Environmental Impact Assessment Report
Volume 4: Outline Written Scheme of Investigation (WSI) (Offshore)

MarramWind Offshore Wind Farm

December 2025

MarramWind

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1. Introduction

1.1 Overview

1.1.1.1 This Outline Written Scheme of Investigation (WSI) (Offshore) has been produced along with the Environmental Impact Assessment (EIA) Report and aims to ensure best practice measures are adhered to during any activities and to set out the proposed approach to archaeological mitigation and investigations to be undertaken on any archaeological remains potentially impacted by the development.

1.1.1.2 This Outline WSI (Offshore) relates to M-034 of **Volume 3, Appendix 5.2: Commitments Register**.

1.1.1.3 This Outline WSI (Offshore) is part of a suite of outline plans prepared for the Project at the point of submissions for the consents, marine licences and permissions noted above. With agreement from Marine Directorate - Licensing Operation Team (MD-LOT) during a Quarterly Project Update call held on 18 September 2025, a single set of outline plans has been prepared and submitted with these being relevant to each of the marine licence applications submitted for the Project. This approach avoids any duplications of plans across the multiple marine licence applications required for the generating station and transmission components of the Project.

1.2 Project background

1.2.1.1 The Project is wholly owned by Scottish Power Renewables UK Limited (SPR). MarramWind Limited, a subsidiary of SPR, is the Applicant for the Project.

1.2.1.2 The Project is a proposed floating wind farm located in the North Sea, with a grid connection capacity of up to 3 gigawatts (GW). The location of the Project is determined by the Option Area Agreement (OAA), which is the spatial boundary of the Northeast 7 (NE7) Plan Option within which the electricity generating infrastructure will be located. The NE7 Plan Option is located north-east of Rattray Head on the Aberdeenshire coast in north-east Scotland, approximately 75 kilometres (km) at its nearest point to shore and 110km at its furthest point. An option to lease agreement for the Project within the NE7 Plan Option was signed in April 2022.

1.2.1.3 A summary of the Project is provided in **Volume 1, Chapter 1: Introduction** and a comprehensive description of the Project is provided in **Volume 1, Chapter 4: Project Description**.

1.2.1.4 The Project's offshore infrastructure, located seaward of Mean High Water Springs (MHWS), includes the following:

- wind turbine generators (WTGs), including floating units (platforms and station keeping system);
- array cables;
- subsea distribution centres;
- subsea substations;
- reactive compensation platform(s) (if required); and
- offshore export cables to connect the wind farm area to the landfall(s).

1.2.1.5 The EIA Report accompanies applications for offshore consents, licences and permissions for the Project to (MD-LOT under Section 36 (s.36) of the Electricity Act 1989, the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009, for the offshore infrastructure seaward of MHWS.

1.2.1.6 The EIA Report also accompanies an application to Aberdeenshire Council for planning permission in principle consent under The Town and Country Planning (Scotland) Act 1997, for the onshore infrastructure landward Mean Low Water Springs (MLWS).

1.2.1.7 There are four sets of EIA regulations applicable to the Project: the Electricity Works (EIA) (Scotland) Regulations 2017 for offshore generating stations requiring s.36 consent; the Marine Works (EIA) (Scotland) Regulations 2017 and the Marine Works (EIA) Regulations 2007 for marine licence applications within Scottish territorial waters (0 to 12 nautical miles) and offshore waters (12 to 200 nautical miles) respectively; and the Town and Country Planning (EIA) (Scotland) Regulations 2017 for planning applications submitted to Aberdeenshire Council for onshore infrastructure located landward of MLWS.

1.3 Purpose of the Outline Written Scheme of Investigation (Offshore)

1.3.1.1 The Outline WSI (Offshore) forms the basis of the final WSI (Offshore). The Final WSI (Offshore) will be produced and approved post-consent as part of condition discharge prior to construction, operation and maintenance (O&M), and decommissioning by Scottish Ministers in accordance with s.36 and associated marine licences and Aberdeenshire Council, associated with the planning permission. It sets out the framework and methodologies of the archaeological investigations that inform the proposed archaeological mitigation strategies.

1.3.1.2 The Final WSI (Offshore) will state the legislative requirements, current standards of practice and best practice measures that define the standard of construction, O&M and decommissioning practice adhered to by the Contractors. However, adhering to the Final WSI (Offshore) does not absolve the Applicant, Contractors or Subcontractors from complying with legislation and bylaws relevant to their construction, O&M and decommissioning activities.

1.4 Legislation and guidance

1.4.1.1 This Outline WSI (Offshore) has been developed with reference to the following key guidance:

- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014);
- Chartered Institute for Archaeologists (CIfA) Code of Conduct (CIfA, 2022);
- CIfA Standards and Guidance (CIfA, 2020a, 2020b, 2020c, 2020d, 2020e);
- Marine Geophysical Data Acquisition, Processing and Interpretation: Guidance Notes (2nd Edition) (Historic England, 2025);
- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector (Gribble and Leather, 2011);
- Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021);

- Historic Environment Guidance for the Offshore Renewable Energy Sector (Wessex Archaeology, 2007); and
- Code for Practice for Seabed Development (Joint Nautical Archaeology Policy Committee (JNAPC), 2006).

1.4.1.2 The fundamental objectives of a WSI for offshore development (i.e. of relevance to the Project) are set out in the Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021) (hereafter, referred to as 'The Crown Estate guidance') as follows:

- set out the roles and respective responsibilities of the Project Team; Contractors, and Retained Archaeologist and Archaeological Contractor(s) and formal lines of communication between the parties and with the Archaeological Curator(s);
- outline the known and potential archaeological receptors that could be impacted by the Project;
- outline the agreed mitigation and archaeological actions that are to take place in various circumstances;
- set out the importance of research frameworks in setting objectives that are delivered through the realisation of the work; and
- provide summarised details on methodologies for these archaeological actions, which will be clarified in more detail in subsequent activity-specific Method Statements.

1.4.1.3 The Crown Estate (2021) guidance document was prepared by Wessex Archaeology for The Crown Estate to set out agreed archaeological methodologies so that they do not have to form part of the drafting and agreement of each WSI prepared for the offshore renewables industry. As such, these methodologies will not be duplicated here. Rather, this Outline WSI (Offshore) draws upon these standards, agreed methodologies and, for each section, sets out how these are relevant to the delivery of the Project and explains any necessary adaptations and amendments for agreement with Historic Environment Scotland (HES).

1.4.1.4 This Outline WSI (Offshore) has been prepared based upon the results of the baseline desk-based assessment and site-specific surveys undertaken for the Project, specifically the following documents:

- **Volume 3, Appendix 16.1: Marine Archaeology Desk-based Assessment**;
- **Volume 3, Appendix 16.2: Archaeological Assessment of Marine Geophysical Survey Data for the MarramWind Offshore Wind Farm**;
- **Volume 3, Appendix 16.3: Export Cable Corridor Geophysical Archaeology Analysis**; and
- **Volume 3, Appendix 16.4: Stage 1 Marine Geoarchaeological Assessment**.

1.4.1.5 Cross-referencing across the Appendix reports is included within this Outline WSI (Offshore), where appropriate.

1.5 Implementation of the Written Scheme of Investigation (Offshore)

1.5.1.1 The Final WSI (Offshore) approved by HES and the Aberdeenshire Council archaeological advisor will be incorporated into the contracts for Principal Contractors responsible for the works. All parties involved, including Principal Contractors, Subcontractors and their suppliers, must comply with the relevant provisions of the Final WSI (Offshore) and

associated targeted method statements produced. All parties are obligated to provide documentation outlining how they will guarantee both the implementation and monitoring of the Final WSI (Offshore) requirements.

1.6 Scope of Outline Written Scheme of Investigation (Offshore)

1.6.1.1 The Outline WSI (Offshore) will cover the following:

- offshore personnel, roles and responsibilities, and reporting structures in relation to archaeological investigation, including for Contractors and Subcontractors; and
- the procedure for communicating and reporting any archaeological compliance matters associated with the Outline WSI (Offshore) with the MD-LOT and relevant stakeholders.

1.7 Other related implementation plans

1.7.1.1 The WSI (Offshore) will be developed with consideration of the content and requirements of other relevant Implementation Plans. These are set out in **Table 1.1** below, with details of the linkages.

Table 1.1 Other related implementation plans to the Written Scheme of Investigation (Offshore)

Implementation plan	Linkage with Written Scheme of Investigation (Offshore)
Protocol for Archaeological Discoveries (Volume 3, Appendix 16.5)	The Protocol for Archaeological Discoveries (PAD) defines the methodology and procedures for identifying, managing, and reporting archaeological discoveries within the marine environment during activities with no direct archaeological supervision.
Environmental Management Plan	The **Outline Environmental Management Plan** references the Outline WSI (Offshore). The Outline WSI (Offshore) outlines the procedures to be followed on discovering and marine archaeology during the construction and O&M phase of the Project.
Project Environmental Monitoring Programme	The **Outline Project Environment Monitoring Programme** defines any AEZ monitoring required, such as post-construction geophysical surveys.

2. Archaeological and Historical Background

2.1 Archaeological assessment of geophysical data

2.1.1 Option Agreement Area summary

2.1.1.1 The archaeological assessment of geophysical data identified six anomalies of high archaeological potential, 17 anomalies of medium archaeological potential and 48 anomalies of low archaeological potential (see **Volume 3, Appendix 16.2** (COARS 2025a) for further information).

