Bowdun Offshore Wind Farm, Offshore EIA Report

Volume 4, Appendix 33: Written Scheme of Investigation and Protocol for Archaeological Discoveries

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Glossary

Defined Term	Definition
Array Area	The Array Area is the area in which the Offshore Generation Assets will be located.
Bowdun Offshore Wind Farm Limited (BOWFL)	A Special-Purpose Vehicle (SPV) (legal entity) for the purpose of developing the Project. BOWFL are the Developer for the Proposed Development.
Developer (the)	Bowdun Offshore Wind Farm Limited (BOWFL).
Embedded Mitigation	Measures that are adopted as part of the Proposed Development and therefore assessed within the EIA. The proposed approach for the EIA for the Proposed Development is that Embedded Mitigation includes both primary mitigation and tertiary mitigation. These are defined by the ISEP as follows: Primary: Modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project, and do not require additional action to be taken. Tertiary: Actions that would occur with or without input from the EIA feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.
Environmental Impact Assessment (EIA)	Process for the assessment of likely significant environmental effects of a project on the physical, biological and human environment during construction, Operation and Maintenance (O&M) and decommissioning.
Export Cable Corridor	The area seaward of Mean High Water Springs (MHWS) which connects the Array Area with the Landfall within which the Offshore Export Cables will be installed.
Impact	A change caused by an action that occurs during a project's lifetime.
Inter-Array Cables (IAC)	Cables which link the Wind Turbines to each other and with the OSPs.
Interconnector Cables	Cables which will connect individual OSPs to each other to provide redundancy against cable failure elsewhere.
Intertidal Area	The area between MHWS and Mean Low Water Springs (MLWS).
Landfall	The area in which the Offshore Export Cables make landfall and is also the transitional area between the Offshore Transmission Assets and the Onshore Transmission Assets. Located in the Intertidal Area at Benholm.
Marine Directorate (MD)	The Marine Directorate of the Scottish Government, formerly known as Marine Scotland. The planning and licensing authority for Scotland's seas and custodian of Scotland's National Marine Plan (NMP). The Marine Directorate - Licensing and Operations Team (MD-LOT) are specifically responsible for managing Section 36 Consent and Marine Licence Applications seaward of MHWS.

Defined Term	Definition
Marine Licence	A Marine Licence permits the undertaking of different activities in the marine environment, including construction, the deposition or removal of substances or objects, and dredging. The Marine (Scotland) Act 2010 requires Marine Licences to be obtained for licensable activities taking place within Scottish Territorial Seas (MHWS to 12 nm). The Marine and Coastal Access Act (MCAA) 2009 requires a Marine Licence to be obtained for licensable marine activities within the Scottish offshore region (12 nm – 200 nm).
Mean High Water Springs (MHWS)	The average tidal height throughout the year of two successive high waters during those periods of 24 hours when the range of the tide is at its greatest.
Mean Low Water Springs (MLWS)	The average tidal height throughout the year of two successive low waters during those periods of 24 hours when the range of the tide is at its greatest.
Mitigation	Measures to avoid, prevent, reduce or control effects on the environment. See also definitions for Embedded Mitigation and Additional Mitigation.
North-East Scotland Regional Research Framework (NESRRF)	A regional research framework specifically for the North East region of Scotland.
Offshore Environmental Impact Assessment (EIA) Report (hereafter, 'Offshore EIA Report')	Document prepared to report the findings of the EIA for the Proposed Development and produced in accordance with the EIA Regulations. The Offshore EIA Report is submitted to support the Offshore Application for the Proposed Development, and to comply with EIA Regulations.
Offshore Export Cables	Subsea cables used to transmit electricity generated offshore by the Wind Turbines from the OSPs to shore. The Transition Joint Bay is the location where the Offshore Export Cables terminate, and the onshore cabling begins.
Offshore Generation Assets	The infrastructure of the Proposed Development required to generate electricity comprising of the Wind Turbines, Wind Turbine foundations and associated infrastructure (e.g. IACs).
Offshore Infrastructure	All of the Offshore Infrastructure associated with the Proposed Development that is located seaward of MHWS, comprising the Offshore Generation Assets and the Offshore Transmission Assets.
Offshore Substation Platform(s) (OSPs)	OSPs comprise the support structure, topside and electrical components used for collecting and/or converting electricity generated by the Wind Turbines for transmission by the Offshore Export Cables.
Offshore Transmission Assets	The infrastructure of the Proposed Development required to transmit the generated electricity comprising the OSPs, Offshore Export Cables and associated infrastructure up to MHWS.
Operation and Maintenance (O&M)	The phase of the Proposed Development following completion of construction. This phase of development includes routine inspections, repairs and replacement of infrastructure and equipment (including Interconnector Cables and IACs), Scour Protection replenishment or replacement, major component replacement, painting and/or other coating works, removal of marine growth, and replacement of access ladders.
Palaeolandscape	Topographic features of a past geological age.

Defined Term	Definition
Plan Option Area (POA)	A location identified in the Sectoral Marine Plan (SMP) as a preferred area for commercial scale offshore wind development.
Project (the)	An overarching term for the Bowdun Offshore Wind Farm (Bowdun OWF) comprising the offshore and onshore infrastructure required to generate and transmit electricity from the Array Area to the onshore Grid Connection Point. The Project includes the Offshore Generation Assets, the Offshore Transmission Assets and the Onshore Infrastructure.
Quaternary	The period of geologic time from about 1.8 million years ago to the present, including the part of the Pleistocene (2.58 million to 11,700 BP) and Holocene (11,700 BP to present) Epochs.
Scottish Archaeological Research Framework (ScARF)	A comprehensive resource designed to support and enhance archaeological research in Scotland. ScARF provides an overview of the current state of research in Scottish archaeology and outlines key research questions and priorities for future study.
Scottish Marine Area	The area of sea within the seaward limits of the territorial sea of the United Kingdom adjacent to Scotland as defined by the Marine (Scotland) Act 2010.
Scottish Ministers (the)	The decision makers with regard to Marine Licence(s) and Section 36 Consent applications in Scottish Offshore Waters and Scottish Marine Area.
Scottish Offshore Waters	The area of sea beyond 12 nm but within the Scottish Exclusive Economic Zone (EEZ) up to 200 nm from the coast.
Scottish Territorial Waters	The territorial waters of Scotland that extend out from MHWS to 12 nm.
Scour Protection	Protective materials installed to avoid sediment being eroded away from the base of the foundations and/or buried subsea cable due to the flow of water.
Sectoral Marine Plan (SMP)	A plan developed by the Scottish Government which provides the strategically planned spatial footprint for offshore wind development in Scotland.
Site Boundary	The boundary within which all elements of the Proposed Development will be located. The Site Boundary comprises the Array Area and Export Cable Corridor which ends at MHWS.
Study Area	For each environmental topic, the baseline environment will be characterised, and the potential environmental impacts will be described within a topic-specific study area. Specific study areas are defined for each topic and are based on the maximum spatial extent across which potential impacts of the Project may be experienced by the relevant receptors (i.e. Zone of Influence).
Thistle Wind Partners (TWP)	Company established for the development of the Project.

Acronyms

Acronym	Definition
2D	Two Dimensional
3D	Three Dimensional
AEZ	Archaeological Exclusion Zone
BOWFL	Bowdun Offshore Wind Farm Limited
BP	Before Present
C-14	Radiocarbon
CIfA	Chartered Institute for Archaeologists
CMS	Construction Method Statement
CoCP	Code of Construction Practice
COWRIE	Collaborative Offshore Wind Research into the Environment
DSLP	Development Specification and Layout Plan
EIA	Environmental Impact Assessment
HES	Historic Environment Scotland
HMPA	Historic Marine Protected Area
HSE	Health and Safety Executive
IAC	Inter-Array Cable
JCCC	Joint Casualty and Compassionate Centre
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate - Licensing Operations Team
MHWS	Mean High Water Springs
MoD	Ministry of Defence
NESRRF	North East Scotland Regional Research Framework
NLB	Northern Lighthouse Board
OASIS	Online Access to the Index of Archaeological Investigations
OSL	Optically Stimulated Luminescence
OSP	Offshore Substation Platforms
OWF	Offshore Wind Farm
O&M	Operation and Maintenance
PAD	Protocol for Archaeological Discoveries
pARCH	Potential Archaeology
pUXO	potential Unexploded Ordnance
RA	Retained Archaeologist
ROV	Remotely Operated Vehicle
RoW	Receiver of Wreck
SBP	Sub-bottom Profiler
ScARF	Scottish Archaeology Research Framework
TBC	To Be Confirmed

Acronym	Definition
TEZ	Temporary Exclusion Zones
UK	United Kingdom
UKHO	United Kingdom Hydrographic Office
UXO	Unexploded Ordnance
WSI	Written Scheme of Investigation

Table of Units

Units	Definition
BC	Years before Christ
BP	Years before present
cm	Centimetre
kg	Kilogram
km	Kilometre
Km^2	Kilometre squared
m	Metre
nm	Nautical mile

1 Written Scheme of Investigation and Protocol for Archaeological Discoveries

1.1 Introduction

Background

1.1.1 Bowdun Offshore Wind Farm Limited (BOWFL) (the Developer) is proposing to develop the Offshore Infrastructure of the Bowdun Offshore Wind Farm (OWF) (hereafter referred to as the 'Proposed Development'). The Proposed Development covers the Option Lease Area that is located in the E3 Plan Option Area, detailed in the Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020), and the Export Cable Corridor. The Array Area is located 38 km offshore at its closest point, is an area of 187 km^2 and will comprise the Wind Turbines (fixed foundation), Inter-Array Cables (IACs), Offshore Substation Platforms (OSPs), Interconnector Cables and any necessary scour/cable protection. The Export Cable Corridor will include a maximum of three High Voltage Alternating Current Offshore Export Cables, each with a length of up to 70 km and will make Landfall at Benholm, Aberdeenshire.

1.1.2 This Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD) has been prepared for the Proposed Development and details the principles to be implemented to ensure the protection of marine archaeological receptors through all phases of the Proposed Development (construction, Operation and Maintenance (O&M), and decommissioning). The measures within this WSI and PAD apply to the range of development options under consideration for the Proposed Development to allow post-consent flexibility in the final design.

1.1.3 Post-consent this WSI and PAD will be finalised and submitted to the Marine Directorate - Licensing Operations Team (MD-LOT) as the licensing authority for approval prior to the commencement of licensable activities. The post-consent WSI and PAD will come into force when it has discharged the relevant Marine Licence condition(s). However, any activities undertaken prior to that point should strive to be undertaken in line with this WSI and PAD.

1.1.4 The post-consent WSI and PAD will be monitored and updated throughout the lifetime of the Proposed Development to ensure that mitigation measures are appropriate for all activities associated with the Proposed Development.

Project Description

1.1.5 The Proposed Development includes the following Offshore Infrastructure components:

- Wind Turbines;
- Wind Turbine foundations (fixed bottom);
- OSPs;
- OSP foundations (fixed bottom);
- IACs, Interconnector Cables, and Offshore Export Cables; and
- Scour Protection, cable protection and utility crossings.

1.1.6 This WSI and PAD applies to activities seawards of Mean High Water Springs (MHWS), and only to licensable activities associated with the Proposed Development.

1.1.7 A Marine Archaeology Study Area was used for assessment purposes (Volume 2, Chapter 19: Marine Archaeology; Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report) (Figure 1.1).

