Appendix 5-2 Addendum: Environmental Management Plan

ORIEL WINDFARM
OFFSHORE RENEWABLE ENERGY

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ORIEL WIND FARM PROJECT

Environmental Impact Assessment Report - Addendum
Appendix 5-2 Addendum: Environmental Management Plan

MDR1520C
EIAR– Appendix 5-2
Addendum
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Contents

Acronyms

Term	Meaning
ADD	Acoustic Deterrent Device
AEZ	Archaeological Exclusion Zone
CLM	Community Liaison Manager
CV	Curriculum Vitae
ECoW	Environmental Clerk of Works
EIAR	Environmental Impact Assessment Report
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
FLO	Fisheries Liaison Officer
HWM	High Water Mark
IEMA	Institute for Environmental Management and Assessment
IFI	Inland Fisheries Ireland
MAC	Maritime Area Consent
MARPOL	International Convention for the Prevention of Pollution from Ships
MMO	Marine Mammal Observer
MPCP	Marine Pollution Contingency Plan
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OFLO	Offshore Fisheries Liaison Officer
OSS	Offshore Substation
OWL	Oriel Wind Limited
PAM	Passive Acoustic Monitoring
RAMS	Risk Assessment Method Statements
SEAR	Safety and Environmental Awareness Report
TII	Transport Infrastructure Ireland
WMP	Waste Management Plan

1 INTRODUCTION

1.1 Purpose

A planning application for the Oriel Wind Farm Project (hereafter referred to as 'the Project') was submitted to An Coimisiún Pleanála (ACP) (formerly An Bord Pleanála) in May 2024. The Environmental Impact Assessment Report (EIAR), which accompanied the planning application (case reference ABP-319799-24), included appendix 5-2: Environmental Management Plan (EMP) (EIAR volume 2A) in support of chapter 5: Project Description (EIAR volume 2A).

This Addendum provides information to supplement the EMP presented in appendix 5-2 : EMP (EIAR volume 2A). It has been prepared in response to a Request for Further Information (RFI) from ACP regarding the planning application for the Project.

The 'Schedule-Further Information Request' provided by ACP listed 19 items of further information. The Schedule did not request further information on the EMP. However, as a result of preparation of the information in response to the RFI, changes have arisen that require an update to the EMP. These changes are presented in this document.

The section and subsection headings in this Addendum correspond to those used in appendix 5-2: EMP (EIAR volume 2A). The reader is directed to review the information presented in this Addendum alongside the EMP in the EIAR (volume 2A).

It will be the responsibility of the appointed Contractor to further update the Project's management plans, together with any updates set out in this Addendum, prior to the commencement of the construction phase.

The EMP will form part of the Oriel Offshore Works Contract. The methods and principles contained herein, as well as within referenced legislative instruments and published guidance documents, will be adhered to by the Contractor in developing construction method statements and other plans relating to environmental management as required by the Contract.

This version of the EMP (Version 1.0A) presents minimum environmental management requirements to be adhered to by the Contractor. This EMP will be further developed and updated following receipt of planning consent to incorporate relevant planning conditions and further details on environmental management measures to be applied during the construction phase. The EMP will be a key construction contract document, which will ensure that all mitigation measures, which are considered necessary to protect the environment, are implemented.

1.2 Scope

There are no changes to appendix 5-2: Environmental Management Plan.

1.3 Aims and objectives

There are no changes to appendix 5-2: Environmental Management Plan.

1.4 Document structure

There are no changes to appendix 5-2: Environmental Management Plan.

1.5 Other relevant documents

The following relevant documents have been updated in response to the RFI:

- Appendix 5-2 Addendum: Marine Pollution Contingency Plan Addendum, which forms Annex 2 of this document;
- Marine Megafauna Mitigation Plan Addendum (see appendix 5-4 Addendum (EIAR volume 2A Addendum); and

- An updated Lighting and Marking Plan (see appendix 5-8 Addendum (EIAR volume 2A Addendum)).

1.6 Description of the Project

There have been no changes to the offshore infrastructure design and therefore there are no changes to appendix 5-2: Environmental Management Plan (EIAR volume 2A).

1.7 Consents

There are no changes to appendix 5-2: Environmental Management Plan.

2 PART I: MANAGEMENT, IMPLEMENTATION AND COMMUNICATION

2.1 Roles and responsibilities

2.1.1 Overview

There are no changes to appendix 5-2: Environmental Management Plan.

2.1.2 Key OWL management roles relating to environmental management

There are no changes to appendix 5-2: Environmental Management Plan.

2.1.3 Contractors and subcontractors

There are no changes to appendix 5-2: Environmental Management Plan.

2.1.4 Supporting environmental roles

There are no changes to appendix 5-2: Environmental Management Plan.

2.1.5 Contact details

There are no changes to appendix 5-2: Environmental Management Plan.

2.2 Communications and reporting

The Applicant will engage with relevant aviation stakeholders (i.e. DAA Dublin Airport, AirNav Ireland and the IAA) in advance of the commencement of offshore construction works, including deployment of the installation vessels with cranes to the site. The Applicant will ensure that sufficient notification of intention to commence crane operations is provided to all relevant stakeholders. Please refer to section 14.8.2 of chapter 14 Addendum: Aviation, Military and Communications (EIAR volume 2B Addendum).

2.3 External communications

There are no changes to appendix 5-2: Environmental Management Plan.

2.3.1 Incident reporting

There are no changes to appendix 5-2: Environmental Management Plan.

2.3.2 Dropped objects

There are no changes to appendix 5-2: Environmental Management Plan.

2.4 Training, auditing and change management

2.4.1 Competence, training and change management

There are no changes to appendix 5-2: Environmental Management Plan.

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2.4.2 Monitoring and audits

There are no changes to appendix 5-2: Environmental Management Plan.

2.4.3 Review and change management

There are no changes to appendix 5-2: Environmental Management Plan.

3 PART II: ENVIRONMENTAL IMPACTS AND CONTROL MEASURES

3.1 Environmental impacts and control measures

An updated commitments register which includes further mitigation arising from further assessments completed in response to the RFI is included in Annex 5 of this EMP.