2.1.1.2 The six high potential anomalies consist of the following:

- MW_Arr_Arch_0005 is a wreck tentatively identified as the SS *Tobol*, torpedoed and sank by UC-52 in 1917;
- MW_Arr_Arch_0016 is the wreck of the *Ocean Challenge* (UKHO 67749), a late-20th century fishing vessel;
- MW_Arr_Arch_0037 is the wreck of the *Emma Jayne* (UKHO 57916), a late-20th century trawler sunk in 1999,
- MW_Arr_Arch_0040 is a wreck tentatively identified as the *Compass Rose 3,* a 1948 YMS-1 class motor minesweeper sunk during a storm in 1975;
- MW_Arr_Arch_0052 is a wreck tentatively identified as the FV *Lucerne*, sunk in 1915 by U-23, now recorded as UKHO record 100044; and
- MW_Arr_Arch_0053 is an unidentified and previously uncharted wreck, tentatively thought to be a mid to late-20th century trawler, now recorded as UKHO record 100224.

2.1.2 Offshore export cable corridor summary

2.1.2.1 The archaeological assessment of geophysical data identified eight anomalies of high archaeological potential, 16 anomalies of medium archaeological potential and 54 anomalies of low archaeological potential (see Appendix 16.3 of the EIA Report; COARS 2025b for further information).

2.1.2.2 The eight high potential anomalies consist of the following:

- MW_ECC_Arch_001 is a wreck identified as the SS *Magician*, which ran aground in 1994, identified 520m north of the recorded wreck locations within the UKHO and Canmore data (UKHO record 2279 and Canmore record 101741);
- MW_ECC_Arch_015 is a wreck identified as the SS *Muriel*, torpedoed and sunk by UC-58 in 1918;
- MW_ECC_Arch_020 is a wreck identified as the SS *St Magnus*, which was sunk in 1918 by either a torpedo or a mine, associated with UKHO Record 2286 and Canmore record 101844;
- MW_ECC_Arch_023 is an unidentified and previously uncharted wreck;
- MW_ECC_Arch_027 is an unidentified and previously uncharted wreck, tentatively thought to be a fishing vessel;

- MW_ECC_Arch_046 is a wreck identified as the SS *Louisiana*, torpedoed and sunk by UC-45 in 1917, associated with UKHO Record 74759 and Canmore Record 324504;
- MW_ECC_Arch_059 is a steam trawler wreck identified as the *Stratclunie*, sunk following a collision in 1928, associated with UKHO record 2284 and Canmore record 202103; and
- MW_ECC_Arch_076 is a wreck identified as the *Bel Lily*, sunk by a mine in 1917.

2.2 Marine geoarchaeological assessment

2.2.1.1 The shallow Pleistocene and Holocene geological deposits identified within the Project (see **Volume 3, Appendix 16.4** COARS 2025c for further information) comprises the following:

- Holocene Marine, expected to comprise of clayey, silty sand and coarse sand with occasional gravel and isolated to scattered cobbles and boulders dating to the Holocene (MIS 1; post 11.7ka);
- Forth Formation (St Andrews Bay Member), comprised of fine medium dense sand with shells and shell fragments, in places rare pockets of organic matter dating to the Late Devensian (Younger Dryas) to Holocene (MIS 2/1; post 12.9ka);
- Forth Formation (Largo Bay Member), comprised of extremely low to low strength clay interbedded with sandy silt, shells and shell fragments dating to the Late Devensian (Windermere Interstadial) (MIS 2; 14.7-12.9ka);
- Witch Ground Formation, comprised of fine sands and silts, often laminated, unit is often acoustically blank but characterized by the occurrence of pockmarks, dating to Late Devensian / Early Holocene (MIS 2/1; post 29ka);
- Swatchway, comprised of extremely low to medium strength sandy clay with occasional gravel thought to date to Middle Devensian (MIS 3/2; approximately 57-26ka);
- Wee Bankie, comprised of fine to coarse loose to very dense sand with high strength clay, gravel, cobbles, boulders and shells dating to Late Devensian (MIS 2; 29-11.7ka); and
- Coal Pit, comprised of sandy silty clay and interlaminated clay and fine-grained silty sand; clay is generally stiff and over consolidated with some pebbles, shell fragments and complete valves abundant in places, and boulders. This formation is thought to date between MIS 6 and 2 (approximately 191 and 29ka).

2.2.1.2 The Holocene Marine and Forth Formation (St Andrews Bay Member) deposits are marine deposits from a deltaic or low to moderate energy marine environment. The Forth Formation (Largo Bay Member), Witch Ground Formation, and Swatchway are glaciomarine deposits. Wee Bankie is a glacial till deposit and the Coal Pit formation is thought to have been laid down as infill deposits within tunnel valleys that were eroded during / immediately after Middle Pleistocene glaciation.

1.1.1.1 The following three vibrocore sections are recommended for Stage 2 geoarchaeological recording. Core section depths for the samples identified as suitable for Stage 2 recording are provided below:

- For cores MRW-ECC-VC-03 and MRW-ECC-VC-12A, 2.10 to 2.50m, radiography and laminography are recommended during the Stage 2 recording as these will aid the interpretation of the depositional environment, as well as an estimate of mollusc shell abundance and preservation. Radiography and laminography of MRW-ECC-VC-03 and MRW-ECC-VC-12A should be undertaken only if the samples are sufficiently intact.

- For core MRW-ECC-VC-05A, samples between 1.25 and 2.25m should be made available for assessment, most notably those from 2.10 to 2.25m. These samples can consist of both stratified core sections and bagged / post-testing samples from these depths. This will permit sieving to extract the reported wood fragments to enable identification. Up to ten wood fragments should be selected for wood identification.

2.3 Palaeolandscapes

2.3.1 Option Agreement Area summary

2.3.1.1 The interpretation of the available SBP and 2D UHR datasets from the OAA indicate the presence of thick Middle to Late Quaternary deposits across the area, comprising the Aberdeen Ground Formation at the base, overlain by the Ling Bank Formation, Fisher Formation, Coal Pit Formation, Swatchway Formation, Witch Ground Formation and Holocene (including modern) seabed deposits. The majority of the formations mapped within the area were likely deposited in marine to glaciomarine environments, with the presence of deep channels observed within the Ling Bank and Coal Pit Formations indicating multiple phases of sub-glacial channelling due to Pleistocene glaciations over the array area during the Saalian and Devensian periods.

2.3.1.2 It is considered that the OAA may have been nearshore or partially intertidal prior to the advance of the Late Devensian ice sheet over the area, with the area to the south dry land and to the north marine (Clark *et al*., 2022). It is likely that area would have had a palaeoclimate non-conducive to human occupation as it would have been covered in an ice sheet between 28ka and 19ka. The array area would have been submerged following the ice sheet retreat, leading to glaciomarine sediment deposition during the Late Glacial and Early Holocene periods (Shennan *et al*. 2018; Sturt *et al*. 2013; Bradley *et al*. 2023). Any Late Glacial to Early Holocene shorelines and submerged palaeolandscapes would only be found, if present and preserved, in shallower waters west of the array area towards the Scottish coast.

2.3.1.3 The assessment of prehistoric archaeological and palaeoenvironmental potential has identified that there is low potential for the former, though opportunities exist to enhance understanding of the Middle to Late Pleistocene and Early Holocene palaeoenvironment of the area.

2.3.2 Offshore export cable corridor summary

2.3.2.1 The interpretation of the available SBP and 2DUHRS datasets from the offshore export cable corridor indicates the presence of thick Middle to Late Quaternary deposits across the area. The formations likely to be encountered by the Proposed Development include the Coal Pit Formation, Wee Bankie Formation, Swatchway Formation, Witch Ground Formation, Forth Formation and Holocene (including modern) seabed deposits. These are likely to be Late Pleistocene to Holocene in age, mainly associated with the Devensian glaciation and subsequent Holocene marine phase.

2.3.2.2 The sequences contain a record of glacial activity in the area, with MSGLs and ridges present across large areas of the route formed by Devensian ice streams. Also present are possible eskers which have a radial pattern that can also infer past ice sheet activity and retreat. Geotechnical sampling of such features would permit the opportunity to establish if these are eskers, as well as potentially providing opportunities to understand their source (e.g. clast analysis). Probable glaciotectonic features are also present, including probable moraines associated with the Bosie's Bank and Wee Bankie Formation. The dataset collected from the offshore export cable corridor provides an opportunity to map these

glacial features along the route. Currently, the mapping of glacial landforms in this offshore area is lacking (Clark *et al.*, 2018). The offshore export cable corridor is also within an area critical for understanding ice stream dynamics, particularly due to the complex nature of multiple converging Devensian ice streams in the Buchan area (Merritt *et al.*, 2003).

2.3.2.3 Glacial and glaciomarine environments are not conducive to archaeological activity. Therefore, the archaeological potential of many of these formations is low to non-existent. There is no evidence within the SBP data to suggest that sediments of archaeological interest (fine-grained or organic deposits) are present within the nearshore area that could provide a palaeoenvironmental record for the Late Glacial to Holocene. However, the deposits mapped within the offshore export cable corridor do offer the potential to enhance understanding of Devensian ice-stream activity and glacial dynamics in the region, leading to an improvement in palaeogeographic reconstructions that can aid the interpretation of the archaeological record.

2.3.2.4 Within the nearshore areas, possible dune or beach deposits sitting upon the bedrock surface at the Scotstown landfall might yield evidence of a submerged palaeo-landsurface, whereas at the Lunderton landfall a possible palaeochannel is present incised into the bedrock through the centre of this bay. The geoarchaeological potential of these features could be established through geotechnical techniques (e.g. vibrocores).