1.1.8 All coordinates in this WSI and PAD are given as geographic Latitude and Longitude, referred to as WSG84.

Aims and Objectives

1.1.9 The aim of this WSI and PAD is to present the Embedded Mitigation measures to be undertaken by the Developer prior to and throughout the construction, O&M, and decommissioning phases of the Proposed Development. This WSI and PAD is informed by pre-application consultation with Historic Environment Scotland (HES) (reported in Volume 2, Chapter 19: Marine Archaeology) and the baseline review of known and potential archaeology within the Marine Archaeology Study Area outlined in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report.

1.1.10 The objectives of the WSI and PAD are as follows:

- To inform the development of a post-consent WSI and PAD.
- To fulfil the requirements of MD-LOT in respect of archaeological monitoring and mitigation of works associated with the Proposed Development.
- To establish the exact position and extent of any Archaeological Exclusion Zones (AEZs) and Temporary Exclusion Zones (TEZs).
- To ensure consultation with archaeologists on all elements of the Proposed Development design that have the potential to impact archaeological sites and materials.
- To ensure that any further geophysical and geotechnical investigations associated with the Proposed Development are subject to archaeological input, review, recording and sampling where required.

- To ensure archaeological involvement in any proposed Remotely Operated Vehicles (ROVs) obstruction or Unexploded Ordnance (UXO) surveys conducted within the Proposed Development if appropriate.
- To propose measures for the mitigation of impacts to archaeological remains encountered during further surveys and investigations, or during activities associated with the construction, O&M and decommissioning of the Proposed Development.
- To establish the reporting and archiving requirements for the archaeological works undertaken during all phases of the Proposed Development and post construction monitoring.

Embedded Mitigation

1.1.11 The Embedded and Additional Mitigation measures stated in Volume 2, Chapter 19: Marine Archaeology are set out in Table 1.1 and the monitoring in Table 1.2 along with where each commitment is addressed in this document, or other documents as stated in Volume 3, Technical Appendix 4.6: Schedule of Mitigation and Commitments.

Table 1.1: Embedded and Additional Mitigation Measures for the Proposed Development

ID*	Embedded Measures Adopted as Part of the Proposed Development	Justification/Where Addressed in This Document
7	Development of and adherence to, a Construction Method Statement (CMS) along with a Code of Construction Practice (CoCP).	Construction procedures will follow the CMS and CoCP, with measures to control specific health and safety risks identified. The CMS and CoCP will also decrease the risk of collision and/or allision during the construction phase and vessel sinking.
8	All relevant Health and Safety Executive (HSE) procedures will be followed.	As with the CMS, construction procedures will consider all relevant health and safety risks and follow HSE legislation and guidance to mitigate these potential risks.
24	Development of, and adherence to, a Development Specification and Layout Plan (DSLP). The development of the DSLP includes consultation with the relevant authorities for approval, including the Maritime and Coastguard Agency (MCA) and Northern Lighthouse Board (NLB).	Avoidance of known marine archaeology receptors is described in Section 1.5. This will influence the development of the DSLP.
29	The identification and implementation of AEZs around receptors identified as having a known archaeological potential.	This is described in Section 1.5.
30	The development and implementation of a WSI and PAD.	This document, to be updated post-consent.
31	Archaeological input into relevant site pre-construction geophysical, geotechnical and ROV surveys with appropriate monitoring or analysis, if necessary.	This is described in Section 1.4.
34	Drafting and implementation of a decommissioning programme, prepared in accordance with the requirements of the Energy Act 2004, which will set out the extent of infrastructure to be removed as well as the methods and processes which will be used.	The aim of this plan is to adhere to the existing legislation and guidance (at the time of writing) during the decommissioning phase. This programme will be developed to reduce the amount of long term disturbance to the environment as far as reasonably practicable.
38	Identification and implementation of TEZs around encounters of previously unknown archaeological sites.	This is described in Section 1.5.
39	Design and micrositing of Offshore Infrastructure to avoid known archaeological receptors, including those identified in pre-construction Surveys.	This is described in Section 1.5.

*see Volume 3, Technical Appendix 4.6: Schedule of Mitigation and Commitments

Table 1.2: Monitoring Commitments for the Proposed Development

ID*	Monitoring Adopted as Part of the Proposed Development	Justification/Where Addressed
1	Monitoring of AEZs will be carried out to confirm that no impact has occurred to the archaeological receptors within the proposed AEZs (The Crown Estate, 2021). This will be undertaken at a minimum: • Post construction; and • Post-decommissioning.	This is described in Section 1.4.

*see Volume 3, Technical Appendix 4.6: Schedule of Mitigation and Commitments

Research Frameworks

1.1.12 The best practice guidance for Archaeological Written Schemes of Investigation for OWF Projects (The Crown Estate, 2021) indicates that a WSI should "*set out the importance of research frameworks in setting objectives that are delivered through realisation of the work*". Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report, and this WSI and PAD, were developed in line with the research objectives identified by research frameworks such as the Scottish Archaeological Research Framework (ScARF) (ScARF, 2012) and the North-East Scotland Regional Research Framework (NESRRF) (Aberdeenshire Council, 2013). Other regional or period specific frameworks may also be deemed relevant, depending on specific packages of work undertaken (Table 1.3).

1.1.13 The identified objectives derived from relevant research frameworks will also be used to guide the advice from the Retained Archaeologist (RA) to the Developer. Connections between the relevant research frameworks, site-specific investigation aims and objectives, and specific work packages will be identified within any method statements supplied before the onset of any archaeological work.

1.1.14 Archaeological work and reporting under the WSI will tie outcomes into the relevant research frameworks to ensure the knowledge dissemination to those areas where there is a demonstrable need for further understanding.

Table 1.3: National and Regional Research Frameworks Used to Inform this Assessment

Research Framework	Relevant Objectives and Questions
ScARF	To match multi-disciplinary techniques of interpretation and synthesis with recent technological advances, particularly in the field of non-intrusive survey techniques. The application of such techniques to shipwrecks and extant vessels offers a remarkable opportunity to provide information on the economy of maritime communities.
	To broaden the basis of data retrieval to include every available and relevant source, technique and academic discipline. Due to the pervasive nature of the marine and maritime historic landscape, a holistic approach must be more fully adopted that incorporates evidence from a variety of sources, including, but not limited to: commercial and research archaeology; offshore development; local

Research Framework	Relevant Objectives and Questions
	and national societies; techniques including photography and geophysics; and disciplines including history; ethnology; cultural studies; folklore; and architecture.
NESRRF	To enhance the Historic Environment Record data for North-East Scotland for development control and research purposes.
	To explore the development of North-East Scotland's coastline over time and consider the impact of sea level change on contemporary populations.

1.2 Baseline

Overview

1.2.1 The baseline in this WSI is summarised from Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report.

1.2.2 The Marine Archaeology Study Area is defined as the Site Boundary with an additional 2 km buffer (Figure 1.1). The following archaeological assets were identified within the Marine Archaeology Study Area:

- known wrecks;
- recorded vessel losses;
- geophysical anomalies of high, medium and low potential;
- records of aviation losses; and
- deposits with Palaeolandscape potential.

1.2.3 The baseline was characterised through a desk-based assessment and archaeological analysis of a site-specific geophysical survey. The survey was carried out by G-Tec between March 2023 and September 2024, and consisted of Sidescan Sonar, Multibeam Bathymetry, Magnetometer, Parametric Sub-Bottom Profiler (SBP), and Sparker (Two Dimensional (2D)) Ultra High Resolution Seismic (G-Tec, 2024a; G-Tec, 2024b). The site-specific survey extent covers the majority of the Site Boundary, however it does not cover the whole extent, nor does it extend into the Marine Archaeology Study Area as shown in Figure 1.1.

Designated Sites

1.2.4 There are no designated heritage sites within the Marine Archaeology Study Area.

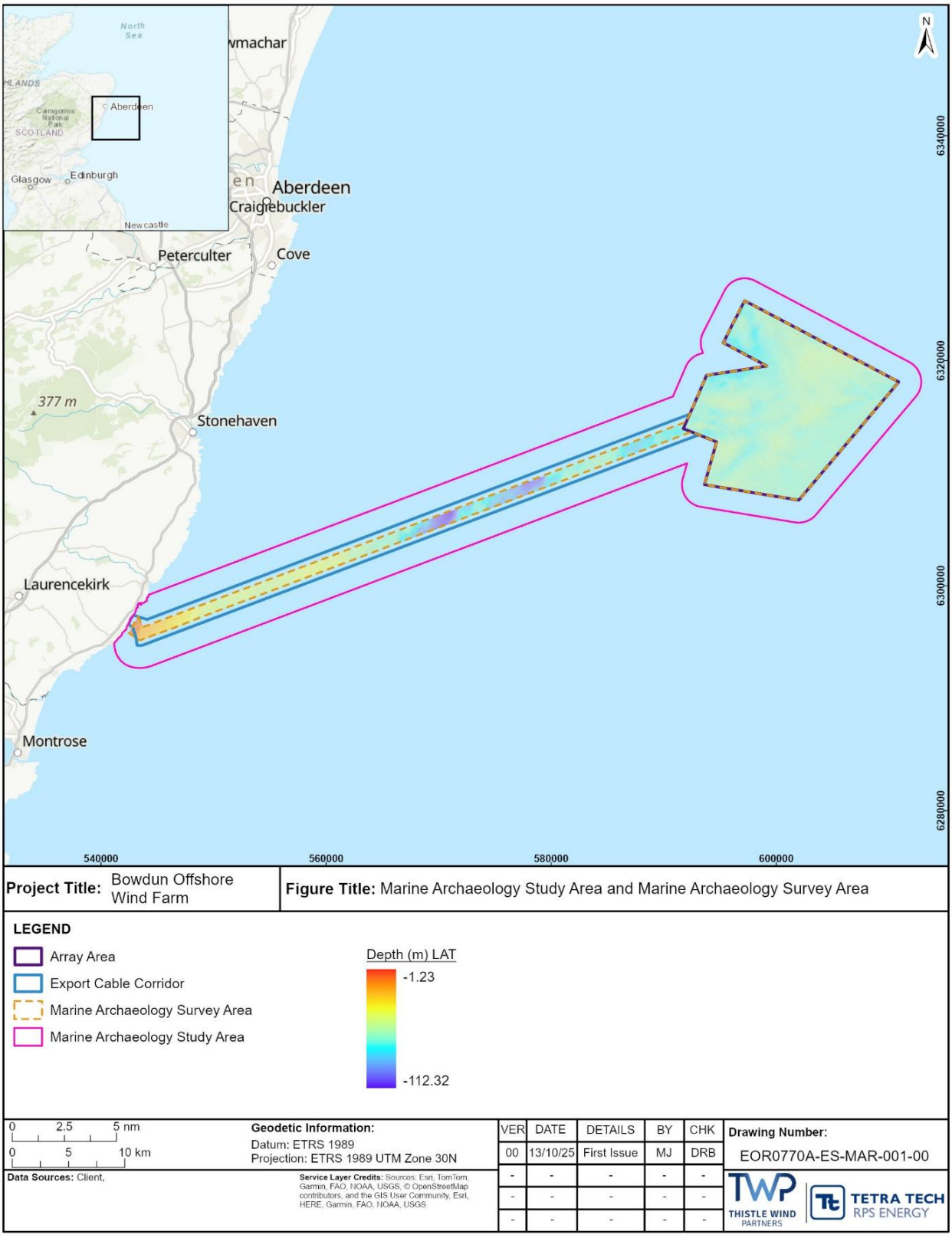

Figure 1.1: Marine Archaeology Study Area and Survey Area

Submerged Prehistoric Archaeology

1.2.5 The potential for submerged prehistoric archaeology within the Marine Archaeology Study Area is considered to be generally low except for the nearshore area, due primarily to relatively high sea levels and the likelihood of ice coverage for much of prehistory (Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report).

