

XLINKS MOROCCO-UK POWER PROJECT

Preliminary Environmental Information Report

Volume 3, Appendix 7.2: Outline Offshore Archaeological Written Scheme of Investigation



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APPENDIX 7.2: OUTLINE OFFSHORE ARCHAEOLOGY WRITTEN SCHEME OF INVESTIGATION

1.1 Introduction

Project Description

- 1.1.1 This document forms Volume 3, Appendix 7.2 of the Preliminary Environmental Information Report (PEIR) prepared for the UK elements of the Xlinks Morocco-UK Power Project (referred to hereafter as ‘the Proposed Development’).
- 1.1.2 A description of the Proposed Development is provided in Volume 1, Chapter 3 of the PEIR: Project Description.
- 1.1.3 This document constitutes an Outline Offshore Archaeology Written Scheme of Investigation (OOAWSI); an updated, final Offshore WSI will be developed in consultation with Historic England for submission with the DCO application (at ES stage). The final Offshore Archaeology WSI will be reviewed and updated as necessary prior to construction to inform a construction phase document based on the final design of the project. The final Offshore Archaeology WSI will be used as a supporting document for the final Construction Environmental Management Plan (CEMP) and any associated Method Statements (MSs) produced.

Aims of the OOAWSI

- 1.1.4 The aim of this OOAWSI is to set out the broad strategy and general scope and methodology for archaeological works, such that potential impacts on archaeological remains are mitigated. The OOAWSI includes a summary of the published research priorities.
- 1.1.5 Once further consultation has been carried out with Historic England and the applicable Local Planning Authority (LPA) Archaeological Advisor at North Devon County Council to agree the strategy presented here, the OOAWSI will be updated, and site-specific method statements will be produced either as an appendix or stand-alone addendums to the ES.

1.2 Guidance and Best Practice

- 1.2.1 In demonstrating adherence to industry best practice, this Outline Offshore WSI has been compiled with respect to available archaeological guidance for offshore development including:
- Protocol for Archaeological Discoveries: Offshore Renewables Projects (The Crown Estate, 2014);
 - Chartered Institute for Archaeologists (CIfA) Code of Conduct (CIfA, 2022)
 - CIfA Standards and Guidance (CIfA, 2023, 2020a, 2020b, 2020c, 2020d, 2020e);

- Marine Geophysical Data Acquisition, Processing and Interpretation – guidance notes (Plets R. et al., 2013);
- 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).

1.2.2 The fundamental objectives of a WSI for offshore development are set out in the Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021) as follows:

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

1.2.3 The Archaeological Written Schemes of Investigation for Offshore Wind Farm Projects (The Crown Estate, 2021) were prepared by Wessex Archaeology for The Crown Estate in order 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 OOAWSI draws upon these standard agreed methodologies and, for each section, sets out how these are relevant to the delivery of the Proposed Development and explains any necessary adaptations and amendments for agreement with Historic England.

1.2.4 This Outline Offshore Archaeological WSI has been prepared based upon the preliminary results of the baseline desk-based assessment reported in Chapter 7 of the PEIR prepared for the UK elements of the Xlinks Morocco-UK Power Project and its accompanying appendices:

- Appendix 7.1

1.2.5 Cross-referencing to the PEIR chapter and appendix is included where appropriate.

1.3 Archaeological and Historical Background

Designated Heritage Assets

- 1.3.1 No designated heritage assets are recorded within the Offshore Cable Corridor (OCC); c.f. Volume 3, Figure 7.1 of the PEIR. There are four scheduled monuments (Wreck at Westward Ho! (NHLE 1432418), Wreck off Northam Burrows (NHLE 1432949), HMS Montagu (ex-Montague) (NHLE 1440450), and Montagu Steps (NHLE 1461607)) located within the 5 km study area; c.f. Volume 3, Figure 7.2 of the PEIR.

Archaeological Potential

- 1.3.2 The PEIR chapter (Volume 3, Chapter 7 of the PEIR: Marine Archaeology and Cultural Heritage) provides a detailed archaeological and historical background, which is summarised here by period.