3.2 Management of key environmental aspects and compliance obligations

3.2.1 Marine species

An updated appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (EIAR volume 2A Addendum) and an appendix 5-16: Monitoring Programme (EIAR volume 2A Addendum) will be implemented in addition to requirements set out in appendix 5-2: Environmental Management Plan (EIAR volume 2A).

3.2.2 Marine archaeology

There are no changes to appendix 5-2: Environmental Management Plan.

3.2.3 Other marine users

Updates to management and mitigation of potential impacts on other marine users have been made and can be found in appendix 5-8 Addendum: Lighting and Marking Plan (EIAR volume 2A Addendum).

Additional measures have been proposed in appendix 13-2: Safety Justification For Single Line of Orientation (EIAR volume 2B Addendum) and appendix 13-3: Response to Department of Transport (MSO) (EIAR volume 2B Addendum).

3.2.4 Marine pollution prevention and contingency planning

An Addendum to the Marine Pollution Contingency Plan has been made and is included as Annex 2 of this EMP.

3.2.5 Marine invasive non-native species

There are no changes to appendix 5-2: Environmental Management Plan.

3.2.6 Resource and waste management

There are no changes to appendix 5-2: Environmental Management Plan.

4 PART III: ANNEXES

Changes have been made as part of this Addendum to the following Annexes:

- Annex 2: Marine Pollution Contingency Plan (MPCP);
- Annex 5: Commitments Register.

ANNEX 1: ENVIRONMENTAL POLICY

There are no changes to appendix 5-2: Environmental Management Plan.

ANNEX 2: MARINE POLLUTION CONTINGENCY PLAN

An Addendum to the Marine Pollution Contingency Plan has been made and is included as Annex 2 of this EMP.

ORIEL WIND FARM PROJECT

Environmental Impact Assessment Report - Addendum
Annex 2 Addendum: Marine Pollution Contingency Plan (MPCP)

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1 INTRODUCTION

This document provides an Addendum to the Marine Pollution Contingency Plan (MPCP) included as annex 2 of appendix 5-2: Environmental Management Plan (EMP) (EIAR volume 2A). It provides information to supplement the pollution response arrangements for the Oriel Wind Farm Project (hereafter referred to as the "Project"). It has been prepared in response to a Request for Further Information (RFI) from An Coimisiún Pleanála (ACP) (formerly An Bord Pleanála) regarding the planning application (case reference 319799) for the Project. There was no specific request for further information regarding the MPCP, however the Applicant has provided this Addendum in light of the publication of new guidance.

1.1 Updated Guidance

The MPCP highlighted in section 1.3 that guidance on navigation risk and emergency response assessment from the Department of Transport was in draft at the time of publication of the EIAR and that the MPCP would comply with the final guidance once published, in particular with regard to Oil/HNS Spill Contingency Plans.

In June 2025, the Department of Transport published a document entitled 'Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI)' (IRCG, 2025a). This guidance aims to address the navigational and emergency response impacts of OREI proposed in Irish waters.

It highlights that the Irish Coast Guard (IRCG) is prescribed under the National Maritime Oil/HNS Spill Contingency Plan 2024 to review and approve Oil/HNS Spill Contingency Plans (OSCPs) and the wider Emergency Response Co-Operation Plans (ERCoPs) for offshore units and for oil handling facilities. Such an agreed OSCP must be in place prior to construction commencing as a condition of development consent.

The Applicant commits to developing an OSCP that complies with the template outlined in Appendix D of Standard Operating Procedure 07-2025 Offshore Renewable Energy Installations (OREI): Guidance and Operational Considerations for SAR and Emergency Response (IRCG, 2025b) and submitting it for review by IRCG prior to construction commencing. Once the OSCP is agreed, the Applicant is committed to implementing it during all phases of the Project. The OSCP will be updated with a new version for the operational and maintenance phase of the Project.

References

Irish Coast Guard (IRCG) (2025a) Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI), Available at: https://www.gov.ie/en/department-of-transport/publications/the-maritime-navigation-safety-emergency-response-guidance-documents-for-offshore-renewable-energy-installations-orei/ [Accessed 15/10/2025].

Irish Coast Guard (IRCG) (2025b) Standard Operating Procedure 07-2025 Offshore Renewable Energy Installations (OREI): Guidance and Operational Considerations for SAR and Emergency Response, Available at: https://www.gov.ie/en/publication/79e5d-national-maritime-oilhns-spill-contingency-plan-nmoscp/ [Accessed 15/10/2025].

ANNEX 3: ENVIRONMENTAL INCIDENT REPORTING PROCEDURE

There are no changes to appendix 5-2: Environmental Management Plan.

ANNEX 4: PROPOSED DROPPED OBJECTS REPORTING FORM

There are no changes to appendix 5-2: Environmental Management Plan.

ANNEX 5: COMMITMENTS REGISTER

An updated commitments register which includes further mitigation arising from further assessments completed in response to the RFI is included in this document. Changes are shown in blue text.