1.2.6 Following the Last Glacial Maximum, when ice sheets were at their greatest extent, the Marine Archaeology Study Area is thought have been quickly submerged, with a period of high relative sea level seen at approximately 27,000 Before Present (BP) to 24,000 BP. It then remained submerged until approximately 13,000 BP (Volume 3, Appendix 19.1: Marine Archaeology Technical Report). Parts of the Export Cable Corridor were then likely to have been exposed from c. 13,000 BP to approximately 8,000/7,000 BP (i.e. from the Late Upper Palaeolithic to the Late Mesolithic). During this time sea levels may have been as low as -35 m below present day levels, rising to present day levels (and above, after c. 7,000 BP). This suggests exposure of the Export Cable Corridor out to approximately 4 km from the coast (Volume 3, Appendix 19.1: Marine Archaeology Technical Report). During this period humans may have inhabited the landscape. The entire Export Cable Corridor and Array Area were submerged thereafter. The landscape that was subaerial (i.e. exposed to air) is therefore now submerged, and is visible in the geophysical survey data. It has been designated as Unit 20A by the site-specific survey contractor (G-Tec, 2024b). This suggests there could be potential for archaeological and palaeoenvironmental remains from the Late Upper Palaeolithic to the Late Mesolithic surviving in the Marine Archaeology Study Area, concentrated within Unit 20A in the nearshore area. Erosion may have affected the upper parts of this deposit, though some potential for uneroded palaeoenvironmental remains still exists (Stoker *et al.*, 2008). Potential for *in situ* remains in other units is limited, though remains redeposited from other contexts could occur.

Maritime and Aviation Archaeology

1.2.7 A total of 29 records of known marine archaeological assets have been identified in the Marine Archaeology Study Area (Volume 3, Appendix 19.1: Marine Archaeology Technical Report). Of these, 13 are named wrecks or find spots that can be tied to a known wreck. There are a further 16 unknown wrecks recorded within the data and no known obstructions.

1.2.8 Five of the known wrecks are listed as dead by the United Kingdom Hydrographic Office (UKHO), meaning they have not been observed in repeated surveys and are considered by the UKHO to no longer be present at the listed location (UKHO 3057, UKHO 3060, UKHO 3061, UKHO 3064 and UKHO 3172). However, this is not a definitive indication that there is no material present at these locations, as there could be buried remains, or remains smaller than the ensonification limit of the site-specific surveys.

1.2.9 There is one recorded aviation loss and one further record of a possible aircraft located within the Marine Archaeology Study Area. Unidentified aviation assets

may be present in the Marine Archaeology Study Area despite there being no identified wreckage.

1.2.10 A total of 180 surface anomalies of archaeological interest have been identified within the Marine Archaeology Survey Area. Of these, four are interpreted as of high potential, all of which are located in the Export Cable Corridor. There are nine medium potential anomalies in total with three being located within the Array Area and six within the Export Cable Corridor. There are 167 low potential anomalies.

1.2.11 There is potential for currently unknown maritime archaeology receptors from all periods to be present in the Marine Archaeology Study Area (Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report).

1.2.12 There is potential for unknown aviation archaeology to be present in the Marine Archaeology Study Area. While the aviation archaeology record is potentially very large, the ephemeral nature of aircraft wrecks ensures that many sites remain unknown and unrecorded or difficult to locate to an accurate position. In addition, despite the potential extensive losses at sea, records are seldom tied to an accurate position. These difficulties complicate any assessment of the likely presence of aircraft wreckage on any particular area of seabed.

Intertidal Archaeology

1.2.13 There are two heritage records located within the Intertidal Area of the Export Cable Corridor. Both records are for harbours, one is Gourdon Harbour and the other is a natural harbour with evidence of artificial enhancement. More detail on intertidal records can be found in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report.

1.2.14 There is potential for unknown archaeological assets from all periods, from Prehistory to Modern, to be present in the Intertidal Area of the Marine Archaeology Study Area.

1.3 Responsibilities and Commitments

Introduction

1.3.1 This section sets out the responsibilities of the relevant parties and the lines of communication. This aims to ensure that the archaeological mitigation measures described within the WSI and PAD are fully implemented in a timely manner that does not interfere with the smooth running of the Proposed Development programme.

Contacts

1.3.2 The contact details of parties relevant to the implementation of the WSI and PAD are given in Table 1.4.

Table 1.4: Relevant Parties and Contact Details for Archaeological Works and Discoveries

Contact	Address	Email	Phone
Developer	To be Confirmed (TBC)	TBC	TBC
Site Champion	TBC	TBC	TBC
Nominated Contact	TBC	TBC	TBC
RA	TBC	TBC	TBC
MD-LOT	TBC	TBC	TBC
HES	TBC	TBC	TBC
Aberdeenshire Council	TBC	TBC	TBC
Receiver of Wreck (RoW)	The Maritime and Coastguard Agency Spring Place 105 Commercial Road Southampton SO15 1EG	row@mcga.gov.uk	0131 247 4120
Joint Casualty and Compassionate Centre (JCCC)	JCCC Innsworth House Imjin Barracks Gloucester GL3 1HW	dbs-jcccgroupmailbox @mod.gov.uk DBS-MODWarDetectives @mod.gov.uk	TBC

Responsibilities

The Developer

1.3.3 The responsibility for developing and implementing the WSI and PAD post-consent rests with the Developer and its appointed representatives. The Developer will ensure that its agents, contractors and supply chain partners are contractually bound to adhere to the terms of the post-consent WSI and PAD.

1.3.4 The Developer will retain the services of a suitably qualified and experienced archaeological contractor as the RA. Following the grant of consent, the Developer will provide the RA with the programme of construction and ensure that they are informed of updates to the programme in a timely manner. In particular, they will notify the RA in adequate time prior to any geophysical, geotechnical or ROV investigations in order to allow for archaeological input into the design of these activities if appropriate. The Developer will also ensure that the RA is provided with all relevant project datasets.

1.3.5 The Developer will commission archaeological method statements prior to archaeological works being undertaken and will submit any archaeological method statements or reports to MD-LOT.

1.3.6 The Developer will ensure communication with MD-LOT, will seek advice from them as appropriate, and will ensure that discoveries of archaeological importance are communicated to them immediately. If appropriate, the

Developer may delegate this task to the RA. The Developer will be kept informed of any contact between the RA and MD-LOT.

1.3.7 The Developer will be responsible for administering all legal obligations, particularly with regard to the Merchant Shipping Act 1995.

Retained Archaeologist

1.3.8 The RA will ensure the effective implementation of the WSI and PAD and other relevant commitments in relation to archaeology.

1.3.9 In relation to the implementation of the WSI, the RA will report to the Developer or their named representative. Interaction between the RA and the Developer's construction team will be administered by the Developer or their appointed representative.

1.3.10 The responsibilities of the RA will include:

- maintaining, reviewing and updating the WSI as required;
- advising the Developer on the activities that require archaeological involvement;
- ensuring the scope of work specifications for the Proposed Development meet archaeological requirements;
- liaising with the Developer regarding timescales for completion of site investigations to ensure sufficient time is available to complete all archaeological work in accordance with the WSI;
- advising the Developer on the design or micrositing of infrastructure based upon archaeological results from pre-application and pre-construction surveys;
- preparing and issuing method statements to the Developer, who will then seek approval from MD-LOT;
- undertaking packages of archaeological work or commissioning an archaeological contractor to complete archaeological works;
- monitoring the implementation of the PAD;
- providing advice in the event of a discovery of archaeological interest;
- preparing, or monitoring the preparation of, archaeological reports as appropriate and issuing any reports to the Developer, who will then seek approval from MD-LOT; and
- advising the Developer on final arrangements for the analysis, archive deposition, publication and popular dissemination of the results of the archaeological works.

Archaeological Contractors

1.3.11 Suitably qualified archaeological contractors may be contracted by the Developer or RA to provide services relating to specialised archaeological

activities (e.g. excavation, geotechnical analysis etc). The scope of any such services will be defined in an agreed method statement.

Developer's Contractors

1.3.12 All contractors, subcontractors, agents and supply chain partners engaged in the construction, O&M and decommissioning of the Proposed Development shall:

- familiarise themselves with the generic requirements of the WSI and PAD;
- assist and afford access to the RA or other archaeological contractors;
- inform the RA of any environmental constraint or matter relating to health, safety and welfare which they are aware that is relevant to the archaeologists' activities; and
- ensure any discoveries of archaeological interest are reported through the PAD.

Archaeological Curator

1.3.13 HES are the Archaeological Curator responsible for Scotland's designated historic environment which includes Historic Marine Protected Areas (HMPAs). They also give advice on undesignated underwater cultural heritage when they are specified in Marine Licence conditions and MD-LOT request their advice.

1.3.14 Contact with the Archaeological Curator will be through the Developer and MD-LOT unless otherwise agreed.

The Regulator

1.3.15 The regulatory body responsible for enforcing Marine Licence conditions in Scotland are MD-LOT.

1.3.16 To encourage timely decisions relating to archaeological mitigation and avoid disruptions to the Proposed Development programme, MD-LOT will be consulted as soon as practicable on discoveries made during the programme of works.

Other Relevant Stakeholders

Receiver of Wreck

1.3.17 The RoW is an official within the MCA. Material identified as a 'wreck' that has either been recovered within United Kingdom (UK) territorial waters (up to 12 nm offshore) or brought into UK territorial waters must be reported to the RoW under the Merchant Shipping Act 1995 (section 236).

Ministry of Defence

1.3.18 Under the Protection of Military Remains Act 1986 (section 35), any aircraft that crashed while in military service are automatically protected. Therefore, all discoveries of aircraft should be reported to the JCCC of the Ministry of Defence (MoD).

Site Champion and Nominated Contact

1.3.19 The Site Champion and Nominated Contact are key positions for the implementation of the PAD (Annex A).

1.3.20 The Site Champion is the person formally appointed by the Developer to be directly responsible for implementation of the PAD and producing reports arising from a particular activity location. The Site Champion could be a Vessel Master, a Construction Foreman or any other person in a position to control the immediate works.

1.3.21 The Developer's Nominated Contact is the formal point of contact for all matters relating to the PAD between the Developer, its subcontractors, the Site Champions, RA, MD-LOT, and the Archaeological Curator if appropriate. The Nominated Contact could be the Environmental Manager, Consents Manager, Project Manager or any other coordinator that the Developer feels is appropriate and effective in acting in this role. It is critical that all parties hold the Nominated Contact's full contact details and that any changes to the Nominated Contact's details are circulated as soon as possible.

1.4 Further Site Investigation

Introduction

1.4.1 Pre-construction geophysical and geotechnical surveys are anticipated for the Proposed Development. ROV surveys are also anticipated for the purposes of UXO identification and clearance. Archaeological advice will be obtained from the RA prior to any survey work to identify specific objectives and to inform the scope of the work in order to fill data gaps and avoid impacts on heritage assets. This must be completed in enough time to influence the scope of seabed preparation and construction activities.