Mesolithic (10,000 BC – 4,000 BC)

- 1.3.3 The northern end of the OCC was located on terrestrial land until c. 6000 BC when the land was inundated following the ending of the Devensian. Fragmentary remains of submerged forests have been identified at Northam Beach (MDV107325) 3.4 km to the north east of the landfall end of the OCC, and at Westward Ho! (MDV44568 and MDV107374) 2.2 km and 2.3 km to the north east of the OCC respectively while Mesolithic midden deposits (MDV14854, MDV107377) and late Mesolithic flint tools (MDV468) were recorded on the Devon Historic Environment Record (DHER) at Westward Ho! beach, 2 km north east of the OCC. Further remains of the palaeolandscape and Mesolithic activity are possible within the previously exposed land.

Neolithic (4,000 BC – 2,200 BC)

- 1.3.4 By the Neolithic period (4000–2200 BC), the sea-level was near modern levels and the coastline had retreated to near its historic position, leaving the Isle of Lundy isolated. Bideford Bay, in which the north end of the OCC is located, contains organic deposits with peats dated to the Neolithic, recorded within the DHER and CITiZAN datasets c. 2.6 km north east of the OCC (MDV107375, MDV107427, MDV107428, MDV107429, MDV107431, MDV107433, MDV107434, MDV53224, MDV63742, MDV71573, MDV71574, MDV71575, MDV102445, and CITiZAN ID 73366, 73430, 74186, 74220, 74099 and 75307).
- 1.3.5 Although boat building is known within Britain during the Neolithic and Early Bronze Age periods, the known remains suggest that technology was limited to logboats and sewn-plank boats that are generally restricted to coastal or riverine environments. Sewn-plank construction techniques can be used to construct seaworthy vessels but no examples of seagoing vessels dated to the Neolithic have been identified within the British Isles to date. Evidence of occupation and activity is present on the Isle of Lundy, c. 5 km north of the OCC, which would have been isolated within the Celtic Sea following the sea level change by this period. The evidence includes a chambered tomb (NHLE1015931, MDV7112) and two standing stones (NHLE 1018266, MDV45993; NHLE 1015929) on the southern cliffs of the island. This activity suggests the possibility that maritime

activity was utilised during this period to facilitate or supplement the island's occupation activities.

Bronze Age (2200–800 BC)

- 1.3.6 Evidence throughout Britain suggests that the population was trading with people in Ireland and potentially the European mainland. The routes taken are unknown but are likely to have included the study area. Within the vicinity of the OCC and the study area, the Isles of Scilly, located 51 km to the south east of the closest point of the OCC at the southern end, and the Isle of Lundy contain evidence of Bronze Age activities suggesting that they were accessible. Bronze Age occupation is further evidenced from the study area by seven beaker type sherds that were found on the foreshore in Bideford Bay (MDV70164), 2.3 km to the north east of the OCC.

Iron Age (800 BC–AD 43)

- 1.3.7 Although no evidence dated to the Iron Age has been identified within the study area, it is considered likely that activity continued within Bideford Bay and on the Isles of Scilly and the Isle of Lundy. Seafaring activity continued through the period and likely would have included the area of the OCC as routes to the estuaries of the Taw, Torridge and Severn rivers.

Roman (AD 43–410)

- 1.3.8 During the Roman period, there is historic evidence for seaborne and coastal activity along the English coastline; however, there is limited known physical evidence within the archaeological record for coastal sites and maritime activity. Indirect evidence within the archaeological record includes the proliferation of manufactured goods like Samian pottery, olive oil, and wine from mainland Europe and raw materials including copper, lead, and tin from Cornwall and Devon in use within Imperial Roman sites in mainland Europe and other regions within the British Isles.
- 1.3.9 It is likely that the study area would have been included within the known sea routes along the western coast of Britain utilised when travelling to important settlements including Brean Down, Sea Mills, Cardiff, and Caerwent on the Severn Estuary and Chester on the Dee Estuary. Bideford Bay is one of the only natural harbours within this region of the south west coast of Britain and would have acted as an important anchorage. Given the paucity of evidence for coastal Roman sites and Roman ships, the potential for Roman activity within the study area as a result of trade activity cannot be discounted.

Early Medieval (AD 410–1066)

- 1.3.10 There is currently a lack of evidence, both onshore and within the marine environment, regarding the nature and extent of foreign trade or domestic coastal activity following the Roman withdrawal. It is likely that maritime activity within the study area continued throughout the early medieval period in spite of the possible reduction of foreign trade during the 5th and 6th centuries. Evidence suggests that trade links with continental Europe increased in the late 6th century continuing into the 9th century. Maritime vessels continued to increase in size and complexity

through the early medieval period; however, smaller craft were commonly used for coastal and inshore activities.

