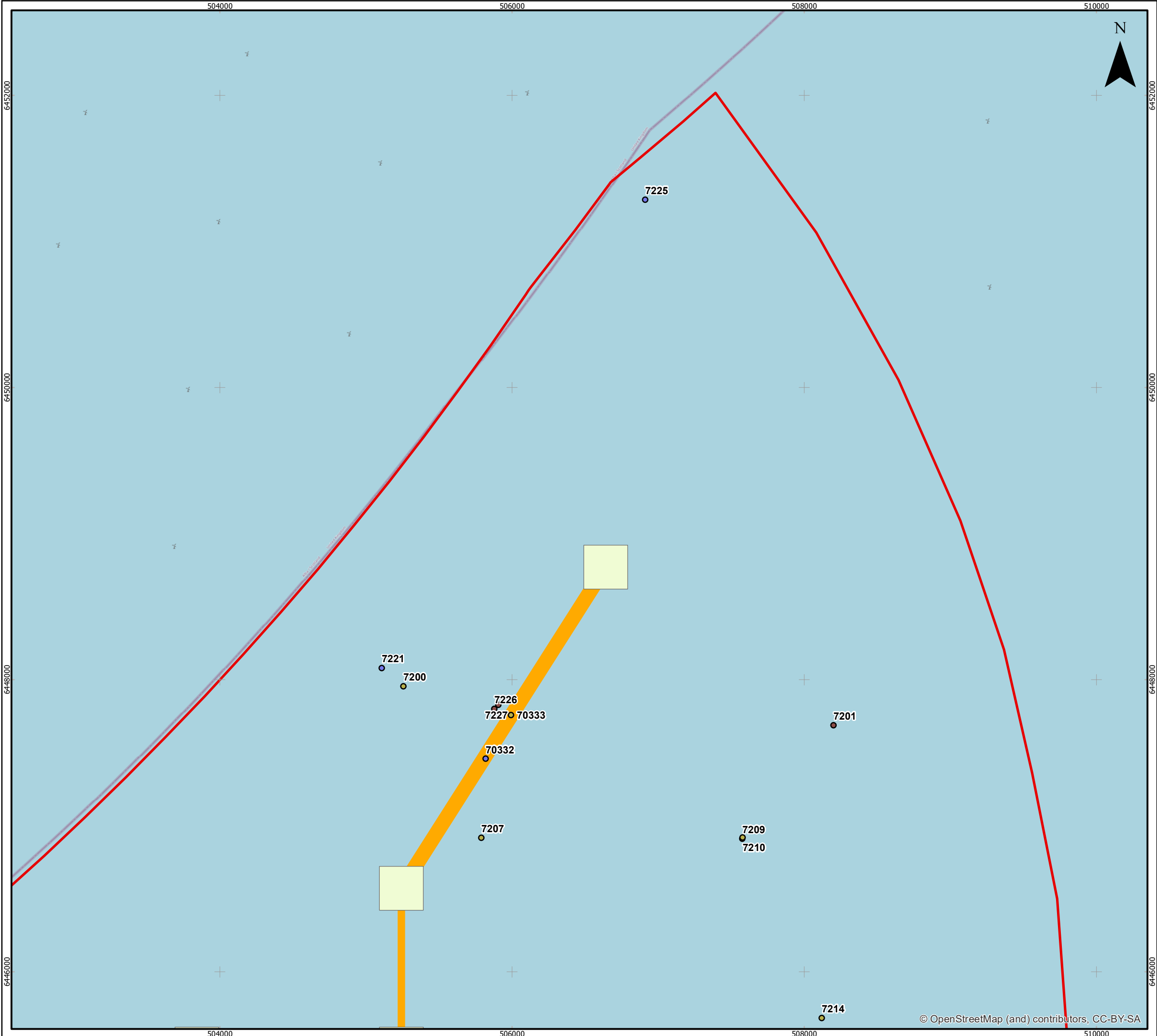
8460005-DBHA15-MWW-PLN-000001


Receiver of Wreck	The Receiver of Wreck deals with cases of voluntary salvage wreck material across the UK, and makes sure that the interests of both salvor and owner are taken into consideration.
Section 36 Consent	Section 36 consent under Section 36 of the Electricity Act 1989 for the construction and operation of the Moray West Offshore Wind Farm was granted on 14 June 2019 and varied on 7 March 2022.
The Development	The Moray West Offshore Wind Farm and OfTI.
The Development Site	The area outlined in Figure 1 attached to the Section 36 Consent Annex 1, Figure 1 attached to the two Marine Licences, and <b>Figure 2-1</b> of this WSI and PAD.
The Moray West Site	The area in which the Moray West Offshore Wind Farm will be located. Section 36 Consents and associated Marine Licence to construct and operate generating stations on the Moray West Site were granted in June 2019 and varied on 7 March 2022.
The Works	The construction and O&M activities undertaken for the Development.
Transmission Infrastructure (TI)	Includes both offshore and onshore electricity transmission infrastructure for the consented wind farm. Includes connection to the national electricity transmission system near Broad Craig in Aberdeenshire encompassing Alternating Current (AC) Offshore Substation Platforms (OSPs), AC OSP interconnector cable, AC export cables offshore to landfall point at Broad Craig, near Sandend in Aberdeenshire continuing onshore to the AC collector station (onshore substation) at Whitehillock and the additional regional Transmission Operator substation at Blackhillock near Keith. A Marine Licence for the OfTI was granted in June 2019.
Written Scheme of Investigation (WSI)	The Written Scheme of Investigation forms an umbrella document for all archaeological survey, investigation and assessment required for an offshore wind farm project supported by activity-specific method statements.


## Appendix B – Seabed Features



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**KEY**

Site Boundary

Foundation Boxes

IAC Survey Corridors

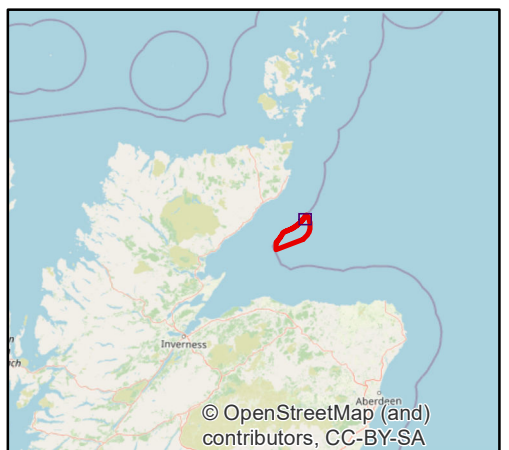
**Classification**

Dark reflector

Debris

Magnetic

Notes:



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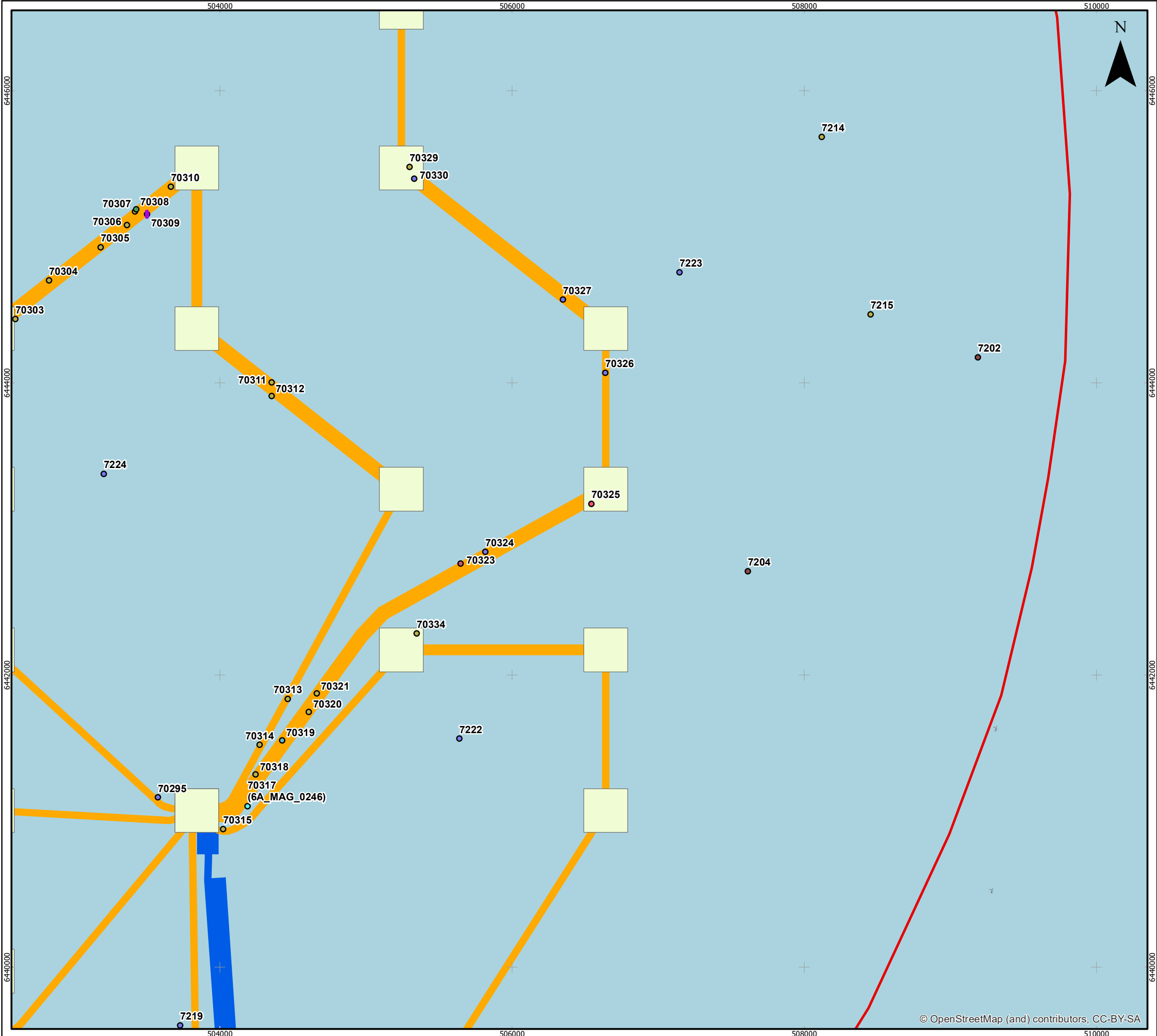
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Approved: VC	Approved: [INITIALS]
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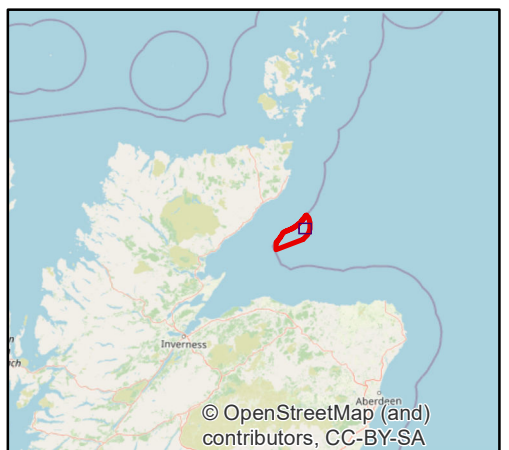
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- Site Boundary
- Seabed Linear Features
- Seabed Boundary Features
- Foundation Boxes
- IAC Survey Corridors
- OEC Export Corridors

**Classification**

- Archaeological (UXO)
- Dark reflector
- Debris
- Debris field
- Magnetic
- Mound
- Seabed disturbance

Notes:



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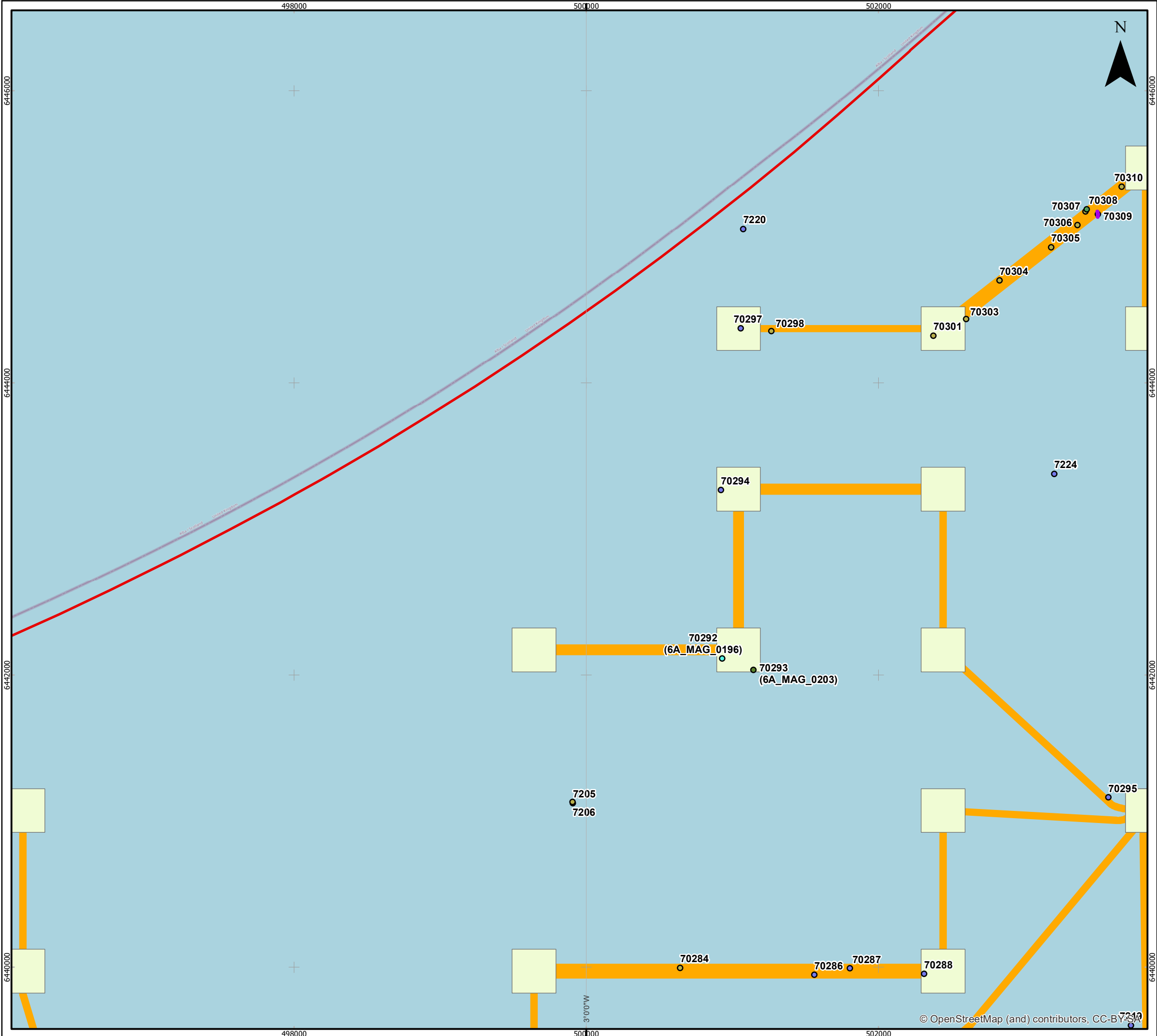
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**KEY**

Site Boundary

Seabed Linear Features

Seabed Boundary Features

Foundation Boxes

IAC Survey Corridors

**Classification**

Archaeological (UXO)

Dark reflector

Debris field

Magnetic

Mound

Possibly Archaeological

Notes:



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Horizontal Scale: 1:25,000A3 Chart

