



# Arklow Bank Wind Park 2

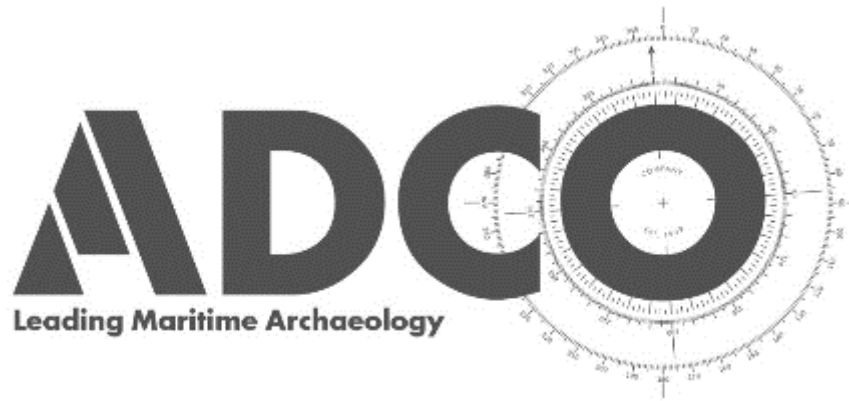
## Environmental Impact Assessment Report

Volume III, Appendix 25.9: Archaeological Management Plan



## Arklow Bank Wind Park 2 Archaeology Management Plan





**Arklow Bank Wind Park 2  
Archaeology Management Plan  
Chapter III, Volume 25.9**

**Issued**

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1.0	14/05/24	Final (External)	ADCO.	GoBe Consultants	Sure Partners Ltd.

## Statement of Authority

Experts	Qualifications	Relevant Experience
Niall Brady	BA MA PhD FSA	Dr Brady is an archaeologist and a graduate of UCD (BA 1983, MA 1986) and Cornell University (MA 1993, PhD 1996). He developed his interest in underwater archaeology in the 1980s while working with the National Museum of Ireland, is founding director of the Archaeological Diving Company Ltd (ADCO) in 1999 and has been HSE Part III diver since 2000. Niall was project director for the Discovery Programme, Ireland’s institute for advanced archaeological research, where he designed and implemented the Medieval Rural Settlement Project (2002-10). With more than four decades of experience in maritime-related research and resolution, Niall has extensive project management experience in the consultancy sector, and has carried out a large number of excavations, monitoring projects, and Environmental Impact Assessments on land and underwater. He has represented several high profile infrastructural projects at Oral Hearing planning enquiries, including the Corrib Onshore Pipeline project 2010; the Port of Cork Ringaskiddy Redevelopment project 2015, and Dublin Port Company’s Alexandra Basin Redevelopment project 2015 and MP2 project 2022. He is editor and heritage team leader for Dublin Port Company’s landmark Conservation Strategy publication (2024), and is currently engaged in a number of Offshore Renewable projects. Niall sits on several international committees, including the Society for Medieval Archaeology and Ruralia. He has been Honorary Editor for the Royal Society of Antiquaries of Ireland (2015-22) and is Associate Research Fellow at the Trinity Centre for Environmental History.

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# Glossary

Term	Meaning
Arklow Bank Wind Park 2 - Offshore Infrastructure	“The Proposed Development”, Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements under the existing Maritime Area Consent.
Arklow Bank Wind Park 2 (ABWP2) (The Project)	<p>Arklow Bank Wind Park 2 (ABWP2) (The Project) is the onshore and offshore infrastructure. This EIAR is being prepared for the Offshore Infrastructure. Consents for the Onshore Grid Infrastructure (Planning Reference 310090) and Operations Maintenance Facility (Planning Reference 211316) has been granted on 26 May 2022 and 20 July 2022, respectively.</p> <ul style="list-style-type: none"> <li>• Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements to be consented in accordance with the Maritime Area Consent. This is the subject of this EIAR and will be referred to as ‘the Proposed Development’ in the EIAR.</li> <li>• Arklow Bank Wind Park 2 Onshore Grid Infrastructure: This relates to the onshore grid infrastructure for which planning permission has been granted.</li> <li>• Arklow Bank Wind Park 2 Operations and Maintenance Facility (OMF): This includes the onshore and nearshore infrastructure at the OMF, for which planning permission has been granted.</li> <li>• Arklow Bank Wind Park 2 EirGrid Upgrade Works: any non-contestable grid upgrade works, consent to be sought and works to be completed by EirGrid.</li> </ul>
Archaeology Management Plan	Document that presents the protocols relating to archaeological mitigation in the course of the Proposed Development’s life.
Array Area	The Array Area is the area within which the Wind Turbine Generators (WTGs), the Offshore Substation Platforms (OSPs), and associated cables (export, inter- array and interconnector cabling) and foundations will be installed.
Bathymetry	The measurement of water depth in oceans, seas and lakes.
Cable Corridor and Working Area	The Cable Corridor and Working Area is the area within which export, inter-array and interconnector cabling will be installed. This area will also facilitate vessel jacking operations associated with installation of WTG structures and associated foundations within the Array Area.
Environmental Impact Assessment (EIA)	An Environmental Impact Assessment (EIA) is a statutory process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information, which fulfils the assessment requirements of the Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment as amended by Directive 2014/52/EU of the European Parliament and of the Council (EIA Directive).
Environmental Management Plan	Document that presents the protocols to be followed to ensure compliance with applicable legislation and statutory controls that apply throughout the lifetime of the Project.
Foreshore	The bed and shore, below the line of high water of ordinary or medium tides, of the sea and of every tidal river and tidal estuary and of every channel, creek, and bay of the sea or of any such river or estuary including the subsoil below, and the water column above the bed and shore and extending to the 12 nautical mile limit.