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
1	Marine Process	Chapter 7	Scour protection	In the absence of scour protection, there is potential for scour pits to develop around foundations. This may result in the release of sediment into the water column and a change to seabed habitat in the vicinity of the foundation. Where required, scour protection will be installed as described in volume 2A, chapter 5: Project Description.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
2			Cables	The cables will be buried below the seabed wherever possible, to a minimum burial depth of 0.5 m and a maximum burial depth of up to 3 m. The appointed contractor will be required prior to the construction phase to submit details on the cable specification and installation methodology. This will include details on the cable laying, including geotechnical data, cable laying techniques and a cable burial risk assessment. Also, in advance of any cable repair, the contractor will be required to submit details on the parameters of the repair or reburial activities and the proposed methodology.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Cable specification and installation methodology	Applicant/ Contractor
3			Cables	The offshore cable will be installed through the intertidal zone using open cut trenching methods. The material will be excavated and reinstated on a layer-by-layer basis to minimise impacts on sediment structure and profile.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
4			EMP MPCP	An Environmental Management Plan (EMP) (see volume 2A, appendix 5-2: Environmental Management Plan & Addendum) will be implemented during the construction, operation and maintenance and decommissioning phases of the Project. The EMP includes Project specific measures and commitments and a Marine Pollution Contingency Plan (MPCP (see volume 2A, appendix 5-2 (Annex 2)). Measures also include designated areas for refuelling where spillages can be easily contained, storage of chemicals in secure designated areas in line with appropriate regulations and guidelines, double skinning of pipes and tanks containing hazardous substances, and storage of these substances in impenetrable bunds within the Project Infrastructure, i.e. WTG and offshore sub-station to ensure that the potential for release of pollutants from construction, operational and maintenance, and decommissioning is minimised. In this manner, accidental release of contaminants from vessels and Project infrastructure will be strictly controlled, thus providing protection for marine life across all phases of the Project development.	To be updated	Construction Operation & Maintenance Decommissioning	EMP, MPCP	Applicant/ Contractor
5			ERCoP	This plan describes the actions to be taken in an emergency during both construction and operation, details the resources available to support those actions, and provides emergency contact details.	To be updated	Construction Operation & Maintenance Decommissioning	ERCoP	Applicant/ Contractor
6			MINNSMP	A Marine Invasive Non-Native Species Management Plan (volume 2A, appendix 5-3 Marine Invasive Non-Native Species Management Plan) will be implemented. The plan outline measures to ensure vessels comply with the International Maritime Organisation (IMO) ballast water management guidelines, it will consider the origin of vessels and contain standard housekeeping measures for such vessels as well as measures to be adopted in the event that a high alert species is recorded.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	MINNSMP	Applicant/ Contractor
7	Benthic and Intertidal Ecology	Chapter 8	EMP MPCP	An Environmental Management Plan (EMP) (see volume 2A, appendix 5-2: Environmental Management Plan) will be implemented during the construction, operation and maintenance and decommissioning phases of the Project. The EMP includes Project specific measures and commitments and a Marine Pollution Contingency Plan (MPCP (see volume 2A, appendix 5-2 (Annex 2)). Measures also include designated areas for refuelling where spillages can be easily contained, storage of chemicals in secure designated areas in line with appropriate regulations and guidelines, double skinning of pipes and tanks containing hazardous substances, and storage of these substances in impenetrable bunds.	To be updated	Construction Operation & Maintenance Decommissioning	EMP, MPCP	Applicant/ Contractor
8			Pre-Construction Survey	A pre-construction survey will be undertaken within the Project offshore wind farm area and offshore cable corridor to identify any areas of reef habitat (particularly Modiolus beds and S. spinulosa reef habitats). This will include a drop-down video survey to determine the extent, distribution and quality/condition of any reef. Should reef areas be identified during pre-construction surveys, appropriate measures will be agreed with regulatory and nature conservation bodies to avoid direct impact on these features. Where possible, features will be avoided by layout refinement of foundations and cables.	To be updated	Pre-Construction Construction		Applicant/ Contractor
9			MINNSMP	A Marine Invasive Non-Native Species Management Plan (volume 2A, appendix 5-3 Marine Invasive Non-Native Species Management Plan) will be implemented. The plan outline measures to ensure vessels comply with the International Maritime Organisation (IMO) ballast water management guidelines, it will consider the origin of vessels and contain standard housekeeping measures for such vessels as well as measures to be adopted in the event that a high alert species is recorded.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	MINNSMP	Applicant/ Contractor
10			Re-Instatement of Rock	Reinstatement of rock in the intertidal zone following cable installation. Any cut rock will be placed back on top of the cable to backfill the trench.	To be updated	Construction		Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
11	Fish and Shellfish	Chapter 9	EMP	An Environmental Management Plan (EMP) (see volume 2A, appendix 5-2: Environmental Management Plan) will be implemented during the construction, operational and maintenance and decommissioning phases of the Project. The EMP includes project specific measures and commitments and a Marine Pollution Contingency Plan (MPCP). Measures also include designated areas for refuelling where spillages can be easily contained, storage of chemicals in secure designated areas in line with appropriate regulations and guidelines, double skinning of pipes and tanks containing hazardous substances, and storage of these substances in impenetrable bunds.	To be updated	Construction Operation & Maintenance Decommissioning	EMP, MPCP	Applicant/ Contractor
12			Cables	The cables will be buried below the seabed wherever possible, to a minimum burial depth of 0.5 m and a maximum burial depth of up to 3 m. The final selected installation method and target burial depth will be defined prior to construction based on a detailed cable burial risk assessment. The appointed contractor will be required prior to the construction phase to submit details on the cable specification and installation methodology. This will include a detailed cable laying plan, including geotechnical data, cable laying techniques and a cable burial risk assessment. In advance of any cable repair, the contractor will prepare details on the able repair methodology repair or reburial activities setting out the parameters of the repair or reburial activities and the proposed methodology.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Cable specification and installation methodology	Applicant/ Contractor