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550

1,100 Meters

Geodetic Parameters:WGS84 UTM Zone 30N

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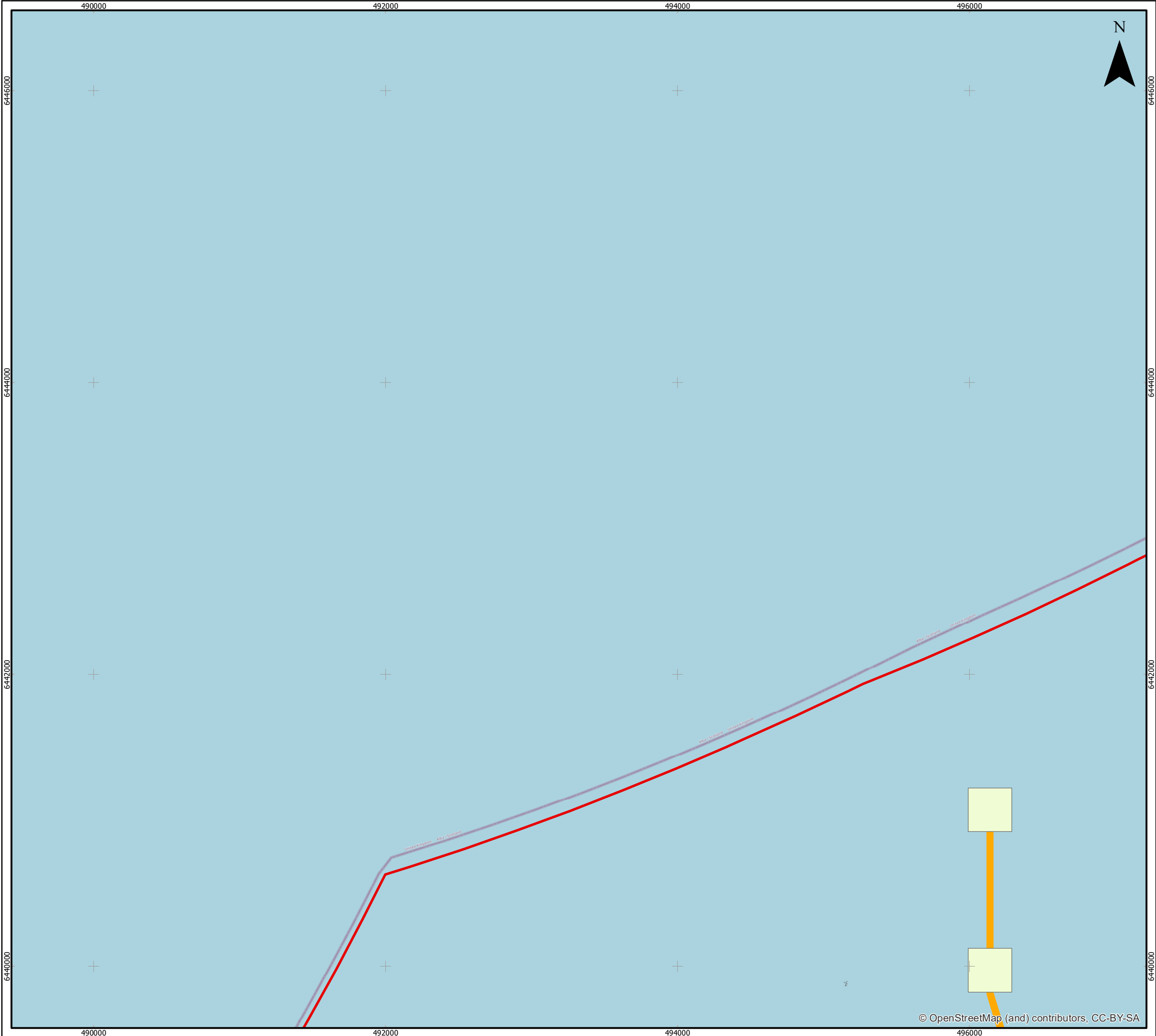
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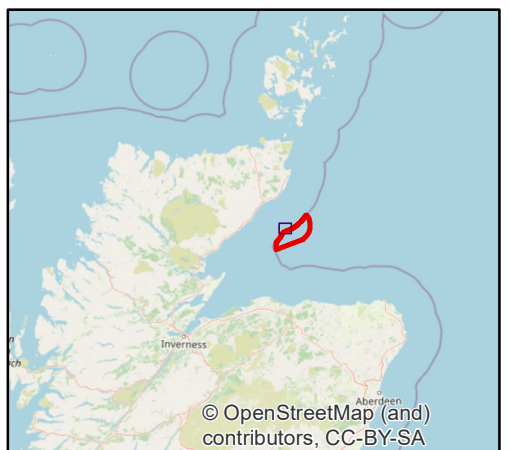
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Site Boundary

Foundation Boxes

IAC Survey Corridors


Notes:



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Geodetic Parameters:WGS84 UTM Zone 30N

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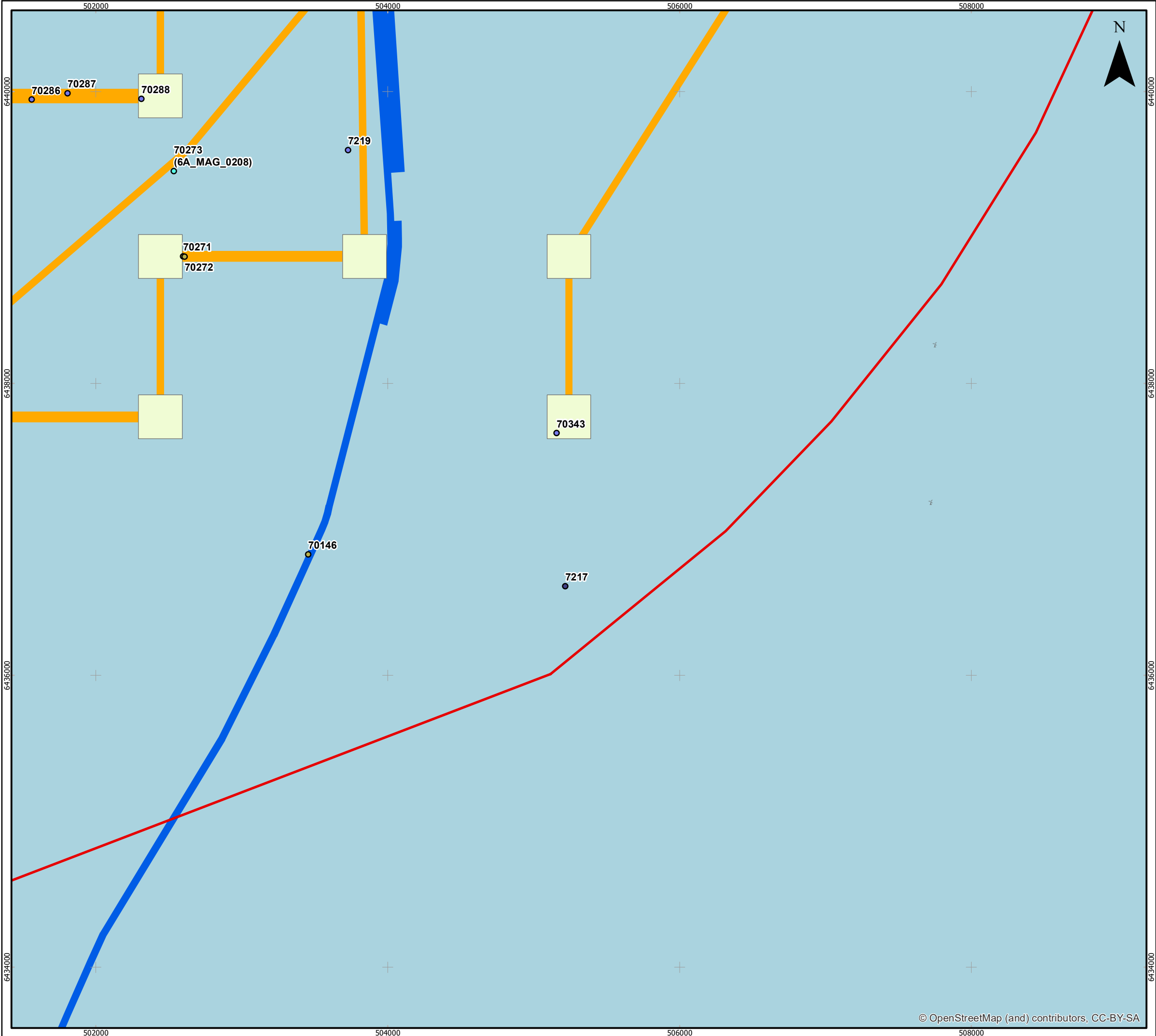
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**KEY**

Site Boundary

Foundation Boxes

IAC Survey Corridors

OEC Export Corridors

**Classification**

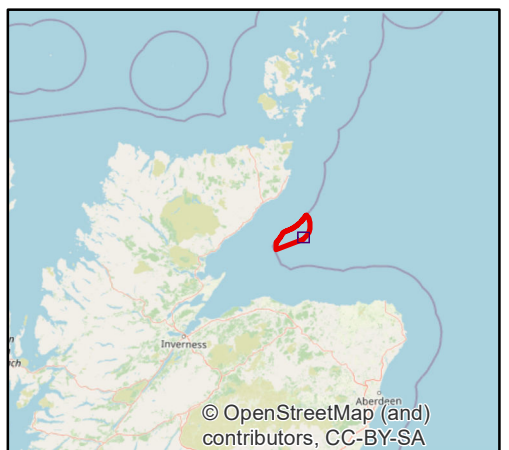
Archaeological (UXO)

Dark reflector

Magnetic

Seafloor disturbance

Notes:



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Horizontal Scale: 1:25,000A3 Chart

05501,100 Meters

Geodetic Parameters:WGS84 UTM Zone 30N

External Control

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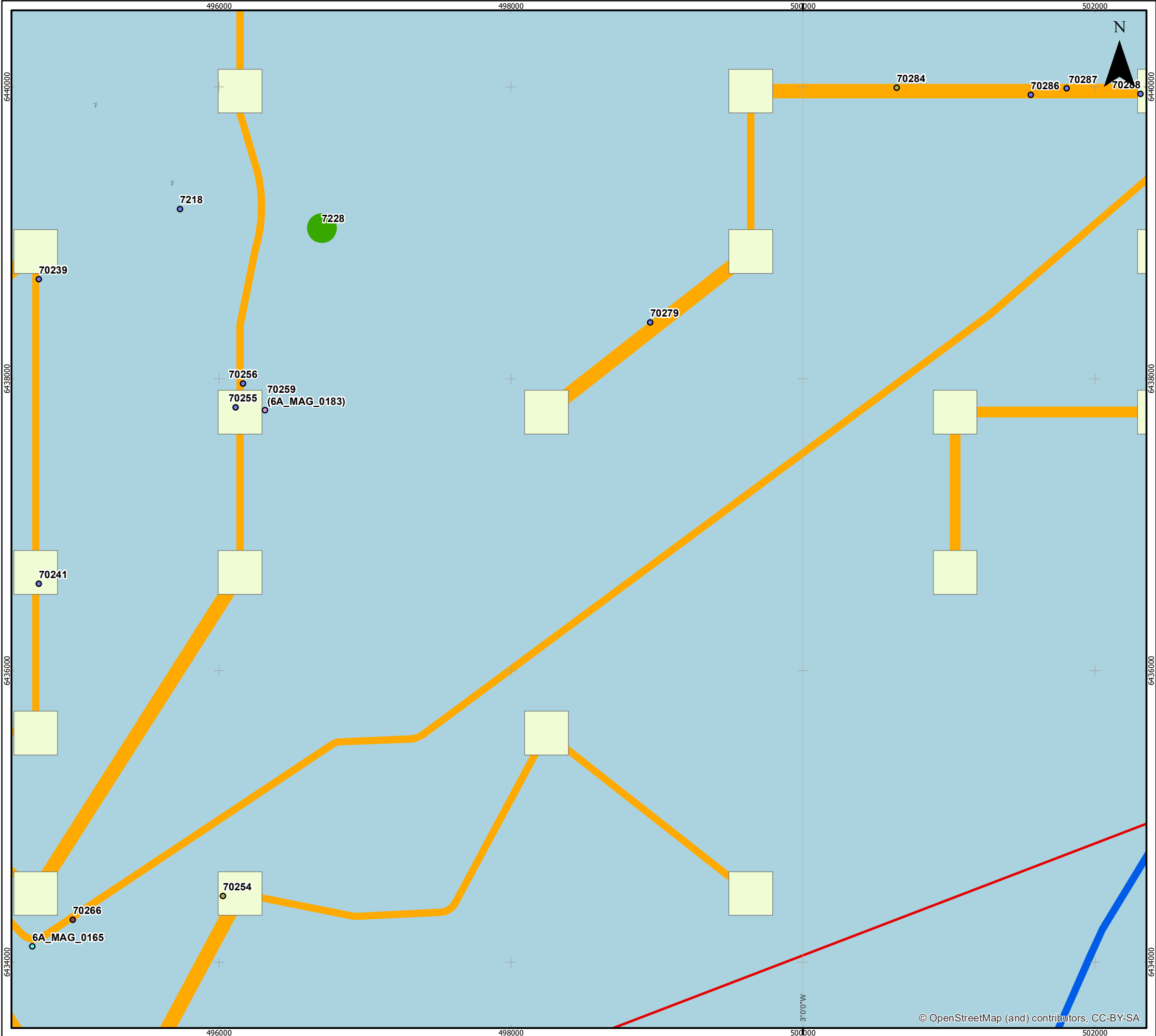
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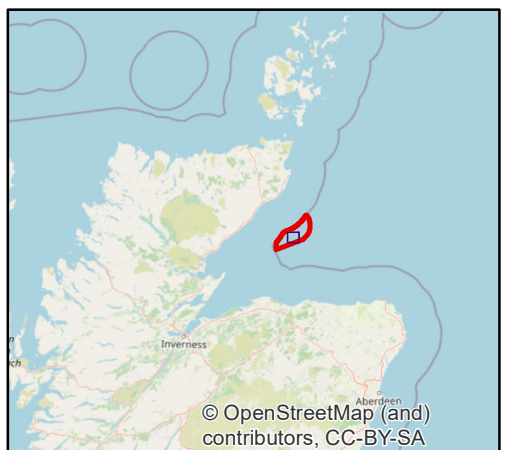
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-  Archaeological Exclusion Zones
-  Foundation Boxes
-  IAC Survey Corridors
-  OEC Export Corridors

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-  Archaeological (UXO)
-  Dark reflector
-  Debris
-  Magnetic
-  Recorded Wreck

