

Volume 10: Appendices (Onshore)

Appendix 25.4

Cultural Heritage and Mitigation Strategy

APPENDIX 25.4 DRAFT CULTURAL HERITAGE MITIGATION STRATEGY

25.1 INTRODUCTION

The North Irish Sea Array offshore wind farm (hereafter referred to as the ‘proposed development’) is an offshore wind farm located off the east coast of Ireland, off counties Dublin, Meath and Louth. The proposed development is comprised of onshore and offshore infrastructure. Refer to Chapters 6 (Offshore Description) and 7 (Onshore Description) of the EIA for further details.

This document has been prepared specifically in reference to the onshore infrastructure of the proposed development and the cultural heritage resource (landward site of the high-water mark) in order to inform and assist in the design of an approach to the evaluation and management of the impacts of the proposed development on the overall cultural heritage baseline environment. It addresses the proposed development with regard to cultural heritage namely:

- The appropriate identification, recording and protection measures of cultural heritage constraints; and
- The efficient and timely delivery of the proposed development.

This draft Cultural Heritage Strategy will be issued to all statutory consultees as part of the planning application process, including the National Monuments Section of the Department of Housing, Local Government and Heritage (DHLGH) and relevant Local Authority Heritage Departments.

The Cultural Heritage Strategy is a live iterative document, and it will continue to evolve on a phased basis to ensure that it remains appropriate and effective in managing cultural heritage risk up to and including the various construction and operational phases. This will be carried out in order that the proposed development can securely provide a timely and appropriate level of provision for cultural heritage works without undue impact on the overall development programme.

It is important to note that with regards to the proposed development, a level of flexibility is required in the design of the onshore elements. Within the landfall site, the construction footprint required to bring the offshore export cables ashore and subsequently connect to the grid facility will be smaller than the proposed development boundary of the landfall site (as assessed in the EIA). This is required to ensure that any obstacles or constraints (both offshore and onshore) identified during detailed design, can be avoided. Therefore, the onshore archaeology, architectural and cultural heritage assessment has been conducted with the assumption that the onshore cables will be located anywhere within the landfall/ grid facility site and all archaeological features identified in this area have the potential to be impacted.

In addition, a number of different cable route crossing options have been developed in order to cross small watercourses where the route travels from the grid facility at Bremore to the existing sub-station at Belcamp. As such, mitigation covers each eventuality, which will be defined at detailed design stage.

25.2 SUMMARY OF EIAR FINDINGS

Note this Appendix must be read in conjunction with Chapter 25 (Archaeological Architectural and Cultural Heritage) of the EIAR.

25.2.1 Construction

Landfall Site

The overall lands have been designated as an Area of Archaeological Potential (AAP1) due to the proximity of the coast. The archaeological potential of the site was proven during geophysical survey and archaeological testing carried out to inform this EIAR. Seven areas of archaeological significance were identified comprising an enclosure (AA5), five areas of burnt mound activity (AA6, 7, 8, 9 and 10) and one kiln (AA11). It is possible that ground disturbances associated with the construction of the proposed development in this area will result in direct, negative impacts on the archaeological remains. These impacts have been defined as very significant in EIA terms (in the absence of mitigation measures).

Grid Facility

The overall lands have been designated as AAP1 due to the proximity of the coast. The archaeological potential of the site was proven during geophysical survey and archaeological testing carried out to inform the EIAR. Four areas of archaeological significance were identified comprising an enclosure (AA1), two areas of burnt mound activity (AA2, 4) and one field system (AA3). Ground disturbances associated with the construction of the development will result in direct, negative impacts on the archaeological remains. These impacts have been defined as very significant in EIA terms (in the absence of mitigation measures).

One CH site (CH01) is also located within this area, which comprises the ruined remains of a post medieval well. This will be removed as part of the proposed grid facility development and the impact has been defined as direct, negative and permanent and moderate in significance (in the absence of mitigation measures).

It remains possible that ground works associated with the construction of the proposed development, both the landfall area and grid facility, may have direct, negative and permanent impacts upon small, unknown archaeological sites that may survive beneath the current ground level and outside of the footprint of the excavated test trenches. The magnitude of impact may be very high and significance of effects (in the absence of mitigation measures) may range from moderate to profound negative, based on the nature and extent of any remains that may be present.