13			Piling Operations	During piling operations, soft starts will be used, following NPWS (2014) guidelines. This will involve the implementation of lower hammer energies (i.e. approximately 10-15% of the maximum hammer energy) at the beginning of the piling sequence before energy input is 'ramped up' (increased) over time to required higher levels (also known as a soft-start). The Applicant commits to implementing phased piling alongside other adjacent offshore wind farms in the western Irish Sea as part of a Piling Strategy. This strategy will be prepared post consent and will set out measures for collaboration with other projects to reduce the potential for an in-combination effect. This will include a stepped strategy which follows the mitigation hierarchy - avoid, reduce, mitigate. Consequently, if phased piling is required a collaborative approach will be explored and information presented to demonstrate how a phased piling approach can contribute to the reduction in underwater sound from piling. Piling activities will be scheduled to avoid piling in the northwest corner of the offshore wind farm area during the key spawning period for herring (i.e. September and October; (ICES., 2013; 1998). Surveys of herring spawning activity will also be undertaken pre, during and post construction which will help to further refine the spawning period and distributions which will inform scheduling of construction operations during the peak herring spawning period.	To be updated	Construction	'Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters' (NPWS, 2014)	Applicant/ Contractor
14	Marine Mammals and Megafauna (including Subsea Noise)	Chapter 10	EMP MPCP	An Environmental Management Plan (EMP) (see volume 2A, appendix 5-2: Environmental Management Plan & Addendum) will be implemented during the construction, operational and maintenance, and decommissioning phases of the Project. The EMP includes Project mitigation/monitoring measures and commitments and a Marine Pollution Contingency Plan (MPCP) which includes key emergency contact details (e.g. Environmental Protection Agency (EPA)). The EMP includes mitigation such as designated areas for refuelling where spillages can be easily contained, storage of chemicals in secure designated areas in line with appropriate regulations and guidelines, double skinning of pipes and takes containing hazardous substances, and storage of these substances in impenetrable bunds. In this manner, accidental release of contaminants from vessels will be strictly controlled, thus providing protection for marine life across all phases of the Project.	To be updated	Construction Operation & Maintenance Decommissioning	EMP, MPCP	Applicant/ Contractor
15			MMMP	A Marine Megafauna Mitigation Plan (MMMP) (see volume 2A Addendum, appendix 5-4 Addendum: Marine Megafauna Mitigation Plan) will be implemented prior to construction. This includes the use of the MODIGA system with internal air bubble as a Noise Abatement System. The MMMP sets out the measures to apply in advance of and during piling activity, including the implementation of a mitigation zone, and monitoring by MMOs and Passive Acoustic Monitoring (PAM).	To be updated	Pre-Construction Construction	MMMP	Applicant/ Contractor
16			Piling Operations	During piling operations, soft starts will be used, following NPWS (2014) guidelines. This will involve the implementation of lower hammer energies (i.e. approximately 10-15% of the maximum hammer energy) at the beginning of the piling sequence before energy input is 'ramped up' (increased) over time to required higher levels (also known as a soft-start). The Applicant commits to implementing phased piling alongside other adjacent offshore wind farms in the western Irish Sea as part of a Piling Strategy. This strategy will be prepared post consent and will set out measures for collaboration with other projects to reduce the potential for an in-combination effect. This will include a stepped strategy which follows the mitigation hierarchy - avoid, reduce, mitigate. Consequently, if phased piling is required a collaborative approach will be explored and information presented to demonstrate how a phased piling approach can contribute to the reduction in underwater sound from piling.	To be updated	Construction	MMMP	Applicant/ Contractor
17			Geophysical Surveys	Geophysical surveys undertaken during the operational and maintenance phase will adopt similar measures as for piling operations, including the implementation of an approved MMMP and Vessel Code of Conduct (see volume 2A, appendix 5-4 Addendum: Marine Megafauna Mitigation Plan and volume 2A Addendum, appendix 5-5: Marine Megafauna: Vessel Code of Conduct). Measures include the use of a mitigation zone around operations, within which MMOs and PAM will ensure that no marine megafauna are present in the vicinity of the geophysical survey vessel, and the use of a soft-start to survey operation, where possible.	To be updated	Operation & Maintenance	MMMP, Marine Megafauna: Vessel Code of Conduct	Applicant/ Contractor
18			Marine Megafauna: Vessel Code of Conduct	A Vessel Code of Conduct (see volume 2A, appendix 5-5: Marine Megafauna: Vessel Code of Conduct) will be issued to all Project vessel operators, requiring them to: • Refrain from approaching animals in the water; • Keep vessel speed to a minimum, including near haul-outs; and • Avoid abrupt changes in course or speed should marine mammals approach the vessel to bow-ride. The Marine Megafauna: Vessel Code of Conduct will be adhered to at all times.	To be updated	Pre-Construction Construction	Marine Megafauna: Vessel Code of Conduct	Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
19			Cables	The cables will be buried below the seabed wherever possible, to a minimum burial depth of 0.5 m and a maximum burial depth of 3 m. The appointed contractor will be required prior to the construction phase to submit details on the cable specification and installation methodology. This will include details on the cable laying, including geotechnical data, cable laying techniques and a cable burial risk assessment. Also, in advance of any cable repair, the contractor will be required to submit details on the parameters of the repair or reburial activities and the proposed methodology.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Cable specification and installation methodology	Applicant/ Contractor
20			ADD	Mitigation will also be applied by use of an Acoustic Deterrent Device (ADD) to minimise impacts arising from injury to marine megafauna from underwater noise during pile-driving by deterring animals to move beyond the predicted injury zone.	To be updated	Construction		Applicant/ Contractor
21	Offshore Ornithology	Chapter 11	EMP	An Environmental Management Plan (EMP) will be implemented during the construction, operational and maintenance, and decommissioning phases of the Project (see volume 2A, appendix 5-2: Environmental Management Plan & Addendum). The EMP includes a plan for minimising disturbance to rafting seabirds from construction vessels. Measures include: • Use of existing navigation approaches to port; avoid over-revving engines to minimise noise; and • Avoidance of rafting seabirds and seaducks en-route between work areas and port, or within the offshore wind farm area and offshore cable corridor, achieved through briefing (e.g. toolbox talks) of vessel crew about the purpose and implications of the vessel management practices.	To be updated	Construction Operation & Maintenance Decommissioning	EMP	Applicant/ Contractor
22			EMP MPCP	The EMP includes a Marine Pollution Contingency Plan (MPCP) which will include key emergency contact details (e.g. Environmental Protection Agency (EPA)). Measures for the MPCP include: • Designated areas for refuelling where spillages can be easily contained; • Storage of chemicals in secure designated areas in line with appropriate regulations and guidelines; and • Double skinning of pipes and tanks containing hazardous substances, and storage of these substances in impenetrable bunds.	To be updated	Construction Operation & Maintenance Decommissioning	EMP, MPCP	Applicant/ Contractor
23	Commercial Fisheries	Chapter 12	Notification of Construction, Maintenance and Decommissioning Activities	Notification of construction, maintenance and decommissioning activities, including the nature, timing and location of activities, with details of any associated safety zones and advisory clearance distances, via Notices to Mariners.	To be updated	Construction Operation & Maintenance Decommissioning	FMMS	Applicant/ Contractor
24			Liaison with Fishing Fleets	Ongoing liaison with all fishing fleets (including regular Notice to Mariners).	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	FMMS	Applicant/ Contractor
25			Marine Coordination	Appropriate marine coordination to ensure risks associated with construction, maintenance and decommissioning vessels are minimised.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