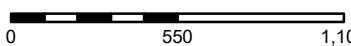
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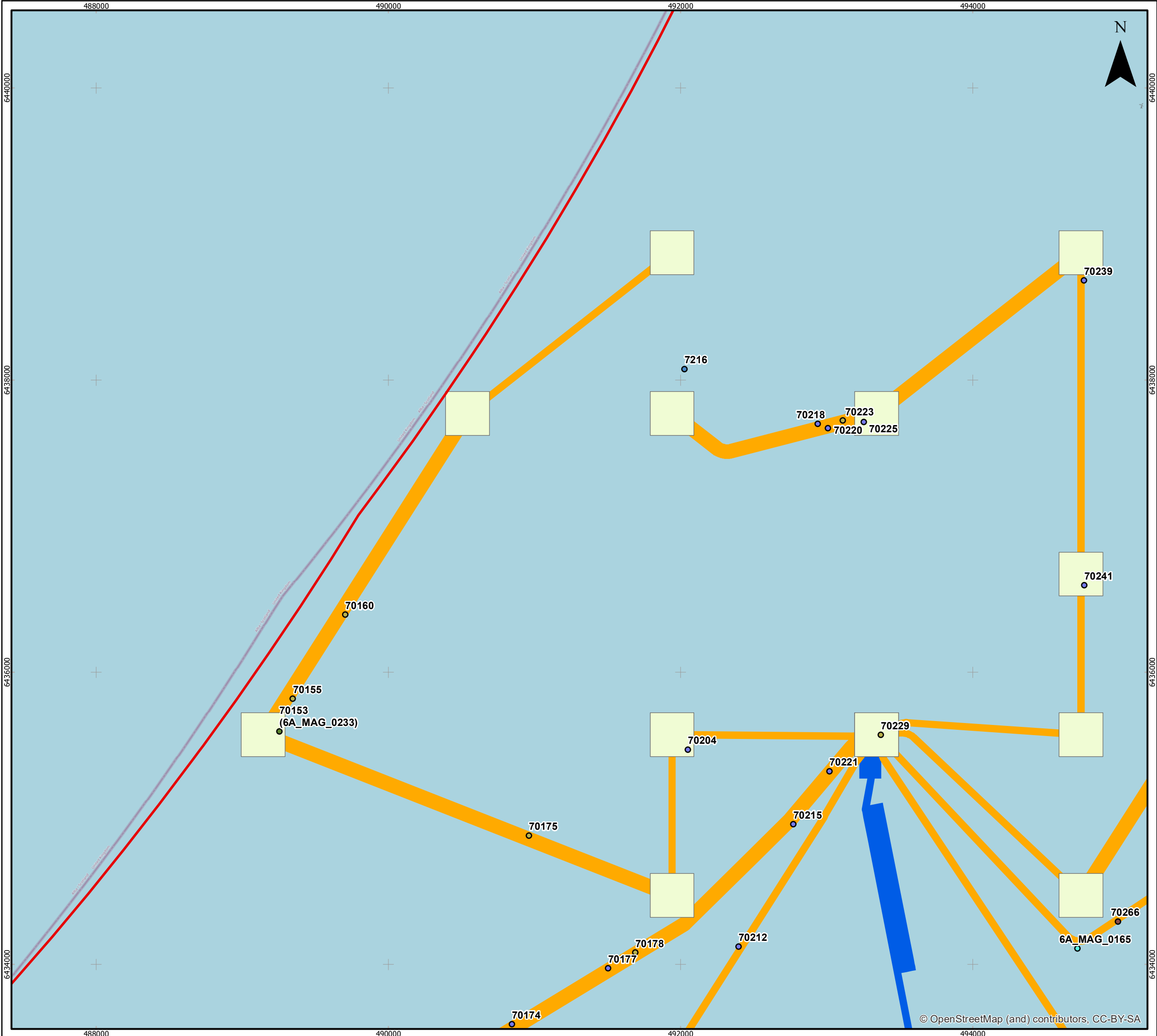
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**KEY**

Site Boundary

Foundation Boxes

IAC Survey Corridors

OEC Export Corridors

**Classification**

Archaeological (UXO)

Dark reflector

Debris

Magnetic

Possibly Archaeological

Rope/chain

Notes:



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Horizontal Scale: 1:25,000

A3 Chart

05501,100 Meters

Geodetic Parameters:

WGS84 UTM Zone 30N

External Control

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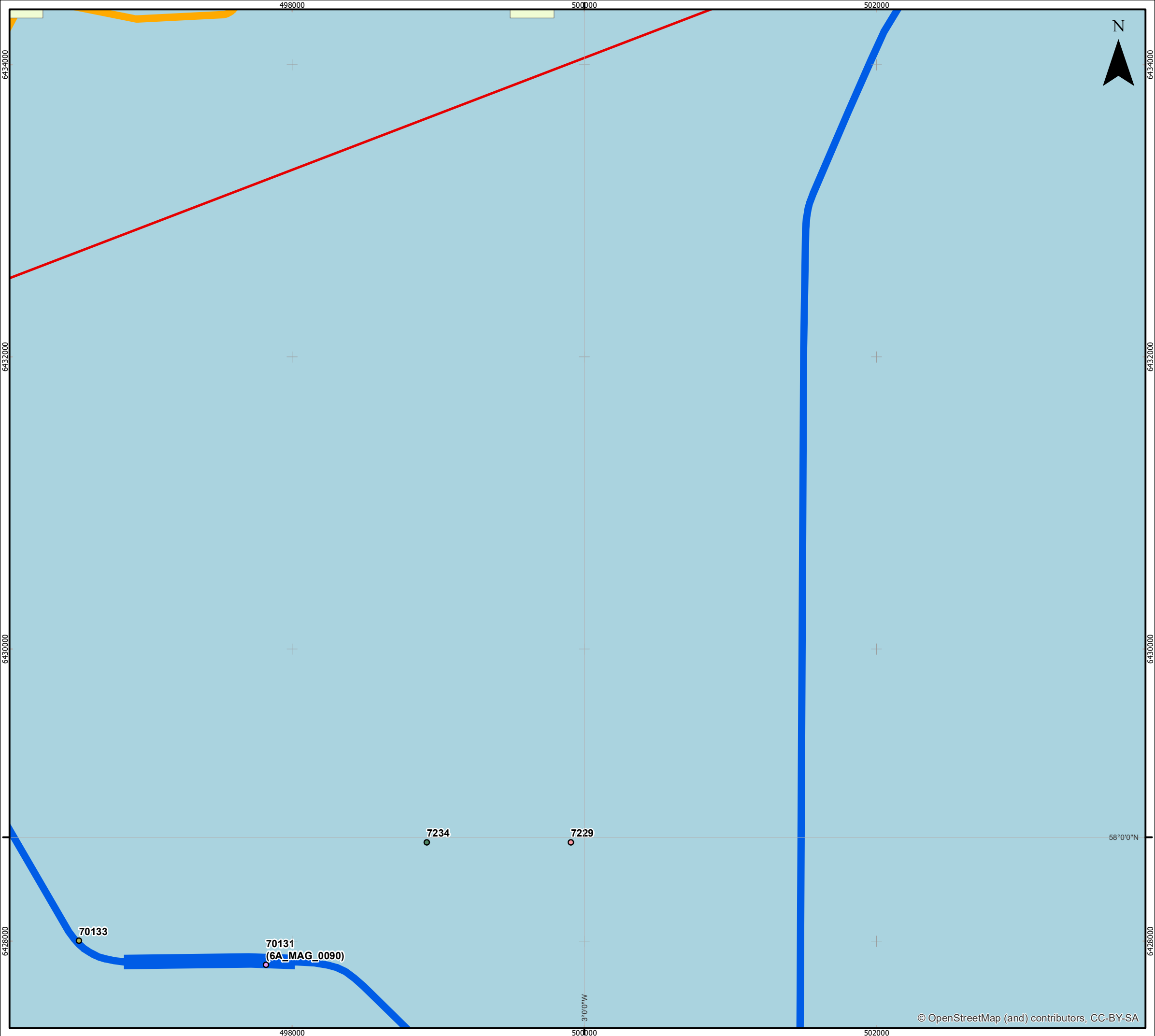
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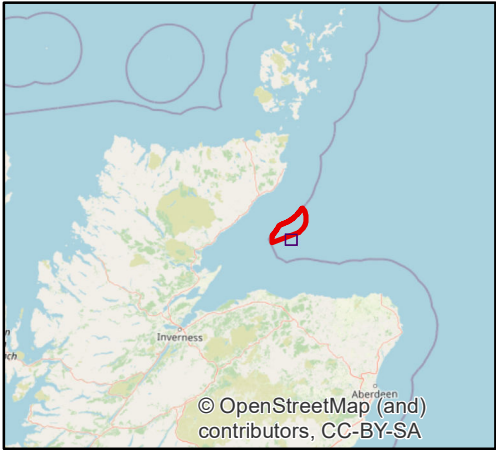
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-  Foundation Boxes
-  IAC Survey Corridors
-  OEC Export Corridors

**Classification**

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-  Recorded Aircraft (Possible)
-  Recorded Submarine

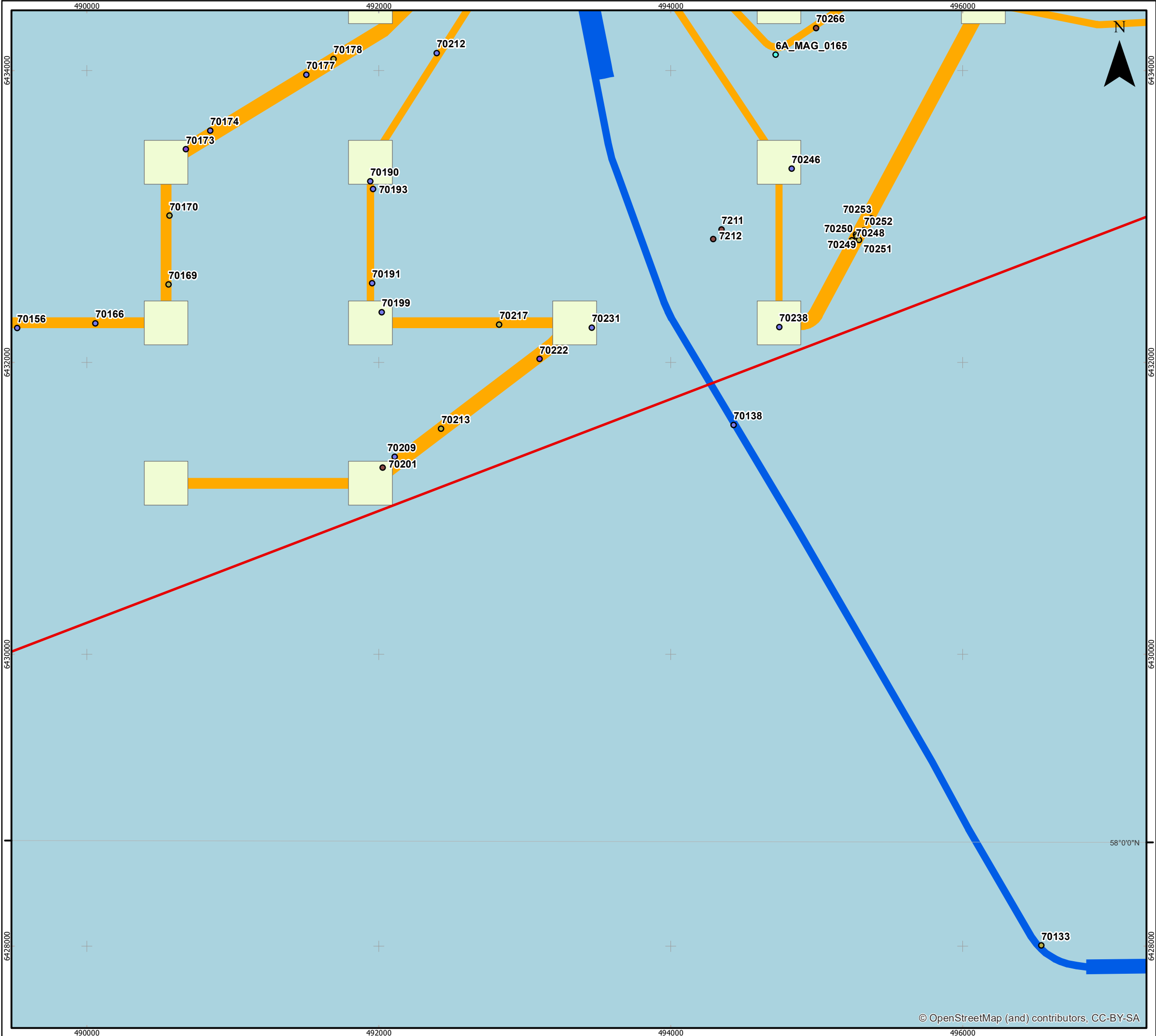
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KEY

Site Boundary

Foundation Boxes

IAC Survey Corridors

OEC Export Corridors

Classification

Archaeological (UXO)

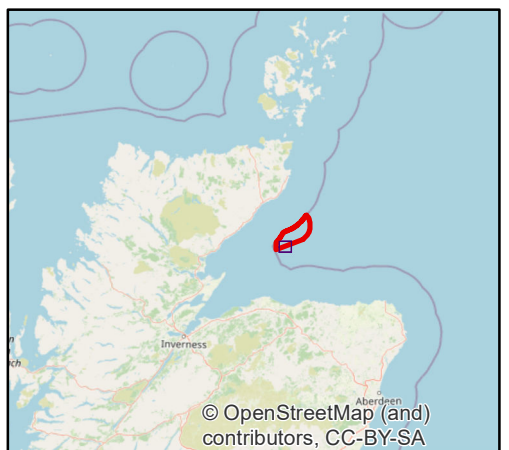
Bright reflector

Dark reflector

Debris

Magnetic

Notes:



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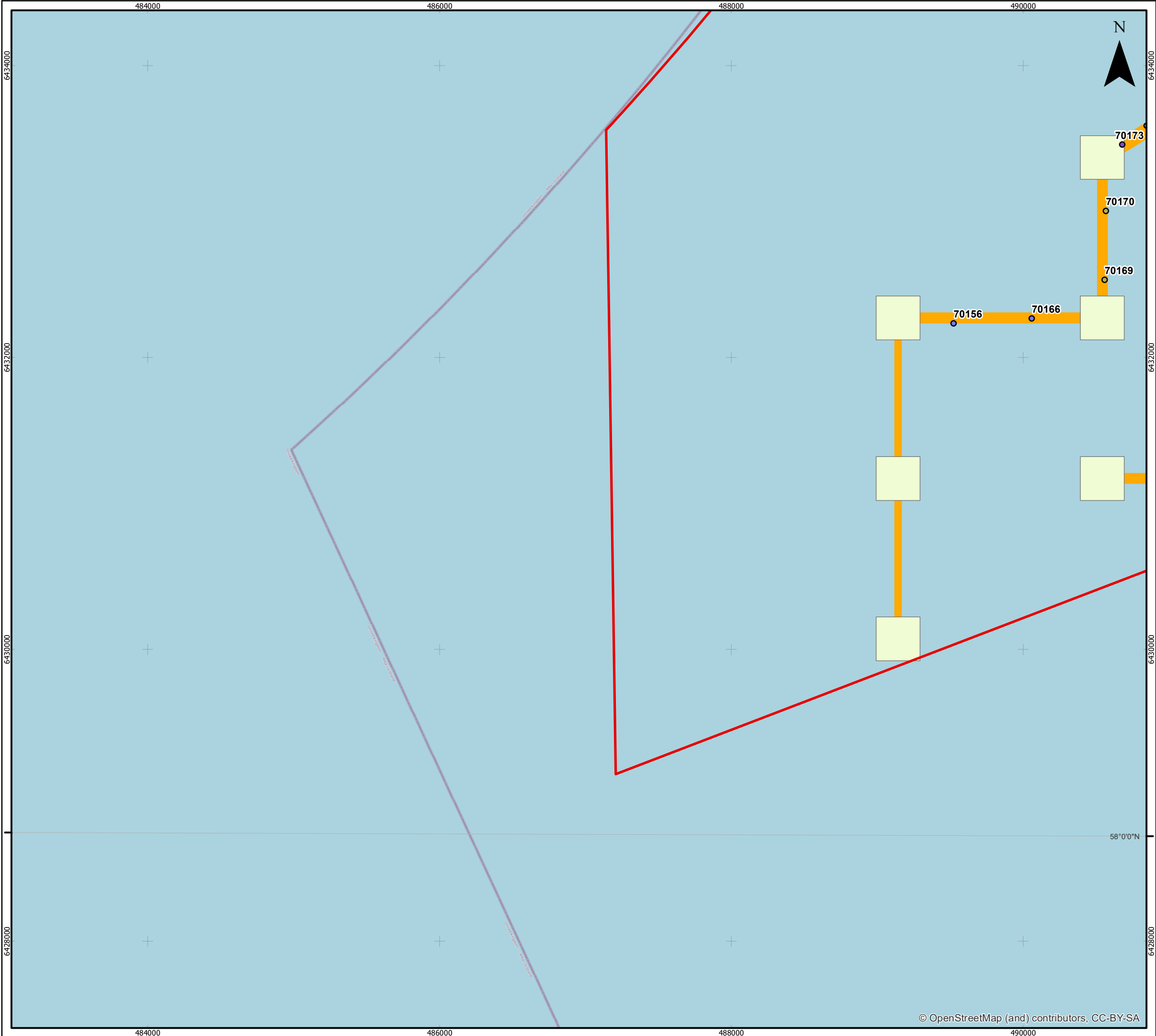
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Site Boundary