1.4.2 A detailed method statement will be produced by the RA in advance of each work package (Section 1.7). The method statements will be produced by the RA in accordance with the clauses set out in the Archaeological Written Schemes of Investigation for OWF Projects (The Crown Estate, 2021).

Geophysical Surveys

Planning

1.4.3 Archaeological advice will be obtained from the RA, and if appropriate MD-LOT prior to any further geophysical survey related to the Proposed Development (e.g. engineering, UXO or environmental surveys), in particular pre-construction surveys in areas where direct impacts to the seabed are anticipated and any surveys that could be used to monitor the receptors subject to AEZs. This must be completed in enough time to influence the scope of work.

1.4.4 The archaeological input will take the form of advice from an archaeological geophysicist on the following points:

- available details of sites, features and/or anomalies identified in previous studies;

- archaeological potential of areas where no existing sites, features and/or anomalies are yet known;
- geophysical survey specification including design, geophysical sources and acquisition methodology; and
- requirements for processing and interpreting of resulting data (The Crown Estate, 2021).

1.4.5 Where a survey is carried out primarily to meet archaeological objectives, the survey should be designed wholly by an archaeological geophysicist. The collection of such data may also be supervised by an archaeological geophysicist who may be present on the survey vessel to ensure the quality of these data. Any such surveys should be carried out in coordination with other survey teams to avoid duplication of survey tasks.

1.4.6 The survey specifications will be in line with relevant guidance including the Marine Geophysics Data Acquisition, Processing and Interpretation Guidance Notes (2nd Edition) (Historic England, 2025).

Interpretation

1.4.7 Once the surveys have been processed to meet their primary objectives, the survey data, together with factual reports will be made available in digital formats to the RA or a suitably qualified archaeological contractor for archaeological analysis and interpretation. The data will be delivered in a format and to a timescale agreed in the method statement for the work package and in line with relevant guidance (Historic England, 2025).

1.4.8 Archaeological interpretation may include, *inter alia:*

- assessment of the data quality and its appropriateness for archaeological interpretation;
- examination of geophysical data within areas that will be subject to scheme impacts in order to identify as yet unknown anomalies of potential archaeology; and
- assessment of SBP data in order to assess the archaeological potential of the sub-surface sediments, if a requirement of the conditions or to enhance the mitigation measures associated with the geoarchaeological investigations (The Crown Estate, 2021).

1.4.9 The results of relevant surveys will be used to inform the final positioning of Offshore Infrastructure. Where a direct impact on a heritage asset is likely to occur, any geophysical anomalies with archaeological potential will be subject to further investigation to determine whether they represent archaeological material. In situations where such investigation suggests high archaeological significance, the anomalies in question will be subject to formal AEZs. The Developer will consult the RA in advance of the finalisation of the Offshore Infrastructure positions to ensure that known archaeological constraints identified by these surveys are avoided.

1.4.10 The archaeological results of any further geophysical survey will be compiled as a report by the RA or the archaeological contractor and will include likely requirements (if any) for further archaeological work. The report will be submitted to the Developer by the RA and then on to MD-LOT for approval. The scope of any further work will be agreed between the Developer and MD-LOT. The report will be delivered in a format and to a timescale agreed in the method statement for the work package (Section 1.7).

Geotechnical Surveys

1.4.11 The requirement for archaeological assessment of geotechnical data and other geoarchaeological assessment will be established in consultation with MD-LOT post-consent but prior to the commencement of construction activities. Agreement may need to be sought at multiple stages in the analysis based upon the results of the previous stage. Such work will feed into relevant research questions identified in the research frameworks (Table 1.3).

1.4.12 If agreed, geotechnical data will be subject to a staged programme of archaeological assessment and analysis by the RA or a suitably qualified geoarchaeological contractor, as set out in a specific method statement (Section 1.7). In addition to the archaeological advice obtained during the survey design, early planning and liaison with the RA to enable the archaeological recording of intact cores will be a key requirement of this archaeological work. In order to facilitate this advice, a geoarchaeologist should be present in any site investigation workshops.

1.4.13 The potential for deposits of archaeological interest exists in the Export Cable Corridor and primarily in Unit 20A. While this unit may hold some archaeological potential, this is highly dependent on past sea levels. Geoarchaeological work should be conducted to hone understanding of this potential. Cores should be used to ground truth the seismic data and test interpretations laid out in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report. These cores should sample areas of potential, in particular the nearshore area focused on Unit 20A, owing to its possible higher potential. The sampling strategy should be coordinated with the Developer's engineering teams.

1.4.14 The staged approach to geotechnical data assessment presented below illustrates the potential full realisation of an assessment programme. Each stage, however, is justified based on the satisfactory results and recommendations from the previous stage. The stages are based on the relevant guidance (Collaborative Offshore Wind Research into the Environment (COWRIE), 2007; The Crown Estate, 2021). Each stage of this phased assessment of the cores is subject to the results of the preceding stages. This is predicated on the retention of, and access to, cores to allow later analysis. Core retention and access requirements will be clearly communicated in the planning stage and will be set out in the specific method statement (Section 1.7). The report will be delivered in a format and to a timescale agreed in the method statement for the work package.

- **Stage 1:** Archaeological assessment of geotechnical logs. This will provide an overview of the sedimentary sequence within the area, including whether any organic material is present and whether there are homogenous sedimentary layers throughout the area.
- **Stage 2:** Geoarchaeological recording of geotechnical cores identified in Stage 1, if the Stage 1 assessment identifies horizons of archaeological potential. This will entail the detailed recording of the sediments within selected cores for a range of palaeoenvironmental indicators and dating material. The geotechnical cores need to be retained until the selection for archaeological recording has been made. Ideally one undisturbed half of each core is required for archaeological recording. The assessment programme will comprise the longitudinal splitting of each core section, the cleaning of half of each section and the detailed archaeological recording of each section, noting sediment colour, sediment type, sedimentary architecture and inclusions. A Stage 2 outline report will present the results of the archaeological recording and will indicate whether a Stage 3 laboratory assessment of the cores is warranted. The scope of further work will be agreed by the Developer and MD-LOT. If no further work is recommended a final (Stage 5) report will be produced by the RA.
- **Stage 3:** Geoarchaeological assessment of selected cores identified during the Stage 2 recording as warranting further laboratory assessment. Stage 3 will comprise the sampling and laboratory assessment to a level sufficient to enable an assessment of the value of the palaeoenvironmental material (pollen, diatoms, ostracods and foraminifera) surviving within the cores along with sampling for radiocarbon (C-14) and/or Optically Stimulated Luminescence (OSL) dating purposes. The assessment seeks to further establish the preservation, diversity and quantity of palaeoenvironmental material to further refine the interpretation of the sedimentary sequence. A Stage 3 outline report will present the results and will indicate whether further (Stage 4) analysis of samples is required. The scope of further work will be agreed by the Developer and MD-LOT. If no further work is recommended a final (Stage 5) report will be produced by the RA.
- **Stage 4:** Geoarchaeological analysis of the core material. This typically involves the full counts and analysis of pollen, diatom, ostracod and foraminifera samples and will be supported by C-14 dating of suitable sub-samples. This phase will result in an account of the successive environments within the coring area, a model of environmental change over time and an outline of the archaeological implications of the analysis. It will include the incorporation of the results into a model of the seabed sediments and palaeotopography based on the analysis of the seismic data. If a full seismic analysis has not been undertaken prior to this point it may be required.
- **Stage 5:** A final report will be prepared by the RA at the end of the last stage of works. This will include a synthesis of all aspects of the palaeotopography, geoarchaeology and prehistory of the area affected by the Proposed Development. This will be based on the results of the archaeological work

carried out in support of the Proposed Development Application in addition to the post-consent work. It may include relevant data generated from the Marine Archaeology Technical Report, geophysical surveys and particularly seismic data, in addition to the geotechnical data. The report will incorporate appropriate 2D and Three Dimensional (3D) illustration of the sediment sequences identified in different parts of the development zone. This will include a geoarchaeological deposit model but will also include plans and sections of areas where more detailed analysis has been possible. The RA will submit the report to the Developer, and the Developer will submit to MD-LOT for approval.

Non-Archaeological Remotely Operated Vehicle Surveys

1.4.15 Non-Archaeological ROV surveys will often be required for UXO identification and clearance purposes and in advance of boulder and obstruction clearance work, although they may also be required for other reasons. To maximise the benefit of any non-archaeological surveys, archaeological input from the RA will be sought at the planning stage, and if agreed with MD-LOT post-consent but prior to the commencement of surveys, resulting data should be subject to archaeological assessment. This must be completed in enough time to influence the scope of work and the methodology will be set out in a method statement (Section 1.7).

1.4.16 A list of UXO and/or boulder targets should be provided to the RA at the earliest opportunity.

1.4.17 Advice from the RA may include:

- the available details of sites and/or anomalies identified in Volume 3, Technical Appendix 19.1: Marine Archaeological Technical Report;
- the type and level of ROV positioning, voice recording and video/still recording to be utilised; and
- the type of sites and finds to be reported and recorded.

1.4.18 Where archaeological receptors are projected to be impacted by construction activities, but which are not due to be investigated as potential UXO (pUXO) or otherwise, MD-LOT may request them to be investigated as potential Archaeology (pARCH) targets during pUXO investigation surveys using the same or similar survey methodology. These will be desk-based records or geophysical anomalies identified in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report and will be suggested by the RA based primarily on potential. They will be agreed with MD-LOT through the method statement (Section 1.7).

1.4.19 Target investigation reports will be supplied to the RA for review regularly, and as soon as possible following survey. If requested, video, geophysical, sonar and other digital data will also be supplied to the RA. If wreck material is relocated during this process, as-found and as-left locations will be provided to the RoW. Data formats and reporting timelines will be agreed in the method statement for the work package.

1.4.20 If the target is in an AEZ, the Developer may consider provisions for a suitably qualified archaeologist to be present as an observer on the survey vessel in order to optimise archaeological results and therefore reduce the need for repeat surveys. The methodology will be agreed in advance with MD-LOT by a method statement (Section 1.7).

Archaeological Remotely Operated Vehicle Surveys

1.4.21 Archaeological ROV surveys can be employed to ground truth other forms of survey, or in order to characterise receptors or confirm significance assessments. Such surveys can also be employed in order to clarify the extent of a site to alter (enlarge, reduce, move, or remove) AEZs as set out in Section 1.5. They would typically be required when direct impacts to marine archaeology receptors or within AEZs cannot be avoided and there may be benefit to further clarifying their significance or extents. Diver surveys may be considered as a last option if the relevant data cannot be obtained in any other way.

1.4.22 Such surveys would be designed and undertaken or supervised by suitably qualified archaeologists.

Watching Briefs

1.4.23 A watching brief is a formal programme of archaeological monitoring that involves attendance by a suitably qualified and experienced archaeologist during site activities (The Crown Estate, 2021). Based on the current understanding of the baseline environment and construction techniques the need for a watching brief is not anticipated at this stage. However, should future work lead to the identification of further archaeological remains or areas of archaeological potential, for example through post-consent geophysical surveys or through the PAD, or should the construction methods or locations be altered, a marine watching brief may be required by MD-LOT. This may be required where impacts are unavoidable in an area of high or medium archaeological potential, particularly in the Intertidal Area, but also potentially for clearance works in areas with numerous geophysical anomalies or seabed preparation and installation works in areas with high seabed prehistory potential.