26			Guard Vessels	Use of guard vessels, where appropriate.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
27			Aid to Navigation LMP	Implementation of Aids to Navigation (marking and lighting) (including temporary Aids to Navigation on any partially constructed turbines) see volume 2A Addendum, appendix 5-9 Addendum: Updated Lighting and Marking Plan (LMP).	To be updated	Construction Operation & Maintenance	LMP	Applicant/ Contractor
28			Marine Safety Zone	The Applicant will seek to maintain Marine Safety Zones of 500 m in radius around individual structures undergoing installation or decommissioning. Advisory Marine Safety Zones of 500 m will be implemented for incomplete structures at which construction activity may be temporarily paused. During the operational and maintenance phase, the Applicant will also seek to maintain Marine Safety Zones of 500 m in radius around infrastructure undergoing major maintenance (for example a blade replacement). The Applicant will implement an advisory clearance distance of 500 m in radius around cable installation vessels and cable repair vessels.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
29			FMMS	Volume 2A, appendix 5-7: Fisheries Management and Mitigation Strategy will be implemented in consultation with local fishing interests (and other interests as appropriate). The FMMS is prepared in accordance with available good practice guidance and with relevant policy set out in the NMPF (DHLGH, 2021). Current best practice guidance with regard to fisheries liaison management and mitigation in respect of offshore wind farm projects is represented by the Seafood/ORE Engagement in Ireland (DHLGH, 2023) and the UK Fishing Liaison with Offshore Wind and Wet Renewables (FLOWW) Group (FLOWW, 2014; 2015). The FMMS includes: • Details of roles and responsibilities, including Applicant responsibilities and details of the roles of the Fisheries Liaison Officer, and Fisheries Industry Representative; • Details of protocols for communication and information transfer; and • Measures to encourage co-existence and management measures, including those outlined above.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	FMMS	Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
30	Shipping and Navigation	Chapter 13	Notice to Mariners	Promulgation of information and warnings through Notice to Mariners and other appropriate Maritime Safety Information (MSI) dissemination methods. See also section 2.8.2 in appendix 13-3: Response Department of Transport (MSO) for further mitigaiton measures relating to Notice to Mariners. Throughout the life of the wind farm, regular liaison meetings to be held between project, sub-contractors and local marine stakeholders such as local harbour authorities, pilots, fishermen, and leisure groups such as yacht clubs. Information and warnings concerning any restrictions to navigation, including the imposition of any safety zones to be promulgated by Radio Navigation Warning Signals (NAVAREA 1 or HYDROLANT), Notice to Mariners, Notice to Airmen Publication.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	EMP	Applicant/ Contractor
31			Multi-Channel VHF	The Project to provide continuous watch by multi-channel VHF, including Digital Selective Calling (DSC).	To be updated	Construction Operation & Maintenance Decommissioning	EMP	Applicant/ Contractor
32			Safety Zones	The applicant will seek to maintain advisory marine safety zones of 500 m radius to be implemented around WTGs and other offshore infrastructure undergoing construction/decommissioning or major maintenance activities. A rolling advisory clearance distance of 500 m in radius to be implemented around the cable laying vessel.	To be updated	Construction Operation & Maintenance Decommissioning	EMP	Applicant/ Contractor
33			Aid to Navigation LMP	Marker buoys and/or other AtoN will be deployed on a device-specific basis. AtoN Marking and Lighting Plan to be submitted to IRCG/CIL for approval and implementation prior to construction, as detailed in appendix 13-1: Navigation Risk Assessment. The plan will consider the necessary AtoN requirements (including specification, location and maintenance requirements) for the construction, operation and decommissioning phases of the Project. The AtoN management plan will be agreed prior to commencement of construction and should be developed in conjunction with IALA (2021) G1162 The Marking of Man-Made Offshore Structures. The Applicant proposes revisions to the location of navigational bouys to the north of the Project as outlined in section 2.8.2 of volume 2B Addendum, appendix 13-3: Response to Department of Transport (MSO) Submission.	To be updated	Construction Operation & Maintenance Decommissioning	LMP	Applicant/ Contractor
34			Vessel Traffic Monitoring	Project to undertake vessel traffic monitoring by: AIS, VHF, Closed Circuit Television (CCTV) with all Project-related vessels throughout all phases.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
35			Safety documents	The following safety documents will apply: Emergency Response Co-operation Plan (ERCoP): An ERCoP has been prepared and will be agreed with the IRCG and other key stakeholders as detailed in appendix 13-1: Navigation Risk Assessment prior to construction. The ERCoP (see volume 2A, appendix 5-8: Lighting and Marking Plan) details the emergency response planning requirements for the Project (at all stages) as directed by the IRCG and includes: • Organisational information including roles and responsibilities for emergencies, equipment and facilities and liaison arrangements between the Applicant and IRCG; • Search and Rescue information including role and responsibility of SAR coordinators, IRCG, communication requirements, SAR facilities (primary – e.g. SAR helicopters, secondary e.g. RNLI lifeboats), and medical advice / assistance; • SAR Exercise requirements; • Support Arrangements including shoreside reception arrangements, procedures on informing next of kin, etc. • Additional Information including duties and functions of various participants in SAR operations; • Project specific information (e.g. size, type and configuration of the infrastructure including support and maintenance vessels, details of proposed project activities for all phases, project SAR equipment and emergency response, etc.); and • Emergency Action Card detailing emergency contact details, wind farm summary, WTG specific information, communications, monitoring, shutdown procedures, personal SAR location devices, mass evacuation details – etc. Navigation Safety Management System (NSMS): A NSMS will collate documents for management of navigational safety relevant to the marine activities from multiple sources. This includes documents created by the Project and those in place for third parties such as construction and maintenance contractors. As such the NSMS is not a singular plan but should include documentation related to: • Navigational safety measures during construction phase; • Navigational safety measures during operations and maintenance; • Procedures for Project vessels when at the offshore wind farm area and in port; • Details on promulgation of information; and • Emergency Response procedures (links to ERCoP – see above).	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	ERCoP, LMP	Applicant/ Contractor
36			Guard Vessels	Provision of a guard vessel to monitor third party vessel traffic and intervene with warnings, as necessary. Guard vessels will be used during the construction/decommissioning phases on a 24-hour basis (including the cable laying), and non-standard or major maintenance during the O&M phase, to patrol the offshore wind farm area and offshore cable corridor, monitor the effectiveness of control measures and advise any passing vessels of the works being conducted.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