Foundation Boxes

IAC Survey Corridors

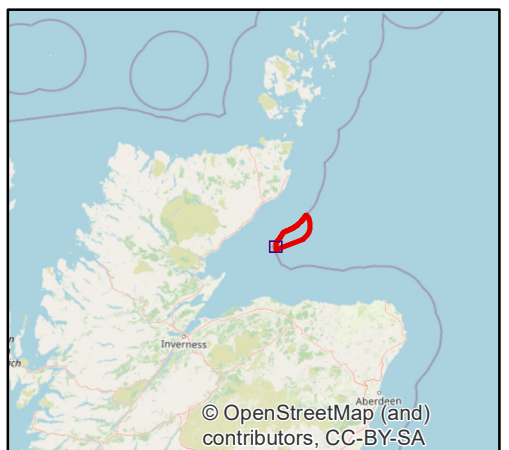
**Classification**

Bright reflector

Dark reflector

Magnetic

Notes:



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Horizontal Scale: 1:25,000

A3 Chart

05501,100 Meters

N

Geodetic Parameters:

WGS84 UTM Zone 30N

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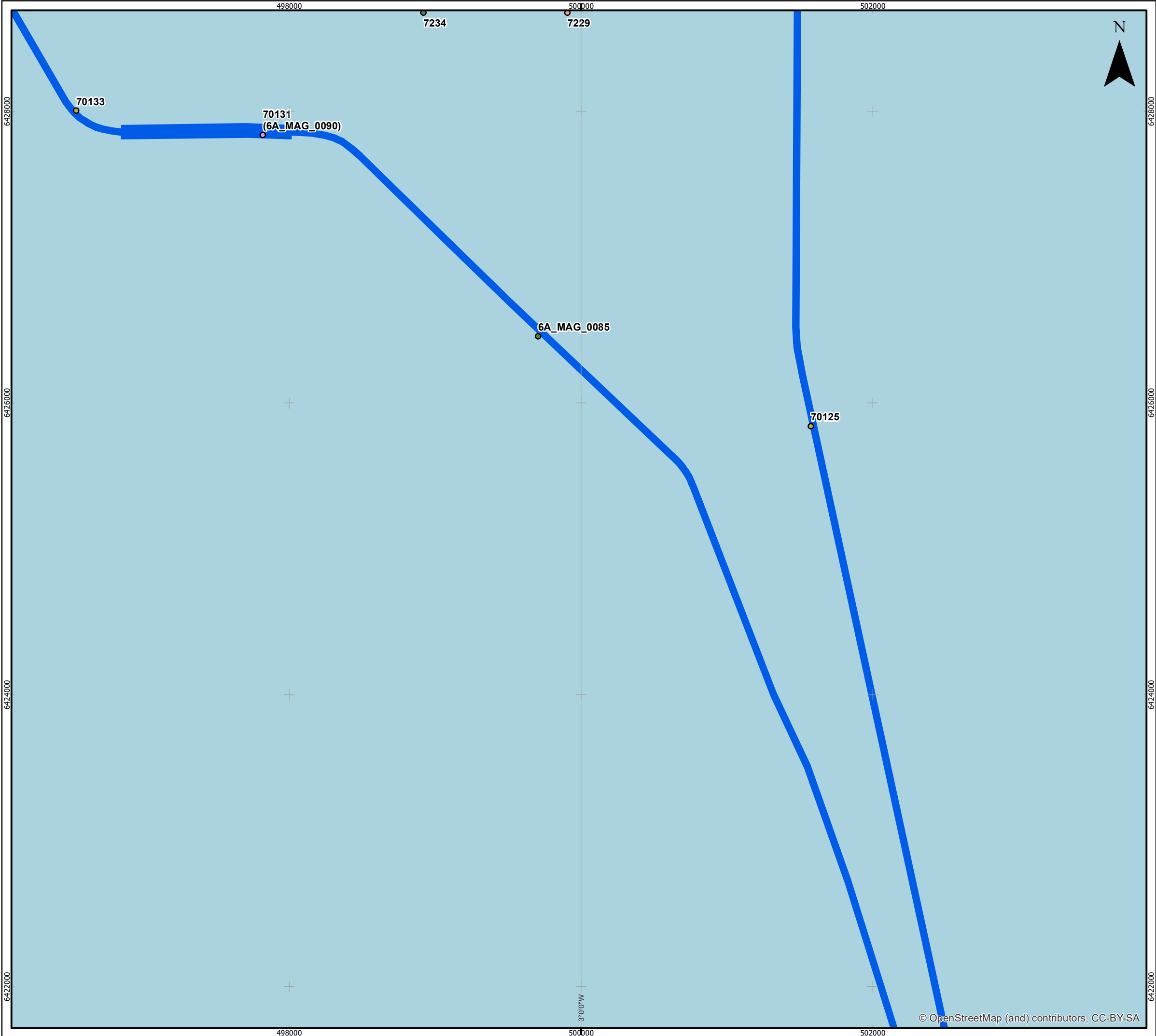
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**KEY**

OEC Export Corridors

**Classification**

Archaeological


Dark reflector

Possibly Archaeological

Recorded Aircraft (Possible)

Recorded Submarine

Notes:



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Horizontal Scale: 1:25,000

A3 Chart

05501,100

Meters

Geodetic Parameters:

WGS84 UTM Zone 30N

External Control

Internal Control

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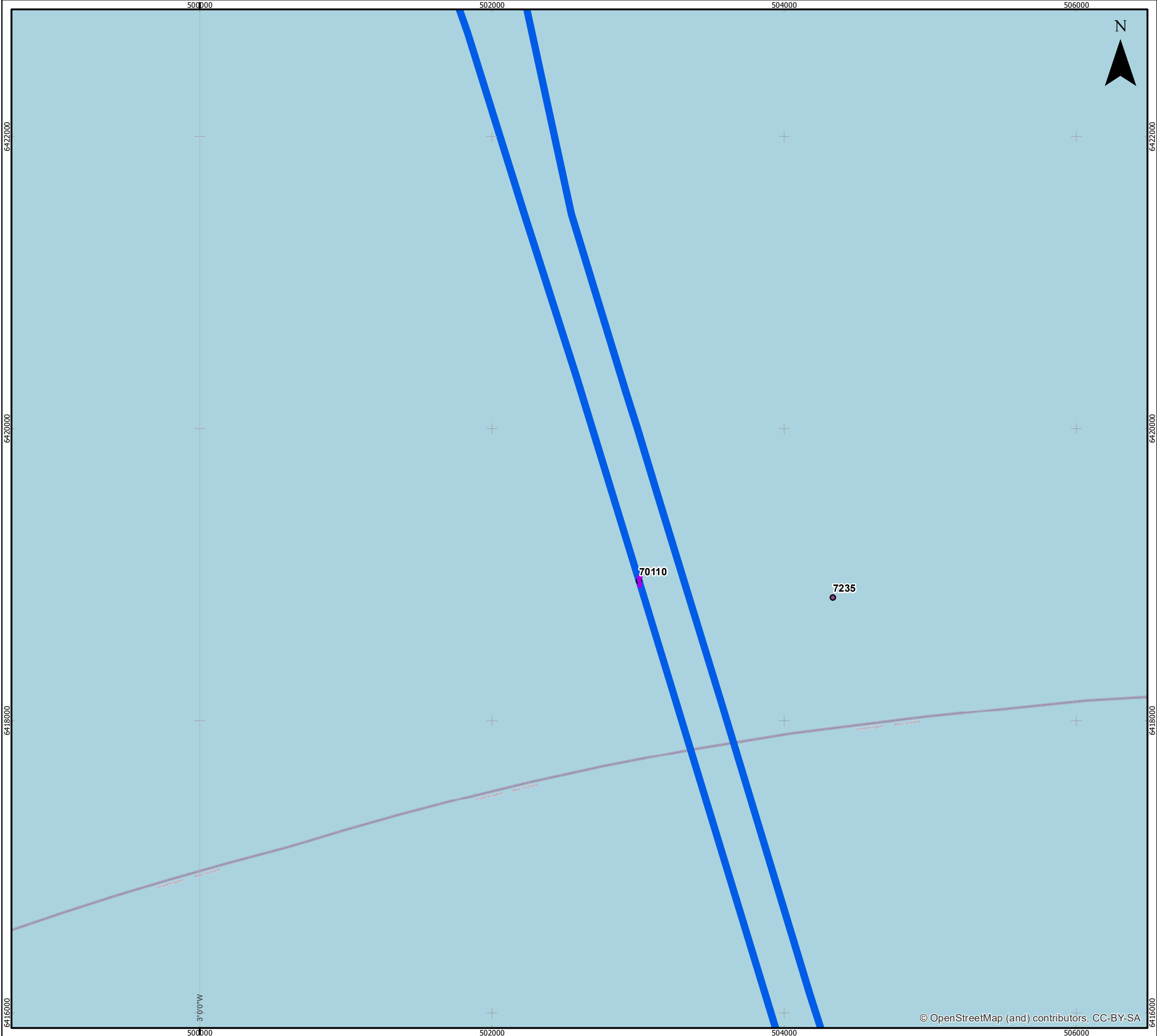
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KEY

Seabed Linear Features


OEC Export Corridors

Classification

Recorded Obstruction

Rope/chain


Notes:



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Horizontal Scale: 1:25,000A3 Chart

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Internal Control

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Approved: VC

Approved: [INITIALS]

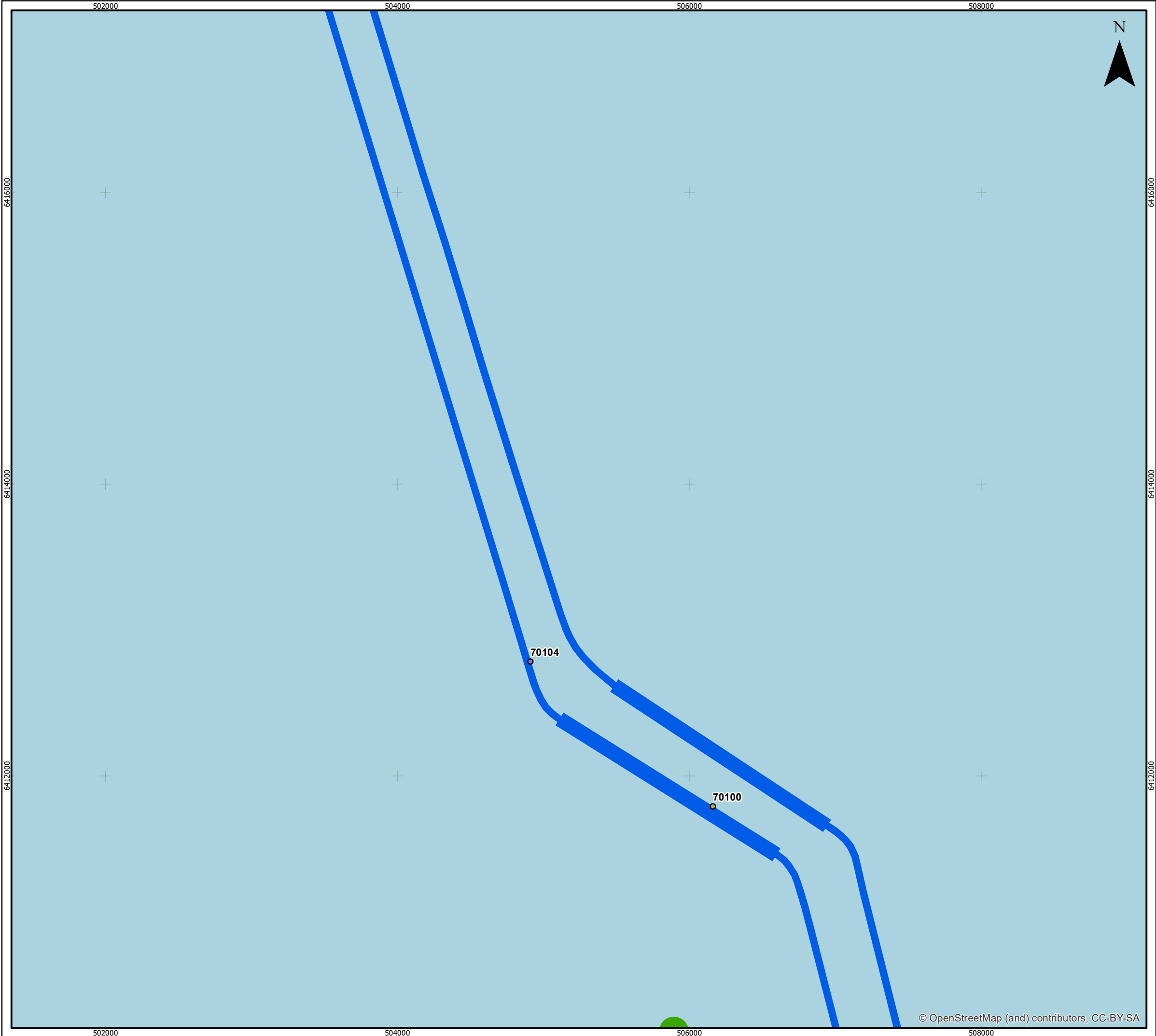
Date: 20/09/2023

Revision: 00

REF: 8460005-AAA0000-AAA-MAP-000000

Distribution of Seabed  
Features and AEZs  
Sheet 12 of 17

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Royal HaskoningDHV  
Enhancing Society Together

On behalf of:

moray west

OFFSHORE WIND FARM

KEY

Archaeological Exclusion Zones

OEC Export Corridors

Classification

Dark reflector

Magnetic

Notes:

Horizontal Scale: 1:25,000

A3 Chart

0

550

1,100 Meters

N

Geodetic Parameters:

WGS84 UTM Zone 30N

External Control

Internal Control

Produced: MCP

Produced: [INITIALS]

Reviewed: VC

Reviewed: [INITIALS]

Approved: VC

Approved: [INITIALS]