- 1.3.11 Ships heading to port towns established during Anglo-Saxon rule including Barnstaple in the River Taw, 15 km to the north east of the north end of the OCC, and Briggstow (modern Bristol) on the Severn estuary would likely have taken refuge in the bay during the early medieval period. The local coastal networks previously established would have continued during this period and the OCC would have been subject to regular activity within proximity to the coasts and for access to nearby islands including Lundy and the Scillies.
- 1.3.12 There is no known direct evidence of Norse activity within the study area but it is likely that the study area would have been traversed as part of the raiding and mercantile activity undertaken by the Norse.
- 1.3.13 Resource exploitation activities, including but not limited to fishing and shellfish gathering, would have continued within the bay, Celtic Sea, and Atlantic Ocean. Evidence of resource extraction includes midden remains containing deposits of limpet shells were identified in Abbotsham 1.7 km to the east of the north end of the OCC. Further evidence of medieval activity is concentrated on the coast of Bideford Bay which includes a sand and clay layer containing animal hoof prints (MDV76315) thought to represent a medieval land surface, revealed on Northam Burrows foreshore, 4.5 km to the north east of the north end of the OCC.

Medieval (AD 1066–1540)

- 1.3.14 Maritime trade and transport continued to be an important activity within the study area following the conquest of the Anglo-Saxon kingdoms by the Normans. The ports on the west coast of Britain, including Barnstaple on the River Taw, Bideford on the River Torridge, and Bristol on the Severn continued to grow bringing in both domestic and foreign trade. The natural harbour of Bideford Bay would have been an important anchorage for any ships travelling along the western coast of Britain to the port of Bristol, ports in Wales, or the north west of England and would likely have seen high levels of activity throughout the period.
- 1.3.15 Piratical activity began on the Isle of Lundy in 1155, with the de Mariscos using the island as a base until William de Marisco was captured in 1242 following a failed murder plot on Henry III in the mid-13th century.
- 1.3.16 Like in the early medieval period, resource exploitation activities would have continued within Bideford Bay, the Celtic Sea and Atlantic Ocean. The population within the land surrounding the bay and along the coasts continued to grow and would have made the area enticing for mercantile activity. It is possible that some of the 54 UKHO and two DHER unidentified wrecks within the study area are related to medieval vessel losses.

Post-medieval (AD 1540–1900)

- 1.3.17 The increasing outward focus on maritime activity during the period built up the prominence and wealth of ports like Bristol, Swansea and Liverpool on the west coast of Britain. Local maritime trade continued with coastal routes servicing both large ports like Bristol as well as smaller ones like Barnstaple and Bideford. The OCC crosses portions of the Bristol Channel, Celtic Sea, and Atlantic Ocean which were exceptionally busy sea lanes as the British Empire grew. The western British ports in particular were heavily involved in what is called the 'triangle trade'

in the 18th and 19th centuries which comprised the trade of slaves from the west coast of Africa to the United States and Caribbean to produce predominantly cash crops of cotton, tobacco and sugar.

- 1.3.18 Like in earlier periods, shipbuilding continued to be decentralised and local shipbuilding technologies exhibited the general trends with local variations. The ship material and building techniques evolved during this period from the traditional wooden carvel ships in the early centuries to predominantly iron and steel in the later centuries in response to changing needs from both commercial and military organisations and pressures on natural resources.
- 1.3.19 Local resource exploitation activities would have continued within Bideford Bay, the Celtic Sea and Atlantic Ocean. Coastal and fishing vessels are likely to have been locally built and predominantly remained built of wood. It is possible that some of the 54 UKHO and two DHER unidentified wrecks within the study area are related to post-medieval vessel losses.

Modern (AD 1900 – modern day)

- 1.3.20 The size of the ships in use for both the transport of goods and passengers as well as the military increased through the 20th century as ship-building technology continued to evolve in response to changing needs from both commercial and military organisations. Goods continued to be shipped by sea but the size of the vessels necessitated the centralisation of ports. Local maritime activity increasingly became marginalised as local ports pivoted to service smaller leisure vessels or local fishing vessels as the transport of goods was undertaken from large container ports by motor vehicle.
- 1.3.21 In the early 20th century, a civilian airfield, the Barnstaple and North Devon Aerodrome, was constructed on the north shore of the Taw estuary, c 10 km to the north east of the northern end of the OCC. The airfield was expanded through the construction of an aerodrome on the farmland of the Chivenor Farm and the base was named RAF Chivenor. Throughout the war, training and anti-submarine activities were undertaken from the base and 13 squadrons were stationed at one point or another. Second World War military defence installations are recorded within the DHER and CITIZAN datasets including a site of anti-glider posts (MDV50849), which would have covered the beach at Westward Ho!, 2.5 km to the north east of the north end of the OCC and coastal anti-invasion defences (MDV102477) on the shore west of Northam Burrows on aerial photographs of the 1940s. After the conclusion of the Second World War, the airfield continued in use as an RAF base until the 1990s when it was taken over by the Royal Marines.