Term	Meaning
Foundation	<p>The load carrying support structure for the wind turbine generator tower or offshore substation platform topside. The foundation is the part of the structure from the interfacing flange with the turbine tower or topside-foundation interface, down to below seabed. This includes any secondary steel items associated with the structure.</p> <p>For the purposes of the EIAR the term 'foundation' includes the structure from the WTG tower or topside interface down to the lower end of the monopile commonly known as the 'substructure' and encompasses monopiles and transition pieces.</p>
Intertidal area	<p>The area between the high water mark (HWM) and the low water mark (LWM).</p>
Scour protection	<p>A solution for preventing scour around subsea structures, typically comprised of rock or concrete mattresses.</p>
The Developer	<p>Sure Partners Limited</p>
The Proposed Development	<p>Arklow Bank Wind Park 2 Offshore Infrastructure: This includes all elements to be consented in accordance with the Maritime Area Consent and comprises the development proposed in this application to An Bord Pleanála. This is the subject of this EIAR.</p>

# Acronyms

Term	Meaning
AEZ	Archaeological Exclusion Zone
AMP	Archaeology Management Plan
DHLGH	Department of Housing, Local Government and Heritage
DTCAGSM	Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media
EEZ	Exclusive Economic Zone
EIAR	Environmental Impact Assessment Report
EMP	Environmental Management Plan
IAD	Irish Antiquities Division
ITM	Irish Transverse Mercator
MCC	Marine Coordination Centre
NMI	National Museum of Ireland
NMS	National Monuments Service
OPS	Offshore Substation Platform
QQI	Quality and Qualifications Ireland
ROV	Remotely Operated Vehicle
SPL	Sure Partners Ltd (SPL)
SSDE	Surface Supplied Diving Equipment
TEZ	Temporary Exclusion Zone
TSHD	Trailer Suction Hopper Dredger
UAU	Underwater Archaeology Unit
UTM	Universal Transverse Mercator
WTG	Wind Turbine Generator



# Units

Unit	Description
m	Metre
km	Kilometre
nm	Nautical miles

## 1. Scope

- 1.1.1.1. The purpose of the Archaeology Management Plan (AMP) is to provide the overarching framework by which the Developer will manage potential risks to archaeological features from the Arklow Bank Wind Park 2 (ABWP2) Offshore Infrastructure (hereafter referred to as the 'Proposed Development') throughout its lifetime.
- 1.1.1.2. The AMP informs the archaeological mitigation strategy presented in the Environmental Impact Assessment Report (EIAR). It is also the basis for the annual archaeological licensing process that will be required in the course of the Project lifetime to facilitate active survey and monitoring of the works programme.
- 1.1.1.3. As such, the AMP sets out the principal protocols that Sure Partners Ltd (SPL – the Developer) will put in place to ensure the protection of archaeological heritage during the construction, operation and maintenance, and decommissioning of the Proposed Development.
- 1.1.1.4. During construction, the AMP will be updated annually to absorb new observations and regulatory guidance that may arise in the course of any one year of the Project lifetime. The AMP will also be updated on completion of each principal phase of the Project (Construction, Operational and Maintenance) so that there is a clear handover of archaeological responsibilities that is up to date and current.