Date: 20/09/2023

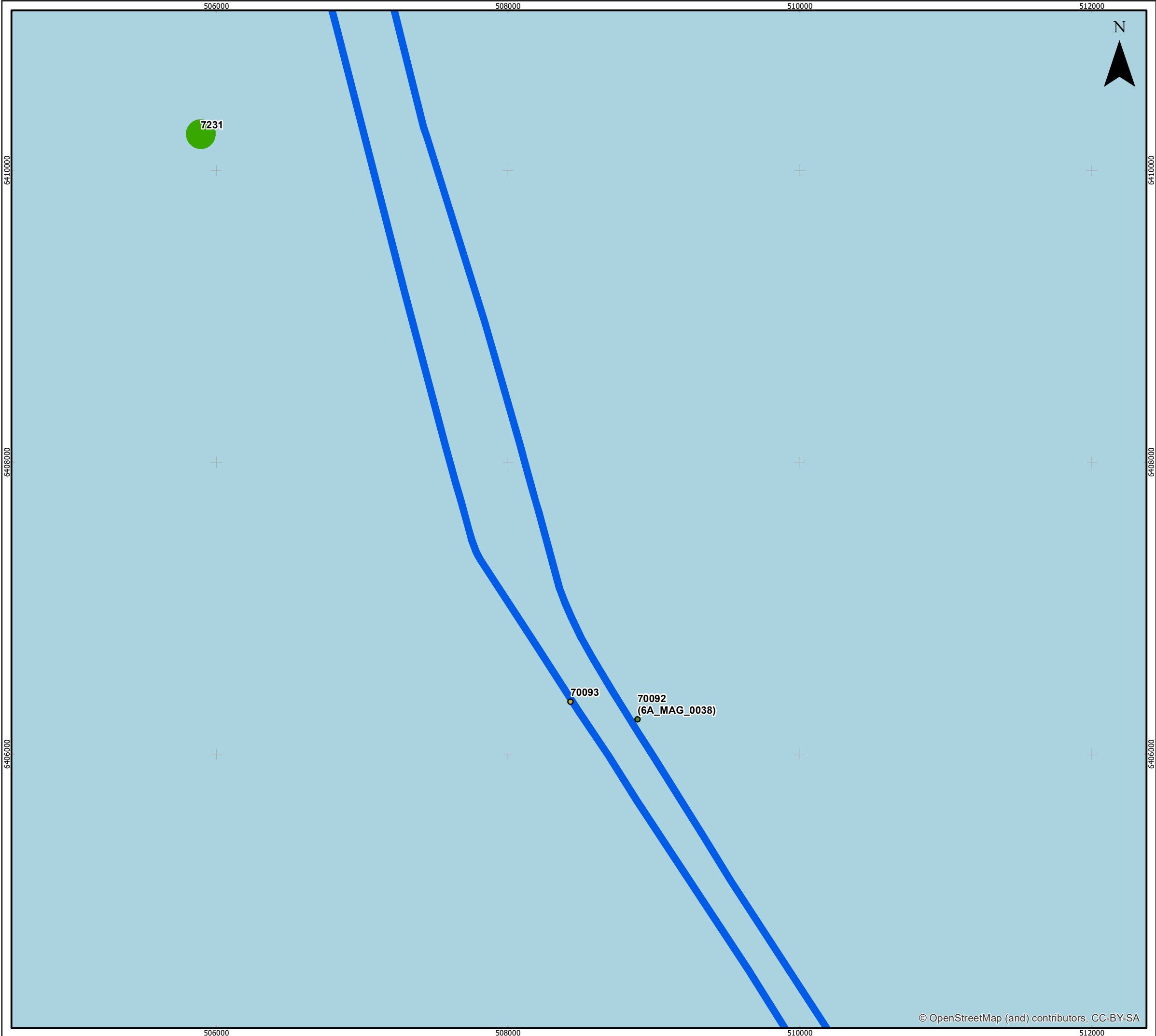
Revision: 00

REF: 8460005-AAA0000-AAA-MAP-000000


Distribution of Seabed Features and AEZs

Sheet 13 of 17

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On behalf of:



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Archaeological Exclusion Zones

OEC Export Corridors

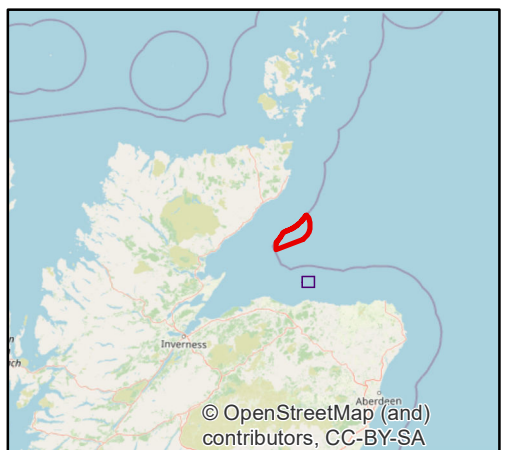
Classification

Dark reflector

Possibly Archaeological

Recorded Motor Fishing Vessel

Notes:



Horizontal Scale: 1:25,000A3 Chart

05501,100 Meters

N

Geodetic Parameters:WGS84 UTM Zone 30N

External Control

Internal Control

Produced: MCP

Reviewed: VC

Approved: VC

Date: 20/09/2023

Produced: [INITIALS]

Reviewed: [INITIALS]

Approved: [INITIALS]

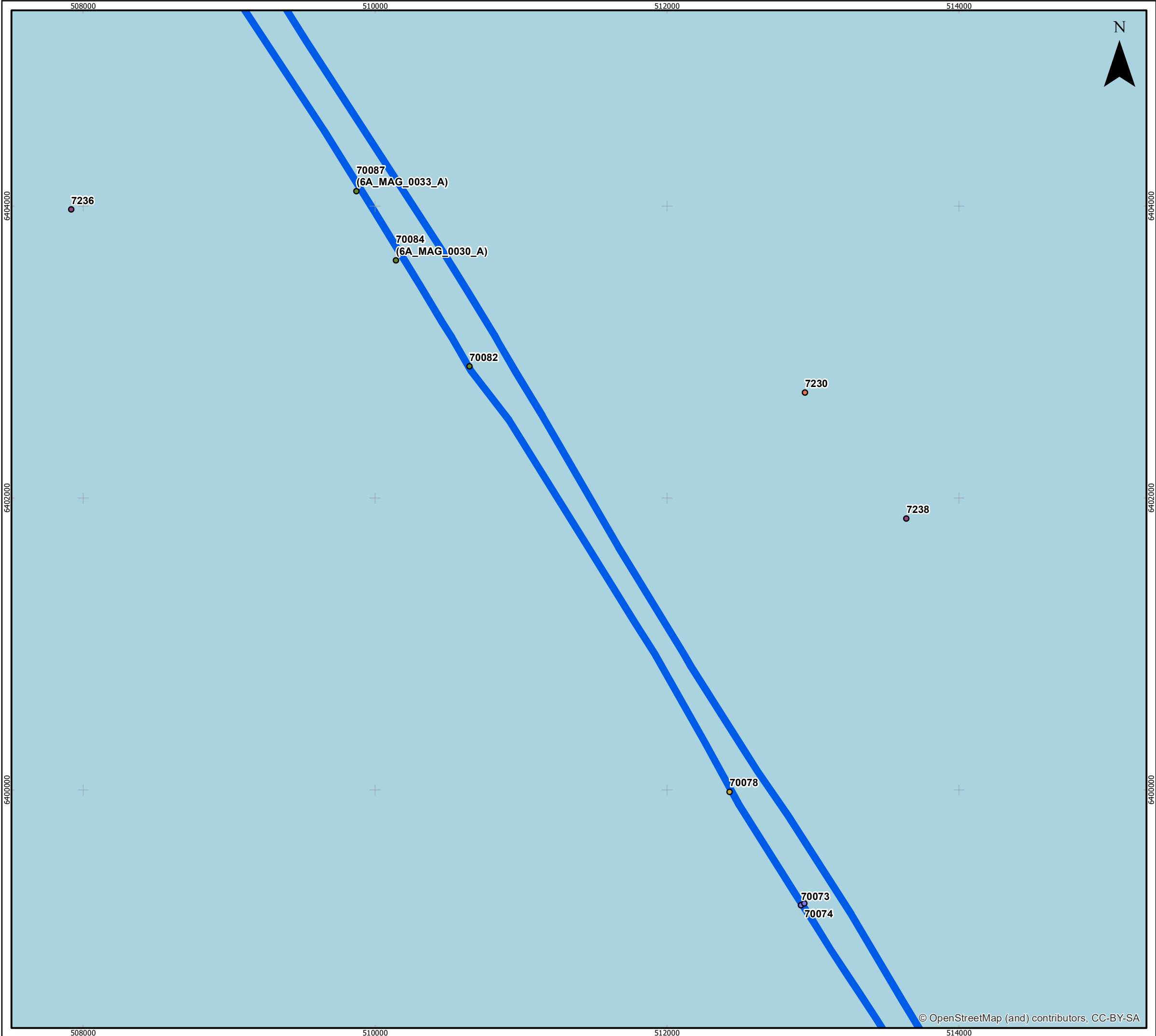
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Distribution of Seabed  
Features and AEZs  
Sheet 14 of 17



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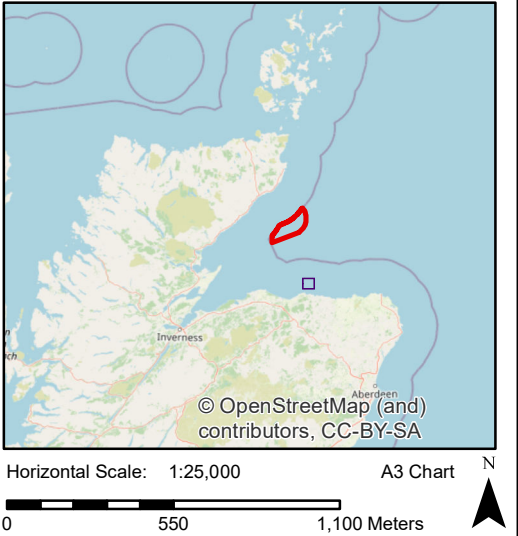


**KEY**

OEC Export Corridors

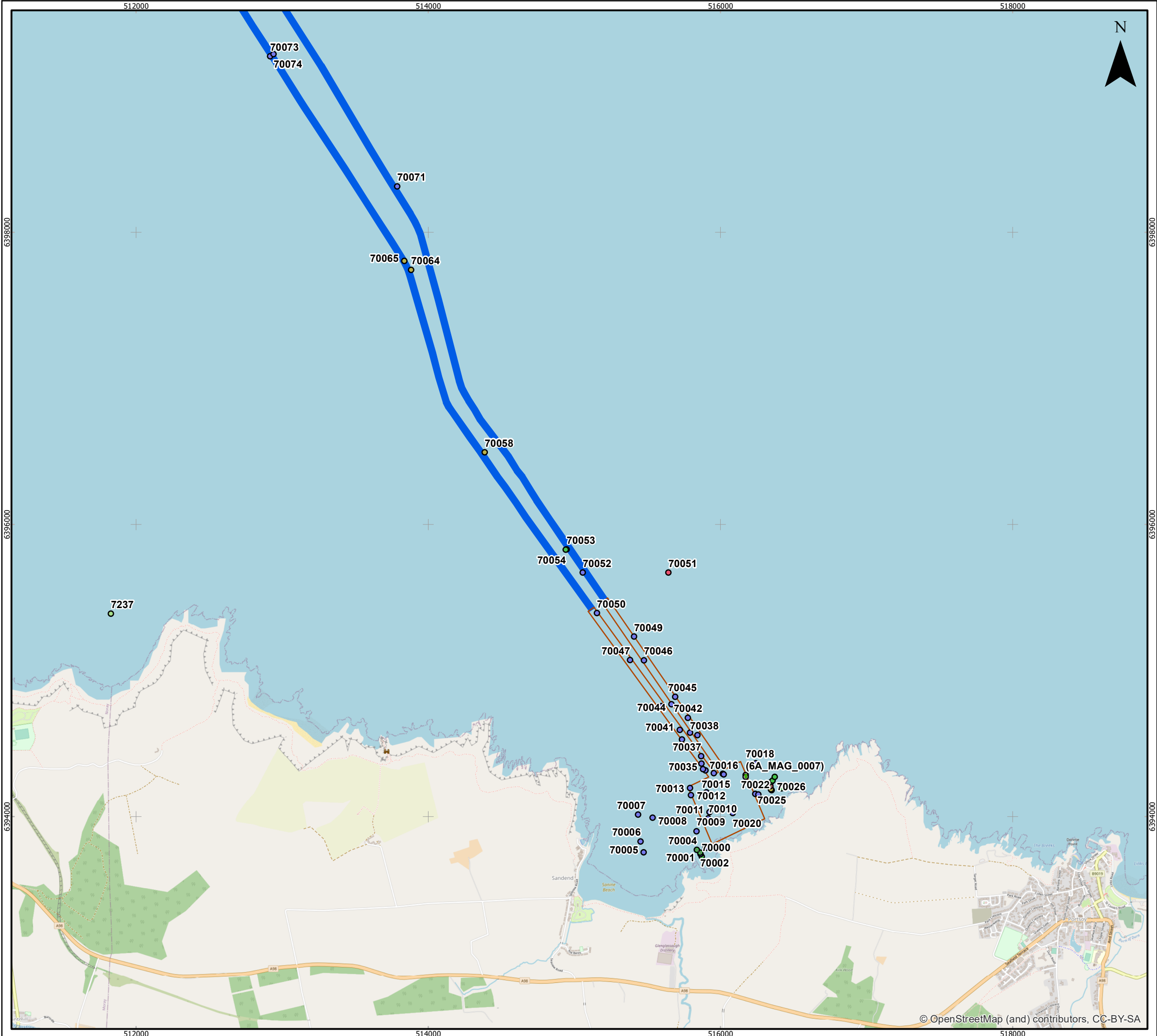
- Classification**
- Dark reflector
  - Magnetic
  - Possibly Archaeological
  - Recorded Craft (Possible) Steamship
  - Recorded Obstruction

**Notes:**




Geodetic Parameters: WGS84 UTM Zone 30N	
External Control	Internal Control
Produced: MCP	Produced: [INITIALS]
Reviewed: VC	Reviewed: [INITIALS]
Approved: VC	Approved: [INITIALS]
Date: 20/09/2023	Revision: 00
REF: 8460005-AAA0000-AAA-MAP-000000	

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**KEY**


 Archaeological Exclusion Zones


 Seabed Boundary Features


 Nearshore UXO Survey Corridor


 OEC Export Corridors


**Classification**


 Archaeological

 Dark reflector

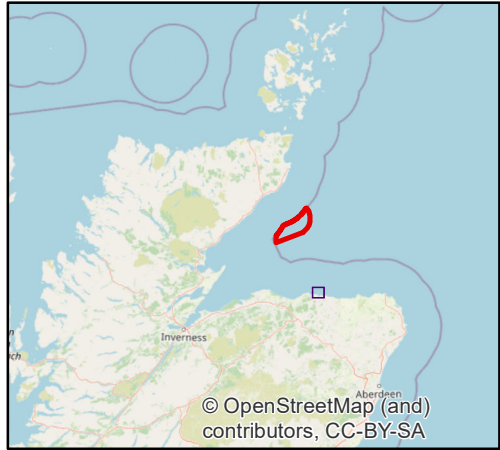
 Magnetic

 Mound

 Recorded Obstruction (Steamship)

 Seabed disturbance


Notes:



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Horizontal Scale: 1:25,000

A3 Chart



Geodetic Parameters:

WGS84 UTM Zone 30N

External Control

Internal Control

Produced: MCP

Reviewed: VC

Approved: VC

Date: 20/09/2023

Produced: [INITIALS]

Reviewed: [INITIALS]