1.4 Research Priorities

- 1.4.1 The People and the Sea: A Maritime Archaeological Research Agenda for England (Ransley *et al.*, 2013) assesses the current state of marine archaeological knowledge along the English Coast and within territorial waters. The research agenda compiled a series of research aims and priorities both for specific periods and for wider cross-period themes.
- 1.4.2 The document comprises an assessment and a research agenda for each archaeological period from the Palaeolithic to the modern periods. Despite the period-specific nature of the research questions, the following five common research themes were identified:

- Coastal change - Greater understanding of surviving palaeolandscapes and how the landscape evolved following sea-level rise and coastline change.
- Maritime settlement and resource exploitation - The importance of landscape and environmental context in appreciation of settlement patterns and understanding how the coast, intertidal, near-shore and open sea were utilised throughout human history within this region of the Celtic Sea and Atlantic Ocean.
- Seafaring – The changes in shipbuilding and seafaring technology and how that impacted the maritime communities.
- Maritime networks – Long-distance links can be investigated via migration routes and trading links. Links across the Irish Sea, along the coast of southern and western England and Wales and across the English Channel are particularly important within the region.
- Maritime identities and perceptions of maritime space – The ways in which the engagement with and direct association with the maritime environment influenced the development of personal identities and conceptualisations of maritime space within a population.

1.4.3 As these themes are fairly broad, specific research questions will be identified in response to in-progress survey results and baseline collation for the final Outline Offshore Archaeological WSI to accompany the ES chapter.

1.5 Committed Mitigation Measures

Embedded Mitigation

- 1.5.1 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 DCO (and Deemed Marine Licences (DMLs)):
- 50m Archaeological Exclusion Zones (AEZs) around the extents of known wreck sites and anomalies of archaeological interest within which no development-related activities will take place (see paragraphs 1.7.42–1.7.49);
 - 50m AEZs around the recorded point locations of previously recorded sites that have not been seen in the geophysical data but at which archaeological material is likely to be present, possibly buried (see paragraphs 1.7.42–1.7.49);
 - 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 (see paragraphs 1.7.50–1.7.57);
 - Further examination of potential palaeoenvironmental deposits including potential geoarchaeological recording of core samples (where potential for archaeological remains or ecofacts is high), deposit modelling and

archaeological input into any future sampling programme(s) (see paragraphs 1.7.32–1.7.41);

- 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 (see paragraphs 1.7.11–1.7.18);
- Watching briefs where seabed material is brought to the surface, for example during pre-lay grapnel runs and potentially the excavation of the Horizontal Directional Drilling (HDD) exit pits (see paragraphs 1.7.58–1.7.59); and
- The archaeological assessment of any further geophysical data (see paragraphs 1.7.19–1.7.31).

Additional Mitigation

- 1.5.2 Additional mitigation may be required where anomalies or identified features cannot be avoided, where sites are potentially of sufficient importance to require additional mitigation, or where unexpected discoveries are encountered and reported through the protocol. 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 methodology for such works would be set out in site-specific works method statements and agreed (where possible) with the Marine Management Organisation (MMO) in consultation with Historic England prior to works commencing.

1.6 Roles, Responsibilities and Communication

- 1.6.1 Overall responsibility for the implementation of the final Offshore WSI will lie with Xlinks Limited ‘the Developer’ 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 protocol for archaeological discoveries (see paragraphs 1.7.11–1.7.18).
- 1.6.2 For each package of archaeological works, the Developer 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 Developer 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.
- 1.6.3 The ‘Regulator’ is responsible for the approval of the WSIs and Method Statements and is advised by the Archaeological Curator. The regulator within England is the MMO.
- 1.6.4 The MMO’s statutory advisor on the marine historic environment and the archaeological curator for heritage matters offshore (below MHWS) is Historic England. 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.
- 1.6.5 The ‘retained archaeologist’ 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 archaeological curator and the regulator. The responsibilities include:

- Compiling, reviewing and updating this Outline Offshore WSI following consultation with the consultant and the regulators (MMO) and curators (Historic England) post-consent to produce a final, agreed Offshore WSI;
- Advising the Developer on their responsibilities regarding the implementation of the final Offshore WSI and the Protocol for Archaeological Discoveries;
- Compiling, agreeing and issuing method statements for archaeological contractors to adhere to, following consultation with the Developer and the regulators and curators;
- Advising the Developer on the necessary interaction with the regulators, curators and other third parties;
- 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; and
- Advising the Developer on any final requirements and arrangements for further analysis, archive deposition, publication and popular dissemination.

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

1.6.7 All agents and contractors engaged by the Developer will:

- Familiarise themselves with the requirements of the final Outline Offshore Archaeological WSI and make it available to their staff, explaining the requirements and need for strict adherence;
- Familiarise themselves with the protocol for archaeological discoveries (see paragraphs 1.7.11–1.7.18) 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 Developer 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.

1.6.8 Prior to and during the course of any geoarchaeological recording, assessment and analysis, consultation with the Historic England Regional Science Advisor for Southwest England is also recommended to agree on the suitability of the approach.

1.7 Archaeological Strategy

1.7.1 The methodologies below summarise those methods presented by the Crown Estate guidance: Archaeological Written Schemes of Investigation for Offshore

Wind Farm Projects (The Crown Estate, 2021), which are deemed relevant to the Proposed Development.

- 1.7.2 For clarity, the Offshore WSI methods set out for the Proposed Development will adhere to The Crown Estate's methodologies, with any adaptations and amendments undertaken only with MMO agreement in consultation with Historic England.

Archaeological Samples and Artefacts

- 1.7.3 Environmental samples, obtained during pre-construction geotechnical surveys (where required), that are suitable for archaeological and palaeoenvironmental assessment, will be subject to geoarchaeological assessment (see paragraphs 1.7.32–1.7.41).
- 1.7.4 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 (ClfA, 2020b);
 - First Aid for Finds (Leigh et al., 1998) and
 - First Aid for Underwater Finds (Robinson, 1998).
- 1.7.5 Isolated discoveries of artefacts that may come to light during the course of the development will be dealt with through the Protocol for Archaeological Discoveries (see paragraphs 1.7.11–1.7.18).
- 1.7.6 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.
- 1.7.7 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.
- 1.7.8 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.
- 1.7.9 All archaeological artefacts that have come from a shipwreck are considered to be subject to the Merchant Shipping Act 1995. The Developer, via their archaeological contractors, should ensure that the Receiver of Wreck is notified within 28 days of recovery, by the Developer or their agents, for all items of wreck that have been recovered.
- 1.7.10 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 ClfA, 2020b).

Protocol for Archaeological Discoveries (PAD)

- 1.7.11 To account for unexpected discoveries of archaeological material during construction, operation and decommissioning, a formal protocol will be required. It is recommended that if any objects of possible archaeological interest are encountered, that they should be reported using the established 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.
- 1.7.12 Activities during which previously unidentified sites or unexpected discoveries of material may be encountered include:
- Pre-construction surveys, for example:
 - 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; and
 - Seabed features identified during diver or ROV surveys.
 - Seabed clearance, pre-lay grapnel runs (e.g. finds brought to the surface);
 - Vessel anchoring (e.g. anchor caught on obstruction); and
 - Installation of cables (e.g. obstruction interactions with plough).
- 1.7.13 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.
- 1.7.14 Each vessel or worksite team has a Site Champion, a single person responsible for reporting discoveries to a Nominated Contact in the Developer's core team. The Nominated Contact uploads discoveries onto a secure web portal and the Implementation Service is alerted to the presence of new discoveries. The Crown Estate provides for the reporting and assessment of discoveries through the Implementation Service, currently maintained by Wessex Archaeology.
- 1.7.15 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 Developer 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 documentation, including a full description of the methodology and requirements for implementing the protocol, can be found via the following web link:
- <https://www.thecrownestate.co.uk/media/1782/ei-protocol-for-archaeological-discoveries-offshore-renewables-projects.pdf>
- 1.7.16 Training to construction staff, site crews and work teams with regard to the practical application of the protocol can be provided by the Implementation

Service or by an experienced and qualified archaeological contractor. Hard copies of the PAD document will be made available for use on board the construction vessels.