2.4 Archaeological background

2.4.1.1 There are no designated heritage assets located within the Project.

2.4.1.2 The desk-based assessment has identified 153 non-designated assets within the Red Line Boundary and 609 non-designated assets within the marine archaeology study area a 5km buffer around the OAA and offshore export cable corridor (**Volume 2, Figure 16.2: Non-designated historic environment features**). These assets are primarily comprised of post-medieval and modern ship remains, such as trawlers, schooners, barques and fishing vessels, in addition, to the remains of military watercraft and aircraft.

2.4.1.3 There is little known evidence of sustained activity within the Site or marine archaeology study area until the medieval period. Evidence from the Boddam area of Peterhead, located to the south of the study area, suggests that prehistoric activity was centred in that area as a result of the abundance of flint outcroppings in the gravels there. The little evidence from the later prehistoric periods indicates that the area was sparsely populated with dispersed evidence of agricultural activity, but no centre of settlement has been identified. The centre of activity in medieval period was the manor of Inverugie which was supported by small fishing villages along the coast and a small harbour protected by a motte at the mouth of Ugie River. The extent of medieval activity along the coast and the nearshore has not been determined. The development of Peterhead in the early post-medieval shifted the focus of the population and allowed for the commercial development of maritime activity through trade and fishing which continued into the modern period. The remains within the Red Line Boundary and marine archaeology study area contain large numbers of shipwrecks from the modern period, many of them dating to the world wars.

3. Archaeological Potential and Research Priorities

3.1 Archaeological potential

3.1.1 Palaeolandscape and Palaeoenvironmental

3.1.1.1 The Red Line Boundary has low potential to contain palaeolandscape remains. The Red Line Boundary experienced repeated glaciations throughout the Pleistocene epoch, resulting in periodic glacial cover that made the broader landscape uninhabitable at times. The interpretation of the marine geophysical data indicates the presence of thick Middle to Late Quaternary deposits across the area. These deposits include formations such as the Aberdeen Ground Formation, Ling Bank Formation, Fisher Formation, Coal Pit Formation, Swatchway Formation, Witch Ground Formation, which were likely deposited in marine to glaciomarine environments, with deep channels observed within the Ling Bank and Coal Pit Formations indicating multiple phases of sub-glacial channelling due to Pleistocene glaciations over the Red Line Boundary during the Devensian period. Glacial and glaciomarine environments are not conducive to archaeological activity, resulting in little archaeological potential for many of these formations. However, analysis of the sub-bottom profiler data suggests that the deposits mapped within the offshore export cable corridor section of the Red Line Boundary have the potential to enhance understanding of Devensian ice-stream activity and glacial dynamics in the region, leading to an improvement in palaeogeographic reconstructions, which can aid the interpretation of the archaeological record. These deposits, therefore, would likely be of up to **medium** value derived from archaeological interest.

3.1.1.2 Any shorelines or submerged palaeolandscapes dating from the Late Glacial to Early Holocene would only be present, if preserved, in shallower waters west of the Red Line Boundary toward the Scottish coast. Within the nearshore areas, possible dune or beach deposits sitting upon the bedrock surface at the Scotstown landfall might yield evidence of a submerged palaeolandsurface, whereas at the Lunderton landfall, a possible palaeochannel is present incised into the bedrock through the centre of this bay. The geoarchaeological potential of these features is currently undetermined.

3.1.1.3 Given the predominantly marine deposits throughout the Red Line Boundary, it is considered that there is no potential for palaeoenvironmental remains through much of the Red Line Boundary. There is undetermined but possibly low potential for palaeoenvironmental remains in the nearshore areas.

3.1.2 Prehistoric

3.1.2.1 The Project has low potential to contain Palaeolithic remains. Any potential Palaeolithic sites (such as middens or hearths) or objects (tools or weapons) that may have survived the glacial processes due to the rocky nature of the area would be either buried within sheltered areas, such as gullies, or in previous lowstand sea caves. Any potential archaeological remains would be highly significant, due to the rarity of such sites across the region. Isolated findspots of stone tools or faunal remains dated to this period are possible within or at the interface between Pleistocene deposits and later geological deposits.

3.1.2.2 If present, Palaeolithic temporary settlement remains would be of **high** or **very high** value, depending on preservation and extent, derived from their archaeological interest. Remains

of lithic material would be **low** value if comprised of isolated lithic remains or **medium** value if comprised of lithic scatters, depending upon the type and extent.

3.1.2.3 The Project has moderate potential to contain Mesolithic prehistoric remains. In addition to the Early Mesolithic flint blades identified within the onshore study area for onshore archaeology, extensive fieldwalking and excavation along the River Dee, which runs through Aberdeenshire to the coast at Aberdeen (south of Peterhead), have uncovered over 11,000 lithic artefacts dating through the Late Upper Palaeolithic to the Mesolithic and into later periods (Wickham-Jones *et al*. 2021). These finds include microliths and other flakes of stone typical of Mesolithic hunter-gatherers and demonstrate that early prehistoric communities were widespread and active in this landscape, especially near water sources and on postglacial gravel terraces (Wickham-Jones *et al*. 2021). Peterhead would have been attractive to Mesolithic groups due to access to marine and terrestrial sources; however, much of the Mesolithic evidence in Scotland is found in river valleys or terraces rather than exposed coastal sites, possibly due to later landscape changes, sea-level rise, or limited investigation of the coastal zone (Wickham-Jones *et al*. 2021). While evidence of Mesolithic activity is generally limited to lithic scatters, it is possible that temporary settlement is present, linked to the abundant natural resources, both marine and terrestrial, that would have been available during this period.

3.1.2.4 If present, Mesolithic temporary settlement remains would be of **high** or **very high** value, depending on preservation and extent, derived from their archaeological interest. Remains of lithic material would be **low** value if comprised of isolated lithic remains or **medium** value if comprised of lithic scatters, depending upon the type and extent.

3.1.2.5 The Project has moderate potential to contain evidence of marine resource exploitation dating to the Neolithic, Bronze Age, and Iron Age. While no direct evidence of watercraft, marine resource exploitation or maritime structures from these periods has been identified within the Red Line Boundary or marine archaeology study area, historic environment records from the onshore Red Line Boundary and Study Area have documented assets linked to these periods. These findings suggest locations of potential archaeological interest that may serve as proxies for past offshore activities.

3.1.2.6 If present, evidence of later prehistoric remains would be of up to **medium** value, depending on preservation and extent, derived from their archaeological interest. Isolated remains would be of **low** value derived from archaeological interest.

3.1.3 Roman

3.1.3.1 There is low potential for the Project to contain Roman remains. Remnants of Roman ports and maritime structures are rare in Britain, particularly in northern and peripheral regions of Scotland, as Roman influence did not reach these areas extensively. The nearest evidence of Roman material culture is found at Dunnicaer promontory fort located on the coast, about 68km to the south of the Red Line Boundary. Further research is required to better understand the extent of Roman activity and influence in this area.

3.1.3.2 If present, Roman ships and maritime infrastructure would be of **high** or **very high** value, depending on preservation and extent, derived from their archaeological interest. Isolated remains would be of **low** value derived from archaeological interest.

3.1.4 Medieval

3.1.4.1 The Project has low potential to contain Pictish remains. While evidence from the onshore Red Line Boundary suggests a possible Pictish presence and trade activity in Peterhead, there is currently limited direct archaeological evidence to substantiate Pictish engagement in maritime contexts in this area. Although the Picts were historically associated with coastal

regions and may have participated in seafaring activities, the archaeological record lacks definitive proof of such involvement in this area. Many coastal Pictish sites have suffered from erosion, which can remove and occasionally expose artefacts, but also means much has been lost to the sea, rather than intentional deposition of artefacts in marine or coastal settings (University of Aberdeen, 2025). The discovery of submerged Pictish material is exceedingly rare; most known Pictish artefacts in Scotland have been recovered from terrestrial contexts, hoards, or eroded coastal settlements (University of Aberdeen, 2024).

3.1.4.2 If present, remains of Pictish boats or maritime infrastructure would potentially be of **high** value derived from their archaeological and historical interest. Remains of medieval coastal infrastructure would be of **high** or **medium** value, depending on preservation and extent, derived from archaeological and historical interest. Isolated remains would be of **low** value, derived from archaeological interest.

3.1.4.3 The Project has low potential to contain Viking remains. While the northeast coast of Scotland was within the sphere of Norse influence and experienced some Viking activity, aside from the battle at Cruden Bay near Peterhead, there is no additional evidence currently available to indicate a Viking presence within the Red Line Boundary. The likelihood of offshore discoveries of Viking ship remains is similarly low, as there have been no confirmed finds along the northeast mainland coast near the Red Line Boundaryor in the broader Aberdeenshire region. Although, this does not rule out the potential for future discoveries.

3.1.4.4 If present, remains of Viking boats or maritime infrastructure would be of **high** value derived from their archaeological and historical interest. Remains of medieval coastal infrastructure would be of **high** or **medium** value, depending on preservation and extent, derived from archaeological and historical interest. Isolated remains would be of **low** value, derived from archaeological interest.

3.1.4.5 The Project has moderate potential to contain post-Viking medieval remains. Although small-scale fishing activities and coastal occupation occurred throughout the medieval period, no substantial harbour constructions or documented maritime infrastructure are recorded before the late 16th century at Peterhead. Furthermore, any remains of medieval vessels or maritime infrastructure offshore are yet to be identified in this area. The proximity of Keith Inch and the known engagement with fishing activities from at least the 1500s (notably Dutch fishermen using Peterhead Bay in the mid-1500s) hints at some maritime use during this period. The lack of early major harbour works could mean smaller-scale, more ephemeral maritime features or artefacts related to fishing and coastal trade such as fishing gear, wooden structures, or small boat remains might survive, especially within intertidal or nearshore deposits.