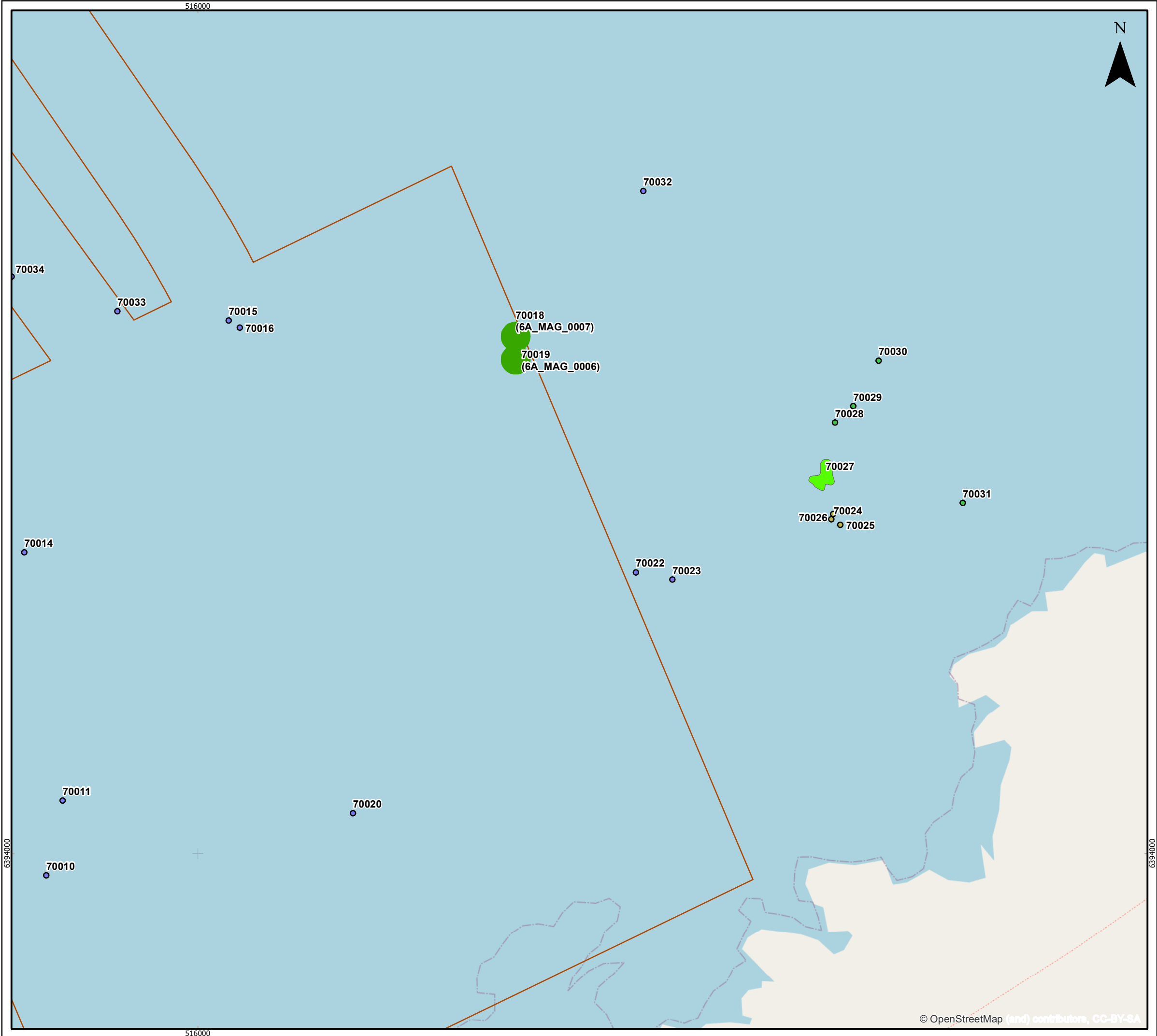
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Revision: 00


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Distribution of Seabed  
Features and AEZs  
Sheet 16 of 17

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**KEY**


 Archaeological Exclusion Zones


 Seabed Boundary Features


 Nearshore UXO Survey Corridor


**Classification**

 Archaeological

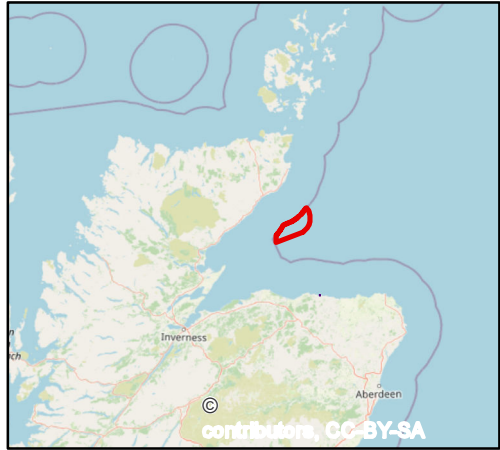
 Dark reflector

 Magnetic

 Mound

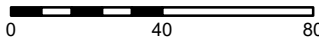
 Seabed disturbance

Notes:



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Horizontal Scale: 1:2,000A3 Chart



04080 Meters

Geodetic Parameters:WGS84 UTM Zone 30N

External Control	Internal Control
Produced: MCP	Produced: [INITIALS]
Reviewed: VC	Reviewed: [INITIALS]
Approved: VC	Approved: [INITIALS]
Date: 20/09/2023	Revision: 00

REF: 8460005-AAA0000-AAA-MAP-000000

Distribution of Seabed  
Features and AEZs  
Sheet 17 of 17

## Appendix C – Gazetteer

Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70018 (6A_MAG_0007)	Possible (gun)carriage	516174.1	6394283.3	Archaeological	See description				70018 (6A_MAG_0007) is located c. 16 m from 70019 (6A_MAG_0006) and the two items may be associated. The item is described as a metal bar 190 cm in length and c. 6 cm in diameter with a large wooden spar running diagonally through it c. 200cm in length and 10 cm from the end of the metal bar. Due to the proximity of this find to the wheel 6A_MAG_0006, there is potential for this to be an associated fitting and the two items may once have formed part of a (gun) carriage. These items remain in situ with an 8m AEZ around each find and will be avoided during works.
70019 (6A_MAG_0006)	Possible (gun)carriage	516174.1	6394270.6	Archaeological	See description				70019 (6A_MAG_0006) was identified as a potential 'wagon' wheel with 10 wooden spokes and a metallic hub. The wheel was c. 160 cm diameter and each spoke c. 80cm in length. The origin of the wheel is unknown although it was presumably lost from a ship or in a wreck incident. 70018 (6A_MAG_0007) is located c. 16 m from 70019 (6A_MAG_0006) and the two items may be associated, possibly part of a (gun) carriage. These items remain in situ with an 8m AEZ around each find and will be avoided during works.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70131 (6A_MAG_0090)	Chain	497821.11	6427835.68	Archaeological	See description				Approx 70m x 0.01 x 0.05m of fused/concreted chain uncovered 0.5m below the seabed. Two further chain links were found close by (6A_MAG_0090_A). The level of concretion suggests that this chain may have been on the seabed for some time. However, due to the limited archaeological significance of this find no AEZ is recommended.
70259 (6A_MAG_0183)	Stockless anchor	496314.95	6437783.59	Archaeological	See description				Stockless anchor with dimensions 2m x 0.25m x 0.1m and 1m length of anchor chain. Eodex suggested that this was a Danforth type anchor, a type invented in 1939 by American Inventor, Richard Danforth, for use aboard second world war landing craft. However, the Danforth design uses large flat plate flukes attached to a hinged stock, to allow the flukes to pivot, whilst the appearance of this example suggests it could be Union or JIS stockless anchor. The lack of concretion and modern appearance of the anchor suggests that this could be of relatively recent date, and from the later half of the 20th century or later. The find have been retained as being of archaeological interest but, as the find has been relocated beyond the construction footprint, and as the archaeological interest is relatively low, no AEZ is recommended.
6A_MAG_0165	Ballistic cap	494719.57	6434107.03	Archaeological (UXO)	See description				Ballistic cap from a 15" projectile likely related to the large number of projectiles found during investigation. Of interest as a possible second world war find but as this has been relocated beyond the construction footprint no AEZ is recommended.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70273 (6A_MAG_0208)	Ballistic cap	502535.1	6439454.27	Archaeological (UXO)	See description				Ballistic cap from a 15" projectile likely related to the large number of projectiles found during investigation. Of interest as a possible second world war find but as this has been relocated beyond the construction footprint no AEZ is recommended.
70292 (6A_MAG_0196)	Torpedo air vessel	500931.27	6442110.58	Archaeological (UXO)	See description				Torpedo air vessel approximately 3.3m in length and 0.533m in diameter. Most likely British and of second world war date. As this has been relocated beyond the construction footprint no AEZ is recommended.
70317 (6A_MAG_0246)	Bofor cartridge case	504191.09	6441099.83	Archaeological (UXO)	See description				40mm Bofor cartridge case, missing projectile. Of interest as a possible second world war find but as this has been relocated beyond the construction footprint no AEZ is recommended.
6A_MAG_0085	Small cylinder with ring attachment	499708.09	6426455.36	Possibly Archaeological	See description				A small cylinder (1.0m x 0.18m diameter) with a ring attached, possibly for lifting or attaching. The purpose of the find remains uncertain but as its archaeological interest cannot be confirmed it has been retained in the gazetteer as being of possible archaeological interest. The find has been relocated beyond the construction footprint and no AEZ is recommended.
70082	Clump weight	510647.54	6402900.04	Possibly Archaeological	See description				Find identified as anon-ferrous (stone) clump weight. As its date or archaeological interest cannot be confirmed it has been retained in the gazetteer as being of possible archaeological interest. No AEZ is recommended.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70084 (6A_MAG_0030_A)	Possible capstan	510143.59	6403627.68	Possibly Archaeological	See description				Possible capstan (or part of a capstan), approx. 1m L x 1m W x 0.6m. Found with a metal bar (6A_MAG_0030_B) and a small ferrous roller (6A_MAG_0030_C). As the archaeological interest cannot be confirmed it has been retained in the gazetteer as being of possible archaeological interest. The find has been relocated beyond the construction footprint and no AEZ is recommended.
70087 (6A_MAG_0033_A)	Possible seamine sinker	509873.12	6404101.07	Possibly Archaeological	See description				Possible early seamine sinker. Found with two ferrous bars (6A_MAG_0033_B and 6A_MAG_0033_C). As the archaeological interest cannot be confirmed it has been retained in the gazetteer as being of possible archaeological interest. The find has been relocated beyond the construction footprint and no AEZ is recommended.
70092 (6A_MAG_0038)	Possible seamine sinker	508888.87	6406236.19	Possibly Archaeological	See description				Unknown object similar in appearance to seamine sinker 6A_MAG_0033_A. As the archaeological interest cannot be confirmed it has been retained in the gazetteer as being of possible archaeological interest. The find has been relocated beyond the construction footprint and no AEZ is recommended.
70153 (6A_MAG_0233)	Unknown objects	489254.58	6435593.3	Possibly Archaeological	See description				Two unknown objects (6A_MAG_0233 and 6A_MAG_0233_A) with dimensions 0.4m x 0.15m x 0.1m. The objects appear concreted and covered with marine growth. As the archaeological interest cannot be confirmed they have been retained in the gazetteer as being of possible archaeological interest. The finds have been relocated beyond the construction footprint and no AEZ is recommended.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70293 (6A_MAG_0203)	Buried metal debris	501146.44	6442032.35	Possibly Archaeological	See description				Substantial metal debris was dredged (greater than 4.5m x 1m) and extending across both 6A_MAG_0202 and 6A_MAG_0203. The debris appears to comprise concreted pieces rather than an identifiable or extensive buried structure but has been retained as being of possible archaeological interest. The debris is located at the edge of the WTG box and wont be impacted during installation. No AEZ is recommended.
7200	Dark reflector	505258	6447954	A2	5	4.4	1	-	A medium sized distinct dark reflector with a bright shadow located on a gravelly area of the seabed. This anomaly is visible in the bathymetry data as a medium sized distinctive mound located on an otherwise featureless area of the seabed. This could be natural or a piece of debris
7201	Debris	508203	6447687	A2	29	2.6	0	-	A right angled linear dark reflector with no shadow. This large debris feature that appears to be anthropogenic in origin and is located on a rough and uneven area of the seabed
7202	Debris	509191	6444173	A2	5	5	0.4	-	A possible piece of debris, a medium sized broken up or possibly partially buried dark reflector with height. One part of the anomaly appears to be 'v' shaped
7204	Debris	507617	6442709	A2	5	3.8	1.3	-	A distinct curvilinear shaped dark reflector with a very bright and rounded shadow. This anomaly is visible in the bathymetry data as a medium sized mound with a slightly pointed tip and situated in a depression. Possibly a medium sized piece of debris

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7205	Dark reflector	499910	6441120	A2	5.7	0.8	0	-	A medium sized, slightly curvilinear dark reflector with no shadow but in a slight depression. This could be natural or a piece of debris
7206	Dark reflector	499907	6441129	A2	4.8	1.3	0.5	-	An irregularly shaped dark reflector with an indistinct shadow, possibly situated in a slight depression. This could be natural or a piece of debris
7207	Dark reflector	505792	6446915	A2	6.5	3.1	0.6	-	A thick and curvilinear shaped dark reflector with a dull shadow. This is a medium sized and distinct feature, isolated on a sandy area of the seabed. This could be natural or a piece of debris
7209	Dark reflector	507578	6446910	A2	2.9	0.9	0.6	-	A medium sized distinct dark reflector with a bright shadow, looks anomalous to the surrounding seabed
7210	Dark reflector	507580	6446918	A2	4.3	0.9	0.6	-	A medium sized dark reflector with a bright shadow that may have some sediment build up around it
7211	Debris	494350	6432910	A2	3.5	1.1	1	-	A medium sized dark reflector with a small but bright shadow, the anomaly possibly has an internal depression. There is scouring orientated south-west and measuring 25 m associated, possibly debris
7212	Debris	494294	6432843	A2	4.3	3.3	0.5	-	A medium sized dark reflector with a small internal shadow or depression. A rounded anomaly, distinct possible piece of debris
7214	Dark reflector	508122	6445682	A2	2.2	1	1.1	-	A small and rounded dark reflector with a very bright shadow, could be natural or a piece of debris

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7215	Dark reflector	508456	6444467	A2	4.1	3	0.5	-	A slightly linear and thick dark reflector with a large shadow. This anomaly is located on the edge of a sandwave and is an isolated and distinct feature which could be natural or a piece of debris
7216	Rope/chain	492029	6438073	A2	28.9	2.4	0	-	A long and thick linear dark reflector with no shadow. This anomaly appears to be anthropogenic in origin and is possibly a rope or chain
7217	Seafloor disturbance	505218	6436609	A2	24.4	4.3	0.5	-	A large area of possible disturbed seabed comprising a group of small indistinct dark reflectors with height. The anomaly is a long thick linear shape and is located on an otherwise sandy and even area of the seabed
7218	Magnetic	495733	6439162	A2	-	-	-	230	Large negative monopole identified on more than one survey line. Indicative of possible buried ferrous debris
7219	Magnetic	503730	6439599	A2	-	-	-	9	Small asymmetric dipole. Indicative of possible buried ferrous debris
7220	Magnetic	501075	6445052	A2	-	-	-	5	Small dipole. Indicative of possible buried ferrous debris
7221	Magnetic	505110	6448078	A2	-	-	-	31	Small asymmetric dipole. Indicative of possible buried ferrous debris
7222	Magnetic	505642	6441562	A2	-	-	-	5	Small dipole. Indicative of possible buried ferrous debris
7223	Magnetic	507148	6444756	A2	-	-	-	24	Small asymmetric dipole. Indicative of possible buried ferrous debris
7224	Magnetic	503206	6443376	A2	-	-	-	7	Small asymmetric dipole. Indicative of possible buried ferrous debris