## 2. Background

- 2.1.1.1. The Proposed Development is an offshore wind farm situated on and around Arklow Bank in the Irish Sea, approximately 6 to 15 km to the east of Arklow in Co. Wicklow. The Proposed Development is subject to an Environmental Impact Assessment Report (EIAR). Volume II, Chapter 18 of the EIAR addresses marine archaeology and cultural heritage and requires a series of mitigation measures to be applied as described in the EIAR, to conserve the marine archaeology and cultural heritage of the site and to secure the preservation and protection of any remains that may exist within the site.
- 2.1.1.2. The Developer commissioned extensive surveys of the seabed as part of the preparations for the EIAR, to inform the archaeological risk within the area of the Proposed Development, and as described in the Marine Archaeology and Cultural Heritage Technical Report (Volume III, Appendix 18.1).
- 2.1.1.3. The AMP also draws from information presented in Volume III, Appendix 25.1: Environmental Management Plan (EMP).
- 2.1.1.4. Confirmatory surveys, site preparation works, installation works, operational and maintenance works, and decommissioning works include direct interactions with the seabed. The works will take place in a phased progression, once commenced.
- 2.1.1.5. The principal archaeological mitigations that apply to the Proposed Development are to avoid impacts with known archaeological sites; to review survey and geotechnical investigations data, and to archaeologically monitor seabed preparation and offshore infrastructure installation (cable, WTG and OSP) works, and associated maintenance and decommissioning works, where monitoring is possible and required.
- 2.1.1.6. Any archaeological material recovered during the works will be retained and stored securely by the Developer for analysis and consideration by the National Museum of Ireland (NMI) for its long-term/permanent disposal options.

- 2.1.1.7. In the event of a significant discovery being made in the course of works (for example, a previously unrecorded shipwreck), additional archaeological mitigation will be implemented in order to investigate and assess the find location further. Such mitigation may include archaeological survey and investigation. The preferred mitigation will be to preserve the site *in situ*. However, should preservation *in situ* not be possible, the principle of ‘preservation by record’ will apply to the discovery and resolution of any such remains, whereby the artefact / feature will be subject to full archaeological excavation and recovery if required.
- 2.1.1.8. The Developer will appoint an experienced maritime archaeological consultancy as its Archaeological Consultant for the Proposed Development. The archaeological services will be carried out under licences to be granted by the Department of Housing, Local Government and Heritage (DHLGH). The archaeological licences currently comprise Detection Device and Dive Survey licences for non-disturbance survey work, and Excavation licences for work that impacts with the seabed, and are granted in accordance with the National Monuments Act. The National Monuments Act (1930-2004) is currently being superseded by the Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023), which is in the process of being commenced. It is likely that full commencement of the 2023 Act will see certain changes in the archaeological licensing system that currently exists. Any such changes will be absorbed into the AMP as updates when they come into effect.

### 3. Roles and Responsibilities

3.1.1.1. The key roles and responsibilities are:

- Archaeological Consultant – Professional experienced marine archaeological consultant appointed to deliver the archaeological aspects of the Project.
- Contractor – Marine Engineering company/companies appointed to deliver construction, operational and maintenance, and decommissioning works packages for the Project.
- Developer – SPL Ltd, Project sponsor.
- Environmental Manager – SPL representative with overall responsibility for managing the delivery of the Environmental Management Plan.
- National Monuments Service – the statutory body within the Department of Housing, Local Government and Heritage (DHLGH) responsible for regulating archaeological licensing and consent.
- National Museum of Ireland – the statutory authority within the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media (DTCAGSM) responsible for regulating the curation and archiving of archaeological finds.

### 4. Communication

- 4.1.1.1. The Archaeological Consultant will be appointed by the Developer to manage the archaeological requirements of the Proposed Development.
- 4.1.1.2. Correspondence and communication throughout all phases of the Proposed Development will be directly between the Archaeological Consultant and the Developer. The Archaeological Consultant will be represented by a named archaeologist who is licence-eligible, has a minimum Level 8 (Honours Bachelor’s Degree) qualification recognised by Quality and Qualifications Ireland (QQI), and specialises in Maritime/Underwater Archaeology with a minimum of three years project management experience in Marine Archaeology projects. The archaeologist will be supported by a team of experienced archaeologists who report directly to the archaeologist.

- 4.1.1.3. The Developer is represented by the SPL Environmental Manager for most environmental aspects of the Proposed Development.
- 4.1.1.4. The works Contractor is appointed by the Developer. Correspondence and communication to or from the Archaeological Consultant on all matters pertaining to works associated with the Proposed Development will be via the SPL Environmental Manager.
- 4.1.1.5. The DHLGH is the statutory authority that regulates the archaeological licences through the National Monuments Service (NMS), and communicates directly with the Archaeological Consultant and the archaeologist's licence holder. In relation to marine archaeology, the NMS is represented by the Underwater Archaeology Unit (UAU).
- 4.1.1.6. The National Museum of Ireland (NMI) is the statutory authority that has responsibility for the archiving and curation of archaeological objects recovered in the course of the Project, and communicates directly with the Archaeological Consultant and the archaeologist's licence holder. The NMS is represented by the Irish Antiquities Division (IAD).