3.1.4.6 If present, remains of medieval boats / ships or maritime infrastructure would be of **high** value derived from their archaeological and historical interest. Remains of medieval coastal infrastructure would be of **high** or **medium** value, depending on preservation and extent, derived from archaeological and historical interest. Isolated remains would be of **low** value, derived from archaeological interest.

3.1.5 Post-Medieval

3.1.5.1 The Project has high potential to contain post-medieval remains. Peterhead Bay has long served as an important hub for fishing and shipbuilding since the establishment of Port Henry. The harbour's development provided improved safe anchorage, enabling it to accommodate numerous vessels and increasing the potential of maritime archaeological remains in the area. Historical and contemporary accounts confirm several hundred wrecks within the Red Line Boundary and marine archaeology study area boundaries, as well as in nearshore waters, suggesting that additional undiscovered remains may exist, either buried

or exposed due to seabed sedimentation and erosion. The harbour and coastal infrastructure evolved significantly from the 17th century onwards, with breakwaters and piers built and expanded to protect the port, yet this period also witnessed frequent and extensive shipwrecks on rocks. Given the high density of maritime traffic and the North Sea's challenging conditions, and documented loss incidents, the Red Line Boundary and marine archaeology study area likely hold several well-preserved or partial wrecks from this period, though some may be buried or partially buried by sediment. Additionally, due to the area's longstanding history as a maritime hub and fishing port, there may be remnants of vessels used for whaling, fishing, and trade, along with associated materials.

3.1.5.2 Remains of early post-medieval ships and maritime infrastructure would potentially be of **high** value derived from their archaeological and historical interest, if present. Remains of later wooden and iron post-medieval ships and maritime infrastructure would be of **high** or **medium** value, depending on type, preservation and extent, derived from archaeological interest. Early steel shipwrecks would likely be of **medium** value depending on type, preservation and extent, derived from archaeological interest. Isolated remains would be of **low** value derived from archaeological interest.

3.1.6 Modern

3.1.6.1 The Project has high potential to contain modern ship and military watercraft remains. In addition to its commercial maritime activities, Peterhead was involved in naval operations during both World Wars. The existence of shipwrecks from this period within the Red Line Boundary and marine archaeology study area substantiates evidence of such activities and suggests that additional remains may still be undiscovered or concealed beneath sediments. Peterhead was heavily bombed 28 times during the war due to its strategic position. Defensive installations, in addition to the identified pillboxes along the nearshore of the Red Line Boundary and marine archaeology study area, such as gun batteries, anti-aircraft positions, or shelters, may remain along the coast of or near the Red Line Boundary, although specific surviving structures are not widely documented.

3.1.6.2 The Project has high potential to contain military aircraft remains. There have been identifications of aviation remains within the offshore and nearshore marine archaeology study area. Aircraft rarely leave articulated remains on the seabed after crashing; impact scatters wreckage, and lightweight materials often cause debris to drift before sinking. If further remains are found, they are most likely to be found in a disarticulated state.

3.1.6.3 Remains of modern shipwrecks and maritime infrastructure would likely be of **medium** significance derived from archaeological and historical value. Sunken military and aircraft remains would be of **high** value derived from archaeological and historical interest. Submarine remains would be of **high** value derived from archaeological and historical interest. Isolated remains would be of **very low** value derived from archaeological interest.

3.2 Research priorities

3.2.1.1 Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021) states that a WSI should set out "the importance of research frameworks in setting objectives that are delivered through realisation of the work".

3.2.1.2 The following research frameworks have been identified as relevant to the marine archaeology resource of the Project:

- North-East Scotland Regional Research Framework (Aberdeenshire Council, 2025); and

- Scottish Archaeological Research Framework (ScARF) – National Research Framework (ScARF, 2025).

3.2.1.3 The general research questions derived from these research frameworks have been identified as relevant to the marine archaeology resource of the Project:

- examine the process of environmental change, and their resultant impact, upon northeast Scotland and reconstruct the environment in the northeast Scotland during the prehistoric periods; and
- explore the development of northeast Scotland's coastline over time and consider the impact of sea-level change on contemporary populations.

3.2.1.4 Additional research aims may be identified as relevant depending on the specific archaeological work to be undertaken. Any archaeological work and reporting under this Outline WSI (Offshore) will tie research into the relevant research frameworks and agendas, ensuring that the Project contributes to archaeological knowledge. The objectives of the research frameworks will be used to guide work and recommendations made by the Archaeological Consultant and Retained Archaeologist to the Project.

4. Roles, Responsibilities and Communication

4.1.1.1 Overall responsibility for the implementation of the Final WSI (Offshore) will lie with the Applicant who will ensure that its agents and contractors are contractually bound to adhere to the terms of the final Offshore WSI and to implement the PAD.

4.1.1.2 For each package of archaeological works, the Applicant or their agents will, as required, procure the services of specialist archaeological contractors with the requisite experience and expertise to undertake the necessary works. In addition, the Applicant will retain the services of a suitably qualified and experienced archaeological consultant (the Retained Archaeologist) to ensure the effective implementation of the final Offshore WSI and other contractual commitments in relation to archaeology.

4.1.1.3 The 'Regulator' is responsible for the approval of the WSIs and is advised by the Archaeological Curator. The regulator within Scotland / Alba is Scottish Ministers and MD-LOT on behalf of the Scottish Ministers.

4.1.1.4 MD-LOT's statutory advisor on the marine historic environment and the archaeological curator for heritage matters offshore (below MHWS) is HES / local planning authority archaeological advisor. The 'Archaeological Curator(s)' provides the development control and planning advice to the regulators, has the final decision on the scope of work and signs off the archaeological fieldwork when it is complete, in consultation with the consultant.

4.1.1.5 The 'Archaeological Consultant' is responsible for managing the scope and for monitoring and assuring the work on behalf of the client. The team will liaise directly with the Retained Archaeologist, curator, and the Regulator. The following are examples of the responsibilities of the Archaeological Consultant:

- compiling, reviewing and updating this Outline WSI (Offshore) following consultation with the regulators (MD-LOT) and curators (HES) post-consent to produce a final, agreed Offshore WSI; Advising the Applicant on their responsibilities regarding the implementation of the final Offshore WSI and the PAD;
- compiling, agreeing and issuing method statements for archaeological contractors to adhere to, following consultation with the Applicant, the regulators and curators; and
- advising the Applicant on the necessary interaction with the regulators, curators and other third parties.

4.1.1.6 The 'Retained Archaeologist' is responsible for managing the implementation of the PAD (see paragraph 4.1.6.1 of **Volume 3, Appendix 16.5**) and for monitoring and assuring the work of specialist archaeological contractors, on behalf of the Applicant. The team will liaise directly with the archaeological consultant, curator and the Regulator. The Retained Archaeologist should have the autonomy to make recommendations based on their specialist knowledge and experience. The responsibilities include:

- procuring, monitoring the work of, and liaising with specialist archaeological contractors;
- monitoring the preparation and submission of archaeological reports as appropriate and making them available to the regulators and curators for review and approval;
- advising the Applicant on any final requirements and arrangements for further analysis, archive deposition, publication and popular dissemination.

4.1.1.7 The ‘specialist archaeological contractors’ are responsible for carrying out the fieldwork, post-excavation reporting, deposition of the archive and dissemination as needed. The specific responsibilities of specialist archaeological contractors during subsequent phases of work will be set out in separate task / work package-specific method statements.

4.1.1.8 All agents and contractors engaged by the Applicant will:

- familiarise themselves with the requirements of the Final WSI (Offshore) and make it available to their staff, explaining the requirements and need for strict adherence;
- familiarise themselves with the PAD (**Volume 3, Appendix 16.5** and see **paragraphs 6.3.1.1** to **6.3.1.7** in this Outline WSI (Offshore)) and ensure the implementation of and adherence to the protocol by staff, including ensuring staff awareness of the protocol and making staff available for training through toolbox talks, as necessary;
- assist and afford access to archaeological contractors as advised by the Applicant and the Retained Archaeologist; and
- inform the Retained Archaeologist and the archaeological contractors of any environmental or health and safety constraints of which they may be aware that are relevant to the archaeologist’s activities on site.

4.1.1.9 Prior to and during the course of any geoarchaeological recording, assessment and analysis, consultation with the HES Regional Science Advisor is also recommended to agree on the suitability of the approach.

5. Embedded Environmental Measures

5.1 Embedded environmental measures

5.1.1.1 In order to prevent significant impacts, the following mitigation will be embedded in the project design and will be secured through conditions set out in the s.36 marine licence:

- bespoke Archaeological Exclusion Zones (AEZs) on geophysical anomalies for high and medium archaeological potential;
- avoidance, where possible, of identified anomalies by micro-routing;
- avoidance by micro-routing, where possible, of previously recorded sites that have not been seen in the geophysical data and at which the presence of surviving material is considered unlikely, although it cannot be entirely discounted;
- further investigation of any identified anomalies and previously recorded sites that cannot be avoided by micro-siting of design;
- further examination of potential palaeoenvironmental deposits, including geoarchaeological recording of core samples, deposit modelling and archaeological input into any future sampling programme(s);
- in the event of impact to potential sites, the establishment of a formal protocol to ensure that any finds are promptly reported, archaeological advice is obtained, and any recovered material is stabilised, recorded and conserved (PAD);
- watching briefs where seabed material is brought to the surface, for example, during pre-lay grapnel runs and the excavation of the horizontal directional drilling pits; and
- the archaeological assessment of any further geophysical data acquired as part of the Project.