37			Cable Burial Risk Assessment	A cable burial risk assessment will be conducted which will ensure cables are adequately buried so as not to become a navigation hazard, based on seabed characteristics and the density and distribution of vessel traffic. Where cable protection is used, this should not exceed a 5% reduction in under keel clearance (UKC). The cable burial risk assessment should be undertaken in line with the Carbon Trust Cable Burial and Risk Assessment Guidance (2015) for commercial shipping, fishing vessels and recreational craft based on: • Baseline vessel traffic analysis: Geospatial temporal/spatial analysis, shipping intensity, vessel type, size and characterisation; • Anchor / gear size / type by vessel usage and map present/future vessel anchorages/anchoring and fishing activity in proximity to the offshore cable corridor (including water depth, bed type ((geology, seabed features, bathymetry, sediments) and relevant MetOcean information); • Probabilistic modelling of anchor drag/likelihood/extent for commercial vessels based on historical incident data, recovery time, penetration, drag speed and holding ground; • Probabilistic modelling of fishing gear drag/likelihood/extent based on fishing gear type, incident data, recovery time, drag speed and holding ground; • Qualitative recreational vessel cable burial risk assessment; and • Based on results of the assessment identify the burial depth requirement for the Project cables.	To be updated	Pre-construction Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
38			Subsea Cables	Subsea cables to be buried to Marine Survey Office agreed depth which provides sufficient protection without compromising UKC.	To be updated	Construction Operation & Maintenance Decommissioning	Cable specification and installation methodology	Applicant/ Contractor
39			IMO Convention compliance	Compliance with IMO Conventions including the International Regulations for Preventing Collisions at Sea (COLREGs) and SOLAS (IMO, 1974).	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
40			FMMS	Production of a Fisheries Management and Mitigation Strategy (FMMS) (volume 2A, appendix 5-7: Fisheries Management and Mitigation Strategy) in line with best practice guidance with regard to fisheries liaison management and mitigation and in consultation with local fishing interests (see chapter 12: Commercial Fisheries).	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	FMMS	Applicant/ Contractor
41			WTG Blade Air Draught Clearance	WTG blade air draught clearance of at least 22 m above High Water Mark (HWM).	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
42			Charting	Charting of offshore structures, inter-array cables and offshore cable and landfall infrastructure on navigation charts. Inform UKHO and the Kingfisher Information Services Cable Awareness (KISCA) accordingly.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
43			Line of Orientation	Agree lines of orientation with IRCG. WTG and OSS layout plan to be agreed with IRCG/CIL prior to construction. Additional measures have been proposed as part of the Safety Justification for Single Line of Orientation (see appendix 13-2, EIAR volume 2B Addendum) such as the installation of cameras on WTG (see section 6).	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
44	Aviation, Military and Communications	Chapter 14	Warning Lights	All significant peripheral structures, to the highest point of the structure, will be fitted with high intensity warning lighting. Specific requirements are listed in IAA ASAM No: 018 (IAA, 2015a).	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
45			LMP	Implementation of a Lighting and Marking Plan (LMP) (see appendix 5-10 in volume 2A of the EIAR) setting out specific requirements in terms of aviation lighting to be installed on the turbines. The LMP will be prepared in consultation with the IAA, DoD and IRCG.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	LMP	Applicant/ Contractor
46			Information on Locations, Heights and Lighting Status of the Wind Turbines	The IAA will be informed of the locations, heights and lighting status of the wind turbines, including estimated and actual dates of construction and the maximum heights of any construction equipment to be used, prior to the start of construction, to allow inclusion on Aviation Charts and in the IAA IAIP.	To be updated	Pre-Construction Construction		Applicant/ Contractor
47			Aeronautical Information Circulars	During the operational phase, the Project operator will issue, as necessary, requests to the IAA to submit Aeronautical Information Circulars (AIC) in the event of any failure of aviation lighting. Any light which fails shall be repaired or replaced as soon as is reasonably practicable. An alerting system for light failure will be put in place, such as remote monitoring or other suitable method agreeable to the IAA.	To be updated	Operation & Maintenance		Applicant/ Contractor
48			Aeronautical charts	All structures > 90 m amsl in height will be charted on aeronautical charts and reported to the IAA at least three months prior to construction, for input into the IAA's database of tall structures in Ireland.	To be updated	Pre-Construction		Applicant/ Contractor
49			Consultation of IAA and IRCG on Final Layouts	IAA and IRCG will be consulted on the final layout of the Project to ensure compatibility with SAR helicopter operations in the event of rescue missions within the wind farm.	To be updated	Pre-Construction		Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	**Topic**	**EIAR Chapter/ Other**	**Aspect**	**Commitment**	**Related Planning Condition**	**Project Phase**	**Relevant document for Implementation**	**Responsible Party**
50			Spacing of Blade Tip	A minimum spacing of 500 m will be maintained between blade tip to blade tip of all surface infrastructure (for OSS, this shall be taken as the outermost point of the infrastructure).	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
51			ERCoP	An Emergency Response and Cooperation Plan (ERCoP) will be in place for the operational and maintenance phase of the Project (see appendix 5-8 in volume 2A of the EIAR). The ERCoP details specific marking and lighting of the wind turbines and will consider helicopters undertaking SAR operations when rendering assistance to vessels and persons in the offshore wind farm area.	To be updated	Operation & Maintenance	ERCoP	Applicant/ Contractor
52			Promulgation of Information	Promulgation of information advising on the nature, timings and location of construction and decommissioning activities at the landfall location. Information and notices will be posted at the landfall location.	To be updated	Construction Decommissioning		Applicant/ Contractor
53			Consultation with Department of Defence & others	The Applicant will continue to consult with the DoD to better understand their aviation lighting requirements. The Applicant will engage with relevant aviation stakeholders (i.e. DAA Dublin Airport, AirNav Ireland and the IAA) in advance of the commencement of offshore construction works, including deployment of the installation vessels with cranes to the site. The Applicant will ensure that sufficient notification of intention to commence crane operations is provided to all relevant stakeholders	To be updated	Pre-Construcion Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
54	Marine Archaeology	Chapter 15	Marine Archaeological Consultation	Marine archaeologists to be consulted in the preparation of any pre-construction ROV/diver surveys and, if appropriate, in monitoring/checking of data.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Marine Archaeology Management Plan	Applicant/ Contractor
55			Archaeological Exclusion Zone	The identification and implementation of Archaeological Exclusion Zones (AEZs) around sites identified as having a known important archaeological potential.	To be updated	Pre-Construction Construction	Marine Archaeology Management Plan	Applicant/ Contractor
56			Unconfirmed Archaeological Potential	All anomalies of unconfirmed archaeological potential to be taken into account during final design. If they are likely to be impacted, these anomalies would undergo further archaeological investigation. Should these anomalies prove to be of archaeological importance then future AEZs may be implemented following consultation with NMS.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Marine Archaeology Management Plan	Applicant/ Contractor
57			Protocol for Archaeological Discoveries	Provision of a Marine Archaeological Management Plan (see volume 2A, appendix 5-10: Marine Archaeological Management Plan) including an Outline Written Scheme of Investigation (WSI) and Protocol for Archaeological Discoveries (PAD) similar to that set out by The Crown Estate 2014 for guidance on the mitigation of marine archaeology receptors and unexpected archaeological discoveries made during the course of the development.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Marine Archaeology Management Plan	Applicant/ Contractor