Onshore cable route

A total of 25 potential direct and negative impacts (in the absence of mitigation measures) have been identified upon the cultural heritage resource as a result of the construction of the onshore cable route. These comprise the following:

- Potential direct, negative, permanent impacts on the archaeological, architectural and cultural heritage resource, which may be profound: AH30g (cross).
- Potential direct, negative, permanent impacts on the archaeological, architectural and cultural heritage resource, which may be very significant: BH06 (milestone), BH10 (milestone), BH12 (Daws Bridge), AH25 (Holy well, site of), BH19 (milestone), BH21 (milestone), BH22 (bridge).
- Potential direct, negative, permanent impacts on the archaeological, architectural and cultural heritage resource, which may be significant: CH23 (site of post medieval structures), CH37 (three archaeological anomalies), AAP08 (estuarine/coastal margin), DL14/Abbeville ACA (demesne landscape), AH30d (St Doolaghs ecclesiastical enclosure), BH33 (walled garden at Belcamp House demesne).
- Potential direct, negative, permanent impacts on watercourses (if offline options are utilised), which may be significant: AAP04, 07, 09, 10, 11.
- Potential direct, negative, permanent impacts on the archaeological, architectural and cultural heritage resource, which may be moderate: CH10 (Bridge).
- Potential direct, negative, permanent impacts on the archaeological, architectural and cultural heritage resource, which may be slight: CH04 (site of structures associated with Ballough).

It remains possible that ground works associated with the construction of the cable within greenfield areas that have not been designated within any obvious archaeological potential, may still have direct, negative and permanent impacts upon unknown archaeological sites that may survive beneath the current ground level. The magnitude of impact may be very high and the significance of effect may range from moderate to profound negative (in the absence of mitigation measures), based on the nature and extent of any remains that may be present.

The cable route will travel through a number of Zones of Notification associated with the monuments. Whilst these zones do not define the extent of archaeological remains, they represent an area in proximity to the RMP that requires two months notification to be issued to the NMS (under Section 12 of the National Monuments Act), if works are proposed within that area. It is possible that features associated with the monuments extend into the roads, where extensive works have not already occurred. No impacts are predicted in relation to the zones associated with AH26 and

AH12 due to the level of developed road infrastructure. Where the onshore cable route passes through the zones associated with AH28 (within AAP08) and AH32, there remains some potential that excavation works may have direct, negative and permanent effects upon archaeological sites that may survive beneath the current road level. The magnitude of impact may be very high and significance of effect may range from moderate to profound negative, based on the nature and extent of any remains that may be present.

25.2.2 Operation

No operational impacts have been identified in relation to the proposed onshore development and the archaeological, architectural and cultural heritage resource, which requires mitigation as part of the proposed development.

The operation of the proposed offshore turbines upon the onshore archaeological, architectural and cultural heritage coastal resource (and an UNESCO World Heritage Sites) has been assessed as part of Chapter 25. It is not possible to mitigate predicted impacts on the setting of the structures or sites due to the visible nature of the offshore turbines within the seascape.

25.3 CULTURAL HERITAGE STRATEGY

North Irish Sea Array Offshore Windfarm Ltd (the Developer) propose the following cultural heritage mitigation strategy, to be updated where required at detailed design and construction stage. The draft mitigation strategy is prepared as part of the planning application, in order to provide statutory heritage consultees to submit observations on same and in order to inform An Board Pleanála (ABP) in determining conditions that may be attached to any planning approval.

25.3.1 Detailed Design

Detailed design work is on-going, which will involve the exact determination of the construction footprint required for the development (within the existing planning boundary). This includes the landfall site, route of the onshore cable beneath the existing railway line, and the precise route of the cabling required between the grid facility and the Belcamp sub-station.

Mitigation by Design

It is acknowledged that the preservation in-situ of archaeological remains is the preferred method in which to conserve the archaeological resource. To that end, every effort will be made during detailed design to avoid directly impacting the identified archaeological areas within the landfall site (AA5-AA11).

If any of the identified archaeological sites are preserved in-situ, those at risk from inadvertent construction impacts will be cordoned off during the construction phase, including an appropriate buffer area (minimum of 10m). The cordoned off areas will not be accessible and the passage and plant and storage of materials will be prohibited. Heritage toolbox talks will be provided to the contractors carrying out the works and the maintenance of the cordoned off areas will be subject to ongoing inspections by an archaeologist.