1.4.24 If a marine watching brief is required it would be subject to a specific method statement and would be conducted by a suitably qualified and experienced marine archaeologist, in line with the Chartered Institute for Archaeologist's (CIfA) Standards and Guidance for Archaeological Watching Briefs (CIfA, 2014a).

1.5 Avoidance

Archaeological Exclusion Zones

1.5.1 Best practice favours the preservation *in situ* of archaeological remains (The Crown Estate, 2021), therefore the preferred mitigation for archaeological remains is avoidance. For the Proposed Development, AEZs have been proposed and will be agreed with MD-LOT through the WSI. Activities that could impact the receptor and/or the seabed within the extents of the AEZs are prohibited.

1.5.2 All AEZs will be marked on relevant consent plans. The final location of the Proposed Development will take into account these AEZs. If impacts cannot be avoided, measures to reduce, remedy or offset disturbance will be agreed (Paragraph 1.6.29).

1.5.3 AEZs may be enlarged, reduced, moved, or removed with the agreement of MD-LOT as the development progresses, subject to layout designs and additional subsequent surveys that may be required. Further AEZs may be defined if additional high potential anomalies or features of archaeological significance are identified.

1.5.4 In view of their potential archaeological significance, AEZs (either in the form of individual AEZs or clusters) have been placed around the anomalies identified within the Marine Archaeology Study Area which have been assigned a high or medium potential (Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report) (Table 1.5).

1.5.5 Dependant on the form of the receptor, AEZs have either been recommended as a radius from the centre point of the receptor or as a distance from the extents. Particularly in the case of shipwrecks, which tend to be longer in length than width, the use of a radius about the centre point provides unequal protection around the extents. This not only impacts the protection afforded but does not present proportional mitigation.

1.5.6 The AEZs identified have been reviewed against desk-based and site-specific data, and as a result of this review AEZs have been identified of varying sizes according to the size of the anomaly, the extents of any debris, the potential significance of the anomaly, the potential impact of the development and the seabed dynamics within the area.

Table 1.5: Proposed AEZs

Anomaly ID.	Description	Potential	WGS84		AEZ (m) (from anomaly extents or radius from a point)
			Latitude	Longitude	
BN25_0101	Potential wreck	High	56° 48.528' N	002° 17.032' W	50 (extents)
BN25_0135	Potential debris	Medium	56° 50.512' N	002° 7.213' W	25 (extents)
BN25_0140	Potential debris	Medium	56° 54.262' N	001° 47.765' W	25 (extents)
BN25_0141	Wreck	High	56° 56.622' N	001° 35.619' W	50 (extents)
BN25_0142	Wreck	High	56° 54.919' N	001° 44.465' W	75 (extents)
BN25_0145	Potential wreck	Medium	56° 53.561' N	001° 50.528' W	25 (extents)
BN25_0152	Potential debris	Medium	56° 55.819' N	001° 38.223' W	25 (extents)
BN25_0153	Potential debris	Medium	56° 54.649' N	001° 43.594' W	25 (extents)

Anomaly ID.	Description	Potential	WGS84		AEZ (m) (from anomaly extents or radius from a point)
			Latitude	Longitude	
BN25_0241	Potential debris	Medium	57° 0.180' N	001° 18.411' W	25 (extents)
BN25_0251	Potential debris	Medium	57° 0.649' N	001° 18.134' W	25 (extents)
BN25_0287	Potential wreck	High	56° 48.033' N	002° 17.342' W	50 (extents)
BN25_0288	Potential debris	Medium	56° 58.803' N	001° 25.335' W	25 (extents)

1.5.7 In total 12 AEZs relating to high and medium potential anomalies have been recommended within the geophysical survey data extents.

1.5.8 There are four high potential anomalies that have been assigned proposed AEZs, all four are located in the Export Cable Corridor (Figure 1.2). Two of the high potential anomalies are wreck sites and two are potential wreck sites. Three of these geophysical anomalies correspond with UKHO records, more detail on the high potential anomalies can be found in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report.

1.5.9 There are eight medium potential anomalies that have been assigned AEZs, three are located within the Array Area and six are located in the Export Cable Corridor (Figure 1.2). More detail on the medium potential anomalies can be found in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report. One of the medium potential anomalies (BN25_0173) is located within the AEZ of high potential anomaly BN25_0142 and so has been removed from the list of proposed TEZs. BN25_0173 is also likely to be debris associated with BN25_0142.

1.5.10 The list of AEZs is 'live' and will be held in the Geographical Information Systems project file maintained by the RA as well as Design Plans produced by the Developer, and any shapefiles and constraints maps provided to all contractors.

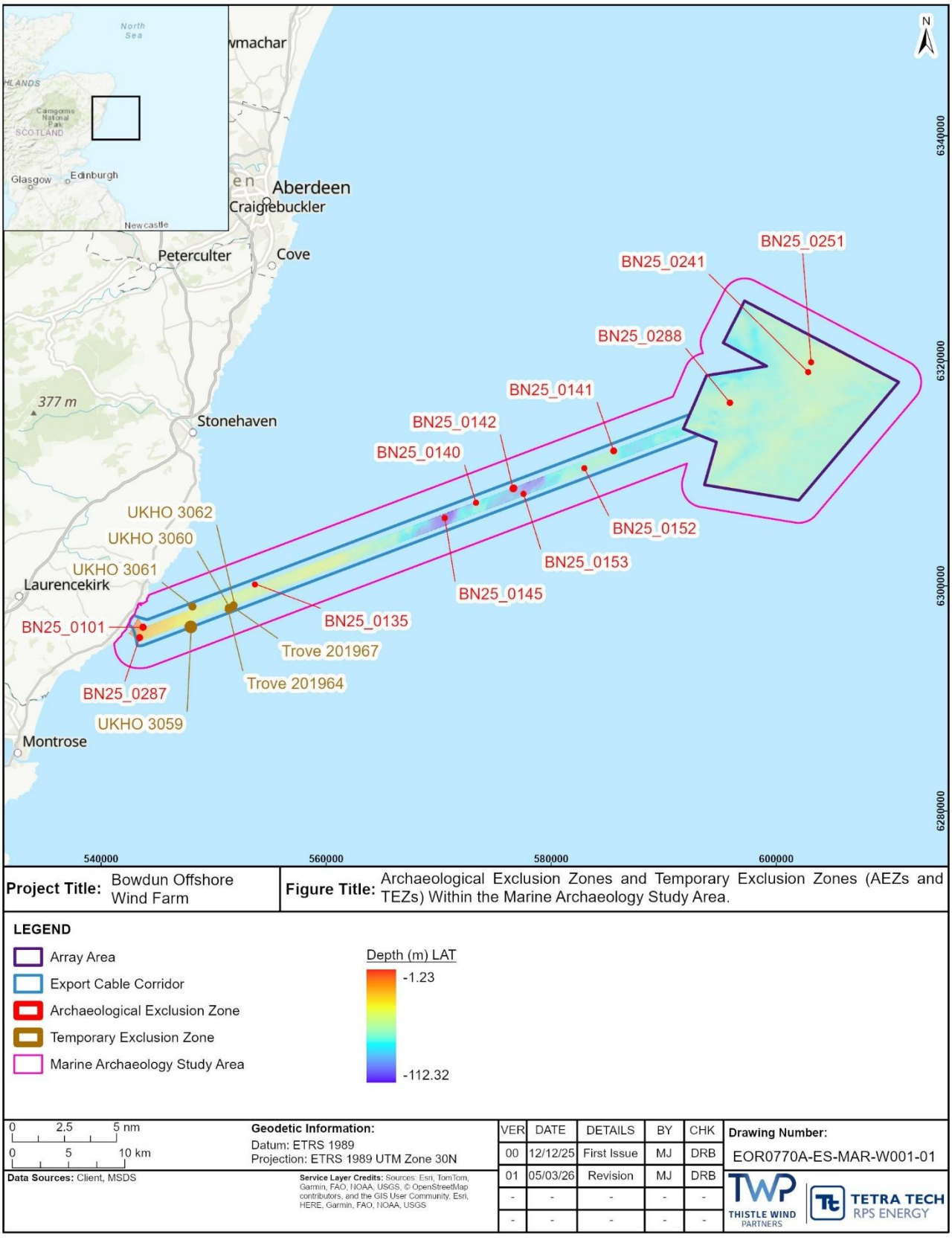

Figure 1.2: Proposed AEZs and TEZs Within the Marine Archaeology Study Area

Temporary Exclusion Zones

1.5.11 If new discoveries of potential archaeological significance come to light at any point during the course of construction, O&M or decommissioning phases, they may be subject to the implementation of a TEZ. A TEZ will be initiated quickly by the Site Champion, Nominated Contact or by agreement of the RA and the Developer to prevent impacts to the seabed within their extents. They will then be confirmed through a formal process with MD-LOT. Depending on the view of MD-LOT and further mitigation, these could then be removed, altered or converted into a more permanent AEZ.

1.5.12 TEZs may also be recommended for records of assets whose position cannot be determined with enough accuracy for refined exclusion zones, or where the extents are not fully known. They are often larger than AEZs, but they can be refined once further assessment has been made.

1.5.13 Five maritime archaeology receptors have been assigned TEZs, these can be seen in Figure 1.2 and are listed in Table 1.6. These are records within the Site Boundary that were not in the Marine Archaeology Survey Area (i.e. have only been identified via desktop sources), and as a result their extents, and presence on the seabed, have not been verified by the Developer. UKHO 3059 is the wreck of the tanker *Baku Standard,* and has a length of 133.2 m, a TEZ of 300 m radius has therefore been recommended in order to ensure the whole wreck falls within the TEZ.

Table 1.6: Proposed TEZs

Anomaly ID.	Description	WGS84		TEZ (m) (from anomaly extents or radius from a point)
		Latitude	Longitude	
UKHO 3059	Remains of the *Baku Standard*	56° 48.516' N	002° 12.861' W	300 (point)
UKHO 3060	Remains of the *Taurus*. Dead wreck	56° 49.407' N	002° 9.513' W	100 (point)
UKHO 3061	Unknown wreck	56° 49.491' N	002° 12.696' W	100 (point)
UKHO 3062	Remains of the *Reindeer*. Dead wreck	56° 49.524' N	002° 9.097' W	100 (point)
Trove 201964	Unknown wreck	56° 49.337' N	002° 9.534' W	100 (point)
Trove 201967	Unknown wreck	56° 49.445' N	002° 9.142' W	100 (point)

Low Archaeological Potential Anomalies and Micrositing

1.5.14 There are 167 low potential anomalies, 100 of which are located within the Array Area and 67 within the Export Cable Corridor. These are currently interpreted as having no archaeological significance from the analysis of the geophysical survey results. These anomalies are listed in full in Volume 3, Technical Appendix 19.1: Marine Archaeology Technical Report. Additional low potential

anomalies may be identified in further pre-construction geophysical surveys. Low potential anomalies are not provided AEZs or TEZs but avoidance of these features by micrositing is recommended.

1.5.15 Where micrositing is not possible due to engineering or other constraints, additional survey or groundtruthing should be completed in order to confirm the analysis that the geophysical anomaly is of no archaeological significance. This can often be achieved through pre-existing surveys such as UXO identification ROV surveys.

1.5.16 Should material of potential archaeological significance be identified during this process then they will be reported through the agreed PAD (Annex A).