5.2 Additional mitigation

5.2.1.1 Additional mitigation may be required where anomalies or AEZs cannot be avoided, sites are potentially of sufficient importance, or where unexpected discoveries are encountered and reported through the PAD. This may include measures to further investigate the nature and extent of anomalies and / or discoveries, to establish the archaeological interest and to record them prior to removal. The precise methodology for such works would be set out in works site-specific method statements in consultation with HES prior to works commencing.

6. Archaeology Strategy

6.1.1.1 The methodologies presented below summarise the Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021). It is an essential requirement of this Outline WSI (Offshore) that all approaches presented in this document adhere to The Crown Estate's methodologies with the exception of any adaptations and amendments under agreement with MD-LOT in consultation with HES.

6.2 Archaeological samples and artefacts

6.2.1.1 In the event that further environmental samples are obtained during any additional pre-construction geotechnical surveys, any samples that are suitable for archaeological and palaeoenvironmental assessment will be subject to geoarchaeological assessment (see **paragraphs 6.5.1.1** to **6.5.1.9**).

6.2.1.2 Any remains encountered during the Project activities would be treated in accordance with the relevant guidance (The Crown Estate, 2021) and:

- Standards and guidance for the collection, documentation, conservation and research of archaeological materials (CIfA, 2014);
- First Aid for Finds (Leigh *et al*., 1998); and
- First Aid for Underwater Finds (Robinson, 1998).

6.2.1.3 Isolated discoveries of artefacts that may come to light during the course of the development will be dealt with through the PAD (see **paragraphs 6.3.1.1** to **6.3.1.7**).

6.2.1.4 With regard to archaeological works from the point of discovery, all finds will be held by the archaeological contractor in appropriate conditions pending further recording, investigation, study or conservation.

6.2.1.5 Recovered objects will be selected, retained or disposed of in accordance with the policy agreed with the institution receiving the archive, and in consultation with the archaeological contractors. Contingency will be made for specialist advice and conservation needs on-site should unexpected, unusual or extremely fragile and delicate objects be recovered.

6.2.1.6 If human remains are discovered, an application for a licence from the Ministry of Justice under Section 25 of the Burials Act 1857 will be made by the Archaeological Contractor(s). The works will also take place in accordance with the appropriate Environmental Health regulations. With regard to the remains of crashed aircraft, the majority of aircraft wrecks are military and so fall under the legal protection of the Protection of Military Remains Act 1986. Other specific and bespoke requirements may also be required.

6.2.1.7 All archaeological artefacts that have come from a shipwreck are considered to be subject to the Merchant Shipping Act 1995. The Applicant, via their archaeological contractors, should ensure that the Receiver of Wreck (RoW) is notified within 28 days of recovery, by the Applicant or their agents, for all items of wreck that have been recovered.

6.2.1.8 All recovered materials will be subject to a conservation assessment to gauge whether special measures are required while the material is being held. This conservation assessment will be carried out by the Retained Archaeologist or an archaeological contractor with advice from appropriate specialists. The Retained Archaeologist (where appointed) or an archaeological contractor will implement recommendations arising from the conservation assessment. Where no special measures are recommended, finds will be

conserved, bagged, boxed and stored in accordance with industry guidelines (Leigh *et al*., 1998 and CIfA, 2014).

6.3 Protocol for Archaeological Discoveries

6.3.1.1 To account for unexpected discoveries of archaeological material during construction, operation and decommissioning, a formal protocol is required. It is recommended that if any objects of possible archaeological interest are encountered, they should be reported using the protocol outlined in **Volume 3, Appendix 16.5**, which is based on the Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014). This will establish whether the objects are of archaeological interest and recommend appropriate mitigation measures where necessary.

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

- pre-construction surveys, examples may include:
  - anomalies on the seabed identified by geophysical contractors;
  - obstructions on the seabed encountered during geotechnical surveys or grab sampling;
  - archaeological material within cores or grab samples;
  - seabed features identified during diver or Remotely Operated Vehicle (ROV) surveys;
- seabed clearance, pre-lay grapnel runs (e.g. finds brought to the surface);
- plough and grapnel clearance activities;
- vessel anchoring (e.g. anchor caught on obstruction); and
- installation of cables (e.g. obstruction interactions with cable lay plant).

6.3.1.3 PADs were first used in December 2010 and were applied to pre-construction, construction and installation activities in developing offshore renewable energy schemes where an archaeologist was not present on site. The protocol allows for the effective reporting of discoveries of archaeological material to ensure that advice, concerning measures to address discoveries, is received and implemented efficiently.

6.3.1.4 Each vessel or worksite team has a Site Champion, a single person responsible for reporting discoveries to a Nominated Contact in the Applicant's core team. The Nominated Contact will contact the Retained Archaeologist and Archaeological Consultant regarding any new discoveries.

6.3.1.5 Individual Site Champions for specific activities will be specified in work package method statements and the identity of the Site Champion will be clearly communicated to work teams. The Applicant will be responsible for ensuring that teams are provided with appropriate training in the application of the PAD and that all staff and contractors are aware of their responsibilities under the protocol. The Applicant may utilise the expertise of the appointed Retained Archaeologist to manage the PAD.

6.3.1.6 Training to construction staff, site crews and work teams with regard to the practical application of the protocol can be provided by the Retained Archaeologist. Hard copies of the PAD document will be made available for use on board the construction vessels.

6.3.1.7 Provision will be made by the Applicant, in accordance with PAD, for the prompt reporting / recording to HES of archaeological remains encountered or suspected during works. If the

find is a wreck within the meaning of the Merchant Shipping Act (1995) then a report will also be made to the RoW. All portable antiquities found in Scotland must be reported to the Crown by the finder through the Treasure Trove Unit or an appropriate intermediary.

6.4 Marine geophysical investigations

6.4.1.1 COARS, a specialist marine and coastal contractor, was appointed to undertake the archaeological assessment of the geophysical survey data. All data acquired within the Project was made available for archaeological assessment and COARS reviewed the entire dataset. For further information regarding the assessment, technical specifications and data processing see **Volume 3, Appendix 16.2** and **Appendix 16.3**.

6.4.1.2 The overarching objectives of the assessment of marine geophysical survey data are to:

- to establish the presence of anthropogenic material of archaeological potential;
- to interpret the identified anomalies as to their potential to be of archaeological significance;
- to recommend mitigation strategies for the anomalies appropriate to their archaeological potential;
- to establish the palaeolandscape potential;
- to recommend mitigation strategies in relation to the palaeolandscape and palaeoenvironment; and
- to recommend further works that may be required and their specifications.

6.4.1.3 If required, a method statement will be issued by the Applicant in advance of any further geophysical survey campaigns that incorporate archaeological objectives, as advised by the Retained Archaeologist and / or archaeological contractor. The method statement will set out the specific details of the campaign and the methodology for archaeological assessment in order to inform consultation with HES and to provide sufficient instruction for the completion of data acquisition programmes to the highest quality standards possible. Archaeological briefings for survey staff will be carried out prior to the commencement of surveys and the Applicant will be responsible for ensuring that surveys proceed in accordance with any planned method statement in consultation with HES.

6.4.1.4 The results of further geophysical interpretation will be compiled as an archaeological report consistent with industry guidelines. The results of further geophysical interpretation will also inform requirements for further investigation (e.g. ground-truthing as set out in **paragraphs 6.7.1.1**to **6.7.1.8**).

6.4.1.5 The RoW should be notified as soon as possible following new discoveries with the aim of protecting any new wreck sites from salvage attempts. Procedures for contacting the RoW following the identification of any new wreck sites should be made clear within the agreed documentation, including method statements for the archaeological assessment of geophysical data.

6.5 Marine geoarchaeological investigations

6.5.1.1 If further investigation is required, any results will be reviewed and assessed by qualified geoarchaeologists in accordance with industry guidelines. HES will be consulted regarding scope and methodology of any further investigations.

6.5.1.2 It is recommended that a data review is undertaken by a suitability qualified and experienced archaeological contractor prior to the acquisition of further geotechnical data during the pre-

construction phase. As part of the review, the archaeological contractor will identify any data gaps and any specific archaeological objectives to inform the acquisition of geotechnical data. This will include details concerning proposals for further palaeoenvironmental assessment and dating in terms of what should be assessed and how this work should be carried out. Objectives should take account of the specific research objectives identified through the initial geoarchaeological assessment and any research priorities identified (see **Section 3.2**).

6.5.1.3 The primary aim of any geoarchaeological investigations will be the further development of a Quaternary (sedimentary) deposit model for the Project which will both inform and be expanded by subsequent phases of work.

6.5.1.4 HES will be consulted on the scope of all further geotechnical surveys and all geotechnical investigations and subsequent geoarchaeological assessment commissioned by the Applicant will be undertaken in accordance with best practice as set out in:

- Offshore Geotechnical Investigations and Historic Environment Analysis: Guidance for the Renewable Energy Sector (Gribble and Leather, 2011);
- Environmental Archaeology: A Guide to the theory and practice of methods, from sampling and recovery to post-excavation (Cambell *et al*, 2011); and
- Geoarchaeology: using earth sciences to understand the archaeological record (Historic England, 2007).