Four recorded cultural heritage sites will be preserved in-situ during the course of the laying of the cable between the grid facility and Belcamp sub-station. These comprise BH06, 10, 19 and 21 (milestones) and a cross at St Doolagh's (AH30g). BH06 could not be identified during the course of this assessment and it remains possible that the milestone may have been removed. Further inspection will take place in order to try and locate the feature. The milestones and cross will be hoarded off at the construction stage in order to prevent inadvertent impacts from plant required to excavate the cable trenches. Heritage toolbox talks will be provided to the contractors carrying out the works and the maintenance of the hoarded off features will be subject to ongoing inspections by an archaeologist.

Archaeological Investigations

All archaeological investigations (including geophysical survey, archaeological testing and wade surveys) require a licence from the National Monuments Service of the DoH/LGH. Licence applications (comprising an application form, method statement and letter of support from the developer) take 3-6 weeks to process and are referred to the National Museum of Ireland for a period of 2 weeks during this period, as part of the process. Archaeological licences are only issued to competent and experienced archaeologists who have been deemed fit to hold a licence by the NMS and NMI.

Landfall/ Grid Facility

Following detailed design and the refinement of the development footprint required for the landfall and onshore export cable route, a programme of archaeological testing will be carried out with an aim of identifying any smaller archaeological remains that may survive within the proposed development boundary (including all lands within AAP1), which were not identified during geophysical survey or the first phase of archaeological testing. This will include further assessment of AA1-4 at the Grid Facility and AA5-11 within the landfall area in order to ascertain more information of the preserved archaeological stratigraphy and extent of the archaeological deposits. Archaeological test trenching within the final designed footprint will aim to assess 5-10% of the lands made available, based on the results of the geophysical survey. Test trenches will be excavated by means of a tracked excavator with a flat bucket (1.8-2m in width). Topsoil will be removed to the natural sub-soil only with the excavator, in order to facilitate further investigation (where required) by hand.

The ruins of a post medieval well (CH01), within the grid facility site, will also be investigated by means of test trenching.

Following the completion of archaeological testing, a report will be submitted to the NMS and NMI detailing the results of the investigations, which will contain a further impact assessment and additional mitigation measures (where required). All mitigation measures will require the approval of the NMS and if archaeological remains are identified (in addition to AA1-11), preservation in-situ or by record will be required. If archaeological remains cannot be preserved in-situ (due to proposed

construction activities), preservation by record will be carried out prior to construction.

Preservation by record requires full archaeological excavation of any archaeological deposits that may be removed by the construction proposed. This phase of works will also require a licence from the NMS and involves a team of archaeologists working on site to hand excavate the archaeological deposits. The time required on site will be dependent on the nature and extent of the archaeological resource to be directly impacted upon. These works take place prior to the establishment of a contractor on site and contingency for this requirement will be built into the overall programme. The archaeological contractor will require a compound and welfare facilities in order to complete the works.

Following the completion of fieldwork and the commencement of construction, a preliminary excavation report will be produced within 4 weeks, followed by a final excavation report. The final report will contain the post excavation analysis that is required to provide a full analysis and interpretation of the archaeological remains. This may include (where relevant) the following: Carbon 14 dating, analysis of any artefacts recovered and analysis of any environmental remains (bones/ wood/ charcoal/ seeds).

Dependant on the results of the archaeological investigations carried out following detailed design, it is possible that further mitigation (in addition to preservation by record) may be required. This would involve the archaeological monitoring of topsoil stripping across the development area. This requires an archaeologist to be present during the removal of topsoil from the natural subsoil. This will be carried out with an excavator equipped with a flat bucket. Whilst a licence is not required under the National Monuments Act to conduct archaeological monitoring, a licence is required to investigate any archaeological remains that may be identified. Therefore, all monitoring works required for the proposed development will be carried out under licence to the NMS. In the event that any small-scale archaeological remains are identified, either preservation by record or in-situ will be agreed with the NMS and carried out as per the above processes.

Onshore Cable Route

Further archaeological investigations will be required within greenfield areas of the Onshore cable route (if any or all of them are required). This will involve geophysical survey, followed by a programme of archaeological testing that will assess the results of the geophysical survey. These works will be subject to the above licencing protocols as described in terms of the above works at the landfall and grid facility areas. Dependant on the results of geophysical survey and archaeological test trenching, further preservation by record or in-situ may be required and/or archaeological monitoring.

Detailed design will also determine if any small watercourse crossings will be required. If direct construction impacts, arising from offline open cut trenching, are

proposed at watercourse crossings for the cable route, advance archaeological wade surveys will be required. These investigations will be subject to the same procedures as archaeological testing in terms of licencing and will also require metal detection. Dependant on the results of the surveys, further mitigation will be required (such as preservation in-situ or by record, subject to agreement with the NMS). The onshore underwater assessments are completed by specialist underwater archaeologists and can be carried out at the same time as other archaeological investigations.