- 1.7.17 Provision will be made by the Developer, in accordance with PAD, for the prompt reporting/recording to Historic England 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 Receiver of Wreck. If the find is treasure within the meaning of the Treasure Act (1996) then a report will also be made to the Coroner.
- 1.7.18 Following completion of the construction phase, a report will be prepared presenting the results of the PAD implementation during activities and submitted to the MMO within four months. In the event that no discoveries are made, a nil discoveries report should be compiled in order to demonstrate adherence to the scheme.

Marine Geophysical Investigations

- 1.7.19 The following geophysical data (sidescan sonar, multibeam bathymetry, magnetometer and sub-bottom profiler data) are currently being archaeologically assessed by Wessex Archaeology to inform the offshore archaeology baseline and mitigation measures assessed as part of the Environmental Impact Assessment (EIA).
- 1.7.20 The marine geophysical survey data were acquired by GEOxyz in 2023 comprising sub-bottom profiler (SBP), sidescan sonar (SSS), magnetometer (Mag) and multibeam echosounder (MBES) data. Data were acquired on board the survey vessel Geo Ocean VI.
- 1.7.21 The assessment of the geophysical survey data will also assess the suitability and quality of the data to determine if sufficient to provide an accurate characterisation of the archaeological potential of the study area for final ES purposes.
- 1.7.22 The acquisition of further pre-construction data (where needed) may provide additional information at a greater resolution within areas where features have been identified and further information is required to inform mitigation strategies. Therefore, the archaeological assessment of any further geophysical data acquired for the project forms part of the commitment by the developer to embedded mitigation (see section 1.5).
- 1.7.23 Prior to the acquisition of further survey data e.g. during the pre-construction phase, it is recommended that a data review is undertaken by a suitability qualified and experienced archaeological contractor (ongoing at the time of PEIR drafting) in order to qualify the continued suitability of the existing data and its validity for assessment purposes.
- 1.7.24 Where further survey is recommended for purposes of expanding knowledge / understanding of palaeotopography, these surveys may be undertaken post consent.
- 1.7.25 The overarching objectives of the assessment of marine geophysical survey data are to:
- Identify known heritage assets and provide additional detail on the nature and extent of those assets;
 - Identify previously unidentified seabed features;

- Identify buried palaeolandscape features that help to clarify the nature of the submerged prehistoric landscape; and
 - Monitor the construction and post-construction effects.
- 1.7.26 As part of the data review, the archaeological contractor should identify specific objectives to inform the scope of further survey work. The acquisition and assessment of further geophysical data, where deemed necessary, will be carried out in accordance with good practice as set out by The Crown Estate (2021) and in industry guidelines including Plets et al. (2013).
- 1.7.27 Historic England will be consulted on the scope of all further geophysical surveys undertaken for the project to ensure that the data generated are sufficiently robust to meet these archaeological objectives and to enable professional archaeological interpretation and analysis.
- 1.7.28 Data will be processed, assessed and interpreted by a suitably experienced and qualified archaeological contractor and integrated with the existing assessments. Data will be provided in raw format to allow the data to be processed by the archaeological contractor using appropriate software in order to facilitate archaeological assessment and interpretation. Vessel trackplots and factual reporting will also be made available to the archaeological contractor.
- 1.7.29 If required, a method statement will be issued by the Developer 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 to inform consultation with Historic England 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 Developer will be responsible for ensuring that surveys proceed in accordance with any planned method statement as agreed with the MMO in consultation with Historic England.
- 1.7.30 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 1.7.50–1.7.57).
- 1.7.31 The National Maritime Information Centre (NMIC) 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 NMIC following the identification of any new wreck sites should be made clear within agreed documentation, including method statements for the archaeological assessment of geophysical data.

Marine Geoarchaeological Investigations

- 1.7.32 Geotechnical data comprising 44 cone penetration tests (CPT) and 44 vibrocores (VC) acquired by GEOxyz in 2023 were initially reviewed (Stage 1) by the geoarchaeology team at WSP. To date, the first (Stage 1) of the four potential stages of assessment has been undertaken:
- Stage 1: Geoarchaeological review of preliminary core logs (WSP, 2023; Volume 3, Appendix 7.1 of the PEIR);