## 5. Legislation and Guidance

- 5.1.1.1. The National Monuments Acts 1930-2014 governs the discovery, reporting and protection of archaeological objects, features and sites in Ireland. The Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023), extends geographic jurisdiction of the National Monuments Acts to the Irish contiguous zone. The Irish contiguous zone is defined in the Maritime Jurisdiction Act 2021 as the area between the outer limit of the territorial sea and the outer limit of the exclusive economic zone (EEZ), to a distance of 24 nautical miles (nm).
- 5.1.1.2. It is anticipated that full enactment of the Historic and Archaeological Heritage and Miscellaneous Provisions Act (2023) will occur in the course of installation works. In accordance with this legislation, all new discoveries of archaeological material must be reported to the NMS within four days of the discovery.
- 5.1.1.3. The Merchant Shipping (Salvage and Wreck) Act 1993 (as amended) and the Maritime Area Planning Act 2021 (as amended) carry their own obligations in relation to the discovery of a shipwreck. The acts apply to territorial waters, out to the 12 nm limit.
- 5.1.1.4. There is not yet a marine archaeological guidance document prepared by the National Monuments Service in Ireland. It is anticipated that such a document will be completed in the course of the Project development. In the meantime, the following archaeological guidance documents inform archaeological requirements and approaches in the marine environment in Ireland:
  - Framework and Principles for the Protection of the Archaeological Heritage (1999)
  - Guidelines for Authors of Reports on Archaeological Excavations (2006)
  - Marine Geophysics Data Acquisition, Processing and Interpretation (2013)
  - Archaeology and Flood Relief Scheme: Guidelines (2023)
  - Advice to the Public on Ireland's Underwater Archaeological Heritage (2023)

The AMP complies fully with these guidance documents.

## 6. Archaeological protocols for Project works

- 6.1.1.1. The following protocols are universal mitigation protocols that exist throughout the Proposed Development's lifetime and serve to protect the marine archaeology and cultural heritage assets.

### 6.1.2. *Appointment of a suitably qualified archaeological consultant*

6.1.2.1. A suitably qualified and experienced marine Archaeological Consultant will be appointed by the Developer to manage the archaeological requirements through the Proposed Development's lifetime. The Archaeological Consultant will advise the Developer on all aspects of the archaeological process, liaise with the statutory archaeological authorities (NMS and NMI), prepare archaeological method statements, ensure the timely acquisition of archaeological licensing, provide Toolbox Talks where required, and conduct/oversee archaeological site work, post-excavation analysis and reporting.

### 6.1.3. *Impact Avoidance: Archaeological Exclusion Zones*

6.1.3.1. Archaeological Exclusion Zones (AEZs) are the principal means with which to preserve *in situ* any sites or deposits of known and potential archaeological interest. AEZs are required mitigation for known archaeological sites and are formed by establishing a buffer around the known extents of wreck sites, or around geophysical anomalies for which the available evidence suggests that there could be archaeological material present on or in the seabed. AEZs are site-specific, depending on the extent of the site or wreckage and are based on their archaeological potential. The AEZs identified within the area of the Proposed Development are set out in Volume III, Appendix 18.1: Marine Archaeology and Cultural Heritage Technical Report and are included below in Table 25.9.1.

6.1.3.2. The size and extent of an AEZ is subject to change, based on the acquisition of new survey data and related information that can help to refine the known extent of a known/potential archaeological site. Any changes to AEZs are subject to the approval of the NMS.

6.1.3.3. In the event that activities associated with the Proposed Development are unable to avoid impacts within an AEZ, the works can only proceed with the consent of the NMS. This applies to works within the Array Area and Cable Corridor and Working Area. In this context (i.e. where an AEZ cannot be avoided), it is likely that additional archaeological mitigation and monitoring will be required. This could take the form of a variety of mitigation measures that would be determined by the NMS, and which may include, but are not limited to:

- Updating method statements;
- Acquiring new or extended archaeological licensing;
- Additional geophysical surveys, focused on refining/clarifying details;
- Archaeological monitoring aboard works vessels to observe live operations;
- ROV/archaeological diver surveys and archaeological interpretation; and
- A programme of archaeological recording and/or recovery of archaeological material from the seabed.

6.1.3.4. The proposed AEZs will remain in place throughout all phases of the Proposed Development. Where additional survey takes place and refines the extent of an archaeological site, the perimeter of the AEZ may be changed to reflect the new information, subject to the approval of the NMS.