1.6 Discoveries and Unavoidable Direct Impacts

Protocol for Archaeological Discoveries

1.6.1 A PAD will be implemented during all subtidal construction, O&M and decommissioning activities. It will address the reporting of unexpected finds of archaeological material, recovered from the sea during these activities. More detailed information relating to the PAD is set out in Annex A.

1.6.2 The responsibility for ensuring the implementation of the PAD rests with the Developer who will ensure that its agents and construction contractors are contractually bound to implement the PAD (Annex A).

1.6.3 The PAD will follow the format laid down in the Protocol for Archaeological Discoveries: Round 3 Offshore Renewables Projects (The Crown Estate, 2014). The RA will provide advice to the Developer and the team and liaise with MD-LOT as necessary (Annex A).

1.6.4 Once agreed by the Developer and MD-LOT, the PAD will be distributed in a form suitable for use onboard vessels. The Developer will ensure that the relevant staff on all vessels are informed of and have access to the PAD.

1.6.5 A Preliminary Record Form will be made available (Annex B) to all vessel crews for completion on discovery of archaeological material.

1.6.6 All finds of potential archaeological material will be reported by site and vessel staff to the Site Champion on their vessel (usually the senior person on the vessel), who then reports to the Nominated Contact (a representative of the Developer). The Nominated Contact will inform the RA and MD-LOT as appropriate.

1.6.7 Full contact details for all relevant parties will be included in the site documents.

1.6.8 The response to reported finds will be implemented through the measures set out in the PAD, this could include further surveys or establishment of TEZs or new AEZs if appropriate (Annex A).

1.6.9 The PAD will be facilitated by means of appropriate training to ensure that all staff and contractors are aware of their responsibilities. Copies of the PAD document will be made available for use on board the construction vessels.

1.6.10 At the end of the construction phase, the RA will prepare a report on the results of the PAD. This could be as a section of any other final archaeological report.

Approach to Finds

1.6.11 Any finds and environmental samples will be processed according to professional standards for finds analysis, environmental sampling and archive preparation and in accordance with the CIfA's Standards and Guidance for the collection, documentation, conservation and research of archaeological materials (CIfA, 2014c) and the Standards and Guidance for nautical archaeological recording and reconstruction (CIfA, 2014b).

1.6.12 The Developer, with the aid of the RA, may have to report the finds to other organisations:

- Where the discovery is of archaeological significance this will be reported to MD-LOT.
- Where the discovery constitutes 'wreck' under the Merchant Shipping Act 1995 and has been recovered, this will be reported to the RoW within 28 days.
- Where the discovery constitutes 'treasure' this will be reported to the Treasure Trove Unit.
- Where the discovery constitutes aircraft material, this will be reported to the MoD immediately.
- Where the discovery constitutes human remains, this will be reported to the Procurator Fiscal, police and MD-LOT immediately.
- Where the discovery constitutes UXO, they will be reported to the UXO Consultant. Company Health and Safety policies and UXO procedures should always take priority over archaeological reporting of ordnance.

Discovery of Artefacts

1.6.13 Any discoveries recovered or exposed during archaeological works by the Proposed Development activities will, at the point of discovery, be the responsibility of the Developer. In line with the PAD, the Nominated Contact (as representative of the Developer) will contact the RA for advice.

1.6.14 Where finds are discovered onboard the vessel, approximate positions will be assigned for where the artefacts were recovered. A full photographic record will be maintained.

1.6.15 In the event of the discovery of unexpected, unusual or extremely fragile and delicate objects and deposits, the Nominated Contact (as representative of the Developer) will notify the RA immediately. Additional work required to recover, record, analyse, conserve and archive such objects and deposits will be agreed with MD-LOT.

1.6.16 Objects that require immediate conservation treatment to prevent deterioration will be treated according to guidelines laid down in First Aid for Underwater Finds (Robinson, 1998). A full record will be made of any treatment given.

1.6.17 In consultation with the Developer and MD-LOT, the RA will advise on the implementation of passive conservation for smaller objects pending more detailed conservation strategies. The Developer will make provision for a professional conservator to undertake a conservation assessment of assemblages if appropriate, normally through the RA, and may need to plan for the long-term conservation and storage of objects or assemblages, particularly wreck material reported to the RoW.

1.6.18 Specialist work approved by MD-LOT on metal work, bone (including worked bone, human remains and other organic remains), ceramic material, glass and lithic material will be carried out by a suitable archaeological contractor(s), monitored by the RA. All retained finds will then be processed in accordance with the CIfA's Standard and Guidance for the collection, documentation, conservation and research of archaeological material (CIfA, 2014c).

1.6.19 Subject to the agreement reached with a suitable museum regarding selection, retention and disposal of material, the Developer will retain all recovered objects unless they are undoubtedly of no archaeological significance and not defined as 'wreck' under the Merchant Shipping Act 1995. The presence of modern objects will, however, be noted.

Human Remains

1.6.20 If human remains are identified, they should be treated with due care and respect. In any event, the RA will inform the local police, the relevant Procurator Fiscal and MD-LOT. A TEZ will be implemented at the location, and all works at the location will cease.

1.6.21 If required, excavation, recording, analysis and storage of any human remains will be undertaken in line with the Guidelines to the Standards for Recording Human Remains (Mckinley and Roberts, 1993) and follow best practice as appropriate (HES, 2016). An appropriate human skeletal biologist will, if required, be available to advise on and assist with the recovery and storage of human remains.

Discovery of Aviation Material

1.6.22 The majority of aircraft wrecks are military and so fall under the legal protection of the Protection of Military Remains Act 1986.

1.6.23 Any finds suspected of being military aircraft will be reported immediately to the RA. In particular, aluminium objects may indicate aircraft wreckage from World War II, especially if two or more pieces of aluminium are fixed together by rivets. All occurrences should be reported. The Developer will also inform the JCCC with the aid of the RA. In the case of a military aircraft being investigated under licence, any human remains will be reported immediately in accordance with paragraph 15 of the Guidance Notes, to the MoD.

1.6.24 Civilian aviation wreck sites are not covered by the Protection of Military Remains Act 1986. Any recovery of civilian aviation material will be reported to the Air Accidents Investigation Branch under the Department of Transport.

Discovery of Wreck

1.6.25 'Wreck' includes all craft, parts of these, their cargo or equipment. Section 236 of the Merchant Shipping Act 1995 stipulates that all wreck recovered from within the UK's waters and any wreck from outside the UK's waters which is brought into UK waters must be declared to the RoW.

1.6.26 Appropriate finds will be reported to the RoW within 28 days of the recovery by the Developer. This can be done through the RoW website. The finds must be retained until the RoW determines ownership or requests that they be transferred to the RoW.

Environmental Evidence

1.6.27 For each programme of archaeological work, environmental sampling strategies and methods, including methods for processing, assessing and/or analysing samples, will be set out in the method statement for the archaeological work.

1.6.28 Approaches and methods will be consistent with relevant guidance (Campbell, 2011).

Unavoidable Direct Impacts

1.6.29 The mitigation strategy described in this document is predicated on the identification and avoidance of archaeological remains. It is recognised that this may not always be possible, for example should an archaeological asset be identified during construction activities.

1.6.30 Once the archaeological significance of the asset is confirmed, the first option would still be avoidance through an AEZ, TEZ or micrositing. If this is not possible and the asset will still be potentially impacted, further mitigation will be needed. This could include a range of measures, from relocating isolated, relatively low significance objects, to full excavation of high significance sites such as wrecks and aircraft. Such measures will be agreed with MD-LOT and set out in detailed method statements.

1.6.31 If the asset is wreck or a military aircraft, agreement of the methodology will also be sought from the RoW and the MoD respectively.

1.6.32 It will be ensured that activities are in compliance with a Marine Licence.

1.7 Documentation

Method Statements

1.7.1 Further archaeological work will be undertaken in accordance with the framework set out in this WSI and PAD and in line with relevant guidance.

1.7.2 Detailed archaeological method statements will also be produced, as appropriate, for further discrete packages of archaeological works, such as, *inter alia*, archaeological assessment of marine geophysical and geotechnical data, archaeological assessment of ROV data, and watching briefs.

1.7.3 Archaeological method statements will provide details about:

- specific objectives of archaeological works;

- extent of investigation;
- investigation methodology, to cover:
  - intrusive methods;
  - non-intrusive methods;
  - recording system; and
  - finds, including the policy for selection, retention and disposal and provision for immediate conservation and storage;
- environmental sampling strategy;
- form of commission and contractual relationship with the Developer;
- relation between licence condition(s), WSI 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 (The Crown Estate, 2021).

1.7.4 Archaeological method statements will be prepared by the RA and authorised by the Developer. The Developer will submit the archaeological method statements to MD-LOT for approval.

1.7.5 Provision for monitoring of the works by MD-LOT or the Archaeological Curator may be through site visits or meetings with the Developer, contractor(s), and/or the RA.

Reports

1.7.6 Following each discrete package of archaeological works, an archaeological report will be produced. 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. Each report will satisfy the requirements of the method statements for that particular work package and will present the project information in sufficient detail to allow interpretation without recourse to the project archive.

1.7.7 The method statements may also set out the need for interim reports, in a form agreed with MD-LOT, and these will be submitted in sufficient time for MD-LOT to provide advice before subsequent stages of work.

1.7.8 All archaeological reports will be prepared in accordance with the guidance given in the relevant CIfA's Standards and Guidance and conform to Monument Inventory Data Standard (the UK's historic environment data standard). Reports will typically include:

- a Non-Technical Summary;
- the aims and methods of the work;
- the results of the work including finds and environment remains;
- a statement of the potential of the results;
- proposals for further analysis and publication; and
- illustrations and appendices to support the report.

1.7.9 The RA will forward a digital copy of each report to the Developer for approval. Once approved by the Developer, the report will also be forwarded to MD-LOT. All archaeological reports (inclusive of geophysical and geotechnical investigations) produced during the development and construction process will be uploaded through the Online Access to the Index of Archaeological Investigations (OASIS) system.

1.7.10 Decisions regarding further work, or the level of post-excavation work required, will be taken following submission of investigative reports and in consultation with MD-LOT.

1.7.11 An overarching final report on the marine archaeology recorded within the vicinity of the Proposed Development will be produced by the RA after the completion of all archaeological works. This may summarise and index the preceding archaeological reports.

1.7.12 The final report will establish final arrangements for publication.

Publication

1.7.13 The Developer and RA will publish the results of work packages and/or results of the final report within one year of completion of the work. Publication will be in an appropriate local or national journal in line with the significance of the work. Other forms of publication (e.g. popular publication/internet) may be employed where appropriate.

1.7.14 Publication media and all publication matters will be discussed and agreed in advance with MD-LOT.

1.7.15 Digital copies of all archaeological reports will also be uploaded through the OASIS system.

Archives

1.7.16 MD-LOT will be notified of any archaeological investigations in advance and any specific requirements related to the preparation and deposition of the archives will be accommodated as appropriate. Archives will be developed in line with guidance including 'Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives' (CIfA, 2014 updated 2020).

1.7.17 A relevant receiving institution will be identified and notified by the RA of any archaeological investigation in advance of fieldwork. An accession number will be sought for the project archive by the RA and included in method statements relating to fieldwork or recovery of artefacts. A policy for the selection, retention and disposal of excavated material will be agreed, and requirements in respect of the format, presentation and packaging of archive records and materials will be confirmed.