58			Marine Archaeological Consultation	Marine archaeologists to be consulted in advance of pre-construction site preparation activities (as included in the project description) and, if appropriate, to carry out watching briefs of such work.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Marine Archaeology Management Plan	Applicant/ Contractor
59			Mitigation of Unavoidable Direct Impacts	Mitigation of unavoidable direct impacts on known sites of archaeological importance. Options include i) preservation by record, ii) stabilisation.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning	Marine Archaeology Management Plan	Applicant/ Contractor
60	Infrastructure and Other Users	Chapter 16	Marine Safety Zone	The Applicant will implement advisory Marine Safety Zones of 500 m in radius around individual structures undergoing installation or decommissioning. Advisory Marine Safety Zones of 50 m will be implemented for incomplete structures at which construction activity may be temporarily paused. During the operational and maintenance phase, the Applicant will also apply for advisory Marine Safety Zones of approximately 500 m in radius around infrastructure undergoing major maintenance (for example a blade replacement).	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
61			Clearance distance	The Applicant will implement an advisory clearance distance of 500 m in radius around cable installation vessels and cable repair vessels.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
62			Notice to Mariners	Notice to Mariners will be issued through the Marine Survey Office in advance of construction and maintenance activities to inform all marine users of the location, time period and safety and navigational requirements for the planned activity.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
63			Promulgation of Information	Promulgation of information advising on the nature, timing and location of activities, including through Notices to Mariners. Information and notices will also be posted at the landfall location. The Applicant will directly issue Notices to Mariners.	To be updated	Pre-Construction Construction Operation & Maintenance Decommissioning		Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	Topic	EIAR Chapter/ Other	Aspect	Commitment	Related Planning Condition	Project Phase	Relevant document for Implementation	Responsible Party
64			Navigational Aids and Marine Charting LMP	Provision of suitable Navigational aids and marine charting, to be agreed with the Commissioner of Irish Lights (CIL). To include charting of all structures associated with the Project on relevant nautical and electronic charts and implementation of a buoyed construction/decommissioning area for the offshore wind farm area during each phase. Lighting and marking to be agreed with CIL via a Lighting and Marking Plan (see volume 2A, appendix 5-9: Lighting and Marking Plan). Requirements align with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Recommendation O-139 (IALA, 2013).	To be updated	Construction Operation & Maintenance Decommissioning	LMP	Applicant/ Contractor
65			Guard Vessels	The Applicant will use guard vessels during installation and major maintenance activities such as during cable repair activities or during use of jack up vessels.	To be updated	Construction Operation & Maintenance		Applicant/ Contractor
66	Resource and waste management	Chapter 30	EMP	Implementation of the Environmental Management Plan (EMP) (see volume 2A, appendix 5-2: Environmental Management Plan).	To be updated	Construction Operation & Maintenance Decommissioning	EMP	Applicant/ Contractor
67			Management of Waste: Vessels	All vessels will be required to manage waste in accordance with the accepted EU and international standards. These include the Sea Pollution Act, 1991, 1999, 2005 and 2006, the Dumping at Sea Act 1996, the International Convention on the Prevention of Pollution from Ships (MARPOL Convention), the European Communities (Port Reception Facilities for Ship-Generated Waste and Cargo Residues) Regulations 2003 (S.I. No. 117 of 2003), the Sea Pollution (Prevention of Pollution by Garbage from Ships) Regulations 2012 (S.I. No. 372/2012) and Sea Pollution (Prevention of Pollution by Sewage from Ships) (Amendment) Regulations 2012 (S.I. No. 492/2012). Each Port will also have a Port WMP which must be abided by and if waste is taken ashore, the Waste Management Act 1996 (as amended) will apply.	To be updated	Construction Operation & Maintenance Decommissioning		Applicant/ Contractor
68	Seascape, landscape and visual asses	Chapter 27	Turbine Towers and Blades	Turbine towers and blades will be to a uniform colouration. Turbine locations are spaced to reduce visual clutter and avoid overlap with background landscape. Turbines will be of identical rotor diameter.	To be updated	Construction Operation & Maintenance		
69	Bats in the Marine Environment	Chapter 31	Injury and/or Fatality Curtailment - During the First Year of Operation	A set of curtailment criteria will be established based on a combination of conditions (i.e. ideal conditions for bats) to stop or slow down the turbines during peak bat migration periods. These measures will minimise bat barotrauma and collisions. The curtailment will apply when all of the following parameters are met: • Peak bat migration periods; mid-March (e.g. 15 March) to end of May (i.e. 31 May); and mid-August (e.g. 15 August) to October (i.e. 31 October); • Between sunset and sunrise; • Sunset temperatures above 10 °C (Collins, 2023); • Wind speeds of < 5.4 m/s (20 km/hr) (Collins, 2023); • Where rainfall is < 4 mm/hr (i.e. low to moderate rainfall levels) occurring for a duration of longer than 30 minutes; and • When one bat call is acoustically detected within the previous thirty minutes. Bat detectors will be evenly placed across fifteen wind turbines within the offshore wind farm area (one at the lowest blade tip height; and one at the nacelle). It is also considered important, whilst still ensuring bat protection during migration periods, that the curtailment criteria do not cause any unnecessary energy losses. To ensure this, bat echolocation detection measures will be put in place which will limit the curtailment criteria to only those times when bats are detected. Such detection measures may include the application of a Detection and Active Response Curtailment (DARC) system, which aims to reduce wind energy's impact on bats while increasing energy production. The bat echolocation detection system will be agreed with the NPWS. Static detector surveys will be undertaken at the lowest blade tip height above LAT of 27 m and at the nacelle/hub height of 145 to 152 m. Thirty bat detectors will be deployed evenly across fifteen turbines within the offshore wind farm area. The results of the mitigation during the first year of operation will be compiled into a report and submitted to the NPWS for review.	To be updated	Operation & Maintenance		Applicant/ Contractor
70			Injury and/or Fatality Curtailment - During the Second Year of Operation	Upon agreement with the NPWS, an adjustment to the curtailment criteria may be made based on the results of bat migration records during the first year of operation, and static detectors will be re-deployed. The results of the mitigation during the second year of operation will be compiled into a report and submitted to the NPWS for review.	To be updated	Operation & Maintenance		Applicant/ Contractor
71			Injury and/or Fatality Curtailment - During the Third Year of Operation	Upon agreement with the NPWS, static detector survey results from year one and year two will be used as an average to update the curtailment criteria. Acoustic surveys will continue for the third year of operation.	To be updated	Operation & Maintenance		Applicant/ Contractor
72			Injury and/or Fatality Curtailment - Operational Years Thereafter	Acoustic surveys will continue for the remaining duration of the operational lifetime of the Project. The curtailment criteria shall be reviewed and updated, as required.	To be updated	Operation & Maintenance		Applicant/ Contractor