Table 25.9.1: AEZs identified for each known wreck site location

Reference	UTM_E	UTM_N	AEZ Radius from centrepoint
W02373	295415	5865095	50 m

Reference	UTM_E	UTM_N	AEZ Radius from centrepoint
W02432	294913	5864142	50 m
W02647	297514	5856582	50 m
W02648	294672	5855713	50 m
W02649	292399	5854609	50 m
W02650	291160	5854208	50 m
W02658	301286	5857808	100 m
W02690; GSI 403	300450	5850432	150 m
W02737	300236	5839999	50 m
W02774	302484	5859615	50 m
W02775	300997	5853014	50 m
W02776	300775	5852999	50 m
W02777	301024	5852907	50 m
W02778	300683	5851621	50 m
W02779	301427	5851389	50 m
W02780	301782	5853481	50 m
W02781	300952	5854652	50 m
W02782	300425	5855377	50 m
W02783	300975	5854761	50 m
W02784	302782	5860428	50 m
W02785	303806	5864039	50 m
W02786	303861	5864572	50 m
W02787	302454	5860151	50 m
W02788	302221	5859559	None
W02789	303368	5863378	50 m
W02790	302446	5860764	None
W02791	302356	5860723	None
W02792	303012	5865887	50 m
W02793	303051	5865841	50 m
W02794	303151	5865837	50 m
W02795	303247	5865710	50 m
W02796	303037	5865663	50 m
W02797	302965	5863583	50 m
W02798	302452	5861744	None
W02799	302116	5861112	50 m
W02800	303111	5864357	50 m
W02801	304123	5864216	50 m
W02802	302613	5859410	50 m
W09512	300408	5850140	None
W09566	289099	5855539	50 m
W10325	307756	5853129	50 m
W10326	305990	5855386	50 m
W10331	303177	5864318	50 m
W11021	288744	5855146	50 m
W11475	288198	5853863	50 m
W11721	292189	5859792	50 m

Reference	UTM_E	UTM_N	AEZ Radius from centrepoint
W17904	296550	5853980	50 m
W18524	297533	5856664	50 m
W18526	300926	5846368	100 m
GSI 467	300041	5849442	100 m
UHC19004_SSS_LA_0390; GSI 403	300047.0	5850134.2	150 m
UHC19004_SSS_LA_0421	300071.0	5850359.6	50 m
UHC19004_SSS_LA_0428; GSI 405	300434.8	5850503.6	150 m
UHC19004_SSS_LA_0434	300323.5	5850568.9	100 m
UHC19004_SSS_LA_0738 ; UHC19004_SSS_R2_1061	300789.0	5853374.6	50 m
UHC19004_SSS_LA_0761 ; UHC19004_SSS_R2_0991	300425.8	5853474.3	50 m
UHC19004_SSS_LA_0855 ; UHC19004_SSS_R2_1014	300647.5	5853867.7	50 m
UHC19004_SSS_LA_0958 ; UHC19004_SSS_R2_0961	300677.9	5854362.6	50 m
UHC19004_SSS_LA_1033	300985.8	5854752.4	70 m
UHC19004_SSS_LA_1228	301131.0	5855739.7	50 m
UHC19004_SSS_LA_1529	301879.8	5858841.5	50 m
UHC19004_SSS_LA_1553	301958.7	5859184.7	50 m
UHC19004_SSS_LA_1579	301747.9	5859529.9	100 m
UHC19004_SSS_LA_1602	302148.4	5859608.3	100 m
UHC19004_SSS_LA_1605	302183.5	5859618.1	100 m
UHC19004_SSS_LA_1641	301661.6	5859997.5	70 m
UHC19004_SSS_LA_1724	301857.7	5860772.1	150 m
UHC19004_SSS_LA_1725	302293.6	5860762.7	70 m
UHC19004_SSS_LA_1735	302377.6	5860813.4	70 m
UHC19004_SSS_LA_1773	302380.4	5861763.2	50 m
UHC19004_SSS_LA_3638	300877.7	5846874.9	100 m
UHC19004_SSS_LA_3777	302632.6	5855331.7	100 m
UHC19004_SSS_R2_1035	300650.4	5853694.1	50 m
UHC19004_SSS_R2_1070	300689.7	5853034.1	50 m
ADCO_1	302006.8	5861908.6	50 m
ADCO_2	302356.0	5864716.0	50 m
ADCO_3	299390.0	5849702.0	50 m
ADCO_4	301617.0	5855788.0	50 m
ADCO_5	303808.0	5863958.0	50 m
ADCO_6	301749.0	5860313.0	50 m
ADCO_7	299894.0	5849084.0	100 m
GR_SSS_0001	295252.0	5858624.0	50 m
GR_SSS_0121	299831.4	5851542	50 m
GR_SSS_0133	299997.7	5851443	50 m
GR_SSS_0137	300157.6	5851424	50 m
GR_SSS_4455	300397.9	5853858	50 m
GR_SSS_4457	300557.1	5853819	50 m



#### **6.1.4. Radii of AEZs**

- 6.1.4.1. Of the wreck sites identified as requiring an AEZ, radii of 50 m, 70 m, 100 m and 150 m have been ascribed. The radius of an AEZ extends from the centre point of a wreck. Fifty metre radii are standard for marine archaeological mitigation, where the wreck is considered to be small in size and to have no evidence of debris extending away from it. However, where sites are larger or where associated debris fields are indicated, the size of the AEZ will increase to provide larger areas of protection. For justification of the sites/features that have been ascribed a larger than 50 m AEZ radius, see Appendix 4 of Volume III, Appendix 18.1: Marine Archaeology and Cultural Heritage Technical Report.
- 6.1.4.2. AEZs have been applied to the precisely identified positions and were agreed with the UAU.