6.5.1.5 In planning any further geotechnical surveys, which may be undertaken primarily to meet engineering / design objectives, general provisions should include:

- micro-siting of borehole / vibrocore locations to avoid recommended AEZs and anomalies of possible archaeological interest;
- comparison of the proposed locations to the positions of previously identified paleogeographic features and deposits of archaeological interest to micro-site the proposed locations to ensure that opportunities to obtain samples to inform archaeological interpretation are not missed; and
- consideration given to the acquisition of second ‘archaeology only’ cores at specific locations, if required, following advice from the Retained Archaeologist, the geoarchaeological contractor and in consultation with HES.

6.5.1.6 During all geotechnical surveys, all operatives should observe the PAD, as set out in **paragraphs 6.3.1.1** to **6.3.1.7** and in more detail in **Volume 3, Appendix 16.5**.

6.5.1.7 The Applicant will procure the services of a specialist geoarchaeological contractor to undertake assessment, and, if required, palaeoenvironmental analysis and dating. Geoarchaeological assessment will also be carried out in accordance with interpretations of sub-bottom profiler data assessed by COARS. Any further sub-bottom profiler data acquired for the Project will be assessed by a suitably qualified and experienced archaeological contractor for integration with the results of the geotechnical surveys and any subsequent geoarchaeological assessment.

6.5.1.8 Prior to the commencement of any site investigation campaign, a method statement will be issued by the Applicant setting out the specific details of the campaign once the geoarchaeological requirements and locations have been established in order to inform consultation with HES. Archaeological briefings for survey staff will be carried out prior to the commencement of surveys and the Applicant will be responsible for ensuring that surveys proceed in accordance with any planned method statement agreed with the MD-LOT in consultation with HES.

6.5.1.9 The results of further marine geoarchaeological assessment will be compiled as an archaeological report consistent with best practice on reporting and will form part of the Project archive (see **paragraphs 6.10.1.1** to **6.10.1.13**).

6.6 Archaeological exclusion zones

6.6.1.1 Archaeological exclusion zones (AEZs) will be employed for archaeologically significant anomalies that are clearly identifiable in the survey data, or for historic records where remains have been previously identified, but are no longer visible. The implemented AEZs will remain for the entirety of the Project or until further data are acquired (ground truthing, higher resolution geophysical data) that will prompt the re-evaluation of the potential, significance or extents of identified sites. The principal objective of an AEZ is to prevent damage to, or disturbance of a wreck, aircraft or features on the seabed during activities that may cause direct impacts to a receptor.

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

6.6.1.3 AEZs preclude development activities from taking place within their boundaries, thereby avoiding significant impacts to assets contained within. The position, extent and design of an AEZ should take into account all available information including geology, hydrology and sediment transport and should extend around the boundaries of the asset rather than around a centre-point within the site. In addition, an AEZ will incorporate a buffer in order to ensure that all material associated with that asset is encapsulated within its boundary, as well as to reduce the risk of unintentional impacts.

6.6.1.4 As part of the embedded mitigation for the Project, the size and position of AEZs agreed between the Applicant and HES will inform the design of the Project. AEZs were constructed around anomalies identified as having medium or high archaeological potential. Around each of these anomalies, an AEZ has been constructed, following the recommendations of Dix (2008), based on the size of the anomaly, the extents of any debris, the pattern and nature of site processes, and the potential significance of the anomaly. AEZs have not been constructed as a radius from the centre point of the anomaly or distance from its extents, but instead provided as polygons, which can account for the previously stated factors. The recommended AEZs for each of the medium and high potential anomalies are provided in **Table 6.1** and the reasoning is provided in more detail in Appendices 16.2 and 16.3 of the EIA Report.

6.6.1.5 AEZs can be reduced, enlarged or removed in agreement with the MD-LOT in consultation with HES if further relevant information becomes available. Unless modified by agreement, it is important that AEZs are retained throughout the Project lifetime and monitoring of AEZs may be required by the regulator and curator to ensure adherence both during construction and in the future operation of the Project.

6.6.1.6 The Applicant will ensure that details of the AEZs are supplied to all agents and contractors and will retain responsibility for ensuing adherence to the AEZs throughout the Project lifespan (pre-construction, construction, operation and decommissioning).

6.6.1.7 Subject to approval by HES, AEZs will be implemented around the following anomalies in below and illustrated in **Volume 2, Figure 16.4: Seabed archaeological exclusion zones**.

Table 6.1 Summary of the recommended AEZs within the Project for marine archaeology and cultural heritage

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
MW_ECC_Arch_001	An AEZ has been defined over this wreck site, aligned with the orientation of the wreck and associated MAG anomaly distribution, extending approximately 190m north and south and 135m East and West.	High	571942	6376784
MW_ECC_Arch_010	An AEZ has been defined over this anomaly, aligned with the distribution of MAG anomalies, extending approximately 70m east and west (108 / 288°) and south and 40m north and south.	Medium	573525	6376071
MW_ECC_Arch_013	An AEZ has been defined over this anomaly, based upon a radius of approximately 65m.	Medium	575145	6377141
MW_ECC_Arch_015	An AEZ has been defined over this wreck site, aligned with the orientation of the wreck and scour, extending approximately 180m north and south (172 / 352°) and 135m east and west.	High	575615	6377614
MW_ECC_Arch_019	An AEZ has been defined over this anomaly, aligned with the direction of scour, extending approximately 70m north and south and 45m east and west.	Medium	576157	6378149
MW_ECC_Arch_020	An AEZ has been defined over this wreck site, aligned with the orientation of the wreck, extending approximately 150m NW and SE (120 / 300°) and 85m NE and SW.	High	576137	6377971
MW_ECC_Arch_021	An AEZ has been defined over this anomaly, aligned with the direction of the anomaly, extending approximately 40m NNE and SSW (23°/ 203°) and 28m ESE and WNW.	Medium	576064	6376313

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
MW_ECC_Arch_022	An AEZ has been defined over this anomaly, aligned with the direction of anomaly, extending approximately 40m NNE and SSW (23°/ 203°) and 28m ESE and WNW, based upon a radius of approximately 50m.	Medium	576247	6376345
MW_ECC_Arch_023	An AEZ has been defined over this anomaly, based upon a radius of approximately 50m.	High	576422	6376402
MW_ECC_Arch_027	An AEZ has been defined over this wreck site, aligned with the orientation of the scour, extending approximately 115m north and south, and 75m east and west.	High	576976	6378310
MW_ECC_Arch_028	An AEZ has been defined over this anomaly, based upon a radius of approximately 68m.	Medium	578464	6378791
MW_ECC_Arch_036	An AEZ has been defined over this anomaly, based upon a radius of approximately 77m.	Medium	580317	6380066
MW_ECC_Arch_037	An AEZ has been defined over this anomaly, based upon a radius of approximately 50m.	Medium	580889	6379443
MW_ECC_Arch_038	An AEZ has been defined over this anomaly, based upon a radius of approximately 75m.	Medium	581137	6380784
MW_ECC_Arch_044	An AEZ has been defined over this anomaly, aligned with the direction of scour associated with the anomaly, extending approximately 75m north and south (351°/ 171°) and 40m east and west.	Medium	604498	6397866
MW_ECC_Arch_045	An AEZ has been defined over this anomaly, based	Medium	603691	6402826

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
	upon a radius of approximately 53m.			
MW_ECC_Arch_046	An AEZ has been defined over this wreck site, aligned with the orientation of the scour, extending approximately 115m north and south, and 75m east and west.	High	603795	6403088
MW_ECC_Arch_059	An AEZ has been defined over this wreck site, aligned with the orientation of the scour, extending approximately 170m north and south (005 / 185°), and 95m east and west	High	577428	6378847
MW_ECC_Arch_060	An AEZ has been defined over this anomaly, based upon a radius of approximately 100m.	Medium	575724	6377315
MW_ECC_Arch_062	An AEZ has been defined over this anomaly, based upon a radius of approximately 75m.	Medium	575275	6376758
MW_ECC_Arch_065	An AEZ has been defined over this anomaly, based upon a radius of approximately 75m.	Medium	575236	6376874
MW_ECC_Arch_067	An AEZ has been defined over this anomaly, based upon a radius of approximately 80m.	Medium	574702	6377451
MW_ECC_Arch_073	An AEZ has been defined over this anomaly, based upon a radius of approximately 75m.	Medium	576929	6381301
MW_ECC_Arch_076	An AEZ has been defined over this wreck site, centred on the northern bow section and aligned with the orientation of the scour and axis of debris distribution, extending approximately 150m north and south and 120m east and west.	High	575217	6375781

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
MW_Arr_Arch_002	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 48m and major axis of 75m, the latter orientated 114°parallel to the direction of the linear anomaly and scour extension.	Medium	627469	6449503
MW_Arr_Arch_004	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 90m and major axis of 130m, the latter orientated 118°parallel to the direction of the linear anomaly and scour extension.	Medium	629235	6454131
MW_Arr_Arch_005	An AEZ has been constructed for this wreck, based upon an ellipsis, with a minor axis diameter of 310m and major axis of 400m, the latter orientated 112°parallel to the wreck and scour alignment.	High	629080	6454442
MW_Arr_Arch_011	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 140m and major axis of 210m, the latter orientated 051°parallel to the direction of the bathymetric high.	Medium	637255	6469455
MW_Arr_Arch_012	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 90m and major axis of 110m, the latter orientated 059°parallel to the direction of the SSS anomaly.	Medium	633818	6456643
MW_Arr_Arch_013	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis	Medium	636088	6462684