Environmental Management, Mitigation and Monitoring Measures - to be completed post consent					Mechanism for Implementation			
No.	Topic	EIAR Chapter/ Other	Aspect	Commitment	Related Planning Condition	Project Phase	Relevant document for Implementation	Responsible Party
73	Fish and Shellfish	Chapter 9	Voluntary Monitoring and Mitigation	Herring spawning grounds have been identified as a feature of a potential MPA and have been raised by An Bord Pleanála (Now An Coimisiún Pleanála) as a cause for concern. Therefore, due to the overlap with the Fish and Shellfish Ecology Study Area, the Project will consider voluntary monitoring and mitigation/enhancement opportunities. These include: • Baseline, construction and post-construction monitoring of egg/larval activity. Surveys may include either trawl surveys for adult herring (to see if they are spawning) or egg/larvae surveys to detect recent spawning activity. • Potential biodiversity net gain initiatives which could aid herring spawning population, such as oyster beds (shells are used for laying eggs on) within detailed design of cable protection and scour protection.	To be updated	Pre-Construction Construction		OWL/Contractor
74	Offshore Ornithology	Chapter 11	Monitoring	The Project proposes to continue monitoring the population distribution and abundance of the Offshore Ornithology Study Area. This monitoring is proposed to consist of DAS before construction (Year 0) and Years 1, 3, 5 and 15 following construction, following the same scope, methods and analysis of the baseline surveys. This monitoring will allow the conclusions presented within this EIAR to be confirmed. No additional monitoring of a specific receptor is proposed at this stage. The Applicant is willing to discuss any additional monitoring requirements with the regulator.	To be updated	Pre-Construction Construction Operation & Maintenance		OWL/Contractor
75	Commercial Fisheries	Chapter 12	Monitoring	It is recognised that static gear fisheries can be particularly affected by offshore wind development, due to their strong fidelity to specific sites (Roach et al., 2022). Therefore, on a precautionary basis, a study will be undertaken in collaboration with local fishers to monitor the static (pot) fisheries before and after construction of the Project.	To be updated	Pre-Construction Construction		OWL/Contractor
76	Population and Human Health	Chapter 18	Monitoring	The following monitoring is suggested: • Monitoring of the proportion of local people with long-term unemployment, high job instability or low income who enter good quality stable employment with the Project in order to confirm the expected benefit and further tailor the targeting of local vulnerable groups. • Monitoring of the proportion of NEETs taking up, and completing, training opportunities with the Project in order to confirm the expected benefit and further tailor the targeting of local vulnerable groups.	To be updated	Construction Operation & Maintenance Decommissioning		OWL/Contractor
77	Noise and Vibration	Chapter 25	Monitoring	Prior to the commencement of construction, the contractor will set out and agree a schedule of noise monitoring with the planning authority to include the number and locations at which noise monitoring will be carried out, the frequency and duration of the monitoring and the reporting of results.	To be updated	Construction		OWL/Contractor
78	Bats in the Marine Environment	Chapter 31	Monitoring	A competenet and experienced Ecologist will be appointed by the Applicant and will ensure the following monitoring scheme is implemented in full: • At pre-construction stage, bat data will be collected using appropriate vessels to provide information on the usage of the offshore wind farm area by migrating bats during at least one spring migration period and at least one autumn migration period. Two bat detectors will be required per vessel and data will be collected weekly during the peak bat migration periods; • During the operational and maintenance phase, thirty static bat detectors will be deployed evenly across fifteen wind turbines within the offshore wind farm area (one at the lowest blade tip height; and one at the nacelle). These static bat detectors will be required to monitor bats during peak migration periods and monitor the success of mitigation measures; • Bat monitoring will be carried out annually, until Project decommissioning; and • The monitoring scheme and success of mitigation measures will be documented annually into a detailed report and submitted to the NPWS for discussion.	To be updated	Pre-Construction Operation & Maintenance Decommissioning		OWL/Contractor
79	Marine Receptors	Chapter 5	Monitoring	Implementation of Monitoring Programme (see appendix 5-16 in EIAR volume 2A Addendum.	To be updated	Pre-Construction Operation & Maintenance Decommissioning		OWL/Contractor

References

There have been no changes to appendix 5-2: Environmental Management Plan (EIAR volume 2A).