1.7.18 The timetable for depositing archives with the receiving institution after completion of the post-fieldwork programme will be set out in the relevant method statements. In Scotland, HES maintains Trove, the equivalent National Record of the Historic Environment.

1.8 Monitoring and Reviewing the WSI and PAD

1.8.1 At each stage of the Proposed Development including construction, O&M and decommissioning and sub-stages therein, the RA will advise the Developer as to the potential requirements for the specific archaeological investigations as outlined in this document, the need for specific method statements, and the need to update the WSI and PAD.

1.8.2 Provision will be made for the WSI and PAD to be revised as appropriate should elements of the Proposed Development change or particular archaeological issues come to light. Any revisions will be prepared by the RA and submitted to the Developer who will ensure they are submitted to MD-LOT.

1.8.3 The performance of the WSI and PAD will be monitored through the provision of a series of archaeological reports prepared to inform on the results of various activities undertaken under its framework. Monitoring visits (if appropriate) by MD-LOT or the Archaeological Curator will be agreed in advance of specific work packages.

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ANNEX A. PROTOCOL FOR ARCHAEOLOGICAL DISCOVERIES

A1 Background

A1.1.1 This document is a protocol that will satisfy conditions relating to the reporting of archaeological discoveries that might be made in association with works undertaken for the Proposed Development. It is adapted from The Crown Estate Protocol for Archaeological Discoveries: Offshore Renewables Projects (2014).

A1.1.2 The PAD is a system of monitoring for unexpected or incidental finds relating to the historic environment that may be encountered within the marine and Intertidal Area. This PAD can be used at all stages of the development process where archaeological information may be obtained, including all pre-development surveys such as benthic sampling, obstruction surveys and other such operations.

A1.1.3 This PAD is intended to satisfy any conditions that relate to reporting protocols included on consents administered by marine licensing authorities including MD-LOT. Where implementation of this PAD is a condition of consent, failure to follow the PAD may give rise to a breach of condition.

A1.1.4 COWRIE's Historic Environment Guidance for the Offshore Renewable Energy Sector (COWRIE, 2007) document states: "*The aim of protocols for unexpected discoveries is to reduce any adverse effects of the Proposed Development upon the marine historic environment by enabling people working on the Proposed Development to report their discoveries or recovered material rapidly in a manner that is convenient and effective. The protocol will set out the respective responsibilities of the Developer, main contractors, and archaeological contractors/consultants. The Protocol therefore provides a mechanism to aid compliance with the Merchant Shipping Act 1995 in respect to recovery of 'wreck', as defined by the Act and reporting of military vessel and aircraft wrecks to the Ministry of Defence*" (COWRIE, 2007).

A1.1.5 This PAD applies to things that are or may have been made, used or affected by people. This will include, for example, fossilised remains from periods of human inhabitation, but not fossils that are exclusively pre-human in origin. It will not include finds of geological, ecological, or other non-archaeological origin, unless a link to human activity can be assumed.

A1.1.6 This PAD takes into account, and is consistent with, existing statutory and non-statutory regimes for reporting discoveries, ownership of finds and other legal regimes, on land, within UK territorial waters and outside territorial waters.

A1.1.7 For some classes of find there are specific legal requirements (e.g. treasure, wreck, human remains; Paragraph 1.6.20). These legal requirements will be met by following this PAD. In such instances, failure to follow the PAD may also give rise to a criminal offence.

A2 Outline

A2.1.1 Archaeological finds made in the course of offshore activities can shed light on past human use of the landscape, sea and seabed. The information that such discoveries bring to light can help archaeologists better understand society and human endeavour in the past, and better protect significant aspects of our history on behalf of future generations.

A2.1.2 The PAD is applicable to activities associated with the Proposed Development where an archaeologist is not present on site and therefore not immediately available. In cases where the Developer has made provision for an archaeologist to be on site, as part of a site investigation, watching brief or specific archaeological works, then the archaeological method statement relating to this provision will take precedence. Where no specific archaeological provision has been made, then this Protocol will apply.

A2.1.3 This PAD addresses finds of archaeological interest made on the seabed or onboard vessels. They may be identified as a result of geophysical survey or (ROV visual identification) or through coming into contact with anchors, grapnels, jack-up legs or other seabed equipment. These finds or anomalies may indicate that an object or structure of archaeological interest has been encountered on the seabed.

A2.1.4 The definition of an archaeological “find” in this context is of an object or site with archaeological potential or significance. It does not refer just to items brought to the surface. An archaeological “site” is a group of features or objects that make up a relatively discrete collection of associated archaeological objects. This could be a shipwreck, structure, or other archaeological assemblage.

A2.1.5 An “anomaly” is distinct from a find or site and is a signature that could be visual or digital (e.g. geophysical) that indicates a possible find or site. Further investigation may reveal that it is not of human origin or is too modern to be of archaeological interest. However, until such investigation takes place it must be considered as a source of possible archaeological interest.

A2.1.6 The PAD anticipates discoveries being made by Project Staff, who report to a Site Champion on their vessel or site (usually the senior person on site), who then reports to a person (the Nominated Contact) who has been nominated by the Developer to co-ordinate implementation of the Protocol. The Nominated Contact will in turn inform the Developer’s Project Manager(s) (if this is not the Nominated Contact) who in turn will contact the RA.

A2.1.7 The response to reported finds will be implemented through the measures set out in the Protocol and may include further surveys or the establishment of TEZs, which may be converted into new AEZs, if warranted. Any action to implement new, or to amend agreed AEZs or TEZs will only be done in agreement with the appropriate Archaeological Curator s and the Regulator responsible for consenting the Proposed Development.

A3 Roles and Responsibilities

A3.1.1 The Site Champion is the person formally appointed by the Developer to be directly responsible for implementation of the Protocol and producing reports arising from a particular activity location. The Site Champion could be a Vessel Master, a Construction Foreman or any other person in a position to control the immediate works.

A3.1.2 The Developer's Nominated Contact is the formal point of contact for all matters relating to the PAD between the Developer, its subcontractors, the Site Champions, RA, MD-LOT and if appropriate the Archaeological Curator. The Nominated Contact could be the Environmental Manager, Consents Manager, Project Manager or any other coordinator that the Developer feels is appropriate and effective in acting in this role. It is critical that all parties hold the Nominated Contact's full contact details and that any changes to the Nominated Contact's details are circulated as soon as possible.

A4 Actions by Project Staff

A4.1 In All Cases

A4.1.1 If a find of archaeological interest is made, Project Staff will immediately inform the Site Champion (via their supervisor if appropriate).

A4.1.2 If the discovery is ordnance, then Project Staff will abide by their operational procedures which are to take precedence; and then report via the PAD once safe to do so.

A4.1.3 Where items of archaeological interest are recovered, Project Staff (under direction of the Site Champion) will:

- handle all material with care;
- ensure any rust, sediment, concretion or marine growth should not be removed and 'groups' of items or sediments should not be separated;
- if possible, photograph the item in the condition in which it was recovered;
- record the position at which the artefact/sediments were recovered; and
- provide a unique reference number for each artefact, which is to be included on all recording and storage mediums.

A4.1.4 If the find is from a waterlogged or in an underwater environment, then Project Staff (under direction of the Site Champion) will arrange for the find to be immersed in seawater in a suitable clean container, which should be covered.

A4.2 Discoveries Onboard

A4.2.1 If a find of archaeological interest is made onboard a construction vessel (for instance, caught in a grapnel/anchor or trapped in a plough), Project Staff will immediately inform the Officer on Watch. The Officer on Watch will inform the Site Champion.

A4.2.2 Where it is possible to identify the seabed position from which the find originated, the Officer on Watch will temporarily cease construction activities in the vicinity of the seabed location, or move to an alternate location, until advice has been obtained.

A4.3 Anomalies on the Seabed

A4.3.1 If an anomaly is identified in advance of impact, such as on the forward-looking sonar of a cable plough, the route should – where possible – be deviated around the obstruction, in line with normal ploughing practice. The position of the anomaly will be reported to the Officer on Watch and then to the Site Champion.

A4.3.2 If an anomaly is identified after an impact has occurred, for example, by being snagged in a pre-lay grapnel run, the Site Champion will be informed accordingly and the original position of the anomaly recorded as far as possible.

A4.3.3 If an anomaly comes to light in the course of geophysical survey, ROV survey or drop-down video survey the Officer on Watch will ensure that the position of the anomaly is noted on navigational software and that the Site Champion is informed.

Discoveries Subsequent to Work on Site

A4.3.4 There are a number of circumstances in which the presence of material of archaeological interest may be identified after work on site has occurred, for instance Project Staff involved in processing samples in a laboratory may make archaeological discoveries in their samples.

A4.3.5 Staff examining sample material (e.g. core material; benthic samples) should consider the potential for archaeological and/or paleoenvironmental material being recovered within their samples. Where such discoveries are made Project Staff should inform the Site Champion and pass on details of the sample number and its position.

A4.3.6 If an anomaly comes to light in the course of processing or interpreting geophysical survey data, video or other photographic data, Project Staff should inform the Site Champion and pass on details of the data files and navigational information relating to the positions where the data were obtained.

Actions by Site Champion

A4.3.7 Where it is possible to identify the position from which the discovery originated, the Site Champion will arrange for a TEZ in which construction activities will cease temporarily (in the vicinity of the location), or move to an alternate location, until the advice of the RA has been obtained.

A4.3.8 The Site Champion will note the occurrence as soon as possible in the site daybook or vessel log together with the time and exact position. The entry should include a close approximation of the original position of the find/anomaly. Additionally, the area should be marked on site drawings or surveys.

A4.3.9 The Site Champion will compile a Preliminary Record of the occurrence (Annex B) and, where possible, accompany this with any supporting information such

as photographs, drawings or other records that have been made. The Site Champion will inform the Developer's Nominated Contact of the occurrence as soon as possible and pass on all available information.

A4.3.10 The Site Champion will arrange for any finds (of archaeological material) to be carefully contained and protected:

- if waterlogged: immersed, bagged and placed in a protective container, or placed in seawater in a suitable clean container, which should be covered and stored in a cool, dark place;
- if dry: placed in a suitable container and stored in a cool, dark place; and
- any dirt, rust, concretion or marine growth should not be removed.

Actions by the Nominated Contact

A4.3.11 The Nominated Contact will confirm with the Site Champion that all the details set out in the Preliminary Record are comprehensive and correct.

A4.3.12 Contact will be made with the RA at the earliest opportunity, providing all available information relating to the circumstances of the occurrence, including a copy of the Preliminary Record and copies of any other records that have been made. The RA will provide advice on the appropriate immediate actions in addition to the recording, handling and storage of any items recovered.

A4.3.13 The Nominated Contact should inform other teams engaged in potentially damaging activities in the same area, to ensure that they are aware of the position of the discovery so that further possible damage to the historic environment can be avoided.

A4.3.14 Should it be required the RA or their archaeological contractor will travel to the site to inspect any finds or data made available.

Actions by the Retained Archaeologist

A4.3.15 The RA will review the information about the discovery in conjunction with the available geophysical and/or desk-based information. Additional communication may take the form of email correspondence and/or telephone conversations (where internet access is restricted). The RA will send an Initial Response to the Nominated Contact to acknowledge the report.