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
	diameter of 205m and major axis of 270m, the latter orientated 165° parallel to the direction of the seabed scour.			
MW_Arr_Arch_014	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 240m and major axis of 270m, the latter orientated 016°parallel to the direction SSS reflectors.	Medium	638208	6465283
MW_Arr_Arch_015	An AEZ should be applied to this anomaly, and therefore it is categorised as having medium archaeological potential. An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 80m.	Medium	632237	6451437
MW_Arr_Arch_016	An AEZ has been constructed for this wreck, based upon an ellipsis, with a minor axis diameter of 280m and major axis of 325m, the latter orientated 120°parallel to the wreck alignment and also includes the likely deployed gear from the stern of the vessel.	High	634649	6454890
MW_Arr_Arch_017	An AEZ should be applied to this anomaly, and therefore it is categorised as having medium archaeological potential. An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 100m.	Medium	638157	6461785
MW_Arr_Arch_019	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 125m and major axis of 205m, the latter orientated 117°parallel to the MAG anomaly alignment.	Medium	636176	6456490

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
MW_Arr_Arch_021	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 280m and major axis of 390m, the latter orientated 140° parallel to the scour and anomaly alignment.	Medium	640475	6458516
MW_Arr_Arch_023	An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 150m.	Medium	638505	6453786
MW_Arr_Arch_026	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 100m and major axis of 140m, the latter orientated 160°parallel to the scour and anomaly alignment.	Medium	638499	6451827
MW_Arr_Arch_028	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 235m and major axis of 290m, the latter orientated 40°parallel to the scour and anomaly alignment.	Medium	634781	6443155
MW_Arr_Arch_034	An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 150m.	Medium	639124	6441472
MW_Arr_Arch_037	An AEZ has been constructed for this wreck, based upon an ellipsis, with a minor axis diameter of 125m and major axis of 172m, the latter orientated 018° parallel to the wreck alignment and also includes the likely deployed gear from the stern of the vessel.	High	647198	6452499
MW_Arr_Arch_040	An AEZ has been constructed for this wreck,	High	641755	6441804

Anomaly ID	AEZ description	Archaeological potential	Easting (ETRS89 UTM30N)	Northing(ETRS89 UTM30N)
	based upon an ellipsis, with a minor axis diameter of 160m and major axis of 210m, the latter orientated 172°parallel to the north-south scour alignment.			
MW_Arr_Arch_041	An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 120m.	Medium	639556	6439450
MW_Arr_Arch_048	An AEZ has been constructed for this anomaly, based upon an ellipsis, with a minor axis diameter of 210m and major axis of 260m, the latter orientated 20°parallel to the area of increased seabed roughness.	Medium	643176	6432896
MW_Arr_Arch_052	An AEZ has been constructed for this wreck, based upon an ellipsis, with a minor axis diameter of 155m and major axis of 250m, the latter orientated 180°parallel to the north-south scour alignment.	High	648480	6433407
MW_Arr_Arch_053	An AEZ has been constructed for this wreck, based upon an ellipsis covering both seabed objects, with a minor axis diameter of 200m and major axis of 350m, the latter orientated 045°parallel to the debris field between the two large anomalies.	High	643890	6447761
MW_Arr_Arch_057	An AEZ has been constructed for this anomaly, based upon a circle, with a diameter of 100m.	Medium	633434	6435350

6.6.1.8 It is considered that these AEZs are appropriate to ensure robust, but proportional, mitigation from the impacts of the Project. The agreed AEZs will be the primary means employed to preserve features or remains of archaeological interest or potential in situ.

6.6.1.9 The AEZs agreed during the EIA process must be supplied as a GIS shapefile. The Retained Archaeologist has responsibility for maintaining the live AEZ shapefiles in the Project GIS. In addition, all documentation required for project delivery provided to contractors will include the lists and illustrated locations of AEZs, which will be updated as needed as the project develops.

6.7 Archaeological investigations using divers and / or remote operated vehicles

6.7.1.1 The principal objective of diver / ROV investigation will be to further establish the archaeological interest of previously unidentified seabed features seen in the geophysical data in order to inform the strategy of avoidance through revisions to the scheme design.

6.7.1.2 It is possible that the nature and extent of individual anomalies may only be achieved through the use of drop-down cameras or diver / ROV survey. Ground truthing may also be required in order to clarify the extent of a site in order to alter (enlarge, reduce, move or remove) AEZs.

6.7.1.3 All ground-truthing that may be required to inform the construction of the Project's mitigation strategy will be carried out in accordance with best practice outlined by The Crown Estate (2021).

6.7.1.4 Diver or ROV-based investigations will take place as required and, where the primary objectives are archaeological, operations will be led by archaeologists. However, it may also be possible to combine such surveys with non-archaeological objectives, for identification of unexploded ordnance (UXO) for example.

6.7.1.5 In order to maximise the potential benefits of any proposed diver or ROV surveys, the Applicant will seek archaeological input at the planning stage of any such works. Any such survey specification will be informed by previous stages of the project, including the Project's EIA Report and assessment of geophysical data so that archaeological considerations can be taken into account. Following the completion of a diver/ROV survey, all data, including video footage, will be reviewed by an archaeological contractor with appropriate expertise.

6.7.1.6 Anomalies, as identified from the archaeological assessment of pre-construction geophysical data (see **Section 2.2**), will be selected for further study if they cannot be avoided through micro-siting, or where clarification is required to inform micro-siting in the final design. A detailed method statement for any archaeological works will be agreed in advance of works commencing with the MD-LOT in consultation with HES.

6.7.1.7 The results of diver / ROV assessment will be compiled as an archaeological report consistent with best practice on reporting and will form part of the Project archive (see **paragraphs 6.10.1.1** to **6.10.1.13**).

6.7.1.8 As stated above for marine geophysical assessments, in the event of a new discovery, it is important to notify the RoW as soon as possible following the identification of a new wreck site in order to protect against salvage attempts. Procedures for contacting the RoW following the identification of any new wreck sites should be made clear within agreed documentation, including method statements for archaeological investigations using divers and / or ROVs.

6.8 Archaeological watching brief

6.8.1.1 The scope and methodology of any archaeological watching brief required will be agreed with the MD-LOT in consultation with HES and set out through a site-specific method

statement or WSI. If areas subject to clearance are considered of medium or high archaeological importance, on board monitoring may be considered necessary to ensure appropriate consideration of archaeological material brought to the surface. In areas of low archaeological importance, any material brought to the surface will be dealt with through the PAD (see paragraphs 6.3.1.1 to 6.3.1.7 of **Volume 3, Appendix 16.5**). HES will be notified and consulted regarding any archaeological material collected during the works.

6.9 Monitoring

6.9.1.1 Monitoring requirements are anticipated to comprise:

- monitoring of the final Offshore WSI by the Retained Archaeologist in order to ensure that the scheme of investigation is appropriate to the scheme design;
- monitoring of archaeological works by the archaeological curators, including monitoring of the effectiveness of AEZs;
- monitoring during and post-construction, including a conservation programme for finds.

6.9.1.2 The performance of the final Offshore WSI will be monitored during the course of the pre-construction phase and the contents will be reviewed and updated as necessary prior to construction to inform a construction phase document specific to the final design. Provision will also be made for the final Offshore WSI to be revised as appropriate should elements of the Project change or particular archaeological issues come to light. Any revisions will be prepared by the Retained Archaeologist and submitted by the Applicant, or their agents to the MD-LOT for approval in consultation with HES.

6.9.1.3 All reports prepared for each package of archaeological works will be disseminated to MD-LOT and HES by the Applicant, or their agents, so that the results can be reviewed and any concerns addressed. All survey reports undertaken for the purposes of archaeological evaluation will be submitted to MD-LOT and HES within a specified timescale of the survey being completed to be agreed with the regulator.

6.9.1.4 HES and MD-LOT will be notified in advance by the Applicant or their agents of the commencement of work timetables and the commencement of any work on site that may have an impact on archaeology and will be informed at this time of the name and contact details for the Retained Archaeologist. During any site evaluation / investigation or construction work that has the potential to impact archaeological remains the Retained Archaeologist may liaise directly with HES with regard to site monitoring and reporting only after prior reference to the Applicant. The Applicant will be kept informed of all contact between the Retained Archaeologist and the archaeological curators.

6.9.1.5 In order to monitor the effectiveness of AEZs, periodic archaeological reports will be prepared by the Applicant, or by the Retained Archaeologist on behalf of the Applicant, to review whether there have been any incursions into each zone and whether there are still archaeological grounds for maintaining each zone. The frequency of such reports will be agreed with MD-LOT in consultation with HES but may include reports at the conclusion of key construction phases and a post-construction monitoring report, including an archaeological assessment of post-construction geophysical survey data. If it becomes apparent that activities have encroached upon an AEZ, the Applicant will seek advice from the Retained Archaeologist.

6.9.1.6 To effectively direct post-construction monitoring, a method statement prepared by the Retained Archaeologist should be produced in consultation with HES. If the Retained Archaeologist does not have a sufficient level of experience with regards to the specific project work required, then the Applicant shall appoint a suitably qualified and experienced

archaeological contractor to prepare the document and undertake the works. Dependent on the type of remains being monitored, diver or ROV-based investigations may be considered.

6.9.1.7 A post-construction monitoring report, including the archaeological assessment of post-construction geophysical survey data relative to the baseline data, will also assess the effects of any indirect impacts that may have occurred to heritage assets as a result of the construction. Based on the results of the initial post-construction review, any further requirements during the operation phase will be agreed in consultation with HES.

6.10 Archaeological recording, reporting, data management and archiving

6.10.1.1 With regard to survey reports, each package of works will be accompanied by written reports pursuant to the requirements of those works and demonstrating appropriate planning, recording and data management and archiving and public dissemination of results as needed.