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7225	Magnetic	506914	6451286	A2	-	-	-	12	Small asymmetric dipole. Indicative of possible buried ferrous debris
7226	Debris	505881	6447799	A2	7	6	0.8	-	A slightly oval shaped dark reflector with a bright and tapered shadow. This is a very distinct anomaly and possible piece of debris. In the bathymetry data this is visible as a large pointed mound located 38 m to the south-west of a similar feature 7227
7227	Debris	505907	6447827	A2	6.3	4	0.5	-	A medium sized slightly square shaped dark reflector with a bright but small shadow. This is a distinct possible piece of debris situated on a sandy area of the seabed. In the bathymetry data this is visible as a medium sized, oval shaped mound located 38 m north-west of 7226
7228	Recorded Wreck	496704	6439032	A3	-	-	-	-	UKHO record of the Sunbeam (Possibly), a wooden sailing vessel with original dimensions of 30.4 m x 7 m x 3.4 m built in 1878 by Massey, Portreath, Cornwall. The vessel was captured by submarine and sunk by gunfire in 1915. The wreck is recorded as being highly degraded, it was identified in sidescan sonar data in 2008 with dimensions of 25 m 20 m x 2.7 m and also in magnetometer data. This location is not covered by the 2010 geophysical survey data.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7229 894 (UKHO); 321469 (CANMORE)	Recorded Submarine	499908.59	6428674.2	A3	-	-	-	-	Recorded by UKHO as a wreck of a German WWI UE-class minelaying submarine, identified as U77. It sank by gunfire from an unnamed British ship on 7th July 1916 after having left Heligoland on 5th July 1916 to lay mines off Kinnaird Head, but did not return or send any reports. In 1988 no wreck was located within 1 mile to the north of the original position. It is believed that the wreck was first located in 1990; 'The wreck lies with a bow up attitude, her stern section of her deck gun completely buried in deep mud...The port side of the wreck is intact, but the plating on the starboard side has fallen away, the conning tower unrecognisable, although to periscoped project upwards from amongst the debris. Her forward hatch is closed.' (Larn & Larn 1998).
7230	Recorded Craft (Possible) Steamship	512946.14	6402719.7	A3	-	-	-	-	Recorded by UKHO in 1986 as a possible wreckage at Portsoy, Moray Firth (probably). The wreck is considered to be non-dangerous consisting of a British steam ship which sank on 28th of March 1943 following a collision. It was built at Firth Shipping Co. Ltd.
7231	Recorded Motor Fishing Vessel	505895.45	6410247.8	A3	-	-	-	-	Recorded by UKHO as the wreck of a wooden hulled fishing vessel, identified as Mayflower, which sank on the 1st of February 1973 following a collision with MFV Devotion II. The wreck is considered to be non-dangerous and situated at a general depth of 81 m. It was last located in 1986.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7232	Recorded Motor Fishing Vessel	509842.6	6394826.4	A3	-	-	-	-	Recorded by UKHO consisting of a wreck with portion of hull or superstructure of a motor fishing vessel, identified as Artemis. It sunk on 2nd of September 1974 whilst on passage for the Isle of Man. It grounded in dense fog and reported as having been pounded. In 1940 it sustained damage to keel and stern as it listed to starboard. In 1987 no wreck was found at original position.
7233 2118 (UKHO); 101774 (CANMORE)	Recorded Obstruction	495817.21	6425583.5	A3	-	-	-	-	Recorded by UKHO in 1987 in the Moray Firth, possibly consisting of fishing gear and situated at a general depth of 54 m.
7234 895 (UKHO); 321470 (CANMORE)	Recorded Aircraft (Possible)	498922.55	6428674.6	A3	-	-	-	-	Recorded by UKHO in 1965 as a non- dangerous wreck. Thought to be the wreck of a ditched Day Jet aircraft. In 1987 wreck was not located and the following year no wreck was found within 1 mile to the north of the original position.
7235 2195 (UKHO); 101806 (CANMORE)	Recorded Obstruction	504335.3	6418842.2	A3	-	-	-	-	Recorded by UKHO in 1986 as a possible wreckage situated at a general depth of 90 m in the Moray Firth. Considered to be non-dangerous.
7236 2204 (UKHO); 101717 (CANMORE)	Recorded Obstruction	507919.38	6403975.5	A3	-	-	-	-	Recorded by UKHO in 1986 as a possible wreckage in the North Sea. Considered to be a dangerous wreck situated at a general depth of 30 m.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
7237 2172 (UKHO); 101789 (CANMORE)	Recorded Obstruction (Steamship)	511827.38	6395388.7	A3	-	-	-	-	Recorded by UKHO in 1981 as the wreck of an old steamship located about 1 mile north-east of Cullen. Two large boilers were found in a depth of 26 m. Classed as dead.
7238	Recorded Obstruction	513641.92	6401856.9	A3	-	-	-	-	Recorded by UKHO in 1986 as a possible wreckage at Moray Firth. Searched for in 1987 but not found.
70000	Mound	515873	6393725	A2_I	7	4.7	2	-	A very distinct mound with steep sides and a flat peak, with some sediment accumulation surrounding it. The feature is anomalous to the surrounding outcropping geology. This position was not directly covered by the SSS or Mag. datasets, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70001	Magnetic	515864	6393742	A2_I	-	-	-	15	A small symmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location, however this is situated 5.0 m south of the southern end of mound 70002 and may be associated. Interpreted as possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70002	Mound	515863	6393753	A2_I	14.5	2.5	0.3	-	A linear mound orientated approximately north to south on the seabed with gently sloping sides and a relatively even peak. The feature is situated within an area of outcropping geology, however appears distinct and anomalous. Situated 10.0 m south-east of similar mound 70004 and may be associated. This position was not directly covered by the SSS dataset. No anomalous features were identified in the Mag. dataset at this location, however Mag. anomaly 70001 is situated 5.0 m south of the end of this feature, and may be associated. Interpreted as a possible natural feature or may be possible debris.
70003	Magnetic	515899	6393783	A2_I	-	-	-	6	A small, broad asymmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70004	Mound	515840	6393771	A2_I	27.3	4.8	1	-	A long and slightly curved mound orientated north-west to south-east on the seabed. The north-west end of the mound is the widest point, the average width of the mound is 3.2 m. The feature is situated within an area of outcropping geology, however is anomalous and distinct. This position was not directly covered by the SSS dataset. No anomalous features were identified in the Mag. dataset at this location, although the feature is only partially covered by the Mag. data. Interpreted as a possible natural feature or may be possible debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70005	Magnetic	515476	6393754	A2_I	-	-	-	13	A small, broad asymmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70006	Magnetic	515454	6393829	A2_I	-	-	-	7	A small, broad asymmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70007	Magnetic	515438	6394013	A2_I	-	-	-	14	A small, symmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70008	Magnetic	515536	6393992	A2_I	-	-	-	41	A small, symmetric dipole with peak and trough on one profile line. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70009	Magnetic	515837	6393899	A2_I	-	-	-	33	A small, asymmetric dipole with peak and trough over two profile lines. Also visible on adjacent profiles. This position was not directly covered by the SSS dataset. No anomalous features were identified in the MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70010	Magnetic	515917	6393988	A2_I	-	-	-	67	A medium, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70011	Magnetic	515926	6394029	A2_I	-	-	-	93	A medium, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70012	Magnetic	515799	6394145	A2_I	-	-	-	11	A small positive monopole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70013	Magnetic	515792	6394194	A2_I	-	-	-	38	A small, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70014	Magnetic	515905	6394165	A2_I	-	-	-	15	A small positive monopole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70015	Magnetic	516017	6394292	A2_I	-	-	-	21	A small negative monopole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Located 7.0 m north-west of Mag. anomaly 70016 and may be associated. Interpreted as possible ferrous debris either buried or with no surface expression.
70016	Magnetic	516023	6394288	A2_I	-	-	-	30	A small negative monopole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Located 7.0 m south-east of Mag. anomaly 70015 and may be associated. Interpreted as possible ferrous debris either buried or with no surface expression.
70020	Magnetic	516085	6394022	A2_I	-	-	-	20	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70022	Magnetic	516240	6394154	A2_I	-	-	-	12	A small symmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70023	Magnetic	516260	6394150	A2_I	-	-	-	7	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70024	Dark reflector	516347	6394183	A2_I	1.1	0.3	0.3	-	A small but distinct sub-angular dark reflector with a tapered shadow. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70025 - 70030). No anomalous features were identified in the MBES dataset at this location. This position was not directly covered by the Mag. dataset, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70025	Dark reflector	516352	6394180	A2_I	2.9	0.6	0.2	-	A distinct, sub-angular dark reflector with a tapered shadow. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024, 70026 - 70030). No anomalous features were identified in the MBES dataset at this location. This position was not directly covered by the Mag. dataset, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70026	Dark reflector	516348	6394186	A2_I	8	1.7	0.9	-	A distinct angular dark reflector with a bright, tapered shadow, possibly two objects however this is unclear. The feature has some scour to the north-west. Also identified in the MBES dataset as a distinct, sub-rounded mound situated in a broad depression. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024, 70025, 70027 - 70030). This position was not directly covered by the Mag. dataset, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70027	Seabed disturbance	516344	6394207	A2_I	14.6	12.9	0.8	-	A distinct area of seabed disturbance comprising multiple rounded and sub-rounded dark reflectors with associated shadows. The largest dark reflector measures 1.7 x 0.6 x 0.8 m. Also identified in the MBES dataset as an area of uneven area seabed with two low-lying, rounded mounds at the western extent measuring 2.9 x 2.1 m and 2.5 x 2.3 m individually. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024 - 70026, 70028 - 70030). This position was only partially covered by the Mag. dataset, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70028	Mound	516349	6394236	A2_I	2.5	2.1	0.1	-	A low-lying sub-angular mound situated in a slight depression on the seabed. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024 - 70027, 70029 and 70030). This position was not directly covered by the SSS dataset. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70029	Mound	516359	6394245	A2_I	1.6	1.4	0.1	-	An indistinct, low-lying sub-angular mound situated in a slight depression on the seabed. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024 - 70028 and 70030). This position was not directly covered by the SSS dataset. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70030	Mound	516373	6394270	A2_I	2.5	2	0.1	-	A low-lying sub-angular mound situated in a slight depression. One of a number of features on this area of seabed in a curvilinear alignment that may be related (70024 - 70029). This position was not directly covered by the SSS or Mag. datasets, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70031	Mound	516419	6394192	A2_I	4.3	1	0.5	-	A distinct, elongate mound oriented north-east to south-west on the seabed. The feature has a slight dip at the south-western end, suggesting it may be two objects and is situated at the edge of an area of outcropping geology. This position was not directly covered by the SSS or Mag. datasets, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70032	Magnetic	516244	6394363	A2_I	-	-	-	28	A small, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70033	Magnetic	515956	6394297	A2_I	-	-	-	11	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70034	Magnetic	515898	6394316	A2_I	-	-	-	5	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70035	Magnetic	515882	6394323	A2_I	-	-	-	20	A small asymmetric dipole with peak and trough on two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70036	Magnetic	515872	6394362	A2_I	-	-	-	6	A small, broad asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES dataset at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70037	Magnetic	515869	6394412	A2_I	-	-	-	18	A small positive monopole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70038	Magnetic	515843	6394557	A2_I	-	-	-	32	A small symmetric dipole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70039	Magnetic	515738	6394527	A2_I	-	-	-	11	A small asymmetric dipole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70040	Magnetic	515792	6394574	A2_I	-	-	-	8	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70041	Magnetic	515723	6394592	A2_I	-	-	-	9	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70042	Magnetic	515777	6394675	A2_I	-	-	-	21	A small asymmetric dipole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70043	Magnetic	515598	6394755	A2_I	-	-	-	10	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70044	Magnetic	515666	6394768	A2_I	-	-	-	12	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70045	Magnetic	515692	6394819	A2_I	-	-	-	10	A small, double-troughed negative monopole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70046	Magnetic	515478	6395069	A2_I	-	-	-	14	A small asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70047	Magnetic	515382	6395071	A2_I	-	-	-	12	A small asymmetric dipole with peak and trough over two profile lines. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70049	Magnetic	515410	6395231	A2_I	-	-	-	35	A small, sharp symmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70050	Magnetic	515156	6395392	A2_I	-	-	-	77	A medium, sharp asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70051	Seabed disturbance	515645	6395669	A2_I	8.4	3	0.6	-	An area of seabed disturbance comprising two indistinct sub-rounded mounds situated within an uneven area of seabed. Individually these mounds measure 3.0 x 2.8 m and 2.5 x 2.1 m and are 1.8 m apart. This position was not directly covered by the SSS or Mag. datasets, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70052	Magnetic	515058	6395670	A2_I	-	-	-	12	A small, broad asymmetric dipole with peak and trough on one profile line. Also visible on adjacent profiles. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70053	Mound	514948	6395829	A2_I	2	1.3	0.4	-	A distinct, slightly angular mound situated 7.0 m ENE of a similar mound (70054) and may be associated. The mound is situated on an otherwise featureless seabed. No anomalous features were identified in the SSS dataset at this location. This position was not directly covered by the Mag. data, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70054	Mound	514941	6395826	A2_I	1.6	1.4	0.3	-	A distinct, slightly angular mound situated 7.0 m WSW of a similar mound (70053) and may be associated. The mound is situated on an otherwise featureless seabed. No anomalous features were identified in the SSS dataset at this location. This position was not directly covered by the Mag. data, so it is not possible to ascertain whether ferrous material is present at this location. Interpreted as a possible natural feature or may be possible debris.
70058	Dark reflector	514387	6396493	A2_I	2.3	0.6	0.4	-	A distinct elongate, almost right angled dark reflector with a bright shadow. No anomalous features were identified in the MBES data at this location. This position was not directly covered by the 2019 or 2021 Mag. datasets. No anomalous features were identified in the UXO Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70064	Dark reflector	513884	6397743	A2_I	1.7	0.6	0.8	-	A distinct sub-angular dark reflector with a very long, bright shadow, situated in a slight depression. Also identified in the MBES data as a small sub-rounded mound with gently sloping sides and a rounded peak. The feature has very slight scour present on the south-west edge. This position was not directly covered by the 2019 or 2021 Mag. datasets. No anomalous features were identified in the UXO Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70065	Dark reflector	513837	6397804	A2_I	1.5	0.3	0.4	-	A thin, slightly elongate dark reflector with a bright uneven shadow, possibly suggesting uneven height. No anomalous features were identified in the MBES data at this location. This position was not directly covered by the 2019 or 2021 Mag. datasets. No anomalous features were identified in the UXO Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70071	Magnetic	513789	6398314	A2_I	-	-	-	36	A small positive monopole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70073	Magnetic	512919	6399206	A2_I	-	-	-	27	A small negative monopole with peak and trough on one profile line in the 2021 Mag. data. No anomalous features were identified in the SSS, MBES or UXO Mag. datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70074	Magnetic	512942	6399220	A2_I	-	-	-	48	A small negative monopole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70078	Dark reflector	512429	6399983	A2_I	2.6	0.9	0.8	-	A distinct elongate dark reflector, with a bright, uneven shadow, possibly suggesting uneven height. May be two objects attached to one another. Visible as a low-lying mound in a depression in the MBES data. This position was not directly covered by the 2019 or 2021 Mag. datasets. No anomalous features were identified in the UXO Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70093	Dark reflector	508429	6406357	A2_I	2.7	1.1	1.5	-	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Slightly complex anomaly. No anomalous features were identified in the SSS or MBES data at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70100	Dark reflector	506164	6411791	A2_I	2.2	1.4	0.3	-	A small negative monopole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. data as a small negative monopole with peak and trough on one profile line measuring 14 nT. No anomalous features were identified in the SSS dataset at this location. In the MBES dataset a depression interpreted as natural is visible close to this position and may be associated. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70104	Magnetic	504912	6412783	A2_l	-	-	-	16	A large, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70110	Rope/chain	503009	6418956	A2_h	84.9	1.2	0.2	-	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70125	Dark reflector	501576	6425839	A2_l	1.6	0.7	0.6	-	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70133	Dark reflector	496542	6428002	A2_l	1.8	0.5	0.5	-	A small asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70138	Magnetic	494432	6431570	A2_I	-	-	-	14	A medium, sharp positive monopole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70146	Dark reflector	503458	6436828	A2_I	2.7	0.4	0.2	-	A medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70155	Dark reflector	489347	6435817	A2_I	4	0.7	0.1	-	A small asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.
70156	Magnetic	489524	6432234	A2_I	-	-	-	20	A distinct slightly angular dark reflector with a bright tapered shadow in a depression with scour to the south-west, possibly two or three small objects close together. Visible as a depression in the MBES data. Associated with a medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. dataset. Also visible on other profile lines. Interpreted as possible ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70160	Dark reflector	489705	6436392	A2_I	1.6	0.2	0.1	-	A medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70166	Magnetic	490060	6432267	A2_I	-	-	-	13	A distinct group of parallel linear dark reflectors with shadows. Internally the feature comprises linear dark reflectors, some of which have associated small shadows. The feature is situated in an area of otherwise featureless seabed. Visible as a square shaped uneven area of seabed in the MBES data. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible non-ferrous debris field.
70169	Dark reflector	490560	6432532	A2_I	2.1	1.1	0.1	-	An indistinct and slightly elongate dark reflector with small shadow, isolated on a featureless seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70170	Dark reflector	490567	6433004	A2_I	0.9	0.3	0.1	-	A small, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70173	Bright reflector	490680	6433459	A2_I	0.9	0.7	0	-	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.
70174	Magnetic	490847	6433588	A2_I	-	-	-	12	A distinct angular dark reflector with a bright shadow, possibly two objects close together situated on an otherwise featureless seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70175	Dark reflector	490964	6434879	A2_I	1.1	0.9	0.1	-	A medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70177	Magnetic	491506	6433970	A2_I	-	-	-	14	An indistinct, slightly elongate dark reflector with an indistinct shadow, situated on a featureless area of seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70178	Dark reflector	491692	6434078	A2_I	1	0.3	0.1	-	A large, sharp symmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70190	Magnetic	491944	6433239	A2_I	-	-	-	15	A small asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.
70191	Magnetic	491956	6432541	A2_I	-	-	-	15	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70193	Magnetic	491962	6433188	A2_I	-	-	-	13	A large, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS dataset at this location. In the MBES dataset a depression is visible close to this position and may be associated. Interpreted as possible ferrous debris that is either buried or with little surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70199	Magnetic	492022	6432343	A2_l	-	-	-	15	A medium, sharp positive monopole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70201	Debris	492028	6431277	A2_h	2	0.5	0.1	-	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. dataset as a small asymmetric dipole with peak and trough on one profile line measuring 24 nT. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70204	Magnetic	492051	6435468	A2_l	-	-	-	10	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. dataset. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70209	Magnetic	492110	6431351	A2_l	-	-	-	57	A very indistinct, intermittent curvilinear dark reflector with a slight shadow, may be a seabed scar however this is unclear. The feature may have two very small and indistinct sub-rounded dark reflectors attached measuring up to 0.4 x 0.2 x 0.1 m. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70212	Magnetic	492399	6434119	A2_I	-	-	-	12	An indistinct, elongate dark reflector with a small shadow at one end. The feature is situated in a very slight depression on an otherwise featureless seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70213	Dark reflector	492429	6431544	A2_I	1.2	0.2	0.1	-	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70215	Magnetic	492774	6434958	A2_I	-	-	-	27	A medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70217	Dark reflector	492827	6432258	A2_I	1.2	0.5	0.4	-	A small, broad asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70218	Magnetic	492940	6437698	A2_I	-	-	-	9	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. dataset as a small, broad asymmetric dipole with peak and trough on one profile line measuring 5 nT. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70220	Magnetic	493010	6437670	A2_I	-	-	-	21	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.
70221	Magnetic	493021	6435319	A2_I	-	-	-	15	A distinct and irregularly shaped bright reflector anomalous to the surrounding featureless seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70222	Bright reflector	493103	6432022	A2_I	1.5	1.3	0	-	An indistinct, elongate dark reflector with a very slight shadow situated on a featureless area of seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70223	Dark reflector	493113	6437721	A2_I	1.4	0.3	0.1	-	A small, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also identified in the 2021 Mag. dataset as a small negative monopole with peak and trough on one profile line measuring 9 nT. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70225	Magnetic	493255	6437711	A2_I	-	-	-	15	A large, sharp positive monopole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70229	Dark reflector	493372	6435569	A2_I	1.3	0.5	0.5	-	A large asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. data as a medium asymmetric dipole with peak and trough on one profile line measuring 66 nT. Also visible on other profile lines. No anomalous features were identified in the SSS dataset at this location. In the MBES data a slightly uneven area of seabed is visible at this location. Interpreted as possible ferrous debris either buried or with little surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70231	Magnetic	493460	6432236	A2_I	-	-	-	12	A medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also identified in the 2021 Mag. dataset as a small asymmetric dipole with peak and trough on one profile line measuring 45 nT. Situated 16.0 m north of Mag. anomaly 70233 and may be related. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70238	Magnetic	494745	6432241	A2_I	-	-	-	5	A small symmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. May represent a natural feature or may represent possible ferrous debris either buried or with no surface expression.
70239	Magnetic	494764	6438681	A2_I	-	-	-	15	A small, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70241	Magnetic	494765	6436593	A2_I	-	-	-	6	A small symmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as a possible natural feature or possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70246	Magnetic	494830	6433326	A2_I	-	-	-	14	A large, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70248	Dark reflector	495243	6432835	A2_I	1.5	1.1	0.2	-	A distinct sub-angular dark reflector with a bright, slightly uneven shadow situated in a depression. Visible as a small sub-angular mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70249	Dark reflector	495272	6432876	A2_I	1.1	0.5	0.2	-	A distinct slightly elongate dark reflector with a bright shadow. Visible as a small sub-angular mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70250	Dark reflector	495276	6432864	A2_I	1.1	0.2	0.4	-	A distinct irregular dark reflector with a long bright shadow, possibly multiple objects close together and is situated within mega ripples. No anomalous features were identified in the MBES or Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70251	Dark reflector	495293	6432838	A2_I	1.3	1.1	0.3	-	A very distinct angular dark reflector with a large, bright, uneven shadow. Situated in a slight depression. Visible as a small, sub-angular mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70252	Dark reflector	495326	6432903	A2_I	1.7	1.5	0.4	-	A distinct elongate dark reflector with a bright shadow situated in a depression. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70253	Dark reflector	495377	6432986	A2_I	1.7	0.3	0.2	-	A thin and elongate dark reflector with a slight shadow, isolated on a featureless area of seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70254	Dark reflector	496026	6434454	A2_I	1.5	0.1	0.1	-	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.
70255	Magnetic	496114	6437803	A2_I	-	-	-	15	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris that is either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70256	Magnetic	496165	6437965	A2_l	-	-	-	11	A long, thin and slightly curvilinear dark reflector with no shadow. Possibly a seabed scar however this is unclear. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70266	Debris	494997	6434290	A2_h	2.1	0.9	0.2	-	An indistinct thin and slightly curved dark reflector, the object possibly has a very small rounded object at its north-east end with a shadow. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or non-ferrous debris.
70271	Dark reflector	502600	6438871	A2_l	1.5	1.1	0.1	-	Small and distinct ovoid dark reflector with bright centre and short shadow, anomalous to the surrounding seabed. Situated 10 m ESE of similar anomaly 70271 and may be related. No anomalous features were identified in the MBES or Mag. datasets at this location. May be a coring location however this is unclear. Interpreted as a possible natural feature or possible non-ferrous debris.
70272	Dark reflector	502610	6438868	A2_l	1.4	1	0.1	-	A small, broad positive monopole with peak and trough over two profile lines in the UXO Mag. data. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70279	Magnetic	498955	6438384	A2_I	-	-	-	18	A distinct elongate dark reflector with a bright shadow situated in an area of otherwise featureless seabed. Visible as a small depression in the MBES data. Associated with a medium, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. Interpreted as possible ferrous debris.
70284	Dark reflector	500644	6439993	A2_I	1.6	0.9	0.3	-	A distinct sub-angular dark reflector with a bright tapered shadow. Visible in the MBES dataset as a small mound with a pointed peak situated in a slight depression. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or may be possible non-ferrous debris.
70286	Magnetic	501562	6439945	A2_I	-	-	-	11	A small symmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70287	Magnetic	501807	6439989	A2_I	-	-	-	9	A small positive monopole with peak and trough over two profile lines identified in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70288	Magnetic	502314	6439951	A2_I	-	-	-	11	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. dataset as a small broad positive monopole with peak and trough on one profile line measuring 9 nT. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70294	Magnetic	500923	6443264	A2_I	-	-	-	12	A small, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70295	Magnetic	503576	6441160	A2_I	-	-	-	36	A small asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70297	Magnetic	501059	6444373	A2_I	-	-	-	9	A distinct irregular dark reflector with a bright, asymmetric shadow. Possibly has an indistinct linear section at the northern end. The object is situated in an area of depressions and possible natural features, but is distinct. No anomalous features were identified in the MBES or Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70298	Dark reflector	501269	6444354	A2_I	2.4	0.8	0.3	-	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Possibly associated with Mag. anomaly 70300 situated 18 m ESE. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70301	Dark reflector	502377	6444321	A2_I	1.4	1.3	0.3	-	A small, sharp asymmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70303	Dark reflector	502601	6444435	A2_I	0.9	0.6	0.2	-	Small sub-angular dark reflector with a broad shadow. The object is distinct from the surrounding seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70304	Dark reflector	502831	6444701	A2_I	1	0.9	0.2	-	A small slightly elongate and angular dark reflector with short, slightly flared shadow. Distinct and isolated on the seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70305	Dark reflector	503185	6444927	A2_I	1	0.5	0.1	-	Small angular dark reflector with a short shadow situated in a depression, distinct to the surrounding seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70306	Dark reflector	503365	6445079	A2_I	0.8	0.7	0.1	-	A distinct, small angular dark reflector with a long tapered shadow. The object is distinct from the surrounding the seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Situated approximately 8.0 m south-west of mound 70308 and may be associated. Interpreted as a possible natural feature or possible non-ferrous debris.
70307	Dark reflector	503420	6445173	A2_I	1.2	0.2	0.4	-	A distinct, elongate oval mound orientated north-east to south-west with gently sloping sides and an uneven peak. The feature appears anomalous to the surrounding seabed. No anomalous features were identified in the SSS or Mag. datasets at this location. Situated approximately 8.0 m north-east of dark reflector 70307 and may be associated. Interpreted as a possible natural feature or possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70308	Mound	503428	6445188	A2_l	20.1	7	0.4	-	Three small sub-rounded dark reflectors with long tapered shadows aligned approximately north to south on the seabed. The largest object measures 1.0 x 0.3 m. They are evenly spaced and are distinct from the surrounding featureless seabed. Faintly visible in the MBES as small, aligned angular mounds. No anomalous features were identified in the Mag. data at this location. Interpreted as a possible non-ferrous debris field and may be fishing gear, however this cannot be confirmed without further investigation.
70309	Debris field	503503	6445154	A2_h	36.1	0.6	0.6	-	An indistinct, elongate dark reflector with a bright, irregular shadow. Visible as a small mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70310	Dark reflector	503666	6445342	A2_l	1.6	1.2	0.3	-	A distinct and angular dark reflector with long tapered shadow, distinct from the surrounding featureless seabed. Visible as small angular mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70311	Dark reflector	504357	6444002	A2_l	1.4	1	0.3	-	A small and elongate dark reflector with broad tapered shadow. No anomalous features were identified in the MBES or Mag. data at this location. Interpreted as a possible natural feature or possible non-ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70312	Dark reflector	504355	6443909	A2_I	1.6	0.8	0.2	-	A distinct and elongate dark reflector with a bright, slightly uneven shadow, isolated on a featureless seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70313	Dark reflector	504466	6441834	A2_I	1.5	0.3	0.2	-	A distinct, angular dark reflector with a bright uneven shadow. The object is isolated on the seabed. Visible as a small angular mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70314	Dark reflector	504273	6441520	A2_I	2.2	1.9	0.2	-	A distinct thin and elongate dark reflector with a bright shadow, isolated on the seabed. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70315	Dark reflector	504024	6440942	A2_I	1.5	0.2	0.1	-	A distinct, elongate dark reflector with a bright tapered shadow, situated 10 m south-west of similar feature 70317 and may be associated. Also identified in the MBES dataset as small angular mound with a dipped peak situated in a small depression. Associated with a small, broad asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Interpreted as a possible natural feature with some ferrous content or possible ferrous debris.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70318	Dark reflector	504247	6441318	A2_l	1.5	1	0.3	-	Identified as an indistinct, compact group of small dark reflectors with associated shadows, one linear object measures 1.7 x 0.2 m. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible non-ferrous debris field.
70319	Debris field	504427	6441551	A2_h	2.6	1.5	0.1	-	A distinct elongate dark reflector with a large bright irregular shadow. The object is situated in a slight depression. Visible as a thin, elongate mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70320	Dark reflector	504611	6441746	A2_l	1.7	0.5	0.5	-	A distinct sub-rounded dark reflector with a bright tapered shadow. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70321	Dark reflector	504665	6441871	A2_l	1	0.4	0.3	-	A small, broad asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70323	Seabed disturbance	505649	6442761	A2_l	14.1	3.5	0	-	A small, broad symmetric dipole with peak and trough on one profile line in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70324	Magnetic	505819	6442841	A2_I	-	-	-	9	A small oval area of seabed disturbance comprising two indistinct sub-rounded dark reflectors with small shadows within depressions. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or a possible partially buried non-ferrous debris field.
70325	Seabed disturbance	506546	6443170	A2_I	1.9	1.6	0.2	-	A small, broad asymmetric dipole with peak and trough on one profile line. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70326	Magnetic	506641	6444068	A2_I	-	-	-	7	A small asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70327	Magnetic	506350	6444568	A2_I	-	-	-	16	A small symmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70329	Dark reflector	505300	6445478	A2_I	2.2	1.1	0.4	-	A small symmetric dipole with peak and trough on one profile line. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.