- Stage 2: Geoarchaeological description and interpretation (to be undertaken on e.g. those cores identified at Stage 1 to have some (moderate) potential for preservation of ecofacts);
 - Stage 3: Sub-sampling and palaeoenvironmental assessment (if required); and
 - Stage 4: Palaeoenvironmental assessment (if required).
- 1.7.33 The requirement for further geoarchaeological investigations is currently being assessed as part of the geoarchaeological assessment of the existing borehole data. If further investigation is required, any results will be reviewed and assessed by qualified geoarchaeologists in accordance with industry guidelines.
- 1.7.34 It is recommended that a data review is undertaken by a suitability qualified and experienced archaeological contractor prior to the acquisition of any further geotechnical data during the pre-construction phase (if required). As part of the review, the archaeological contractor will identify any specific archaeological objectives to inform the acquisition of (potential) further geotechnical data. This will include detail 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.
- 1.7.35 The primary aim of any geoarchaeological investigations will be the further development of a Quaternary (sedimentary) deposit model for the OCC which will both inform and be expanded by subsequent phases of work. An outline deposit model will be prepared as part of the geoarchaeological assessment.
- 1.7.36 Historic England will be consulted on the scope of all further geotechnical surveys and all geotechnical investigations and subsequent geoarchaeological assessment commissioned by the Developer 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 (Historic England, 2011); and
 - Geoarchaeology: using earth sciences to understand the archaeological record (Historic England 2007).
- 1.7.37 In planning 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 Historic England.
- 1.7.38 During all geotechnical surveys, all operatives should observe the PAD, as set out in paragraphs 1.7.11–1.7.18.

- 1.7.39 The Developer 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 currently being assessed by Wessex Archaeology. 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.
- 1.7.40 Prior to the commencement of any additional site investigation campaign (if required), a method statement will be issued by the Developer setting out the specific details of the campaign once the geoarchaeological requirements and locations have been established in order to inform consultation with Historic England. Archaeological briefings for survey staff will be carried out prior to the commencement of surveys and the Developer will be responsible for ensuring that surveys proceed in accordance with any planned method statement agreed with the MMO in consultation with Historic England.
- 1.7.41 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 1.7.66–1.7.77).

Archaeological Exclusion Zones

- 1.7.42 The principal objective of an AEZ is to prevent damage to or disturbance of a wreck, aircraft or features on the seafloor during activities that may cause direct impacts to a receptor.
- 1.7.43 The implementation, monitoring and modification of AEZs will take place in accordance with the measures specified by The Crown Estate (2021).
- 1.7.44 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 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 to ensure that all material associated with that asset is encapsulated within its boundary, as well as to reduce the risk of unintentional impacts.
- 1.7.45 As part of the embedded mitigation for the Proposed Development, the size and position of AEZs agreed between the Developer and Historic England will inform the design of the cable route. The size and position of AEZs is expected to be:
- 50 m AEZs around the extents of known wreck sites and anomalies of archaeological interest within which no development related activities will take place;
 - 50 m AEZs around the recorded point locations of previously recorded sites that have not been seen in the geophysical data but at which archaeological material is likely to be present, possibly buried.
- 1.7.46 AEZs have not been proposed for individual anomalies. Additional work will be required to further investigate the nature and extent of anomalies, to establish the archaeological interest and to record them prior to removal, if they cannot be avoided through micro-siting of design.

- 1.7.47 AEZs can be reduced, enlarged or removed in agreement with the MMO in consultation with Historic England 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 cable.
- 1.7.48 The Developer 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).
- 1.7.49 The number of potential AEZs within the OCC is currently undetermined. The number and placement of the AEZs would be informed by the archaeological review of the geophysical survey results which is currently being undertaken.

Archaeological Investigations Using Divers and/or ROVs

- 1.7.50 The principal objective of diver/ROV investigation would be to further establish the archaeological interest of previously unidentified seabed features seen in the geophysical data, to inform the strategy of avoidance through revisions to the scheme design.
- 1.7.51 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.
- 1.7.52 All ground-truthing that may be required to inform the construction of the Proposed Development's mitigation strategy will be carried out in accordance with best practice outlined by The Crown Estate (2021).
- 1.7.53 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 UXO for example.
- 1.7.54 In order to maximise the potential benefits of any proposed diver or ROV surveys, the Developer 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 Proposed Development EIA characterisations 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.
- 1.7.55 Anomalies, as identified from the archaeological assessment of pre-construction geophysical data (see paragraphs 1.7.19–1.7.31), 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 MMO in consultation with Historic England.
- 1.7.56 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 1.7.66–1.7.77).