#### **6.1.1. Monitoring of AEZs**

- 6.1.1.1. The effectiveness of the AEZs will be periodically monitored by the Archaeological Consultant, by examining vessel trackplot logs and inspecting works vessels as needed.

#### **6.1.2. Altering AEZs**

- 6.1.2.1. AEZs may be altered (enlarged, reduced, moved or removed) as a result of further assessment or archaeological evaluation of data of areas that are subject to AEZs. Further assessment could include a formal archaeological analysis of new geophysical data, and archaeological evaluation could include suitable high-resolution geophysical survey.
- 6.1.2.2. The alteration of AEZs will only be undertaken with the agreement of the NMS at the DHLGH and in accordance with the archaeological licensing conditions granted. In the instance of an alteration, a new plan giving details of the AEZs will be drawn up by the Archaeological Consultant and issued to the SPL Environmental Manager and the NMS.
- 6.1.2.3. The SPL Environmental Manager will notify contractors of AEZs and of any alteration or removal of AEZs.

## **7. Temporary Exclusion Zones**

- 7.1.1.1. If new finds of archaeological importance are discovered during any phases of the Proposed Development, the AMP allows for Temporary Exclusion Zones (TEZs) to be introduced. These operate in a similar way to the established AEZs, but may be removed following advice from the NMS. A TEZ may also form a new AEZ if further disturbance needs to be avoided. AEZs will be put in place with the agreement of the NMS.

## **8. Archaeological licensing/consent**

- 8.1.1.1. Archaeological licences will be obtained prior to commencing the following works:
- Relevant Marine Surveys;
  - Seabed preparation works;
  - Installation works;
  - Maintenance works that anticipate seabed disturbance activities; and
  - Decommissioning works that anticipate seabed disturbance activities.
- 8.1.1.2. Archaeological licence applications require the inclusion of detailed method statements that outline the rationale for the works, the means by which the works will be resolved, the schedule of such works, and the required post-excavation analysis of finds and reporting/archiving requirements that are required for archaeological licence compliance.



8.1.1.3. The following licence types are required:

- Form NMS 2-06 Consent to use a Detection Device, to cover the use of marine geophysical survey equipment;
- Form NMS 3-06 Licence to Dive/Survey, to support Detection Device applications, and to conduct archaeological diving; and
- Form NMS 1-2019 Licence to Excavate, to support archaeological monitoring and underwater investigations works, including preservation by record.

8.1.1.4. Archaeological licence applications take a minimum of four weeks to process through the DHLGH, and advance planning is required to ensure that the necessary permits are in place before site works commence. The Proposed Development will allow eight weeks for licence processing by DHLGH.

## 9. Toolbox Talks

9.1.1.1. Archaeological Toolbox Talks will be delivered by the Archaeological Consultant to the works crews in advance of surveys and works commencing. The Toolbox Talks will inform the works crews of:

- Archaeological potential of the setting;
- Managing the archaeological risk: scope of work; range of archaeological material that can be anticipated to be observed;
- Communication procedures within the Project personnel;
- Archaeological legislation governing the discovery and reporting of archaeological material;
- Archaeological protocols in the event of observation and/or recovery of archaeological material;
- Archaeological protocols in the event that preservation by record is required;
- Exiting the site; and
- Reporting data.

## 10. Archaeological Monitoring and Finds Retrieval Strategy

10.1.1.1. Archaeological monitoring will be carried out by suitably qualified and experienced maritime archaeological personnel who will operate under an excavation licence from the DHLGH.

10.1.1.2. Archaeological monitoring will be conducted during intertidal/foreshore and seabed disturbances associated with the Proposed Development where the recovery of material to the surface is possible. The relevant works packages include:

- Boulder clearance using a grab;
- Seabed preparation – foundations employing a Trailer Suction Hopper Dredger (TSHD);
- Seabed preparation – cables, pre-sweep employing a TSHD;
- Seabed preparation – cables, grapnel run using a chain fitted with grapnel hooks;
- Cable installation, using a trenching device;
- Nearshore cable works – punch-out location using backhoe dredger to excavate.

10.1.1.3. The schedules for the works campaigns shall be made available to the Archaeological Consultant ten weeks in advance of the works commencing, with information on where and when works will take place. The details of the works operations will be made available to the Archaeological Consultant, with information to inform the most appropriate monitoring strategy.