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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70330	Magnetic	505331	6445396	A2_I	-	-	-	19	A large, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.
70332	Magnetic	505820	6447457	A2_I	-	-	-	14	A distinct small and angular dark reflector with long irregular shadow, possibly with a smaller faint object within this shadow. The feature is isolated on the seabed. Visible as a small oval mound in the MBES data. No anomalous features were identified in the Mag. dataset at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70333	Dark reflector	505995	6447757	A2_I	1.3	0.8	0.4	-	An indistinct 'T' shaped dark reflector with a bright pointed shadow. No anomalous features were identified in the MBES or Mag. datasets at this location. Interpreted as a possible natural feature or possible non-ferrous debris.
70334	Dark reflector	505349	6442283	A2_I	2	0.8	0.2	-	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. Also identified in the 2021 Mag. dataset as a small positive monopole with a peak and trough on one line measuring 25 nT. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

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Seabed Features of Archaeological Interest									
ID	Classification	Easting	Northing	Archaeological Discrimination	Length (m)	Width (m)	Height (m)	Mag (nT)	Description
70343	Magnetic	505160	6437660	A2_I	-	-	-	14	A medium, sharp asymmetric dipole with peak and trough over two profile lines in the UXO Mag. data. Also visible on other profile lines. No anomalous features were identified in the SSS or MBES datasets at this location. Interpreted as possible ferrous debris either buried or with no surface expression.

## Appendix D – ORPAD Preliminary Record Form

Discoveries forms are also available as downloads from the ORPAD webpages at:

- <https://www.wessexarch.co.uk/our-work/offshore-renewables-protocol-archaeological-discoveries>


# Protocol for Archaeological Discoveries: Offshore Renewables Projects

Preliminary Record Form Page 1 of 2

## Preliminary Record Form: Discoveries on the Seabed/ on board / in the inter-tidal zone / on land

Company Name:
Vessel/Team Name:
Site/sea area Name:
Date:
Time of compiling information:
Name of compiler (Site Champion):
Name of finder (if different to above):

Time at which discovery was encountered:
Vessel position at time when anomaly was encountered:
a) Latitude
b) Longitude
c) Datum (if different from WGS84)
Original position of the anomaly on the seabed, if known:
Notes on likely accuracy of original position stated above:
a) How accurate is the position?
b) Is the position the original position or has the material been moved by operations?
c) Details of circumstances and activity that lead to the discovery

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# Protocol for Archaeological Discoveries: Offshore Renewables Projects

Preliminary Record Form Page 2 of 2

## Preliminary Record Form: Discoveries on the Seabed/ on board / in the inter-tidal zone / on land

Description of the find/anomaly:
Apparent size/extent of the anomaly:
Details of any find(s) recovered:
Details of photographs, drawings or other records made of the find(s) (e.g. location figure):
Details of treatment or storage of find(s):
Date and time Nominated Contact informed:
General notes:
If discovered on the seabed:
a) Derived from: e.g. Obstacle Avoidance Sonar, Cable Tensiometer?
b) Apparent size/extent of anomaly (length, width, height above seabed)
c) Extent of deviation/route development
Signed: _____ Date: _____

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