6.10.1.2 For all aspects of recording, reporting, data management and archiving, the Applicant will adhere to industry standards and guidance.

6.10.1.3 Once agreed, the methodology for each package of works will be set out in a method statement prepared under the requirements of the final Offshore WSI and appended to it. Each method statement will be agreed with the relevant archaeological curator prior to works commencing.

6.10.1.4 Each archaeological report will satisfy the method statement requirements for the investigation and will present the Project information in sufficient detail to allow interpretation. In accordance with the CIfA standards and guidance (2014), this will include as a minimum, the following:

- non-technical summary;
- the project design or appropriate reference to it;
- the aims, objectives and methods used, including any departure from the project design:
- results, referring to the research aims in the project design and including research implications;
- illustrations, plans and essential technical and supporting detail, with accurate spatial information sufficient to locate the areas of investigation in the future;
- conclusions, including a confidence rating on techniques used, and any recommendations for further work that might improve that confidence;
- references and bibliography, list of all sources used. The final destination of the archive (records and finds) will be noted in the report along with the site code assigned by the relevant Project archive repository;
- archive locations (pre- and post-deposition if known); and
- copyright.

6.10.1.5 Each archaeological report will be submitted in draft to the Retained Archaeologist for submission to the Applicant. If the report is prepared by the Retained Archaeologist, it will be submitted directly to the Applicant. Where appropriate, further desk-based and / or archival research will be undertaken as part of the reporting process to meet the policy provisions set out in section 36 (“s.36 consent”) of The Electricity Act 1989 (“the 1989 Act”) and marine licence under the Marine (Scotland) Act 2010).

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

6.10.1.7 The assessment phase may include (but is not limited to) the following elements:

- The conservation of appropriate materials, including the X-raying of metalwork;
- The spot-dating of all pottery from any investigation. This will be corroborated by the scanning of other categories of material;
- The preparation of site matrices with supporting lists of contexts by type, by spot-dated phase, and by structural grouping supported by appropriate scaled plans;
- An assessment statement will be prepared for each category of material, including reference to quantity, provenance, range and variety, condition and existence of other primary sources; and
- A statement of potential for each material category and for the data set as a whole will be prepared, including specific questions that can be answered and the potential value of the data to local, regional and national research agendas.

6.10.1.8 On the basis of post-fieldwork assessment, and as agreed by the relevant archaeological curators, mitigation requirements will be satisfied by carrying out analysis and reporting of the post-fieldwork assessment. If appropriate, this may include publication of important results in a recognised peer-reviewed journal or as a monograph.

6.10.1.9 On completion of archaeological works relating to construction of the scheme, an overarching report on the archaeology of the scheme will be prepared and submitted to MD-LOT and HES to a timetable to be agreed with the Applicant, the regulator and the archaeological curators. The overarching report need not repeat the details contained in each preceding report, but should serve as an index to, and summary of, the archaeological investigations as a whole.

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

- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (CIfA, 2014);
- Archaeological Archives. A guide to best practice in creation, compilation, transfer and curation (Archaeological Archives Forum, 2011);
- Standards in the Museum Care of Archaeological Collections (Museums and Galleries Commission, 1992); and
- Towards an Accessible Archive. The Transfer of Archaeological Archives to Museums: Guidelines for Use in England, Northern Ireland, Scotland and Wales (Society of Museum Archaeologists, 1995).

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

6.10.1.12 In Scotland, the National Record of the Historic Environment (Canmore) and the Historic Marine Protected Areas maintained by HES are the repositories for fieldwork and

archaeological records. These databases operate a policy for the selection of records relating to sites of national importance. On completion of the scheme construction, the Applicant or their agents will produce an OASIS form for any completed and agreed archaeological reports produced as a result of the final Offshore WSI and ensure that a copy is submitted as a PDF file to Canmore and HES, to notify the relevant archaeological curators of compliance with the final Offshore WSI and potential deemed Marine Licence conditions.

6.10.1.13 In consultation with the Applicant and the Archaeological Curator, the Retained Archaeologist will ensure the results of important archaeological investigations undertaken in connection with the scheme will be published in an integrated manner. Publication media and all publication matters will be discussed and agreed in advance with the Applicant and Archaeological Curator.

7. Health and Safety

7.1 Introduction

7.1.1.1 Health and Safety will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. The Project will be carried out in accordance with safe working practices.

7.2 Risk assessment and method statement

7.2.1.1 The archaeological fieldwork subcontractor will produce a site-specific Risk Assessment and Methodology Statement (RAMS) to cover the onsite fieldwork and will supply a copy of the company's Health and Safety Policy. These will be reviewed by the consultant to ensure that the policy and measures are appropriate.

7.2.1.2 The archaeological fieldwork subcontractor's RAMS will:

- be clear, concise, site-specific, and without generic text for hazards that do not apply or mitigation that is not applicable;
- include tabulation of site-specific hazards, risk grading and mitigation measures;
- include site manager's contact details, along with a deputy; and
- include an emergency action plan, with an address and route map to the closest Accident and Emergency.

7.2.1.3 Subcontractor RAMS will be reviewed by an appropriately qualified and experienced member of staff (e.g. Project Manager), ideally with final approval by the H&S Manager / Senior Manager prior to review by the consultant. The RAMS will have been read, understood, and signed by all staff attending the site before any fieldwork commences.

7.3 Personal protection equipment

7.3.1.1 Staff present on site will be required to wear the appropriate Personal Protective Equipment (PPE), as identified in the RAMS.

7.4 Non-archaeological constraints

7.4.1 Unexploded ordnance

7.4.1.1 In the event that any ordnance is discovered, it should be treated with extreme caution as it may not be inert. Guidelines on addressing UXO discoveries provided to contractors by the Applicant must be followed prior to any recording of items for archaeological purposes. Health and safety has primacy in these circumstances. The responsibility for all aspects of Health and Safety in respect of UXO will be the responsibility of the Applicant.

7.4.1.2 To ensure that the UXO risk is reduced to As Low as Reasonably Practicable, industry good practice is to undertake a marine UXO geophysical survey so that the risk can be sufficiently identified. UXO awareness briefings should be given to site staff to ensure that in the unlikely event that suspect UXO is discovered, appropriate action can be taken with care and reduced risk.

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9. Glossary of Terms and Abbreviations

9.1 Abbreviations

Acronym	Definition
CES	Crown Estate Scotland
EIA	Environmental Impact Assessment
GW	gigawatts
HND FUE	Holistic Network Design Follow Up Exercise
JV	Joint Venture
MD-LOT	Marine Directorate – Licensing Operations Team
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
NE7	North East 7
NGESO	National Grid Electricity System Operator Limited
O&M	Operation and Maintenance
OA	Option Agreement
OAA	Option Agreement Area
PPiP	Planning Permission in Principle
s.36	Section 36
SPR	ScottishPower Renewables
WTG	Wind Turbine Generator

9.2 Glossary of terms

Term	Definition
Anthropogenic	Man-made.
Archaeology	The study of the material remains of the past.
Designated Heritage Asset	An element of the historic environment that has value in policy and is designated by statute.

Term	Definition
Geoarchaeology	A multi-disciplinary approach that uses the techniques and subject matter of geography, geology, geophysics and other earth sciences to examine and inform archaeological knowledge and thought.
Geophysical survey	Activities to obtain data on the distribution and nature of geophysical properties of the seabed (for example. bathymetry, surficial sediment type and bedforms, sub surface geology). Geophysical survey outputs typically include multibeam bathymetry, SSS and sub-bottom profiler data.
Heritage	The historic environment and especially valued assets and qualities such as historic buildings and cultural traditions.
Heritage Asset	An element of the historic environment that has value in policy.
Historic Environment	The physical evidence of past human activity.
Intertidal area	The area between Mean High-Water Springs and Mean Low Water Springs.
Listed Buildings	High and medium significance buildings designated for their historical, architectural or artistic importance under the Planning (Listed Buildings and Conservation Areas) Act 1990.
Morain	Accumulation of glacial debris.
Outline WSI (Offshore)	An Outline Offshore Written Scheme of Investigation (WSI) outlines the archaeological mitigation measures for offshore wind farm projects, ensuring protection of the marine historic environment throughout the project lifecycle.
Palaeoenvironmental remains	Minerogenic deposits such as alluvial silts and clays that have potential for ecofact preservation (such as diatoms, ostracods molluscs), the assessment of which can provide information on depositional environments (e.g. the salt or freshwater nature of deposits) that can enhance interpretation of the palaeolandscape. Peat deposits can preserve floral remains such as pollen, seeds and plant fragments and other organic remains. Organic material can also be dated by radiocarbon techniques, important for establishing the chronology for the depositional sequence.
Palaeolandscape	Palaeolandscape refers to an ancient/relict landscape that has been preserved in the geological record, in this case submerged by rising sea levels and seabed sediments. These landscapes provide insights into past environments, including the physical and ecological conditions that existed at different times. The study of the remnant palaeogeographic features provides insight into how ancient environments were exploited by early humans and how the landscape changed through time as a result of natural processes and human activities.
Protected Wrecks	High significance shipwrecks designated for their historical, archaeological or artistic importance under the Protection of Wrecks Act 1974.
Protocol for Archaeological Discoveries	Protocols for Archaeological Discoveries (PADs) are systems of monitoring for unexpected or incidental finds relating to the historic environment,
Scheduled Monument	A site or structure having statutory protection under the Ancient Monuments and Archaeological Areas Act 1979.

MarramWind