- 10.1.1.4. A site office and facilities will be provided by the Developer within the Project compound/Project vessels for use by the archaeologist monitoring site works. The Developer will ensure that the works contractors will also provide accommodation and work area for archaeologists on board the works vessels as needed.
- 10.1.1.5. Archaeological monitoring will be undertaken in a safe working environment that will facilitate archaeological observation and the retrieval of objects that may be observed and that require consideration during the course of the works.
- When aboard the works vessel, the monitoring archaeologists will be permitted to observe the operation from the bridge and/or survey room, and to advise on archaeological observations when necessary; and
  - The vessel captain/offshore manager will make available trackplot data and provide the information necessary to record positioning, and to record the start and end of vessel runs, along with primary data files and project mapping/reporting, to facilitate archaeological reporting.
    - The monitoring archaeologists will observe the dredging/related operation from the bridge, along the deck areas and when the dredge head is lifted, when safe to do so;
    - On completion of a works run, the archaeologist will inspect the material recovered to deck and recover items when safe to do so; and
    - Objects recovered will be stored securely aboard the works vessel until they are unloaded safely by the archaeological personnel. Artefacts recovered during the works must meet the temporary storage requirements of the NMI (Standards for the care and treatment of archaeological objects from excavations, 2022).
- 10.1.1.6. Secure wet storage facilities will be provided by the Developer to facilitate the temporary storage of artefacts that may be recovered during the course of the site work.
- 10.1.1.7. Long-term storage facilities that are secure and will accommodate wet storage of marine finds shall be identified within the Developer's onshore compound until all post-excavation analysis, conservation and reporting has been completed and in accordance with and subject to the approval of the requirements of the NMI and NMS.
- 10.1.1.8. Post-excavation analysis of finds recovered will be conducted where required. This may require specialists in particular artefact and object types.
- 10.1.1.9. Objects of potential archaeological interest recovered may require archaeological conservation, which is a specialist archaeological service.
- 10.1.1.10. It is a condition of archaeological licensing that a detailed project report is lodged with the DHLGH within 12 months of completion of site works. The report will be to publication standard and will include a full account, suitably illustrated, of all archaeological features, finds and stratigraphy, along with a discussion and specialist reports.

## **11. Finds Retrieval Strategy without archaeological monitoring**

- 11.1.1.1. Archaeological monitoring will not be required in works packages where there will be no material recovered to deck and where the seabed has already been surveyed comprehensively and no archaeological features recorded. The relevant works packages include but are not limited to:
- Scour protection installation;
  - Foundation installation;
  - Cable lay;
  - WTG installation;

- Operational and maintenance works, where no new excavations of the seabed are anticipated; and
- Decommissioning works, where no new excavations of the seabed are anticipated.

11.1.1.2. A protocol for archaeological discovery will nevertheless apply in these circumstances, where the Contractor will report observations to the SPL Environmental Manager, who will then report the observation to the Archaeological Consultant. The Archaeological Consultant will determine the significance of the observation.

11.1.1.3. The protocol will follow a 14-step procedure:

1. Toolbox Talk prior to works commencing to be provided to the works crews by the Archaeological Consultant.
2. The Archaeological Consultant will provide a pro-forma archaeological record sheet that will be completed by the SPL Environmental Manager in the event of an object being recovered. The pro-forma record sheet will include the details listed in the archaeological record sheet and will indicate the next steps required.
3. In the event of archaeological material being encountered, the Contractor will temporarily cease potentially damaging activities in the vicinity, if it is safe to do so.
4. Where it is possible to identify the position from which the find originated, the SPL Environmental Manager will implement a TEZ within which activities must temporarily cease until the advice of the Archaeological Consultant has been obtained.
5. The SPL Environmental Manager will record the occurrence as soon as possible in the site records, together with the time and exact vessel position.
6. Where possible, the report entry should include a close approximation of the original position of the anomaly on the seabed.
7. The Contractor will ensure that the area shall be marked on navigational software, site drawings and survey charts/software.
8. The SPL Environmental Manager will notify the Marine Coordination Centre (MCC) who will mark the TEZ on navigational software and inform other vessels/teams in the area where the discovery has been made.
9. The SPL Environmental Manager will also be responsible for compiling a Preliminary Record of the occurrence both for discoveries on the seabed and on the deck of the vessel.
10. The SPL Environmental Manager will notify the Archaeological Consultant within 12 hours of the observation, and will pass all available information to them, including a copy of the Preliminary Record and copies of other relevant records.
11. The Archaeological Consultant will provide advice on the nature of any discoveries and ensure appropriate action is taken.
12. The Archaeological Consultant will respond to all e-mails within 48 hours, or as soon as reasonably practicable.
13. The Archaeological Consultant will determine whether an object is of archaeological interest and will determine its significance.
14. If any finds have been recovered, the SPL Environmental Manager will arrange for them to be immersed in seawater in a suitable clean container, which will be covered. Any rust, concretion or marine growth will not be removed. Furthermore, the SPL Environmental

Manager and the Archaeological Consultant will make any finds available to the NMS and NMI as necessary.