- 1.7.57 As stated above for marine geophysical assessments, in the event of a new discovery, it is important to notify the NMIC as soon as possible following the identification of a new wreck site in order to protect against salvage attempts. Procedures for contacting the NMIC 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.

Archaeological Watching Brief

- 1.7.58 Due to the use of long HDD to install cables at the landfall, watching briefs within the intertidal area will not be required. Activities which may result in archaeological material being brought to the surface, including clearance operations, HDD pit excavation and pre-lay grapnel runs, may require on-board supervision by a suitably qualified and experienced archaeologist.
- 1.7.59 The scope and methodology of any archaeological watching brief required will be agreed with the MMO in consultation with Historic England 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 1.7.11–1.7.18).

Monitoring

- 1.7.60 Monitoring requirements are anticipated to comprise:
- Monitoring of the final Offshore WSI by the retained archaeologist 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; and
 - Monitoring during and post-construction, including a conservation programme for finds.
- 1.7.61 The performance of the final Offshore WSI will be monitored during the course of the pre-construction phase and the contents of the final Offshore WSI 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 Developer, or their agents to the MMO for approval in consultation with Historic England.
- 1.7.62 All reports prepared for each package of archaeological works will be disseminated to MMO and Historic England by the Developer, 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 the MMO and Historic England within a specified timescale of the survey being completed to be agreed with the regulator.
- 1.7.63 Historic England and the MMO will be notified in advance by the Developer 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 Historic England with regard to site monitoring and reporting only after prior reference to the Developer. The Developer will be kept informed of all contact between the retained archaeologist and the archaeological curators.

- 1.7.64 To monitor the effectiveness of AEZs, periodic archaeological reports will be prepared by the Developer, or by the retained archaeologist on behalf of the Developer, 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 the MMO in consultation with Historic England 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 Developer will seek advice from the retained archaeologist.
- 1.7.65 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 cable construction. Based on the results of the initial post-construction review, any further requirements during the operation phase will be agreed in consultation with Historic England.

Archaeological Recording, Reporting, Data Management and Archiving

- 1.7.66 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.
- 1.7.67 For all aspects of recording, reporting, data management and archiving, the Developer will adhere to industry standards and guidance.
- 1.7.68 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.
- 1.7.69 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 ClfA standards and guidance (2023), 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 A 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) (h) a list of all sources used; and
 - Copyright.
- 1.7.70 Each archaeological report will be submitted in draft to the retained archaeologist for submission to the Developer. If the report is prepared by the retained archaeologist, it will be submitted directly to the Developer.
- 1.7.71 Decisions regarding the scope of post-fieldwork assessment will be made by agreement between the Developer 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.
- 1.7.72 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.
- 1.7.73 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.
- 1.7.74 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 the MMO and Historic England to a timetable to be agreed with the Developer, 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.
- 1.7.75 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 (ClfA, 2020a);
 - 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);
 - Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland (Society of Museum Archaeologists, 1993); 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).
- 1.7.76 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.
- 1.7.77 In England, Historic England holds responsibility for the National Record of the Historic Environment (NRHE), the repository for fieldwork records, and the National Marine Heritage Record (NMHR), the repository for records for archaeological investigation undertaken between Mean High Water (MHW) and the 200 nautical mile sea limit. The NRHE operates a policy for the selection of records relating to sites of national importance. The Developer or their agents will produce an Online Access to the Index of Investigations, known as 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 the NRHE/NMHR.

1.8 Health and Safety

Introduction

- 1.8.1 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.

Risk Assessment and Methodology Statement (RAMS)

- 1.8.2 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.
- 1.8.3 The archaeological fieldwork subcontractor's RAMS will:
- Be clear, concise, and site-specific. Bespoke to the site, 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 provided, along with a deputy.
 - Include an emergency action plan, with an address and route map to the closest Accident and Emergency.
- 1.8.4 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.
- 1.8.5 All RAMS will need to be submitted to the Principal Contractor for review in advance of commencing works.

Personal Protection Equipment (PPE)

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

Non-Archaeological Constraints

Unexploded Ordnance (UXO)

- 1.8.7 In the event that any ordnance is discovered it should be treated with extreme care as it may not be inert. Guidelines on addressing Unexploded Ordnance (UXO) discoveries provided to contractors by the Developer must be followed prior to any recording of items for archaeological purposes. The responsibility for all aspects of Health and Safety in respect of UXO will be the responsibility of the Developer.
- 1.8.8 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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