The cable route option crosses the path of AH25, which is the site of a holy well. The site is located within the embankment of an existing junction at the M1 and it is unclear whether the remains were removed by previous groundworks. As such, all works within the zone of notification for this monument (135m) will be subject to archaeological monitoring under licence as issued by the DoHLGH. This will ensure that if any archaeological remains are found to be extant beneath the road surface, that a licence is in place to investigate same. If archaeological remains are identified, further mitigation will be required (preservation in-situ or by record) and this will be agreed with the NMS.

One cable route option passes through the RMP zone of notification for AH30 and potentially across the path of the ecclesiastical enclosure associated with St Doolagh's. Here the cable route will be located within an existing busy road. The excavation of 130m of the cable trench through this road and the zone will be subject to archaeological monitoring, under licence as issued by the DoHLGH. This will ensure that if any archaeological remains are found to be extant beneath the road surface, that a licence is in place to investigate same. If archaeological remains are identified, further mitigation will be required (preservation in-situ or by record) and this will be agreed with the NMS.

At construction stage, some archaeological monitoring will be carried out where the cable route passes through the zone of notification associated with AH28 (tower house) and AH32 (church and graveyard). As per the above protocols, this work will be undertaken under licence from the NMS.

Detailed design will also determine whether BH12 (Daws Bridge) and BH22 (Bridge at Abbeville) will be affected by the laying of the cable route. Should either structure be potentially affected by the proposed cable, detailed design will be subject to the assessment and supervision of a Grade 1 Conservation Architect. This will ensure that the structural and architectural integrity of the structures is maintained and preserved during the course of the project. Dependant on the requirements of the project and the assessment works of the Conservation Architects, further mitigation may be required at construction stage.

Note

It is noted that any archaeological monitoring works that are required at construction stage may lead to further mitigation (such as archaeological preservation by record arising from the identification of archaeological remains).

All reports that are subject to licence are ultimately housed within a publicly accessible archive, maintained by the NMS of the DoHLGH. Dependant on the significance of archaeological remains identified and recorded, it may be appropriate to consider further public dissemination of results. This may take the form of articles published within regional or national archaeological publications, along with presentations to local, regional or national heritage bodies. Publication proposals should be developed in tandem with any post excavation works that arise from required archaeological excavation.

25.4 NEXT STEPS

The draft cultural heritage strategy will be updated by the relevant heritage contractors following any grant of planning permission that may be forthcoming. This will include responses from statutory consultees and any planning conditions attached to the development.

Following the completion of detailed design, the strategy will be updated to reflect the exact cultural heritage requirements and locations for the proposed development and submitted to the NMS of the DoHLGH and local authority heritage bodies. Any observations will be incorporated into the document and the finalised version will be utilized in order to procure archaeological services for the works, which will be carried out in accordance with the conditions and strategy.

25.5 ARCHAEOLOGICAL FIELDWORK DEFINITIONS

Geophysical survey is used to create ‘maps’ of subsurface archaeological features. Features are the non-portable part of the archaeological record, whether standing structures or traces of human activities left in the soil. Geophysical instruments can detect buried features when their electrical or magnetic properties contrast measurably with their surroundings. In some cases, individual artefacts, especially metal, may be detected as well. Readings, which are taken in a systematic pattern, become a dataset that can be rendered as image maps. Survey results can be used to guide excavation and to give archaeologists insight into the pattern of non-excavated parts of the site. Unlike other archaeological methods, the geophysical survey is not invasive or destructive.

Archaeological Test Trenching can be defined as ‘a limited programme of intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate’ (ClfA 2020a).

Full Archaeological Excavation can be defined as ‘a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves

artefacts, ecofacts and other remains within a specified area or site on land, inter-tidal zone or underwater. The records made and objects gathered during fieldwork are studied and the results of that study published in detail appropriate to the project design' (ClfA 2020b).

Archaeological Monitoring can be defined as 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (ClfA 2020c).

Underwater Archaeological Assessment consists of a programme of works carried out by a specialist underwater archaeologist, which can involve wade surveys, metal detection surveys and the excavation of test pits within the sea or riverbed. These assessments are able to access and assess the potential of an underwater environment to a much higher degree than terrestrial based assessments.