## 12. Archaeological protocols when a discovery of archaeological material is made

- 12.1.1.1. In the event of archaeologically significant features or material being uncovered during activities associated with the Proposed Development, the SPL Env Manager will apply a Temporary Exclusion Zone (TEZ) to the proposed find location and machine work will cease within the TEZ to allow the archaeologist/s to assess and/or inspect any such material. The Archaeological Consultant will determine when a feature or material is significant. Once the presence of archaeologically significant material is established, the Archaeological Consultant will inform the Developer and the NMS. The size of the exclusion zone will be informed by the archaeologist's observations.
- 12.1.1.2. The principle of preservation *in situ* will be promoted. However, where impact avoidance is not possible, full archaeological recording will be required. The extent and duration of excavation will be a matter for discussion between the Developer and the NMS. The Archaeological Consultant will advise the Developer on this.
- 12.1.1.3. The Archaeological Consultant will be facilitated by the Developer to request additional archaeological survey of the TEZ and also of the impact area to examine further the potential of possible archaeological features that may have become revealed.
- 12.1.1.4. Such surveys may include multibeam bathymetry, side-scan sonar, magnetometry, sub-bottom profiling and the use of ROVs, to be acquired by the Developer's approved third-party provider working to specifications agreed by the archaeologist and the Developer.
- 12.1.1.5. Such survey may include underwater archaeological diver-truthing where necessary.
- 12.1.1.6. Where a TEZ is activated during a seabed preparation/infrastructure works campaign, this surveying facility may be commenced during such a works campaign; where the works vessel has moved away from and is at a safe distance from the TEZ.
- 12.1.1.7. The core of a suitable archaeological team will be on standby to deal with any rescue excavation. This will be complimented and expanded in the event that preservation by record or a full archaeological excavation is required.
- 12.1.1.8. Remotely Operated Vehicles (ROV) may offer appropriate resolution.
- 12.1.1.9. In the event that underwater archaeological inspection is required by means of archaeological diving, the archaeological dive team will consist of the following:
  - 1 No. Captain (Dive Supervisor);
  - 1 No. Diver (Lead diver)
  - 1 No. Watcher (tender for Lead diver).
  - 1 No. Back-up (Standby) Diver;
  - 1 No. Watcher (tender for Standby diver).
  - 1 No. Diver (reserve diver / reserve tender / record keeper).
- 12.1.1.10. Archaeological diving will be conducted operating Surface Supplied Diving Equipment (SSDE) in accordance with SI 254/2018 Safety, Health and Welfare at Work (Diving) Regulations 2018 and SI 180/2019 Safety, Health and welfare at work (Diving) (Amendment) Regulations 2019.
- 12.1.1.11. Buoying of any such areas of discovery (TEZs) will be necessary if discovered and during excavation.

12.1.1.12. Vessel traffic during construction, operational and maintenance and decommissioning that require contact with the seabed when operational (e.g. jack-ups supported by spud legs) will be restricted to avoid any identified archaeological site/s and their environs.

12.1.1.13. Spoil will not be dumped on any of the archaeological sites or their environs.

12.1.1.14. Facilities will be provided by the Developer to facilitate the temporary storage of artefacts that may be recorded during the course of the site work.

## **13. Archaeological record**

13.1.1.1. The Archaeological Consultant will maintain detailed records that will form part of the document archive for the Proposed Development.

13.1.1.2. The records for object/feature/site observations will include the following information:

- Archaeological Licence;
- Project name;
- Works vessel name;
- Date of observation;
- Time of observation;
- Positioning information (Lat/Long and UTM/ITM projection);
- Circumstance of discovery;
- Description;
- Measurements;
- Storage location;
- Storage condition;
- Other comment;
- Photograph/s (and digital image file reference numbers);
- Measured sketch;
- Next actions;
- Recorder name;
- Checked by; and
- Date.

## **14. Works campaign schedule**

14.1.1.1. The works campaign schedule will be provided in advance and when the schedule changes to the archaeologist, to inform archaeological licensing and archaeological mobilisation.

14.1.1.2. The archaeologist, when aboard works vessels, will prepare and issue daily reports to the Developer, focussed on archaeological observations.

14.1.1.3. The archaeologist will prepare mini-campaign reports for issuing to DHLGH if required.

14.1.1.4. The archaeologist will prepare project preliminary and final reports in fulfilment of archaeological licensing requirements and in accordance with the NMS *Guidelines for Authors of Reports on Archaeological Excavations*.

## **15. Operating Environment/ Site Work**

15.1.1.1. The archaeologist will operate a safe working environment at all times and personnel will comply with all relevant regulatory and contractual requirements.

## 16. References

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