Assessment of Archaeological Potential

A4.3.16 The assessment of archaeological potential will be based on the following criteria:

- low potential discoveries: reports of single, apparently isolated, finds that are not datable or are of modern (post-1800) or later date, or small pieces of peat (<10 cm diameter) where there are clear signs it has been mobile (rolled); and
- high potential discoveries: reports of single finds that are of post-medieval or earlier date; reports of single finds that relate to military aircraft; reports of multiple finds from the same area; reports indicating the

presence of a wreck or other structural remains; reports of peat or other fine-grained organic material where there is no evidence of mobility (e.g. angular blocks of sediment with no/limited rounding of the edges).

A4.3.17 In the case of a discovery of high potential, construction will not recommence in the TEZ without the approval of MD-LOT. The RA will confirm the extent of the area of the TEZ. The RA (through the Developer if appropriate) will notify MD-LOT that a discovery of high potential has been reported and will provide details of the further actions that have been advised.

A4.3.18 In the case of discoveries of low potential, the RA will advise the Nominated Contact that the TEZ may be lifted and that construction activities in the vicinity of the discovery may recommence.

Summary Record

A4.3.19 The RA will send a Summary Record of the report to the Nominated Contact and to other relevant parties. The Summary Record will include:

- advice on the identification of finds and the character of their seabed locations;
- an assessment of the archaeological potential of the report, including the rationale for the conclusion reached;
- advice on actions to be taken in respect of the discovery, including any recovered finds; and
- a list of the parties to which the Summary Record and associated archaeological data are being sent.

Subsequent Actions

A4.3.20 The RA will advise the Nominated Contact of the implications of the discovery and of further actions that might be required. Further actions may include call-out investigations, the conversion of a TEZ to an AEZ, and/or the institution of a watching brief. The rationale for conclusions reached will be provided to the Nominated Contact.

Further Requirements

A4.3.21 If the discovery is something to which specific legal provisions apply (e.g. treasure, human remains, wreck, etc.), it will remain the responsibility of the Developer to undertake such statutory reporting as is required.

Finds

A4.3.22 The handling, retention or disposal of finds will be subject to applicable law and to arrangements between the Developer and the institution receiving the archaeological archive arising from the Proposed Development.

Revised Summary Record

A4.3.23 The Summary Record will be revised to take account of further information or actions that have taken place or are planned. The RA will pass on a copy of the revised Summary Record to:

- the Nominated Contact for circulation to the Site Champion and relevant Project Staff;
- MD-LOT;
- the relevant authority, where specific legal provisions apply (e.g. RoW, Coroner, MoD, HES, etc.);
- the Crown Estate; and
- deposition of the revised Summary Record with the OASIS.

A5 Legal Terms and Responsibilities

A5.1 Marine (Scotland) Act 2010

A5.1.1 This Act enables Scottish Ministers to designate HMPAs. This is restricted to Scottish Marine Area.

A5.2 Merchant Shipping Act 1995

A5.2.1 This Act is not a form of designation, but will affect offshore renewable energy schemes if, during site investigations or construction, any material is recovered which falls within the definition of 'wreck'. All wreck has an owner, and the Merchant Shipping Act sets out the procedure for returning recovered wreck to the owner or their successor. The RoW must be notified of all recovered wreck landed in the UK and will seek to identify the original owner so that it can be claimed. Ownership of unclaimed wreck from within territorial waters vests in the Crown or in a person to whom rights of wreck have been granted. Unclaimed wreck from beyond territorial waters is returned to the finder.

A5.2.2 The RoW has a duty to ensure that finders who report wreck receive an appropriate salvage payment. In the case of material considered to be of historic or archaeological importance, a suitable museum will be asked to purchase the material at the current market valuation. The finder will receive the net proceeds of the sale as a salvage payment. If the right to, or the amount of, salvage cannot be agreed, either between the owner and finder or between competing salvors, the RoW will hold the wreck until the matter is settled, either through amicable agreement or by court judgement.

A5.3 Protection of Military Remains Act 1986

A5.3.1 The primary purpose of the Protection of Military Remains Act is to protect the resting places of military personnel from unauthorised disturbance. It allows the MoD to protect vessels and aircraft that were in military service when they were lost or wrecked. The MoD can designate any such named vessel lost after 04 August 1914 as a 'protected place' even if the position of the wreck is not known. In addition, the MoD can designate a 'controlled site' any such wreck whose position is known.

A5.3.2 Access is not prohibited at a 'protected place', but it is an offence to tamper with, damage, move or remove items from such a wreck without a licence.

However, access, salvage and excavation are all prohibited on 'controlled sites', except where a licence for restricted activities has been obtained from the MoD.

A5.3.3 The remains of all aircraft that have been lost in military service are automatically classified as 'protected places' by the Act.

A5.4 Treasure

A5.4.1 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. Items constituting treasure should be reported to the Treasure Trove Unit.

A5.5 Ancient Monuments and Archaeological Areas Act 1979

A5.5.1 Monuments that are of national importance within UK territorial waters can be protected by being added to the schedule of monuments protected under this Act. It is an offence to damage or carry out a range of specified activities on such a 'scheduled monument', unless a licence for these activities has been obtained from the relevant authority, in the form of 'scheduled monument consent'.

A5.5.2 Monument can mean, among other things, the site of any vehicle, vessel, aircraft, or other structure. It also refers many types of archaeological site in the traditional sense.

A6 Guidelines for Identifying Finds of Archaeological Interest and Handling Artefacts

A6.1 Materials Guidelines

Rubber, Plastic, Etc.

A6.1.1 In most cases, rubber, plastic, bakerite and similar modern materials are not of archaeological interest and can be disregarded. One exception is where such materials are found in the same area as aluminium objects and structures, which may indicate aircraft wreckage from World War II. Such material should be reported.

Iron and Steel

A6.1.2 The potential range and date of iron and steel objects is so wide that it is difficult to provide general guidance. In broad terms, iron and steel objects which are covered by a thick amorphous concrete-like coating ('concretion') are likely to be of archaeological interest and should be reported. Pieces of metal sheet and structure may indicate a wreck and should be reported. Specific operational measures are likely to apply in respect of ordnance (e.g. cannonballs, bullets, shells) which should take precedence over archaeological requirements. However, discoveries of ordnance may be of archaeological interest, and they should be reported.

Other Metals

A6.1.3 Items made of thin, tinned, or painted metal sheet are unlikely to be of archaeological interest. Aluminium objects may indicate aircraft wreckage from World War II, especially if two or more pieces of aluminium are fixed together by rivets. Copper and copper alloy (bronze, brass) objects might indicate a wreck, or they may be very old. Precious metal objects and coins are of archaeological interest because they are relatively easy to date. All occurrences should be reported.

Bone

A6.1.4 Discoveries of animal bone, teeth and tusks are of archaeological interest because they may date to periods when the seabed formed dry land and should be reported. Such bones, teeth, tusks etc. may have signs of damage, breaking or cutting that can be directly attributed to human activity. Large quantities of animal bone may indicate a wreck (the remains of cargo or provisions) and should be reported. Human bone is of archaeological interest, and may, if buried and found within the territorial waters, be subject to the provisions of the Burial Act 1857. Any suspected human bone should be reported and treated with discretion and respect. Objects made from bone – such as combs, harpoon points or decorative items – can be very old and are of archaeological interest. All occurrences should be reported.

Wood

A6.1.5 Light coloured wood, or wood that floats easily, is probably modern and is unlikely to be of archaeological interest. 'Roundwood' with bark – such as branches – is unlikely to be of archaeological interest, although it may provide palaeoenvironmental evidence. However, roundwood that has clearly been shaped or made into a point should be reported. Pieces of wood that have been shaped or jointed may be of archaeological interest, especially if fixed with wooden pegs, bolts, or nails – all occurrences should be reported. Objects made from dark, waterlogged wood – such as bowls, handles, shafts and so on – can be very old and are of archaeological interest. All occurrences should be reported.

Stone

A6.1.6 Small to medium size stones that are shaped, polished and/or pierced may be prehistoric axes. All occurrences should be reported. Objects such as axe heads or knife blades made from flint are of prehistoric date and should be reported. Large blocks of stone that have been pierced or shaped may have been used as anchors or weights for fishing nets. All occurrences should be reported. The recovery of numerous stones may indicate the ballast mound of a wreck, or a navigational cairn. All occurrences should be reported.

Pottery

A6.1.7 Any fragment of pottery is potentially of interest, especially if it is a large fragment. Items which look like modern crockery can be discarded, but if the item has an unusual shape, glaze, or fabric it should be reported.

Brick

A6.1.8 Bricks with modern proportions and v-shaped hollows ('frogs') are of no archaeological interest. Unfrogged, 'small', 'thin' or otherwise unusual bricks may date back to Medieval or even Roman times and should be reported.

Peat and Clay

A6.1.9 Peat is black or brown fibrous organic material that was deposited when sea level was so low that the modern seabed formed marshy land, for example on the banks of a river or estuary. The peat is made up of plant remains and contains microscopic remains that can provide information about the environment at the time it was formed. Prehistoric structures (such as wooden trackways) and artefacts are often associated with wetland areas where peat may have formed. In some rare instances archaeological material has been found within peat samples (moorlog) recovered from the North Sea seabed. Fine-grained sediments such as silts and clays are often found at the same places as peat. Any discoveries of such material could be of archaeological interest, and their occurrence should be reported.

A6.2 Artefact Storage Advice

A6.2.1 It should be noted that 'time is of the essence' in terms of the recovery of waterlogged archaeological material. If waterlogged organic items dry out this can cause irreparable damage. Care in handling items is paramount.

A6.2.2 In the event of artefact recovery, the finds should be stored in the following manner:

- If dry, finds should be placed in zip-lock bags and/or stored in a suitable protective container in a cool, dark area if possible.
- If waterlogged, any artefacts should be kept damp, or preferably totally submerged (in sea water), in zip-lock bags which are then stored in ridged plastic boxes to prevent damage. Items should be kept wet, covered, and stored in a cool, dark area if possible, and protected from any damage to potentially delicate waterlogged material.
- Any sediments of interest will be collected and double bagged into zip-lock bags.
- If particularly delicate or significant items are recovered the RA should be contacted for further advice.

A6.2.3 The Developer will supply suitable storage materials to its construction operations. The RA can advise on suitable materials for this purpose. All retained finds will then be processed in accordance with the CIfA's 'Standard and Guidance for the collection, documentation, conservation, and research of archaeological material' (CIfA, 2014b).

ANNEX B. ARCHAEOLOGICAL DISCOVERIES EXAMPLE PRELIMINARY RECORD FORM

Preliminary Record Form: Discoveries on the seabed/on board/in the intertidal zone/on land		
Finder information		
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 the above):		
Location information		
Time at which discovery was encountered:		
Vessel position at time when anomaly was encountered:	Latitude:	
	Longitude:	
	Datum (if different from WGS84)	
Notes on likely accuracy of original position stated above:	How accurate is the position?	
	Is the position the original position or has the material been moved by operations?	
	Details of circumstances and activity that lead to the discovery:	
Find information:		
Description of the find/anomaly:		
Apparent size/extent of the anomaly:		
Details of any find(s) recovered:		
Details of photographs, drawings		

Preliminary Record Form: Discoveries on the seabed/on board/in the intertidal zone/on land	
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:	
Derived from (e.g. Obstacle Avoidance Sonar, Cable Tensiometer?)	
Apparent size/extent of anomaly (length, width, height above seabed):	
Extent of deviation/route development:	
Signed:	Date: