Addendum to the Environmental Impact Assessment Report

NISA

North Irish Sea Array

Volume 6 - Summary Chapters

Chapter 36
Mitigation and Monitoring and Likely Significant Residual Effects

Statkraft

CIP
Copenhagen Infrastructure Partners

GoBe
APEM Group

ARUP

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36. Mitigation and Monitoring Measures and Likely Significant Residual Effects

North Irish Sea Array Windfarm Ltd (NISA, hereafter referred to as 'the Developer') has been considering the Request for Further Information (RFI) issued by An Bord Pleanála (now An Coimisiún Pleanála) as well as the third-party submissions received following public consultation. At An Coimisiún Pleanála's behest, the Developer has also continued to consult with stakeholders in respect of the 2024 planning application throughout 2024-2026. The Developer has refined elements of the design to respond to the third-party submissions, the continued public and stakeholder consultation and the RFI (further details on the design refinements are provided in Appendix A5.1: Design Refinements). Amendments are therefore required to Chapter 36: Mitigation and Monitoring Measures and Likely Significant Residual Effects of the 2024 Environmental Impact Assessment Report (EIAR). Full details of consultation undertaken can be found in Appendix A1.2 in the Addendum to the EIAR.

For the purposes of clarity, this document shall be read in conjunction with the Chapter 36 submitted as part of the 2024 EIAR.

Any cross reference to a chapter, section, table, image, figure or appendix within this document is to another location within the Addendum to the EIAR unless explicitly stated otherwise. Any cross reference to anything included in the 2024 EIAR will be clearly labelled as such.

Text in bold is only used throughout this document to indicate where changes are required, and why they are required. Text in italics illustrates section(s) of the 2024 EIAR which are deleted, or quotations from other documents (as explicitly stated). Replacement text is in normal font.

Tables which have been updated from the 2024 EIAR, or entirely new tables or diagrams, have been included in the Addendum to the EIAR. These can be identified by the "A" prefix in the caption. Any changes within the updated table, in comparison to tables within the 2024 EIAR, are indicated by grey shading in the relevant cell, column or row, as necessary. The exception here is where a table has been replaced in its entirety or where this is only a chapter / appendix reference update.

The sections relevant to Chapter 36 in the RFI are included below.

RFI Section	RFI	Relevance to Chapter
1 (b)	The scientific information provided as part of the planning application documentation should be based on up-to-date survey reports and data. Accordingly, the applicant is requested to confirm/provide justification/verification that the information submitted in support of the planning application remains relevant and appropriate at the point of submitting further information or to update same as required.	The timeframes associated with the RFI have necessitated a review of the datasets previously used in the 2024 EIAR to ensure any necessary updates to the baseline environment are captured. Therefore, a review of the baseline environment has been undertaken to comply with RFI Section 1 (b). The updates to this chapter are provided in Sections 36.10, 36.15 and 36.17.
1 (c)	The applicant is requested to confirm whether any on-going or additional surveying has been carried out since the application was lodged and, if so, the applicant is invited to submit any further survey data results and analysis and update the planning application documentation, as appropriate.	Additional surveys have been undertaken since the 2024 EIAR to provide an updated baseline for assessment. The updates to this chapter are provided in Section 36.15 of this chapter.
1 (d)	The applicant is requested to provide details of an operational monitoring programme for the proposed development. In this regard, the applicant is advised that the proposed operational	In response to this RFI the Developer has prepared an Operational Monitoring Plan which contains the requested

RFI Section	RFI	Relevance to Chapter
	monitoring programme should fully inform the requirements of any future decommissioning plan(s) and justify any adaptive mitigation measures required. The proposed operational monitoring should be provided at appropriate intervals, for appropriate periods, and provide for adequate reporting to the relevant compliance authorities	information on planned operational monitoring, including timeframes and reporting. This document is provided in Appendix A6.3: Operational Monitoring Programme. These updates to this chapter are provided in Section 36.27.
2 (a)	The IRCG, through the DoT, has raised concerns in relation to the layout of the proposed development with respect to search-and-rescue (SAR) access. The applicant is requested to consult with the IRCG, in addressing these concerns, and provide further information and clarification on such matters.	Continued consultation has occurred with the Irish Coast Guard (IRCG) since the submission of the 2024 EIAR and wind turbine (WTG) layout for Project Options 1 and 2 have been revised in liaison with the IRCG in response to RFI Section 2 (a). These layouts include a single line of orientation (SLoO) with a linear configuration which is accompanied by a safety justification in line with the requirements of Marine Guidance Note (MGN) 654. IRCG have confirmed they are content with these revisions and approach. These changes are acknowledged in this chapter, where relevant.
2 (b)	The EIAR under Chapter 17, Shipping and Navigation, states that as part of embedded mitigation, the fixed layouts for Project Option 1 and Project Option 2 comply with MGN 654 requirements (UK guidance, Maritime and Coastguard Agency, 2021). The applicant is advised that the Department of Transport Marine Survey Office (MSO) states that the proposed layout does not comply with guidance provided in MGN 654 and the MSO strongly disagrees with the summarisation of the risk to the safety of navigation posed to commercial shipping, fishing vessels, and recreational craft transiting in proximity to the southeastern corner and the Rockabill GAP. The applicant is requested to consult with the Department of Transport MSO in addressing these concerns and provide further information and clarification on such matters.	At that time of the 2024 EIAR, comprehensive Irish guidance was not in place and therefore use of the UK MGN 654 (MCA, 2021) was agreed for use by relevant stakeholders. Since then, the guidance had been published by Department of Transport (DoT) and in line with its requirements; the Navigational Risk Assessment (NRA) is still informed by MGN 654. The refined layouts for Project Option 1 and Project Option 2 have a SLoO with a linear configuration in line with the requirements of MGN 654. The wind turbine (WTG) layouts for both Project Options 1 and 2 have also been set back from the south eastern corner which was central to the MSO's concerns. The PIANC guidance (PIANC, 2018) was also applied to the Rockabill Gap and resulted in an increased Structure Exclusion Zone to which the MSO have deemed suitable for safe navigation. These changes are acknowledged in this chapter, where relevant.
4	The documentation submitted does not provide specific detail, assessment, or review of the range of ecosystem functions and services which could be impacted by the proposed development. The National Marine Planning Framework (NMPF) states that proposals to protect, maintain, restore, and enhance coastal habitats for ecosystem functioning and provision of ecosystem services will be supported, subject to the outcome of statutory environmental assessment processes. Seafloor and Water Column Integrity Policy 3 of the NMPF also requires proposals to take account of the space required for coastal habitats, for ecosystem functioning and the provision of ecosystem services and to demonstrate that they will, in order of preference, avoid, minimise or mitigate for net loss of coastal habitats. The applicant is requested to update the EIAR to include an assessment of impacts (both positive and negative) on relevant ecosystem functions and services and include mitigation measures, as appropriate.	A synopsis report of ecosystem functions and services has been provided in Volume 2 Appendix A3.3 Ecosystem Functions and Services Assessment, which considers the full range of ecosystem services set out in the report 'Valuing Ireland's Blue Ecosystem Services' (SEMRU of NUI Galway, 2018). The outcome of individual receptor assessments concluded no material impact on ecosystem services, and no impediment to the ability of normal ecosystem functions and services to function, resulting from the proposed development. The Developer has not included a separate eco-system function assessment in the respective Chapters of the Addendum to the EIAR, as the conclusions of the EIAR are already directly linked to the assessment of ecosystem functions and services. This includes assessment of decommissioning impacts, the need for adaptive management, ongoing monitoring and/or other mitigations which are collating in this chapter.

RFI Section	RFI	Relevance to Chapter
	The applicant is also requested to submit a synopsis report of the relevant impacts on ecosystem functions and services. In identifying the relevant ecosystem services for assessment, including those services classified as provisioning, regulation and maintenance, and cultural services, the applicant is advised to consider the full range of ecosystem services set out in the report 'Valuing Ireland's Blue Ecosystem Services' (SEMRU of NUI Galway, 2018), as referenced in the NMPF. The report should also consider the need for an adaptive management framework for ongoing assessment and should include provision for appropriate monitoring of any mitigation measures and operational management strategies, as well as provision for decommissioning.	
5	The Board notes that cumulative assessment was addressed under each topic specific chapter in the EIAR and addressed within Chapter 38 Cumulative and Interrelated Effects Assessment (CEA) (and associated Appendices 38.1 and 38.2). The Marine Institute in their observation raises concerns in relation to the methodology applied in the submitted cumulative effects assessment and the manner in which the information is presented, noting the lack of a standard Irish methodology in relation to CEA. The applicant is advised that guidance exists in the UK, namely Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK, September 2024 (NSIP, 2024). The applicant is requested to revise the submitted cumulative assessment in line with NSIP (2024) and submit a standalone document to clearly demonstrate the CEA conclusions. In the interests of consistency and transparency, the applicant is requested to complete the assessment in accordance with the templates provided in the NSIP (2024), namely "*Appendix 1: Matrix 1 – Identification of 'other development' for CEA" and "Appendix 2: Matrix 1 – Assessment matrix*" (see attached Appendix B)……	A revised CEA, which considers the methodology and template provided in the Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK, September 2024 (NSIP, 2024), has been prepared. The revised CEA is provided in Chapter 38 Cumulative and Inter-Related Effects and Appendix A38.1 – Onshore Long List. The update to this chapter, in relation to this, is provided in Section 36.28.
6	The applicant is requested to review Chapter 5 in relation to site selection and the rationale for choosing this site for development and provide further justification and rationale regarding the suitability of the site for the proposed development. and The Board notes that a number of observations have raised concerns in relation to the assessment of site alternatives and suitability of the site for development having regard to the location of the site within the recently designated North-west Irish Sea (NWIS) cSPA…	While the proposed development boundary, as shown in Figure 1.1 of Chapter 1 of the 2024 EIAR, remains unchanged the Developer consulted with the NPWS in 2025 and 2026 (see Appendix A1.2 Consultation Report) to discuss the overlap of the proposed development with the NWIS SPA, in relation to potential ornithological displacement effects. The Developer, on foot of the RFI and discussions with NPWS, refined the WTG layouts for Project Option 1 and Project Option 2 to reduce the spatial extent of offshore infrastructure overlap within the NWIS SPA, compared with 2024 EIAR layouts. These changes are acknowledged in this chapter, where relevant.

RFI Section	RFI	Relevance to Chapter
8 (c) vi	Any potential specific mitigation measures to minimise the effects of the project on birds, such as painting of turbine blades, the use of curtailment systems in particular conditions or at particular times etc, if considered appropriate, should also be included and addressed in the application documentation.	Embedded mitigation measures, mitigation measures and monitoring for Offshore Ornithology are detailed in Chapter 15 and collated within this Chapter. A detailed response on why other mitigation measures (such as painting blades) are not required is provided within the RFI Response document.
9 (f)	It is noted that development of an Offshore Environmental Plan (OEMP) was not listed as a measure under the operation phase of the project, where it had only been listed under construction and decommissioning (section 12.4.5; table 12.13). The applicant is requested to clarify if an OEMP is considered a mitigation measure under the operation phase.	The Developer has added the reference to the Offshore EMP to Section 36.4 of this Chapter.
10 (a)	Having regard to information submitted in the EIAR, the NPWS underwater noise guidelines (NPWS, 2014), the strict protections afforded to marine mammals under the Wildlife Act 1976, as amended, in addition to observations from prescribed bodies and observers, the Board requires a comprehensive suite of noise abatement measures to be proposed and assessed in addition to the existing mitigation measures referenced in the planning application documentation. The applicant is therefore requested to submit: i. A comprehensive review of relevant mitigation, in addition to what is currently contained in the submitted documentation, specifically appropriate noise abatement measures, which could be applied to the proposed development to reduce/restrict the propagation of noise through the marine environment and provide realistic values for the reduction in sound level possible from these technologies. The review must consider the range of suitable abatement measures available, including consideration of, at a minimum, bubble curtains, casings, resonators, and alternative hammer/piling technologies to reduce noise emissions, and set out in detail the suitability of such measures for the construction of the proposed development at this location, including restrictions in relation to their suitability, where relevant. … iii. Revised noise modelling and mapping which provides detailed consideration of the noise abatement strategy selected in response to (i) above and include: 5. Any additional abatement and / or mitigation measures should also be considered in the context of their potential for reduction of cumulative effects with other projects in terms of underwater noise.	Following receipt of the RFI and subsequent stakeholder meetings with the IRCG, MSO, Irish Lights and NPWS, careful consideration was given to understanding how a refined design could address specific requests contained within the RFI, whilst also further mitigating potential environmental effects from the proposed development. Following careful consideration by the Developer, there are design refinements proposed to both Project Option 1 and Project Option 2. This includes removal of both driven and drilled monopile and jackets with pin piles as options for the WTG foundations from Project Option 1 and Project Option 2 and a refinement to the WTG foundation installation methodology to jackets with suction buckets (hereafter referred to as ‘SBJs’) for Project Option 1 and Project Option 2 to address key stakeholder concerns in the RFI around underwater noise (NPWS). Suction buckets are a low underwater noise solution for WTG installation and a proven technology on other wind farms. This chapter collates the mitigation measures for underwater noise impacts, which have considered the use of SBJs. These updates to this chapter are provided in Sections 36.6, 36.13
10 (p)	The MMMP states the development will follow standard DAHG (2014) guidelines, however it describes the use of Passive Acoustic Monitoring (PAM) as a form of mitigation under hours of darkness.	The Developer confirms that the MMMP has been updated (Volume 9, Appendix A14.5) and is compliant with the DAHG (2014) guidance.

RFI Section	RFI	Relevance to Chapter
	The guidelines state: 'Pile driving activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible'. The following text is also noted: 'Once an appropriate and effective Ramp-Up Procedure commences, there is no requirement to halt or discontinue the procedure at night-time, nor if weather or visibility conditions deteriorate nor if marine mammals occur within a 1,000m radial distance of the sound source, i.e., within the Monitored Zone'. According to standard practice, there is no requirement for piling to stop once daylight fades, however if there is a break in pile driving sound output for a period greater than 10 minutes (e.g. due to equipment failure, shut-down or location change), the piling must not resume until daylight hours. Although the proposed development will be able to employ PAM to aid in identifying the presence of cetaceans, to begin before daybreak would constitute a deviation from the DAHG (2014) Guidance. As per DAHG (2014) Guidance, PAM may be used as a supplementary mitigation tool to optimise marine mammal detection, but not as a primary mitigation tool. The applicant is requested to clarify the relevant mitigation measures to be utilised. It is requested that all elements of the MMMP comply with NPWS (2014) Guidance including: soft start times, delay durations, mitigation zone sizes, and mandatory ramp-up procedures, and defined reporting requirements. Furthermore, the use of distance estimation formula should follow the same approach suggested for distance estimation by the Joint Nature Conservation Committee (JNCC) (refer to Marine Mammal Observer Association article on the subject of distance estimation using reticular binoculars for further explanation) and use standard trigonometric equations for calculation.	Following design refinements to the Proposed Development, impact piled monopiles are no longer included as a foundation option for either Project Option 1 or Project Option 2, meaning that impact piling is no longer required for either WTG or OSP installation. Therefore, mitigation measures for pile driving have been removed from the Addendum to the MMMP. The updated mitigation measures have been summarised within this chapter.
10 (q)	The applicant is requested to address the possibility for temporal mitigation, for example limiting piling to periods that do not overlap with the harbour or grey seal pupping season or the harbour porpoise calving season, to further limit effects on nearby SACs.	Following design refinements to the Proposed Development, impact piled monopiles are no longer included as a foundation option for either Project Option 1 or Project Option 2, meaning that impact piling is no longer required for either WTG or OSP installation. Therefore, temporal mitigation does not need to be considered for piling. The updated mitigation measures have been summarised within this chapter.
12	The NMPF provides that the proposed development should be considered in the context of co-existences with existing marine activities in the area, including fisheries and aquaculture. Having regard to the provisions of the NMPF, the submitted EIAR (including the Fisheries Management and Mitigation Strategy, Appendix 16.2), and all observations made:	The proposed development has been considered in the context of co-existence with existing marine activities through the Addendum to Chapter 16 and Fisheries Management and Mitigation Strategy (FMMS; Appendix A16.2). Together, these set out the Developer's approach to fisheries liaison, coexistence, mitigation, monitoring and adaptive management in line with the NMPF.

RFI Section	RFI	Relevance to Chapter
		In particular, the application is supported by an updated Co-existence Strategy, a Technical Coexistence Assessment, and the further development of the Sustainable Fisheries Community (SFC) as a fisheries-led mechanism to support long-term engagement, evidence gathering and management of fisheries interactions over the lifetime of the project. These updates to this chapter are provided in Section 36.8
13 (e)	….The applicant is requested to review the draft [Flemington] LAP (or adopted LAP, where updated at time of this observation) and update the submitted application documentation accordingly, having regard in particular to potential for visual impacts from the substation on the draft LAP lands, potential traffic implications given the proposed access to the LAP lands directly adjoins the proposed access to the substation, and potential noise implications from the substation on the adjoining residential zoned lands.	Changes to the landscape plan at the grid facility have been included in response to RFI 13 (e) to reduce the visual impacts of the grid facility on receptors associated with the Flemington LAP. These are included in Landscape Mitigation Plan (planning drawing ref. 281240_MCR_ONS_GF_DR_YE_1010) and referred in this chapter. In addition, the substation colour scheme/finish also takes into consideration the adoption of the Flemington LAP, to reflect a future scenario that is more urban edge and includes a higher architectural quality of finish. These updates to this chapter are provided in Sections 36.15 36.21 and 36.22.
14 (a)	Chapter 18 of the EIAR relates to Offshore Archaeology and Cultural Heritage. Section 18.3.2.5 states that at the time of writing of the EIAR the results of an additional intertidal and shallow water marine geophysical survey at the nearshore of the ECC was unavailable to determine the AEZ of the recorded wreck of the Belle Hill which is a national monument located c. 150m north of the EEC. The applicant is requested to submit the results of the referenced geophysical survey and update the chapter and associated analysis accordingly.	The Developer has amended the Offshore Archaeology and Cultural Heritage analysis and assessment to reflect the results of the referenced geophysical surveys (ADCO, 2024 and 2026) and this is presented in Chapter 18. The receptors within the intertidal and nearshore geophysical surveys include four receptors that have been interpreted as probable wreck debris (ADCO 03, ADCO 04, ADCO 07 and M 0142), potentially either from the Belle Hill or from one of the many Recorded Losses wrecked on the Cardy Rocks. Archaeological Exclusion Zones (AEZ's) for Sites ADCO 03, ADCO 07 and M0142 have now been included within Table A18.5 of Chapter 18. These updates to this chapter are provided in Section 36.10
14 (b)	Appendix 25.4 is titled 'Draft Cultural Heritage Mitigation Strategy'. The applicant is requested to confirm if this is the most up-to-date report available and to update said report in relation to any issues arising as a result of the observation of the DAU and other observations.	This is relevant to Chapter 25 as this chapter deals with archaeological, architectural and cultural heritage. Appendix 25.4 is the most up to date version of the report and does not require changes following submissions. Appendix 25.4 is titled 'Draft' Cultural Heritage Mitigation Strategy in order to reflect that it will be updated throughout the course of the proposed development, when required. The Strategy will be finalised prior to construction.
15 (f)	The applicant is requested to examine the need for mitigation measures, in addition to monitoring during the operational phase, to reduce potential impacts on bats, and is requested to provide details in relation to potential mitigation measures, for example, including, *inter alia*, measures such as curtailment or feathering of blades under certain conditions.	The Addendum has re-evaluated the need for bat-specific mitigation measures in response to RFI 15(f). As detailed in Section 35.5 of Chapter 35: Offshore Bats, the updated assessment confirms that no significant effects on any bat species are predicted during the construction, operational or decommissioning phases. Offshore bat presence within the array area across the 2022–2024 monitoring period is extremely low, short-duration and involves very small numbers of individuals, with no evidence of sustained offshore use or any behavioural pathway that would result in regular interaction with turbine infrastructure. The updated artificial light at night (ALAN) and prey-mediated assessments (Impacts 3, 4, 6 and 7) confirm that no attraction mechanisms exist, and the revised collision and barotrauma assessment (Impact 8) concludes that any potential interaction would be rare and of negligible biological consequence. International monitoring evidence also shows that no confirmed bat collisions have been recorded at offshore wind farms.

RFI Section	RFI	Relevance to Chapter
		Given this evidence base, additional mitigation measures such as curtailment or feathering are not considered necessary or proportionate for the proposed development. Standard environmental management measures applicable to all offshore works will be implemented as part of the wider project controls. These updates to this chapter are provided in Section 36.27.
19 (a)	Having regard to the anticipated traffic disruption, the applicant is requested to consider, in consultation with Fingal County Council, mitigation measures to address the predicted length of road closures, including consideration of lane closures with significant traffic management measures, nighttime road closures and measures to reduce road closure timelines such as increased resources. The applicant is also requested to submit, further to consultation with Fingal County Council, proposals for a phasing plan.	An Bord Pleanála acknowledged concerns raised by Fingal County Council in relation to the scale and duration of onshore road closures proposed to facilitate the proposed development. The Developer engaged in further consultation with Fingal County Council (FCC) in 2025 (see Appendix A1.2 for further information on consultation with FCC). Following this consultation, additional mitigation measures have been included to further reduce potential impacts arising from the proposed development. As part of this consultation, the Developer also submitted an indicative phasing plan to FCC which will be further developed and finalised by the Developer and its appointed contractor(s) in consultation with FCC and other relevant stakeholders, prior to the commencement of construction, as agreed with FCC. Further details on the additional mitigation measures and the indicative phasing plan are provided in the Construction Traffic Management Plan (CTMP) which is included as part of the Onshore Construction Environmental Management Plan (CEMP). Any relevant changes are included in this report in Section 36.16. Following consultation with FCC, the Developer has included for potential 24 hour working at select locations along the onshore cable route, subject to further agreement with relevant stakeholders. An assessment of potential construction phase effects arising from this additional night-time working has been undertaken. See Section 36.22.
19 (c)	The applicant is requested to review section 24.3 of Chapter 24 in relation to Baseline Environment to ensure any road network upgrade works, such as the installation of active travel measures/cycle paths at Corduff NS and along the R132 (The Five Roads to Corduff), and at any other location, are reflected accurately in the baseline and subsequent assessment.	To ensure compliance with RFI Section 19 (c), updated traffic count surveys were undertaken in 2025. The results of these surveys are presented in detail in Chapter 24. The indirect air quality and noise effects of these updated traffic count surveys have been assessed in Chapter 27 and Chapter 30, respectively. The updates to this chapter are provided in Section 36.19.
20 (b)	Fingal County Council raise a number of issues in relation to tree protection/removal, landscaping plans and the submitted Habitat and Species Management Plan. The applicant is requested to address the issues raised.	In response to RFI 20 (b), an updated Tree Report has been included to ensure retained trees are protected during construction. The updates to this chapter are provided in Section 36.15.

36.1 Introduction

There are no changes to the section. Refer to Section 36.1 of Chapter 36 of the 2024 EIAR.

36.2 Marine Geology, Oceanography and Physical Processes Mitigation and Monitoring Measures

36.2.1 Embedded Mitigation Measures

There are no changes to the section. Refer to Section 36.2.1 of Chapter 36 of the 2024 EIAR.

36.2.2 Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.2.2 of Chapter 36 of the 2024 EIAR.

36.3 Marine Water and Sediment Quality Mitigation and Monitoring Measures

36.3.1 Embedded Mitigation Measures

There are no changes to the section. Refer to Section 36.3.1 of Chapter 36 of the 2024 EIAR.

36.3.2 Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.3.2 of Chapter 36 of the 2024 EIAR.

36.4 Benthic Subtidal and Intertidal Ecology Mitigation and Monitoring Measures

36.4.1 Embedded Mitigation Measures

The key change required in this section is the addition of the Offshore Environmental Management Plan (Offshore EMP) for the operation phase of the proposed development (as per RFI Section 9 (f)). Table 36.2 of the 2024 EIAR has been replaced by Table A36.1 below:

Table A36.1 Embedded mitigation measures relating to benthic subtidal and intertidal ecology (Replaces Table 36.2 of Chapter 36 of the 2024 EIAR)

Type of mitigation measure	Description of Mitigation measure
Construction	
Cable installation measures/Cable Burial Risk Assessment	Cable installation measures will minimise adverse impacts to potentially sensitive receptors. It will also set out appropriate cable burial depth in accordance with industry good practice, reducing the risk of cable exposure and based on a cable burial risk assessment (CBRA). Cables will be buried to a sufficient depth to ensure that they are not exposed via erosion or seabed lowering. Where target cable burial depth cannot be achieved during the cable installation process (for any of inter-array, interconnector, or export cables), cable armouring will be implemented (e.g. mattressing, or rock placement etc). The suitability of installing rock or mattresses for cable protection will be investigated, based on (inter alia) the seabed current data at the location of interest and a risk assessment of the potential for cable damage to occur. Cable installation measures are captured in the Offshore Environmental Management Plan (EMP).
Cable burial	Cable installation will follow the burial hierarchy, where practicable two attempts will be made to bury cables before cable protection is used.
Landfall	The installation of the offshore export cables at landfall will be undertaken by HDD beneath the intertidal zone which will prevent any direct disturbance to intertidal receptors. The HDD exit pits will be located within the ECC seaward of the LWM at a point where cable installation vessels can operate.
Project Design	Presence of sensitive habitats will be identified through a review of the latest available benthic datasets and pre-construction surveys. Proposed development infrastructure will avoid protected habitats wherever reasonably practicable to an extent not resulting in a hazard for marine traffic and Search & Rescue capability.
Offshore Environmental Management Plan (EMP)	An Offshore EMP will be developed and will include details of: Marine pollution contingency measures to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised proposed development in relation to all activities carried out below the HWM; • A chemical risk review to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance; • Marine biosecurity measures detailing how the risk of introduction and spread of invasive non-native species will be minimised; • Waste management and disposal arrangements; • A vessel management plan, to determine vessel routing to and from construction sites and ports, to include a code of conduct for vessel operators; and

Type of mitigation measure	Description of Mitigation measure
	• The appointment and responsibilities of a company Fisheries Liaison Officer (FLO).
Pre-construction profile survey	Where necessary, before works commence and following reinstatement, a topographical survey of the nearshore subtidal area will be carried out to identify and map the contours of the subtidal HDD exit pit to ensure a profile similar in nature to the profile recorded during the pre-construction survey is reinstated, as far as practicable.
Operation	
Offshore Environmental Management Plan (EMP)	An Offshore EMP will be developed and will include details of: Marine pollution contingency measures to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised proposed development in relation to all activities carried out below the HWM: • A chemical risk review to include information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance; • Marine biosecurity measures detailing how the risk of introduction and spread of invasive non-native species will be minimised; • Waste management and disposal arrangements; • Operational monitoring plan; • A vessel management plan, to determine vessel routing to and from the windfarm site and ports, to include a code of conduct for vessel operators; and • The appointment and responsibilities of a company Fisheries Liaison Officer (FLO).
Electromagnetic Field (EMF) and cable protection	Where practicable cables will be buried to reduce the impacts of EMF on sensitive receptors and minimise the requirement for additional cable protection.
Decommissioning	
Assessment of impacts and best practice environmental management	Prior to decommissioning a study of the potential environmental impacts to benthic ecology receptors from the proposed decommissioning activities will be undertaken, considering the baseline environment at the pre-decommissioning stage. All mitigation measures to be captured will be captured within Appendix 6.2 of Volume 8 Rehabilitation Schedule and the decommissioning strategy within the Offshore EMP. Any licences or authorisations that might be required will be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

There are no further changes to this section. Refer to Section 36.4.1 of Chapter 36 in the 2024 EIAR.

36.4.2 Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.4.2 of Chapter 36 of the 2024 EIAR.

36.5 Fish and Shellfish Ecology Mitigation and Monitoring Measures

36.5.1 Embedded Mitigation Measures

As noted in Section 13.4 of Chapter 13 Fish and Shellfish Ecology, the refined design parameters of the proposed development include no option for driven piles, therefore removing the need for mitigation measures relating to pile driving activities.

Moreover, the Developer has committed to the use of a Noise Abatement System (NAS) e.g. bubble curtains or similar if high order unexploded ordnance (UXO) clearance is required. Therefore, Table 36.3 of the 2024 EIAR has been replaced by Table A36.2 below:

Table A36.2 Embedded mitigation measures relating to fish and shellfish ecology (Replaces Table 36.3 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Construction	
Marine Pollution Contingency Procedure (MPCP)	• Marine pollution prevention and contingency measures will be implemented as part of Volume 8, Appendix A6.1: Offshore Environmental Management Plan (EMP; hereafter the Offshore EMP) to manage the risk of accidental pollution from offshore operations relating to the proposed development (Appendix 2A and 2B in Offshore EMP). The MPCP will include the following control measures and procedures: – A chemical risk review with information regarding how and when chemicals (including vessel fuels) are to be used, stored and transported in accordance with recognised best practice guidance and national and international regulations and commitments. – Navigational safety measures (e.g., guard vessels, safety buoys, lighting of active working zones) to reduce the likelihood of collision events; and – Emergency response methods and procedures to deal with any spills and collision incidents. • Implementation of these measures would reduce the likelihood of potentially harmful pollutants to be released into the marine environment, thereby reducing the likelihood of pollution impacts on sensitive fish and shellfish receptors.
Offshore Waste Management Procedure	• An Offshore Waste Management Procedure setting out waste management and disposal procedures will be implemented as part of the Offshore EMP (Appendix 6 in Offshore EMP). The Waste Management Procedure will include the following measures: – Application of the waste hierarchy (prevention, re-use, recycle, recovery, and disposal) to minimise the amount of waste produced, and reduce, as far as possible, the amount of waste that is disposed of in landfill; – Waste disposal procedures, ensuring all waste that cannot be reused, recycled or recovered will be kept onboard vessels and safely disposed of onshore in a suitable licensed waste facility; and – Code of conduct for vessel operators with respect to the discharge of wastewater and handling and storing of hazardous materials. • Implementation of these measures will reduce the likelihood of potentially harmful pollutants to be released into the marine environment, thereby reducing the likelihood of pollution impacts on potentially sensitive migratory fish species.
Environmental Vessel Management Plan (EVMP)	• An EVMP will be implemented to minimise the risk of collision, injury and disturbance to marine wildlife during construction activities, which will include a code of conduct for vessel operators when encountering marine species (Volume 9, Appendix 14.5). In addition, vessel movements to and from construction sites and ports will, where feasible, follow existing routes. While the measures are targeted towards marine mammals and birds at sea, they would equally reduce the risk of injury and disturbance to marine turtles and larger mobile receptors, such as basking sharks.
UXO Management Measures	• The clearance of UXO will follow a mitigation hierarchy, with micro-siting of subsea infrastructure around UXO where practicable. Where avoidance is not possible, relocating the UXO to a safe place and leaving in situ will be considered. Where clearance of UXO is required (i.e. avoidance or relocation is not practicable), removal of the UXO from the site or low order clearance at the UXO location will be adopted where feasible. However, removal of the UXO or low order deflagration of the UXO are not always possible and are dependent upon the individual situations surrounding each UXO. Therefore, a high order detonation of the UXO may be required. • A case-by-case risk assessment will be undertaken following pre-construction surveys (dedicated geophysical and ROV surveys) as part of the construction phase (Appendix A14.5: Marine Mammal Mitigation Protocol (MMMP), and Appendix A6.1: Offshore EMP). • Where there may be clusters of UXO requiring detonation, these UXO will not be detonated at the same time. In addition, to reduce in-combination impacts to harbour porpoise protected within the Rockabill to Dalkey Island SAC, the Developer has committed to not undertake any high order UXO detonations at the proposed development at the same time Codling undertakes high order clearance within its Offshore Export Cable Corridor (Chapter 14: Marine Mammal Ecology).
Noise Abatement System (NAS) during high order UXO clearance	• The Developer has committed to the use of NAS (e.g. bubble curtain or similar) if high order UXO clearance is required (Appendix A14.5: MMMP). This would reduce the impact of UXO clearance noise on sensitive fish and shellfish species.
Pre-construction profile survey	• Where necessary, before works commence and following reinstatement, a topographical survey of the nearshore subtidal area will be carried out to identify and map the contours of the subtidal HDD exit pit to ensure a profile similar in nature to the profile recorded during the pre-construction survey is reinstated, as far as practicable.

Measure	Mitigation detail
Operation	
Cable burial and cable protection measures	• Export and inter-array cables will be buried where practicable to ensure they are not exposed by sediment movements (Section 8.3.10 in the Offshore Construction Strategy). Where cables cannot be buried, additional cable protection measures such as rock placement or mattressing will be applied to achieve adequate cable protection. Up to 20% of cable length is expected to need protection either during initial installation, or throughout the operational phase of the proposed development (Volume 3, Chapter 8). Cable burial or cable protection increases the distance between the cables and electro- and magneto-sensitive receptors, thereby reducing the received EMF (from attenuation of the EMF).
MPCP, Offshore Waste Management Procedure, EVMP	• Marine pollution and waste management control measures and vessel operating procedures will be implemented throughout the operational phase of the proposed development, following the same measures and procedures that were implemented during the construction phase.
Decommissioning	
Assessment of impacts and best practice environmental management	• Prior to decommissioning a study of the potential environmental impacts to fish and shellfish receptors from the proposed decommissioning activities will be undertaken, considering the baseline environment at the pre-decommissioning stage. All mitigation measures to be captured will be captured within the Rehabilitation Schedule and decommissioning strategy within the Offshore EMP. Any licences or authorisations that might be required will be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

There are no further changes to this section. Refer to Section 36.5.1 of Chapter 36 in the 2024 EIAR.

36.5.2 Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.5.2 of Chapter 36 of the 2024 EIAR.

36.6 Marine Mammal Ecology Mitigation and Monitoring Measures

36.6.1 Embedded Mitigation Measures

Following further design refinement in response to the RFI 10 (a), the key changes required in this section is the revision of the foundation installation method for Project Option 1 and Project Option 2 (WTGs are now proposed with SBJ foundations, and OSPs with jacket foundations installed with either drilled pin piles or suction buckets) as well as noise abatement systems (NAS) (e.g. bubble curtains or similar) for high-order UXO clearance. Section 36.6.1 of Chapter 36 Mitigation, Monitoring and Likely Significant Residual Effects of the 2024 EIAR should be deleted and replaced in its entirety with the following:

The following embedded mitigation measures in Table A36.3 have been identified through the design and consultation process and are assumed to be incorporated as part of the proposed development. The embedded mitigation measures will not be considered again at the residual impact stage.

A MMMP (Appendix A14.5; hereafter the MMMP) and Offshore Environmental Management Plan (EMP) (Appendix A6.1; hereafter the Offshore EMP) have been prepared and will be implemented for all phases of the proposed development.

Table A36.3 Embedded mitigation measures relating to marine mammal ecology (Replaces Table 36.4 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Construction	
Marine Pollution Contingency Procedure (MPCP)	An offshore Environment Management Plan (EMP) is provided in Appendix A6.1 and will be implemented to cover the construction, operational and decommissioning phase of the proposed development. The Offshore EMP includes a MPCP to cover accidental spills, potential contaminant release and include key emergency contact details. Key measures in the MPCP include: • Compliance with MARPOL;

Measure	Mitigation detail
	• Spill kits on board all vessels; • Fuel and chemical storage according to relevant storage regulations; • Handling of waste in accordance with relevant waste regulations; and • Vessel refuelling to take place in port. The measures included in the MPCP would reduce the likelihood of potentially harmful pollutants to be released into the marine environment which may then impact on marine mammal receptors. Further information is provided in Appendix A6.1.
Collision avoidance	The Department of Communications, Marine and Natural Resources released a Marine Notice (No 15 of 2005) for the correct procedures when encountering whales and dolphins in Irish coastal waters (DCMNR, 2005). Alongside this Marine Notice, the Irish Whale and Dolphin Group provided a Code of Conduct for all watercraft encountering whales and dolphins (IWDG, 2005). These guidelines were drafted specifically for the interactions between small vessels and marine mammals (e.g. whale watching passenger vessels), however the key principals will be followed by all project vessels where practicable to minimise the risk of vessel collisions with marine mammals and disturbance to marine mammals from vessels. These measures are captured within Appendix 14.5 Environmental Vessel Management Plan (EVMP). Other key measures to mitigate collision risk, as described in the EVMP include: • When an animal(s) is first sighted, vessels should maintain a steady course (speed and direction) to allow marine mammals to predict the vessel's path; • Where practicable, when an animal(s) is in close proximity (for example 100 – 200 m), vessel speed should be gradually reduced and maintained below 7 knots (in accordance with DCMNR, 2005). The exception to this is when behaviour such as bow riding is experienced, where speed should be maintained on a steady course; • If animals are moving in a consistent direction, maintain a parallel course; • Do not cut off individuals by moving across their path; • Avoid deliberately approaching marine mammals when sighted; • Avoid abrupt changes to course or speed should marine mammals approach the vessel, be on course to cross the path of a vessel or bow-ride; • Transit vessels should maintain a minimum distance of 150m or more from the coast, particularly when near to known seal haul-out sites during sensitive periods (i.e. moulting and breeding seasons). Vessels should remain in the vicinity of seals for no more than 15 minutes; and • Further information is provided in Appendix A6.1.
Auditory injury and disturbance from high order UXO clearance	The Developer has committed to the use of a Noise Abatement System (NAS) (e.g. bubble curtains or similar) if high order UXO clearance is required. Where there may be clusters of UXO requiring detonation, these UXO will not be detonated at the same time. In addition, to reduce in-combination impacts to harbour porpoise protected within the Rockabill to Dalkey Island SAC, the Developer has committed to not undertake any high order UXO detonations at the proposed development at the same time Codling undertakes high order clearance within its Offshore Export Cable Corridor (Chapter 14: Marine Mammal Ecology).
Operation	
Marine Pollution Contingency Procedure (MPCP)	The Offshore EMP includes a MPCP to cover accidental spills, potential contaminant release and include key emergency contact details. Key measures in the MPCP include: • Compliance with MARPOL; • Spill kits on board all vessels; • Fuel and chemical storage according to relevant storage regulations; • Handling of waste in accordance with relevant waste regulations; and • Vessel refuelling to take place in port. The MPCP would reduce the likelihood of potentially harmful pollutants to be released into the marine environment which may then impact on marine mammal receptors.
Collision avoidance	The Department of Communications, Marine and Natural Resources released a Marine Notice (No 15 of 2005) for the correct procedures when encountering whales and dolphins in Irish coastal waters (DCMNR, 2005). Alongside this Marine Notice, the Irish Whale and Dolphin Group provided a Code of Conduct for all watercraft encountering whales and dolphins (IWDG, 2005). These guidelines were drafted specifically for the interactions between small vessels and marine mammals (e.g. whale watching passenger vessels), however the key principals will be followed by all proposed development vessels where practicable to minimise the risk of vessel collisions with marine mammals and

Measure	Mitigation detail
	disturbance to marine mammals from vessels. These measures are captured within Appendix 14.5 EVMP. Other key measures from the EVMP are the same as those listed in the construction collision avoidance mitigations section of this table.
Decommissioning	
Collision avoidance	The Department of Communications, Marine and Natural Resources released a Marine Notice (No 15 of 2005) for the correct procedures when encountering whales and dolphins in Irish coastal waters (DCMNR, 2005). Alongside this Marine Notice, the Irish Whale and Dolphin Group provided a Code of Conduct for all watercraft encountering whales and dolphins (IWDG, 2005). These guidelines were drafted specifically for the interactions between small vessels and marine mammals (e.g. whale watching passenger vessels), however the key principals will be followed by all Project vessels where practicable to minimise the risk of vessel collisions with marine mammals and disturbance to marine mammals from vessels. These measures are captured within the EVMP. Other key measures from the EVMP are the same as those listed in the construction collision avoidance mitigations section of this table.
Assessment of impacts and best practice environmental management	Prior to decommissioning a study of the potential environmental impacts to marine mammal receptors from the proposed decommissioning activities will be undertaken, considering the baseline environment at the pre-decommissioning stage. All mitigation measures to be delivered will be captured within the Rehabilitation Schedule and Offshore EMP. Any licences or authorisations that might be required will be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

36.6.2 Mitigation and Monitoring Measures

Following further design refinement in response to the RFI 10 (a), the key changes required in this section are the revision of the foundation installation method for Project Option 1 and Project Option 2 (WTGs are now proposed with suction bucket jacket (SBJ) foundations, and OSPs with jacket foundations installed with either drilled pin piles or suction buckets) and the commitment to at-source noise reduction (e.g. bubble curtains or similar). Therefore, pile driving impacts and associated mitigation and monitoring are no longer considered and deleted from Table 36.5 and at-source noise reduction (e.g. bubble curtains or similar) for high order clearance is now considered embedded (see Table A36.3).

To clarify, Table 36.5 within Chapter 36 in the 2024 EIAR shall be deleted and replaced with Table A36.4. All changes are highlighted in grey.

Table A36.4 Mitigation relating to marine mammal ecology (Replaces Table 36.5 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Construction	
Geophysical survey monitoring	• Geophysical survey equipment sources with a greater than negligible magnitude of impact will be covered by 'Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters' (DAHG, 2014), which outlines measures to reduce the potential impacts (PTS and disturbance) to negligible levels. Only the SBP is predicted to overlap with the estimated hearing range of relevant marine mammal species. Measures proposed are: – A mitigation zone (an area within which mitigation must be applied to prevent instantaneous injury) of 500m radial distance from the SBP source; – A qualified and experienced marine mammal observer (MMO) will be appointed to monitor for marine mammals and to log all relevant events using standardised data forms in accordance with licensing and regulatory requirements; – Survey equipment with a source SPL above 170dB re 1µPa shall commence from a lower energy start-up and increase gradually over a period of 40 minutes; – The start of the acoustic equipment will be delayed if marine mammals are detected within the mitigation zone during the pre-watch, allowing the animals time to move away from the acoustic source. The start of the source will be delayed for at least 30 minutes following the last sighting within the mitigation zone; – For any breaks in operation of the equipment of 10 minutes the MMO will undertake dedicated monitoring to check no marine mammals are present within the mitigation zone prior to the source restarting; and

Measure	Mitigation detail
	– For line changes taking longer than 40 minutes, the source will be stopped, then a pre-watch of 30 minutes followed by a soft-start will be required to resume operations. Further details on these measures are included in the MMMP (Appendix 14.4).
UXO clearance mitigation measures, including: • MMO; • Acoustic Deterrent Device (ADD) (if required); and • At-source noise reduction (bubble curtain).	The implementation of a Marine Mammal Mitigation Protocol (MMMP) (Appendix A14.5) with specific measures should UXO clearance be required, to ensure the risk of PTS to marine mammals is imperceptible (not significant levels). The list of measures and procedures can be modified in accordance with advice received from the regulator and their specialist UXO advisors as appropriate prior to UXO clearance activities commencing. Measures will include: • If detonation is deemed necessary, a mitigation zone of 1,000m from the detonation location will be established, within which it will be ensured, through visual observations (trained and experienced MMOs) that no marine mammals are present prior to the detonation event. • Where a UXO disposal method has a risk of PTS impact range that may exceed the 1,000m mitigation zone there is a residual risk of auditory injury to marine mammals at a greater range than can be mitigated by monitoring of the 1,000m mitigation zone alone. Therefore, an ADD will be operated for a pre-determined length of time, concurrent to the pre-detonation search, to deter marine mammals to a greater distance prior to any detonation.
Operation	
Nil	No mitigation measures are anticipated to be required specifically during the operational phase.
Decommissioning	
Nil	No additional mitigation measures are anticipated to be required specifically during the decommissioning phase. All relevant embedded mitigation measures will still apply.

There are no further changes to this section. Refer to Section 36.6.2 of Chapter 36 in the 2024 EIAR.

36.7 Offshore Ornithology Mitigation and Monitoring Measures

36.7.1 Embedded Mitigation Measures

Due to the refinement and reduction of the footprint of the fixed WTG layouts for Project Option 1 and Project Option 2 an additional row has been added to Table 36.6 of Chapter 36 of the 2024 EIAR. Therefore Table 36.6 of Chapter 36 of the 2024 EIAR has been replaced by Table A36.5.

Table A36.5 Embedded mitigation measures relating to offshore and intertidal ornithological receptors (Replaces Table 36.7 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Refinement and reduction in the offshore development area	Refinements in the offshore development area (as outlined in Chapter 5) were undertaken to avoid key areas for birds (e.g., avoidance of density hotspots that may indicate key foraging areas where possible, alongside avoidance of breeding colonies and migration corridors where possible). Reducing the extend of the offshore development area also increases distance from Rockabill Island and Lambay Island which leads to a considerable reduction in interaction with bird species that inhabit these SPA colonies. There has been a considerable reduction in the size of the array area from the original MAC boundary. This process considered hotpots of auks, the most abundant species within the survey area, using species heatmaps from raw observations and a modelled approach using MRSea (MRSea Modelling Report). The results of this modelling clearly show high densities of guillemots and razorbills in proximity to Lambay Island during the breeding season. During this time the densities of birds within the array area are comparatively low. Outside of the breeding season there are no clear hotspots throughout the survey area (MAC boundary plus 4km buffer). This process was undertaken for the proposed development, with the array area of the proposed development being reduced by more than 60% from the MAC boundary of 195.9km^2 to the refined array area of 88.5km^2.

Measure	Mitigation detail
Reduction in WTG Footprint	The design process has refined and reduced the footprint of the fixed WTG layouts for Project Option 1 and Project Option 2 to reduce the spatial extent of the offshore infrastructure within the NWIS SPA. The footprint of the WTGs with 500m Limit of Deviation (LOD) within the array area has reduced the area of overlap (in terms of area of potential displacement for Common Guillemot, which includes a 2km buffer around the array area) from 8.5% to 6.9% of the NWIS SPA.
Increase in air draft	The design has increased the WTG air draft, which reduces the collision risk to key vulnerable ornithological receptors by reducing the rotor swept area that is at collision risk height. All turbines in Project Option 1 will have minimum air draft of 40m LAT. Turbines in Project Option 2 will have a minimum air draft of 40m LAT except where they are in the aviation restriction zone where the air draft will be 35m LAT. The number of birds at collision risk height at 40m is considerably reduced compared to 22m. For example, the number of common tern flying at collision risk height is reduced by 90.6% between 22m and 40m. Likewise, kittiwake have a reduction of birds at collision risk height of 82.2% between 22m and 40m, and gulls show a reduction of roughly 65%.
Lighting design	Lighting design will avoid lighting levels that exceed those required to comply with navigational safety, aviation, emergency procedures and general activity to reduce the risk of WTG and OSP lighting attracting birds during periods of bad weather or at night. This measure will be provided as part of the Lighting Management Plan (LMP) (Appendix A17.3).
Standard pollution and waste management	Each WTG will be equipped with sensors to enable early detection of fluids and leaks. Spill kits will also be located on each WTG to contain any fluids in the unlikely event of pollutant release. Pollution and waste management is considered within Appendix A6.1: Offshore Environmental Management Plan (hereafter the Offshore EMP).
Assessment of impacts and best practice environmental management	Prior to decommissioning a study of the potential environmental impacts to fish and shellfish receptors from the proposed decommissioning activities would be undertaken, considering the baseline environment at the pre-decommissioning stage. All mitigation measures to be captured would be captured within the Rehabilitation Schedule. Any licences or authorisations that might be required would be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

There are no further changes to this section. Refer to Section 36.7.1 of Chapter 36 in the 2024 EIAR.

36.7.2 Mitigation and Monitoring Measures

36.7.2.1 Mitigation

There are no changes to this section. Refer to Section 36.7.2.1 of Chapter 36 in the 2024 EIAR.

36.7.2.2 Monitoring

There are no changes to this section. Refer to Section 36.7.2.2 of Chapter 36 in the 2024 EIAR.

36.8 Commercial Fisheries Mitigation and Monitoring Measures

36.8.1 Embedded Mitigation Measures

The change required in this section is in response to the refinement of the foundation types for Project Option 1 and Project Option 2 and subsequent update to the WTG layouts for Project Options 1 and 2. Therefore, Table 36.8 of Chapter 36 in the 2024 EIAR shall be deleted and replaced with Table A36.6.

Table A36.6 Embedded mitigation relevant to commercial fisheries (Replaces Table 36.8 of Chapter 36 in the 2024 EIAR)

Embedded mitigation	Justification
Construction	
Fisheries liaison	The Developer is committed to ongoing liaison with fishers throughout all stages of the proposed development, including: • Continuation of the appointment of a company FLO to continue to maintain effective communications between the proposed development and fishers, in compliance with the Seafood/ORE Engagement in Ireland guidance (Seafood/ORE Working Group, 2023); • Appropriate liaison with relevant fishing interests to ensure that they are fully informed of development planning and any offshore activities and works; • Timely issue of notifications including Notice to Mariners (NtMs), Kingfisher Bulletin notifications and other navigational warnings to the fishing community to provide advance warning of proposed development activities and associated advisory safe passing distances; and • Development of an FMMS (Appendix A16.2) setting out in detail the approach to fisheries liaison and means of delivering co-existence and disruption payments.
Agreement of lighting and marking with Commissioners of Irish Lights during construction.	Implementation of a buoyed construction area around the site (assumed to be 12 construction buoys) during the appropriate phases, in consultation with Commissioners of Irish Lights.
Dropped objects	The approach for dealing with dropped objects, including reporting and recovery of dropped objects where they pose a potential hazard to other marine users, is included in the offshore environmental management plan (EMP). Measures to prevent dropped objects include: • Good housekeeping practices, with all wastes correctly stored. • Storage of hazardous chemicals as per material safety data sheet (MSDS); • Lift planning for over-the-side lifting (including appropriate crane rigging and load ratings, crane operator and rigger training and competency requirements) all lifting equipment will be tested and certified. • A ship-to-ship transfer permit will be in place • All deck items will be securely stowed • Transfers of objects will use specialist equipment and consider environmental conditions • Ongoing personnel awareness and training, and dropped object prevention programs (e.g., lanyards on hardhats, hand tools) • Safe working procedures to prevent dropped objects • Procedures will be put in place to ensure that the location of any lost material is recorded and that significant objects are recovered – including ROV and boat recovery where practicable • Ongoing personnel awareness and training, and dropped object prevention programs; and • Waste Management Plan.
Cable burial	Preferred means of cable protection is cable burial with typical trench depth of between 1-3 m and typical trench width of 1 m.
Cable Burial Risk Assessment (CBRA)	CBRA undertaken pre-construction following detailed site investigation surveys including consideration of under keel clearance and appropriate cable protection applied based upon the outcomes. To include consideration of requirements for monitoring of the protection.
Guard vessels	Use of temporary guard vessel during construction phase will be employed if deemed necessary during detailed design stage and following consultation with the relevant statutory authorities, e.g. to protect unlit structures and/or unprotected cable prior to burial.

Embedded mitigation	Justification
Advisory safety zones	During construction the proposed development will deploy advisory safety zones around individual structures undergoing installation. Irish navigational guidance is available through the Department of Transport's Maritime Navigation Safety Guidance and Emergency Response document for Offshore Renewable Energy Installations (2025), which has taken account of relevant UK guidance, in particular Maritime and Coastguard Agency MGN 654 (Maritime and Coastguard Agency, 2021) in the establishment of advisory safety zones. Advisory safety zones of up to 500m in radius around individual structures undergoing installation will be established. Advisory safety zones of 50m will be sought for incomplete structures where construction activity may be temporarily paused (and therefore the 500m safety zone has lapsed) such as installed foundations or where construction works are completed but the WTGs have not yet been commissioned.
Advisory safe passing distances	Use of advisory safe passing distances including surrounding vessels that are undertaking sensitive construction, installation, or maintenance works. These vessels are likely to display Restricted in Ability to Manoeuvre (RAM) status.
Operation	
Fisheries liaison	The Developer is committed to ongoing liaison with fishers throughout all stages of the proposed development, including: • Continuation of the appointment of a company FLO to continue to maintain effective communications between the proposed development and fishers, in compliance with the Seafood/ORE Engagement in Ireland guidance (Seafood/ORE Working Group, 2023); • Appropriate liaison with relevant fishing interests to ensure that they are fully informed of development planning and any offshore activities and works; • Timely issue of notifications including Notice to Mariners (NtMs), Kingfisher Bulletin notifications and other navigational warnings to the fishing community to provide advance warning of proposed development activities and associated advisory safe passing distances; and Development of a FMMS (Appendix A16.2) setting out in detail the approach to fisheries liaison and means of delivering co-existence and disruption payments.
Snagging	In the instance that snagging does occur, the Developer will work to the protocols laid out within the guidance produced by the UK FLOWW group and 'Recommendations for Fisheries Liaison: Best Practice' guidance for offshore renewable developers, in particular Section 11: Dealing with claims for loss or damage of gear as confirmed in the FMMS (Appendix A16.2).
Agreement of lighting and marking with Commissioners of Irish Lights during the operational phase.	The Developer is committed to marking and lighting the proposed development in accordance with relevant industry guidance and as advised by relevant stakeholders including in accordance with IALA Recommendation O-139 (IALA, 2013) and Irish Lights requirements. In particular, the use of marine lighting to mark selected peripheral structures. The Developer will also ensure all structures associated with the proposed development are adequately marked on nautical and electronic charts.
Advisory safety zones	During the operational phase, the proposed development will deploy advisory safety zones around any WTG or OSP to protect technicians, crew and vessels on-site during any maintenance works. Safety zones are not a statutory requirement in Ireland meaning they are advisory only, however following UK guidance MGN 654 (Maritime and Coastguard

Embedded mitigation	Justification
	Agency, 2021) the safety zones will be 50m during the operational phase.
Advisory safe passing distances	The proposed development will recommend that advisory clearance distances of up to 500m in radius are observed around cable installation vessels and cable repair vessels during the operational phase.
Decommissioning	
Fisheries liaison	The Developer is committed to ongoing liaison with fishers throughout all stages of the proposed development, including: • Continuation of the appointment of a company FLO to continue to maintain effective communications between the proposed development and fishers, in compliance with the Seafood/ORE Engagement in Ireland guidance (Seafood/ORE Working Group, 2023); • Appropriate liaison with relevant fishing interests to ensure that they are fully informed of development planning and any offshore activities and works; • Timely issue of notifications including Notice to Mariners (NtMs), Kingfisher Bulletin notifications and other navigational warnings to the fishing community to provide advance warning of proposed development activities and associated advisory safe passing distances; and Development of a FMMS (Appendix A16.2) setting out in detail the approach to fisheries liaison and means of delivering co-existence and disruption payments.
Agreement of lighting and marking with Commissioners of Irish Lights during decommissioning.	Implementation of a buoyed decommissioning area around the site (assumed to be 12 decommissioning buoys during the appropriate phases, in consultation with Commissioners of Irish Lights.
Advisory safety zones	During decommissioning the proposed development will deploy advisory safety zones around individual structures undergoing installation. Due to a lack of Irish guidance, it is proposed to establish zones based on the relevant UK guidance, UK guidance MGN 654 (Maritime and Coastguard Agency, 2021). Advisory safety zones of up to 500m in radius around individual structures undergoing installation will be established.
Advisory safe passing distances	Use of advisory safe passing distances including surrounding vessels that are undertaking sensitive decommissioning works. These vessels are likely to display Restricted in Ability to Manoeuvre (RAM) status.
Decommissioning strategy	A decommissioning strategy will be developed to cover the decommissioning phase and included as part of the Offshore EMP. The decommissioning strategy is anticipated to cover the removal of all structures above the seabed; decision to leave or remove scour protection and buried assets; and secure burial of export cables in the intertidal area. As the decommissioning phase will be a similar process to the construction phase but in reverse (i.e., increased project vessels on-site, partially deconstructed structures) the embedded mitigation measure and post-effect mitigation measures will be similar to those for the construction phase.

There are no further changes to this section. Refer to Section 36.8.1 of Chapter 36 in the 2024 EIAR.

36.8.2 Mitigation and Monitoring Measures

In response to RFI Section 12, the key change to this section is the progress in developing and implementing the SFC. Considering this, Table 36.9 of Chapter 16 of the 2024 EIAR shall be deleted and replaced with Table A36.7.

Table A36.7 Mitigation relating to commercial fisheries (Replaces Table 36.9 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation description
Construction	
Volume 9, Appendix A16.2: Fisheries Management and Mitigation Strategy (FMMS)	This chapter has concluded significant impacts requiring additional mitigation for Irish demersal otter trawlers targeting Nephrops (Nephrops norvegicus) within the array area during the construction phase of the proposed development. Under the NMPF, where significant impacts are identified, a FMMS should be prepared (Fisheries Policy 2). This is provided in Appendix A16.2. The mitigation measures provided within the FMMS have been developed in consultation with the industry as detailed in Appendix C of the FMMS and will continue to be delivered through the FMMS, as it remains a live document. The FMMS includes the following key principles and measures relevant to construction: • **The proposed development will provide a Fisheries Liaison Strategy** The implementation of appropriate communication and information transfer strategies is of key importance to assist in minimising interference and facilitating effective co-existence with the fishing industry. The principles of liaison are that: – The Developer will undertake regular and routine communications via NtM to provide reasonable time (accounting for adverse weather etc.) to enable operational fishing business decisions to be made; – Continued engagement, constructive two-way communication and proactive dialogue between the fishers, their representatives and other fisheries stakeholders and the Developer is desired and is advantageous to all parties; and – All maritime operations that may have an effect on the commercial fishing sector will be made on a factual and accurate basis, in order to prevent unnecessary escalation of issues. • **The proposed development will follow the Seafood / Offshore Renewable Energy (ORE) Working Group Summary guidance (Seafood/ORE Working Group, 2023)** The FMMS provides a schedule for liaison and information dissemination. Notice and information will aim to be provided not less than 14 days prior for individual construction vessels mobilisations (where feasible) and weekly construction status updates will be provided. • **The Developer will minimise the size and duration of advisory safety zones during surveys and other works where safe and practicable to do so.** • **The Developer will provide local fisheries stakeholders with procedures for registering disruption payment claims for loss of/damage to fishing gear in association with surveys and construction activities of the proposed development.** • **Vessels undertaking operations in relation to the proposed development will be working to appropriate safety management systems to ensure safe work practices.** • **Vessels undertaking operations in relation to the proposed development will only undertake activities prescribed in their line of work.** • **Vessels involved in the construction, operation and maintenance and decommissioning of the proposed development, including guard vessels and survey vessels, will be provided with the relevant lines of communication (as outlined within the FMMS) to minimise interaction with fishing vessels undertaking their normal activities.** • **The proposed development will provide a Co-existence Strategy with an update provided in Appendix A16.2, which sets out the approach to maintaining and facilitating fishing activity within and around the array area. This includes the provision of designated trawling corridors aligned with the conventional trawling direction, consideration of over-trawlability and cable burial/protection standards to reduce snagging risk, and the development of operational protocols that recognise local tidal constraints and fishing practices. The strategy also includes a commitment to the monitoring of fishing access and catch rates, including through the proposed Digital Effort Traceability Project.** The Developer regards coexistence as the continuation of both the proposed development and fishing industry activities at the same time within and around the array area and along the ECC. Specifically, these commitments relate to: – Proposed development design, i.e. the location and coordination of all wind farm layout infrastructure and cable burial and protection; – The offshore development area represents only 36% of the full MAC boundary area and was reduced as a commitment by the Developer to ensure optimal seabed usage where possible, whilst ensuring the key other marine users are impacted as minimally as possible. This has been

Measure	Mitigation description
	further reinforced through the refined Project Option 1 and Project Option 2 WTG layouts, which demonstrate an additional reduction in the spatial extent of offshore infrastructure within the array area, as set out in Appendix A5.1: Design Refinements; – Design of the array area that maximised corridors between turbines for navigation and orientated the turbines in a NNW - SSE direction to facilitate the direction of trawling in this area; – Appropriate notification of survey and construction activities to other marine users and the retention of a FLO and OFLO; – Appropriate lighting and marking of the proposed development and construction vessels; – Appropriate charting of the proposed development and notification of any hazards; and – The adoption of advisory safety zones and a process for marine coordination of all vessel activity. – Code of good practice for all vessels sets out measures for safe navigation, communication, vessel scheduling and reporting of any disruption. – Procedures in relation to gear fastening or loss; set out protocols for securing gear, reporting losses, retrieving lost gear and communicating any entanglement hazards. • **In addition to the commitments above, vessels undertaking operations in relation to the proposed development will be required to follow the mitigation and management measures provided in other documents and management plans committed to by the proposed development. These are referenced within the FMMS and include:** – The Lighting and Marking Plan (Volume 9, Appendix A17.3); sets out the types, placement and intensity of lights, identification systems and protocols to ensure visibility and safety. – The Vessel Management Plan (VMP) (Volume 9, Appendix 17.2); sets out navigational safety measures for the proposed development, including use of advisory safety zones and guard vessels (as appropriate) – The Offshore Environmental Management Plan (EMP) (Volume 8, Appendix A6.1); includes a Dropped object procedure which sets out measures for risk assessment, reporting and retrieval protocols for dropped objects.
Sustainable Fisheries Community (SFC) (Appendix B within the FMMS Appendix A16.2)	• **The proposed development has established and is delivering a Sustainable Fisheries Community (SFC) as a mechanism for long-term, collaborative fisheries impact mitigation.** The SFC is a mechanism to deliver long-term proactive fisheries impact mitigation through collaboration and mutual cooperation between the local fishing community and the Developer. The SFC has been established as a formal, fisheries-led framework a to support long-term coexistence between the proposed development and commercial fishing activity. It has been developed to provide a structured framework for consultation, mitigation, monitoring, adaptive management and, where relevant, compensation and community benefit initiatives. The SFC has been developed in parallel with the FMMS and is intended to remain active throughout the pre-construction and construction phases and into the operational phase of the proposed development, thereby ensuring that fisheries engagement and mitigation continue over the lifetime of the proposed development rather than being limited to the pre-consent stage. The key aim is to establish a SFC focused on the protection and enhancement of a locally sustainable fisheries and marine environment in the waters around the proposed development. The SFC is intended to provide a transparent and durable mechanism through which fisheries stakeholders can contribute to project decision-making, the co-design of mitigation measures, and the review of monitoring outcomes. The arrangements developed to date include committee formation, Terms of Reference, Secretariat support and an independently administered fisheries funding mechanism. This ambition includes the following delivered throughout the lifetime of the proposed development: – Collaboration between the Developer and local fishing community. – Provide a definition of what is considered the local fishing community. – Deliver a proactive fisheries impact mitigation process. – Create a mechanism to deliver benefits, both to and from, the local fishing ports. – Work collaboratively to deliver enhancements to the local marine environment. – To, in a broad context, enhance the sustainability of the local fishing community. – Establish ways of collaboratively adding value to local seafood produce. – Support fisheries-led input into mitigation design, monitoring and adaptive management through a formal committee structure with seafood-sector representation.

Measure	Mitigation description
	– Support strategic initiatives that improve the evidence base for fisheries coexistence, including spatial activity monitoring, traceability, low impact fisheries initiatives, coastal engagement and marine stewardship projects. The SFC will be adapted to focus on the commercial fishing industry in the long term through such measures such as enhancing stocks, improvements to fishing vessels, improvements that enhance the profit margins of sustainable fishing activities, and the development of new fisheries or other activities. In support of this role, an independently administered Fisheries Coexistence Fund has currently been established during the development phase to enable fisheries-related initiatives and to support broader resilience, diversification and sustainability objectives within affected coastal communities. Funding Round 1 has already supported projects including the Digital Effort Traceability Project (DETP), a coastal education initiative, a low impact fishery pilot and a marine biodiversity mapping initiative, with additional pipeline projects approved in principle. Where construction related impacts occur, and where there are claims to be considered, the developer will require a significant level of supporting evidence for any such claims. It is for this reason that the Developer has gathered extensive fishing activity information, so as to ensure that this lengthy process can be expedited, for known fishers in the area. This evidence base is being strengthened through targeted consultation and fisheries-led data initiatives, including the DETP, which is intended to improve understanding of fishing activity, spatial footprint, displacement risk and sector dependency within and around the proposed development area. The Developer will develop a fair, transparent and evidence based disturbance payment scheme for those fishers that can evidence disruption. The SFC is intended to support transparency in this process by improving the quality of fisheries engagement, strengthening the available evidence base and providing a structured forum through which mitigation, monitoring and any necessary adaptive measures can be discussed with the fishing community. Further information of the SFC is provided in the FMMS Volume 9 (Appendix A16.2). Further details on the development of the SFC, its framework arrangements, associated consultation and funded initiatives are provided in Appendix B and Appendix C of Appendix A16.2.
Operation	
FMMS	This chapter has concluded significant impacts requiring additional mitigation for Irish demersal otter trawlers targeting Nephrops (Nephrops norvegicus) within the array area during operation. Under the NMPF, where significant impacts are identified, a FMMS should be prepared (Fisheries Policy 2). This is provided as Volume 9 Appendix A16.2. The mitigation measures provided within the FMMS have been developed in consultation with the industry and will continue to be delivered through the FMMS as it remains a live document. The key principles and mitigation details are presented earlier in this table and the measures that are relevant to operation are: • **The Developer will provide a Fisheries Liaison Strategy** • **The Developer will follow the Seafood / Offshore Renewable Energy (ORE) Working Group Summary guidance (Seafood/ORE Working Group, 2023)** • **The proposed development will minimise the size and duration of advisory safety zones during operation and maintenance and other activities where safe and practicable to do so.** • **Vessels undertaking operations in relation to the proposed development will be working to appropriate safety management systems to ensure safe work practices.** • **Vessels undertaking operations in relation to the proposed development will only undertake activities prescribed in their line of work.** • **Vessels involved in the operation and maintenance of the proposed development, including guard vessels and survey vessels, will be provided with the relevant lines of communication (as outlined within the FMMS) to minimise interaction with fishing vessels undertaking their normal activities.** • **The proposed development will provide a Co-existence Strategy, with an update provided in Appendix A16.2.** • **In addition to the commitments above, vessels undertaking operations in relation to the proposed development will be required to follow the mitigation and management measures provided in other documents and management plans committed to by the proposed development. These are referenced within the FMMS and include the VMP, LMP and Offshore EMP.**

Measure	Mitigation description
SFC	• **The proposed development has established and is delivering a Sustainable Fisheries Community (SFC) as a mechanism for long-term, collaborative fisheries impact mitigation.** The SFC is a mechanism to deliver long-term proactive fisheries impact mitigation through collaboration and mutual cooperation between the local fishing community and the Developer. The SFC has now progressed beyond a proposed concept and has been established as a formal, fisheries-led framework to support long-term coexistence between the proposed development and commercial fishing activity. It has been developed to provide a structured framework for consultation, mitigation, monitoring, adaptive management and, fisheries initiatives. The SFC has been developed in parallel with the FMMS and is intended to remain active throughout the pre-construction, construction and operational phases of the proposed development, thereby ensuring that fisheries engagement and mitigation continue over the lifetime of the proposed development rather than being limited to the pre-consent stage. The key aim is to establish a SFC focused on the protection and enhancement of a locally sustainable fisheries and marine environment in the waters around the proposed development. The SFC is intended to provide a transparent and durable mechanism through which fisheries stakeholders can contribute to project decision-making, the co-design of mitigation measures, and the review of monitoring outcomes. The arrangements developed to date include committee formation, Terms of Reference, Secretariat support and an independently administered fisheries funding mechanism. This ambition includes the following delivered throughout the lifetime of the proposed development, including the operational phase: – Collaboration between the Developer and local fishing community. – Provide a definition of what is considered the local fishing community. – Create a mechanism to deliver benefits, both to and from, the local fishing ports. – Work collaboratively to deliver enhancements to the local marine environment. – To, in a broad context, enhance the sustainability of the local fishing community. – Establish ways of collaboratively adding value to local seafood produce. – Support fisheries-led input into mitigation design, monitoring and adaptive management through a formal committee structure with seafood-sector representation. – Support strategic initiatives that improve the evidence base for fisheries coexistence, including spatial activity monitoring, traceability, low impact fisheries initiatives, coastal engagement and marine stewardship projects. The engagement with the local fisheries around the SFC has commenced and initiatives are being delivered, as described in Appendix B of Appendix A16.2. The SFC is now being taken forward as an active and ongoing mechanism for collaboration with the local fishing community, with further workstreams and longer-term initiatives to be developed and refined over time. Delivery of these broad-ranging benefits to the local fishing community, as relevant to the proposed development, will continue through construction and into the operational phase. Prior to the commencement of the operational phase, the SFC will be reviewed and, where necessary, updated to ensure that its framework, representation, workstreams and delivery mechanisms remain appropriate to the transition from construction into long-term operation and maintenance. This review will take account of the final form of the authorised proposed development, relevant monitoring outputs, consultation feedback, experience from construction, and the practical requirements of operational coexistence. During the operational phase, the SFC will continue to function as a mechanism through which the Developer and fisheries stakeholders can review coexistence outcomes, monitoring evidence and any reported interactions over time, and identify any proportionate updates to mitigation or management measures where required. In this way, the SFC will support an evidence-led and adaptive approach to operational coexistence, rather than a fixed or one-off mitigation response. In support of this objective, an independently administered Fisheries Coexistence Fund has been currently established in the Development phase to enable fisheries-related initiatives and to support broader resilience, diversification and sustainability objectives within affected coastal communities. Funding Round 1 has already supported projects including the Digital Effort Traceability Project (DETP), a coastal education initiative, a low impact fishery pilot and a marine biodiversity mapping initiative, with additional pipeline projects approved in principle. The operational-phase role of the SFC is therefore expected to include continued support for fisheries liaison, review of monitoring and coexistence evidence, consideration of fisheries-led initiatives, and ongoing collaboration on practical measures that help maintain coexistence between the proposed development and commercial fishing activity over the life of the proposed development.

Measure	Mitigation description
	Further details on the development of the SFC, its arrangements, associated consultation and funded initiatives are provided in Appendix B and Appendix C of Appendix A16.2.
Decommissioning	
FMMS	This chapter has concluded significant impacts requiring additional mitigation for Irish demersal otter trawlers targeting Nephrops (Nephrops norvegicus) within the array area during decommissioning. Under the NMPF, where significant impacts are identified, a FMMS should be prepared (Fisheries Policy 2). This is provided as Volume 9 Appendix A16.2. The mitigation measures provided within the FMMS have been developed in consultation with the industry and will continue to be delivered through the FMMS as it remains a live document. The key principles and mitigation details are presented earlier in this table and the measures that are relevant to decommissioning are: • **The proposed development will provide a Fisheries Liaison Strategy** • **The proposed development will follow the Seafood / Offshore Renewable Energy (ORE) Working Group Summary guidance (Seafood/ORE Working Group, 2023)** • **The proposed development will minimise the size and duration of advisory safety zones during surveys and other works where safe and practicable to do so.** • **Vessels undertaking operations in relation to the proposed development will be working to appropriate safety management systems to ensure safe work practices.** • **Vessels undertaking operations in relation to the proposed development will only undertake activities prescribed in their line of work.** • **Vessels involved in the construction, operation and maintenance and decommissioning of the proposed development, including guard vessels and survey vessels, will be provided with the relevant lines of communication (as outlined within the FMMS) to minimise interaction with fishing vessels undertaking their normal activities.** • **The proposed development will provide a Co-existence Strategy, with an update provided in Appendix A16.2.** • **In addition to the commitments above, vessels undertaking operations in relation to the proposed development will be required to follow the mitigation and management measures provided in other documents and management plans committed to by the proposed development. These are referenced within the FMMS and include the VMP, LMP and Offshore EMP.** The FMMS is a live document and will be updated to reflect current (at the time of decommissioning) fishing practices and liaisons to reflect best practice at that point in time.
SFC	• **The proposed development has established and is delivering a Sustainable Fisheries Community (SFC)** The SFC is a mechanism to deliver long-term proactive fisheries impact mitigation through collaboration and mutual cooperation between the local fishing community and NISA. It is a live document and will be updated to reflect the current fishing ahead of decommissioning commencing, to provide a mechanism for dealing with this transitional phase for the fisheries. The SFC is focused on the protection and enhancement of a locally sustainable fisheries and marine environment in the waters around the proposed development. Further details on the development of the SFC, its framework arrangements, associated consultation and funded initiatives are provided in Appendix B and Appendix C of Appendix A16.2.

There are no further changes to this section. Refer to Section 36.8.2 of Chapter 36 in the 2024 EIAR.

36.9 Shipping and Navigation Mitigation and Monitoring Measures

36.9.1 Embedded Mitigation Measures

With the publication of the Department of Transport (DoT) guidance and the increase in the Structure Exclusion Zone due to the amendment of the Rockabill Gap, the relevant embedded mitigation

measures in Table 36.10 of Chapter 36 of the 2024 EIAR shall be deleted and replaced by the those outlined in Table A36.8.

Table A36.8 Embedded mitigation measures relating to Shipping and Navigation (Replaces Table 36.10 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Construction	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a construction or maintenance vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Buoyed construction area	A buoyed construction area around the array will be implemented during the appropriate phases in agreement with Irish Lights and as outlined in Appendix A17.3: Lighting and Marking Plan (LMP).
Cable protection	Cable protection (burial or external protection) will be implemented and monitored, as determined by a cable burial risk assessment post consent.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the DoT Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI)published by DoT[1] is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.
Liaison with IRCG in relation to SAR resources	The Developer will liaise with the IRCG in relation to SAR resources to ensure the Emergency Response Cooperation Plan (ERCoP) is in place post consent.
Lighting and marking	Lighting and marking of the array in agreement with Irish Lights and in line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162. A separate LMP is provided in Appendix A17.3.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels. A separate Vessel Management Plan (VMP) is provided in Appendix A17.2.
Marking on nautical charts	There will be appropriate marking of all offshore infrastructure associated with the offshore development area on UKHO Admiralty charts.
Proposed development compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including International Regulations for Preventing Collisions at Sea (COLREGs) and International Convention for the Safety of Life at Sea (SOLAS). A separate VMP is provided in Appendix A17.2.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the project Fisheries Liaison Officer (FLO) and Marine Notices (where deemed appropriate).
Structure Exclusion Zone	An area within the array area within which no surface piercing structure will be located inclusive of blade overfly. This area will ensure that a minimum 3.06nm gap between the Rockabill islands and the surface infrastructure is maintained. In practice, given the fixed nature of the layouts, the gap will be greater even when considering LoD/ micrositing principles.
Operation	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a maintenance vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Cable protection	Cable protection (burial or external protection) will be implemented and monitored, as determined by a cable burial risk assessment post consent.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the Irish Guidance published by DoT is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.

[1] The Department of Transport (DoT) (2025a). DoT Guidance on Safety of Navigation & Emergency Response: Offshore Renewable Energy Installations (OREI). Dublin, Ireland: DoT. Guidance_on_Safety_of_Navigation_and_Emergency_Response_OREI.pdf

Measure	Mitigation detail
Lighting and marking	Lighting and marking of the array in agreement with Irish Lights and in line with International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) G1162. A separate LMP is provided in Appendix A17.3.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels during operation. A separate VMP is provided in Appendix A17.2.
Marking on nautical charts	There will be appropriate marking of all offshore infrastructure associated with the offshore development area on UKHO Admiralty charts.
Minimum blade clearance	There will be a minimum blade clearance of more than 22 m above highest Astronomical Tide (HAT) in line with industry good practice and MGN 654. The lowest minimum blade clearance associated with the proposed development is 35m above LAT associated with selected WTGs for Project Option 2.
Proposed development vessel compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including COLREGs and SOLAS.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the FLO and Marine Notices (where deemed appropriate).
Structure Exclusion Zone	An area within the array area within which no surface piercing structure will be located inclusive of blade overfly. This area will ensure that a minimum 3.06nm gap between the Rockabill islands and the array is maintained. See Figure A17.3. In practice, given the fixed nature of the layouts and LoD/ micrositing principles, the gap will be greater.
WTG design and layouts	Consideration will be given to navigational safety and SAR with respect to WTG and layout design (with respect to the 500m LoD), including acceptable levels of SCADA systems.
Decommissioning	
Advisory safe passing distances	Advisory safe passing distances may be deployed around ongoing work being undertaken by a decommissioning vessel with notice of these promulgated through Notices to Mariners and Marine Notices (where deemed appropriate).
Buoyed decommissioning area	A buoyed construction decommissioning area around the array area will be implemented during the appropriate phases in agreement with Irish Lights as outlined in the LMP in Appendix A17.3.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the Irish Guidance published by DoT is generally aligned with UK MGN 654.
Guard vessel(s)	Where appropriate, guard vessels will be used to ensure adherence with advisory passing distances.
Liaison with IRCG in relation to SAR resources	The Developer will liaise with the IRCG in relation to SAR resources to ensure the ERCoP is in place post consent.
Marine coordination for proposed development vessels	Marine coordination will be implemented to manage proposed development vessels. A separate VMP is provided in Appendix A17.2.
Proposed development vessel compliance with international marine regulations	All proposed development vessels will comply with international marine regulations as adopted by the Flag State including COLREGs and SOLAS.
Promulgation of information	Information relating to the proposed development will be circulated via Notices to Mariners and other appropriate media including via the project FLO and Marine Notices (where deemed appropriate).

There are no further changes to this section. Refer to Section 36.9.1 of Chapter 36 in the 2024 EIAR.

36.9.2 Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.9.2 of Chapter 36 of the 2024 EIAR.

36.10 Offshore Archaeology and Cultural Heritage Mitigation and Monitoring Measures

36.10.1 Embedded Mitigation Measures

There are no changes to the section. Refer to Section 36.10.1 of Chapter 36 of the 2024 EIAR.

36.10.2 Mitigation and Monitoring Measures

The change required to this section is the addition of a Marine Archaeology Management Plan (MAMP) as a result of consultation with National Monuments Service (NMS) in March 2026 (refer to Appendix A18.3 Marine Archaeology Management Plan). Therefore, the following sentence shall be deleted:

These measures will be set out in the EIAR Schedule of Environmental Commitments (see Volume 8, Appendix 6.1: Offshore Environmental Management Plan (EMP); hereafter the Offshore EMP).

And replaced by:

These measures will be set out in in a project-specific Marine Archaeology Management Plan (MAMP) (Appendix A18.3) that forms part of the EIAR Schedule of Environmental Commitments (see Volume 8, Appendix A6.1: Offshore Environmental Management Plan (EMP); hereafter the Offshore EMP).

There are no other changes to this section. Refer to Section 36.10.2 of Chapter 36 in the 2024 EIAR.

36.10.3 Archaeological Exclusion Zones

The key change to this section is the additional and more recent data and reports that have become available since submission of the 2024 EIAR. The new information has been reviewed and included to ensure the impact assessment is informed by the most current and up-to-date data, satisfying RFI Section 1 (b) and 14 (a). Therefore, the following text shall be added and Table 36.13 of Chapter 36 of the 2024 EIAR shall be deleted and replaced by Table A36.9. Figure 18.5 of Chapter 18: Offshore Archaeology and Cultural Heritage of the 2024 EIAR shall be deleted and replaced by Figure A18.3.

The updated AEZs around receptors within the intertidal and nearshore area of the ECC replace an earlier, more extensive precautionary AEZ of 230m around WA7000, based on the updated geophysical survey data and archaeological assessment (ADCO, 2023b; 2024).

Table A36.9 AEZs within the offshore development area (Replaces Table 36.13 of Chapter 36 in the 2024 EIAR)

Site ID	Description	UTM30N Easting	UTM30N Northing	Recommended AEZ buffer
WA7000	High value, potential for impact	289332	5946816	100m, clipped to MHW and overlapping AEZs
ADCO 03	High value, potential for impact	286121	5901164	100m, clipped to MHW and overlapping AEZs
ADCO 07	High value, potential for impact	289361	5946778	100m, clipped to MHW and overlapping AEZs
M 0142	High value, potential for impact	289385	5946700	150m, clipped to MHW and overlapping AEZs
WA7001	High value, potential for impact	289796	5946725	100m
WA7002	High value, potential for impact	297073	5949027	100m
WA7003	High value, no potential for impact	297403	5947223	None: outside the ECC boundary by c.450m

Site ID	Description	UTM30N Easting	UTM30N Northing	Recommended AEZ buffer
WA7004	High value, no potential for impact	297387	5947239	None: outside the ECC boundary by c.450m
WA7005	High value, no potential for impact	298783	5947415	None: outside the ECC boundary by c.450m
WA7006	High value, potential for impact	299034	5948785	100m
WA7007	High value, potential for impact	302666	5951085	100m
WA7008	High value, potential for impact	303126	5951304	100m
WA7009	High value, potential for impact	311154	5944559	100m
WA7010	High value, potential for impact	299052	5948791	None, covered by AEZ for WA7006
WA7011	High value, potential for impact	299029	5948771	None, covered by AEZ for WA7006
WA7012	High value, potential for impact	302665	5951077	None, covered by AEZ for WA7007
WA7013	High value, potential for impact	303061	5951326	100m

There are no other changes to this section. Refer to Section 36.10.3 of Chapter 36 in the 2024 EIAR.

36.11 Aviation and Radar Mitigation and Monitoring Measures

36.11.1 Embedded Mitigation Measures

With the publication of the final DoT guidance in July 2025, the relevant embedded mitigation measures in Table 36.14 within Section 36.11.1 in Chapter 36 of the 2024 EIAR require updating. Therefore, Table 36.14 of Chapter 36 of the 2024 EIAR shall be deleted and replaced with Table A36.10.

Table A36.10 Embedded mitigation measures relating to aviation and radar (Replaces Table 36.14 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation description
Construction	
Compliance with IAA lighting and marking requirements	The offshore infrastructure would be designed and constructed in accordance with the requirements of the IAA and the Commissioners of Irish Lights (CIL) in terms of the notification, charting, marking and lighting of obstacles in order to protect air and marine navigation. Refer to Section 19.4.5.1. for further details and Volume 9, Appendix A17.3: Lighting and Marking Plan.
Compliance with IAA requirements for the promulgation of obstacle locations	At least three months before the erection of offshore infrastructure, the required obstacle parameters will be supplied to the IAA and the CIL. Refer to Section 19.4.5.2 for further details.
WTG design parameters within aviation restricted zone	Project Option 2 WTGs within the 3nm buffer areas of Dublin Airport's ATCSMAC sectors 1 and 2 will have a reduced air draft and corresponding reduced tip height of 311m above LAT.

Measure	Mitigation description
	This is to ensure that the minimum required obstacle clearances of sectors 1 and 2 are not infringed.
Compliance with relevant regulator guidance	The proposed development will be compliant with the relevant regulator guidance noting that the Irish Guidance published by DoT is generally aligned with UK Marine Guidance Note (MGN) 654. Refer to Volume 3, Chapter 17: Shipping and Navigation for further details.
Consultation with the DoD Adherence to DoD issued NOTAMs and NtMs, and DoT issued Marine Notices	Prior to installation of the offshore export cable, engagement will be undertaken with the DoD and the following of NOTAMs, NtMs and Marine Notices relating to Gormanston Danger Area EID1 will ensure that installation schedules do not conflict with IAC firing range activities.
Operation	
Compliance with IAA lighting and marking requirements	The offshore infrastructure would continue to be lit during operation in accordance with the requirements of the IAA and the CIL in terms of the notification, charting, marking and lighting of obstacles in order to protect air and marine navigation. Refer to Section 19.4.5.1. for further details and Appendix A17.3.
Compliance with IAA requirements for the promulgation of obstacle locations	Within three months of construction completion, updated obstacle information will be supplied to the IAA and the CIL. Refer to Section 19.4.5.2 for further details.
WTG design parameters within aviation restricted zone	Project Option 2 WTGs within the 3nm buffer areas of Dublin Airport's ATCSMAC sectors 1 and 2 will have a reduced air draft and corresponding reduced tip height of 311m above LAT.
Compliance with relevant regulator guidance	The fixed layouts for Project Option 1 and Project Option 2 comply with Irish Coast Guard requirements with regards to SAR emergency access to the array area.
Decommissioning	
Compliance with IAA lighting and marking requirements	The offshore infrastructure would continue to be lit through the decommissioning phase in accordance with the requirements of the IAA and the CIL in terms of the notification, charting, marking and lighting of obstacles in order to protect air and marine navigation. Refer to Section 19.4.5.1. for further details and Appendix A17.3.
Compliance with IAA requirements for the promulgation of obstacle locations	Updated relevant information will be supplied to the IAA and the CIL, as detailed in Section 19.4.5.2.
WTG design parameters within aviation restricted zone	Project Option 2 WTGs within the 3nm buffer areas of Dublin Airport's ATCSMAC sectors 1 and 2 will have a reduced air draft and corresponding reduced tip height of 311m above LAT.
Compliance with relevant regulator guidance	The fixed layouts for Project Option 1 and Project Option 2 comply with Irish Coast Guard requirements with regards to SAR emergency access to the array area.
Assessment of impacts and best practice environmental management	Prior to decommissioning a study of the potential impacts to aviation and radar receptors from the proposed decommissioning activities would be undertaken, considering the baseline environment at the pre-decommissioning stage. All mitigation measures to be captured would be captured within the decommissioning strategy within Appendix A6.1: Offshore Environmental Management Plan (EMP; hereafter Offshore EMP). Any licences or authorisations that might be required would be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

There are no other changes to this section. Refer to Section 36.11.1 of Chapter 36 in the 2024 EIAR.

36.11.2 Mitigation and Monitoring Measures

There are no other changes to this section. Refer to Section 36.11.2 of Chapter 36 in the 2024 EIAR.

36.12 Infrastructure and Other Users Mitigation and Monitoring Measures

36.12.1 Embedded Mitigation Measures

The changes to this section are a result of consultations with Marine Survey Office (MSO) and the commitment by the Developer to maintain the Structural Exclusion Zone to a minimum 3.06nm. Therefore, the only change in this section is to Table 36.15 from Chapter 36 of the 2024 EIAR, and the addition of the 3.06nm separation, as indicated by the grey shading within the "Structure Exclusion Zone" row. For the purposes of clarity, Table 36.15 of Chapter 36 of the 2024 EIAR shall be replaced with Table A36.11 below.

Table A36.11 Embedded mitigation measures relating to Infrastructure and Other Users (Replaces Table 36.15 of Chapter 36 in the 2024 EIAR)

Measure	Mitigation detail
Construction	
Pre-construction surveys	Pre-construction surveys will be carried out that involve geophysical and magnetometer surveys used to identify existing assets. This may include out of service cables located in a different area to their chartered location due to outdated location techniques, which will reduce the risk of direct impacts or damage to subsea cables and pipelines during construction.
Structure Exclusion Zone	As part of managing potential impacts to shipping and navigation, the proposed development has incorporated a Structure Exclusion Zone into the design. This is an area within the array which excludes all surface infrastructure (inclusive of blade overfly) and enables a minimum 3.06nm separation between surface infrastructure and the Rockabill islands to be maintained. This gap between the array area and the Rockabill islands is referred to as the Rockabill gap and provides sea room to facilitate the safe passage of vessels. Additionally, it is anticipated that potential other users of the Rockabill gap will be able to safely navigate in the presence of other activities.
Advisory safety zones	Advisory safety zones of up to 500m around infrastructure under construction will be communicated during construction. Where appropriate, guard vessels and/or guard buoys will also be used to ensure adherence to advisory safety zones or advisory passing distances, as defined by risk assessment, to mitigate any impact which poses a risk to surface navigation during construction. An advisory safety zone of 50m will be implemented for incomplete structures at which construction activity may be temporarily paused.
Advanced vessel warnings	Details of the proposed development will be promulgated in advance of construction, via Notice to Mariners (NtM) to ensure mariners are aware of the planned works. This information will include associated advisory safety zones and advisory passing distances.
Updated nautical charts	The provision of relevant data and information will be provided to the relevant authorities/charting bodies for the updating of nautical and electronic charts.
Consultation with the Department of Defence (DoD) Adherence to DoD NtMs and/or Marine Notices	Prior to installation of the export cable, engagement will be undertaken with the DoD and adherence of NtMs (and/or Marine Notices) relating to Gormanston Danger Area EID1 will ensure that installation schedules do not conflict with Irish Air Corps (IAC) firing range activities.
Cable burial and cable protection measures	Exposed and/or inappropriately managed cables may potentially impact on vessels looking to anchor within proximity to the offshore development area. Export and inter-array cables will be buried where practicable to ensure they are not exposed by sediment movements (Section 8.3.10 in the Offshore Construction Strategy). Where cables cannot be buried, additional cable protection measures such as rock placement or mattressing will be applied to achieve adequate cable protection. Up to 20% of cable length is expected to need protection either during initial installation, or throughout the operational phase of the proposed development (see the Offshore Construction Strategy). Cable specification and installation measures will be determined pre-construction and will be included within a detailed Cable Burial Risk Assessment (CBRA), to enable informed judgements regarding burial

Measure	Mitigation detail
	depth to increase the likelihood of cables remaining buried whilst limiting the amount of sediment disturbance to that which is necessary. This sets out appropriate cable burial depth in accordance with industry good practice, reducing the risk of cable exposure. During construction, sections of export cable might be left exposed whilst awaiting a suitable method of installation. A temporary exclusion zone may therefore be required until the cable can be buried.
Vessel route management	Indicative transit corridors (vessel routing to and from construction sites and ports) will be define in advance of the construction phase, in consultation with the MSO. A vessel management plan (VMP) will be implemented and will include a code of conduct for vessel operators. These measures will reduce the risk of disturbance and displacement of with infrastructure and other users. The VMP is provided in Appendix A17.2 and will be updated through the phases of the proposed development.
Marine pollution contingency measures – chemical risk review	Marine pollution contingency measures will be implemented as part of Appendix A6.1: Offshore Environmental Management Plan (EMP; hereafter Offshore EMP) to manage the risk of accidental spillages from construction equipment or collision incidents. This includes a chemical risk review with information regarding how and when chemicals are to be used, stored and transported in accordance with recognised best practice guidance. This measure will reduce the likelihood of potentially harmful pollutants to be released into the marine environment which may then impact on fish and shellfish receptors.
Operation	
Structure Exclusion Zone	The proposed development design has incorporated a Structure Exclusion Zone, an area within the array which excludes all surface infrastructure (inclusive of blade overfly) and enables a minimum 3.06nm separation between surface infrastructure and the Rockabill islands to be maintained. This gap between the array area and the Rockabill islands is referred to as the Rockabill gap and provides sea room to facilitate the safe passage of vessels. Additionally, it is anticipated that potential other users of the Rockabill gap will be able to safely navigate in the presence of other activities.
Advanced vessel warnings	Details of the proposed development will be promulgated in advance of any work that is not routine during operation via NtM to ensure mariners are aware of the planned works. This information will include associated advisory safety zones and advisory passing distances.
Advisory safety zones	Advisory safety zones of up to 500m around the relevant infrastructure will be communicated during substantial maintenance activities (such as major component replacement). Where appropriate, guard vessels and/or guard buoys will also be used to ensure adherence with advisory safety zones or advisory passing distances, as defined by risk assessment, to mitigate any impact which poses a risk to surface navigation during construction, maintenance and decommissioning phases. Such risks may include partially installed structures or cables, extinguished navigation lights or other unmarked hazards. An advisory safety zone of 50m will be implemented for incomplete structures at which construction activity may be temporarily paused.
Updated nautical charts	The provision of relevant data and information will be provided to the relevant authorities/charting bodies as/if required for the updating of nautical and electronic charts.
Consultation with the DoD Adherence to DoD issued NtMs and/or Marine Notices	Prior to management or repair of the offshore export cable, engagement will be undertaken with the DoD and adherence of NtMs (and/or Marine Notices) relating to Gormanston Danger Area EID1 will ensure that installation schedules do not conflict with IAC firing range activities.
Decommissioning	
Structure Exclusion Zone	The proposed development incorporated a Structure Exclusion Zone, an area within the array which excludes all surface infrastructure (inclusive of blade overfly) and enables a minimum 3.06nm separation between surface infrastructure and the Rockabill islands to be maintained. This gap between the array area and the Rockabill islands is referred to as the Rockabill gap and provides sea room to facilitate the safe passage of vessels. Additionally, it is anticipated that potential other users of the Rockabill gap will be able to safely navigate in the presence of other activities.

Measure	Mitigation detail
Advanced vessel warnings	Details of the proposed development will be promulgated in advance of decommissioning via NtM to ensure mariners are aware of the planned works. This information will include associated advisory safety zones and advisory passing distances.
Advisory safety zones	Advisory safety zones of up to 500m around the relevant infrastructure will be communicated during decommissioning. Where appropriate, guard vessels and/or guard buoys will also be used to ensure adherence with advisory safety zones or advisory passing distances, as defined by risk assessment, to mitigate any impact which poses a risk to surface navigation during decommissioning. Such impacts may include partially installed structures or cables, extinguished navigation lights or other unmarked hazards. An advisory safety zone of 50m will be implemented for incomplete structures at which construction activity may be temporarily paused.
Updated nautical charts	The provision of relevant data and information will be provided to the relevant authorities/charting bodies for the updating of nautical and electronic charts.
Consultation with the DoD Adherence to DoD issued NtMs and/or Marine Notices	Prior to decommissioning of the offshore export cable, engagement will be undertaken with the DoD and adherence of NtMs (and/or Marine Notices) relating to Gormanston Danger Area EID1 will ensure that installation schedules do not conflict with IAC firing range activities.
Assessment of impacts and best practice environmental management	Prior to decommissioning a study of the potential environmental impacts to infrastructure and other users from the proposed decommissioning activities should be undertaken, taking into account the baseline environment at the pre-decommissioning stage. All mitigation measures to be captured would be captured within the decommissioning strategy within the Offshore EMP. Any licences or authorisations that might be required would be identified and obtained prior to decommissioning, including any validation, updating or new submission of an EIAR, as required.

There are no other changes to this section. Refer to Section 36.12.1 of Chapter 36 in the 2024 EIAR.

36.12.2 Mitigation and Monitoring Measures

There are no changes to this section. Refer to Section 36.12.2 of Chapter 36 in the 2024 EIAR.

36.13 Land and Soils (includes soils, geology and hydrogeology) Mitigation and Monitoring Measures

36.13.1 Construction Phase

The Developer has refined elements of the design to respond to the third-party submissions, the continued public and stakeholder consultation and the RFI. Amendments are therefore required to chapters in the 2024 EIAR, and as part of this, the Onshore Construction Environmental Management Plan has been updated and is included in Appendix A9.1. There are no other changes to this section, refer to Section 36.13.1 of Chapter 36 of the 2024 EIAR.

36.13.1.1 General

There are no changes to this section. Refer to Section 36.13.1.1 of Chapter 36 of the 2024 EIAR.

36.13.1.2 Mitigation of potential effects

The only update in this section is a text update to reflect official nomenclature in sub section 'Loss or damage of topsoil' for reuse of material as a by-product from "Article 27" to "Regulation 27".

There are no other changes required to this section. Refer to Section 36.13.1.2 of Chapter 36 of the 2024 EIAR.

36.13.1.3 Monitoring during construction

There are no changes to this section. Refer to Section 36.13.1.3 of Chapter 36 of the 2024 EIAR.

36.13.2 Operational Phase

There are no changes to this section. Refer to Section 36.13.2 of Chapter 36 of the 2024 EIAR.

36.13.3 Decommissioning Phase

There are no changes to this section. Refer to Section 36.13.3 of Chapter 36 of the 2024 EIAR.

36.14 Water (includes hydrology, surface water quality and flooding) Mitigation and Monitoring Measures

36.14.1 Construction Phase Mitigation Measures

There are no changes required to the introductory text of this section. Refer to Section 36.14.1 of Chapter 36 of the 2024 EIAR.

36.14.1.1 Project Wide Mitigation Measures

There are no changes required to the introductory text of this section. Refer to Section 36.14.1.1 of Chapter 36 of the 2024 EIAR.

36.14.2 Operational Phase

There are no changes required to the introductory text of this section. Refer to Section 36.14.2 of Chapter 36 of the 2024 EIAR.

36.14.3 Decommissioning

There are no changes required to the introductory text of this section. Refer to Section 36.14.3 of Chapter 36 of the 2024 EIAR.

36.15 Biodiversity Mitigation and Monitoring Measures

Following the submission of the consent application for the proposed development in June 2024, the Flemington Local Area Plan (LAP) was adopted in December 2024. The lands included within the LAP are adjacent to the grid facility boundaries along the southern extents.

The Landscape Plan for the grid facility has been updated to provide additional planting of native woodland along the southern boundary of the site. This is to ensure further screening is in place between the proposed grid facility and the LAP lands as per RFI Section 13 (e), regarding potential impacts from the grid facility on the Flemington LAP. These changes are provided in the Mitigation Plan (drawing ref. 281240_MCR_ONS_GF_DR_YE_1010).

In addition, a change is required for this section to provide reference to the Habitat and Species Management Plan which has been updated in response to the National Parks and Wildlife Service (NPWS) in their submission that relates to the planting method of habitat enhancement for semi-natural grasslands submission. This is included in Volume 10 Appendix A23.9.

There are no further changes to this section. Refer to Section 36.15 of Chapter 36 of the 2024 EIAR.

36.15.1 Construction Phase

There are no changes to the introductory text in this section. Refer to Section 36.15.1 of Chapter 36 of the 2024 EIAR.

36.15.1.1 Designated Sites

There are no changes to the section. Refer to Section 36.15.1.1 of Chapter 36 of the 2024 EIAR.

36.15.1.2 Habitats

The change in this section is an update required to account for the updated Landscape Plan at the grid facility as detailed in Section 36.15.

Therefore, the following text from Section 36.15.1.2 of Chapter 36 in the 2024 EIAR shall be deleted:

"Measures to mitigate against habitat loss of hedgerows and trees/treelines

Trees and woodland will be planted around the periphery of the grid facility. This planting area will measure a total 8,325m^2."

And replaced with the following text:

Measures to mitigate against habitat loss of hedgerows and trees/treelines

Native trees and woodland will be planted around the periphery of the grid facility. This planting area will measure a total 9,748m^2.

In addition, the following text has been added to Section 36.15.1.2 (at the end of sub section titled *Measures to mitigate against habitat loss of hedgerows and trees/treelines)* of Chapter 36 in the 2024 EIAR to address RFI Section 20 (b), in relation to tree protection/removal.

Where there is tree felling and hedgerow removal along the onshore cable route, the Developer will prepare and agree a felling and replacement plan with Fingal County Council, if required prior to construction.

There are no other changes to the section. Refer to Section 36.15.1.2 of Chapter 36 of the 2024 EIAR.

36.15.1.3 Habitat Enhancement

The change in this section is an update required to account for the updated Landscape Plan at the grid facility as detailed in Section 36.15.

Therefore, the following text from Section 36.15.1.3 of Chapter 36 in the 2024 EIAR shall be deleted:

"Habitat enhancement for hedgerow and trees

Trees and woodland will be planted around the periphery of the grid. This planting area will measure a total 8,325m^2.

See Appendix 23.10 Habitat and Species Management Plan for details on management of hedgerows and tree planting to enhance the biodiversity potential."

And replaced with the following text:

Habitat enhancement for hedgerow and trees

Trees and woodland will be planted around the periphery of the grid facility. This planting area will measure a total 9,748m^2.

See Appendix A23.9 Habitat and Species Management Plan for details on management of hedgerows and tree planting to enhance the biodiversity potential.

In addition, the following text has been updated to capture comments provided by NPWS in their submission that relate to the planting method of habitat enhancement for semi-natural grasslands. Therefore, the following text from 36.15.1.3 of Chapter 36 in the 2024 EIAR shall be deleted:

"Habitat enhancement for semi-natural grasslands

A species rich grassland mix will be used in appropriate grassland areas of the grid facility in an area of 33,483m^2. At Blakes Cross North an additional area of species rich grassland will be sown, measuring 5,500m^2.

The species rich grassland seed mix will include the species as listed, or a similar native grassland seed mix: Festuca pratensis, Festuca ovina, Lolium prenne L., Festuca rubra, Festuca rubra subsp. Commutate, Poa

pratensis, Poa trivialis, Alopecurus pratensis, Phelum pratense, Plantago lanceolata, Prunella vulgaris, Achillea millefolium, Daucus carota, Leucanthemum vulgare, Galium verum, Rumex acetosella, Lotus corniculatus, Rhinanthus minor, Trifolium repens and Trifolium pratense, Centaurea nigra, Hypochoeris radicata, Anthriscus sylvestris, Vicia sepium, Lathyrus pratensis, Conopodium majus.

In addition, the attenuation basin in the grid facility, which will be infrequently wet depending on rainfall levels, will be planted with a riparian grass and herb mix. The planted area will measure a total area of 6,411m2. This species rich grassland mix will include important food plants for the butterflies and invertebrates and will benefit foraging bats and birds.

This riparian grass and herb mix will include the following species as listed, or a similar native species mix: Juncus effusus, Ranunculus peltatus, Sagittaria sagittifolia, Potamogenton natans, Mentha aquatica, Ceratophylium demersum, Glyceria maxima, Hydrocharis morus-rane, Sparganium erectum, Berula eracta, Filipendula ulmaria, Callitriche platycarpa, Lychnis flos-cuculi, Myosotis scorpiodes, Iris psedudacorus, Alisma plantago-aquatica, Althaea officinalis, Berula eracta, Filipendula ulmaria, Mentha aquatica, Glyceria fluitans, Lychnis flos-cuculi, Myosotis scorpiodes, Iris psedudacorus, Alisma plantago-aquatica, Althaea officinalis.

Areas of seeded grassland will be managed through a once or twice annual mowing regime, whereby mowing is undertaken outside of the breeding bird period (1 March to 31 August). Cuttings will be removed from the site after each mow. Strips will also be left unmown with seed heads intact for the winter period providing a winter food resource for birds.

Insecticides and herbicides will not be used to manage habitats, with the exception of the treatment of non-native invasive species.

See Appendix 23.10 Habitat and Species Management Plan for details on management of grassland to enhance the biodiversity potential."

And replaced with the following text:

Habitat enhancement for semi-natural grasslands

A species rich grassland mix will be used in appropriate grassland areas of the grid facility in an area of 35,756m^2. At Blakes Cross North an additional area of species rich grassland will be sown, measuring 5,500m^2.

Establishment of grassland habitats at these locations will be implemented using hay transfer. This is an effective near-natural solution for grassland restoration which avoids importing a seed mix and instead utilises the existing seed bank and seed resource. Adjacent, or nearby, grassland similar to the grassland that is being removed will be cut when grasses and flowering plants are in seed. These cuttings will be laid over the reinstated bare ground for natural colonisation.

The same method of establishment will be used for the attenuation basin in the grid facility, which will be infrequently wet depending on rainfall levels, will be planted with riparian vegetation. The planted area will measure a total area of 5,284m^2. Grassland cuttings for the establishment of riparian vegetation will be taken from nearby drainage ditches or riparian channels where appropriate species are abundant, and permission has been obtained from landowners.

Areas of established grassland will be managed through a once or twice annual mowing regime, whereby mowing is undertaken outside of the breeding bird period (1 March to 31 August). Cuttings will be removed from the site after each mow. Strips will also be left unmown with seed heads intact for the winter period providing a winter food resource for birds.

Insecticides and herbicides will not be used to manage habitats, with the exception of the treatment of non-native invasive species.

See Appendix A23.9 Habitat and Species Management Plan for details on management of grassland to enhance the biodiversity potential.

There are no other changes to the section. Refer to Section 36.15.1.3 of Chapter 36 of the 2024 EIAR.

36.15.1.4 Annex 1 Habitats

There are no changes to the section. Refer to Section 36.15.1.4 of Chapter 36 of the 2024 EIAR.

36.15.1.5 Terrestrial Mammals

As a result of the updated badger surveys (RFI 1 (c)), the change in this section is an update to the mitigation measures during construction phase regarding badgers. Therefore, Section 36.15.1.5 of Chapter 36 in the 2024 EIAR shall be deleted in its entirety and replaced with the text below.

Mitigation measure to ensure protection of badger setts from disturbance

A summary of the mitigation measures as they relate to each badger sett are presented in Table A36.12, with locations of badger setts shown in Figures A23.5 to Figure A23.6 in Chapter 23.

As the usage of setts by badger can change over time, a pre-construction check of the activity status of all setts will be required within 12 months and at least 3 months of any construction works commencing within vicinity of setts.

In order to prevent any disturbance to badger setts, no heavy machinery shall be used within 30m of a badger sett at any time. No works shall be undertaken within 50m of active setts during the breeding season. Light machinery shall not be used within 20m of a sett entrance. No pile driving shall be undertaken within 150m of active setts during the breeding season (December to June inclusive).

Prior to works commencing, a non-interference zone of 30m will be established around each of the setts. If the sett is active, a non-interference zone will be extended to 50m during the breeding season (December to June inclusive).

The mitigation measures as they relate to each sett are summarised in Table A36.12.

For any setts identified during pre-construction surveys within 150m of the onshore development area, monitoring will be undertaken using trail cameras to confirm the status of the sett in line with NRA (2006a) guidelines. If any sett occurring within 150m is confirmed to be a breeding sett, no works will occur within 50m of the sett during the badger breeding period (1 December to 30 June). A 50m exclusion zone will be implemented and demarcated to ensure protection of sett occurring within 50m from disturbance during the construction phase. Additionally, if a sett is confirmed to be a breeding sett no piling will occur within a 150m exclusion zone during the breeding period (1 December to 30 June).

Table A36.12 Mitigation measures for badger sett during construction.

Sett no.	Mitigation measure for badger sett
1	Pre-construction check of sett to establish current activity status within 12 months of any construction works commencing.
2	Pre-construction check of sett to establish current activity status within 12 months of any construction works commencing. If active, any pile driving works within 150m of the sett during the breeding season (December to June inclusive) will only be carried out with the approval of and, if required, under the supervision of an ECoW.
3 and 4	Pre-construction check of sett to establish current activity status within 12 months of any construction works commencing. The sett will require temporary closure. The sett closure will occur prior to construction of the grid facility and will remain closed for the period of construction at this location. The sett will be reopened following the completion of construction at the grid facility. The sett will be closed under the supervision of an ECoW and will follow the steps outlined below as per Transport Infrastructure Ireland (TII) guidance (TII, 2006). • Monitor for a minimum 5 days, using trail cameras, light sticks or sand pads, prior to any sett closure works to determine the level of activity. • If the sett is found to be active during monitoring, sett closure (exclusion works) will only be undertaken within the period July to November, inclusive, in any given year to avoid the badger breeding season.

Sett no.	Mitigation measure for badger sett
	• If the sett is found to be inactive during monitoring (including during the breeding season confirming that there is no possibility of cubs below ground), sett closure (exclusion works) can take place during any season. • Erect a chain link or sheep net fence around the sett entrances at a distance of 5 m. Fence to be dug into the ground by a minimum of 30 cm and to be a final height of a minimum of 1 m from the ground surface. • Install a one-way badger gate (using a make with a proven track record in badger sett closures and obtained through an appropriate wildlife management or ecological equipment supplier) into the fence fabric. • Gates will be left installed, with regular inspections, over a minimum period of 21 days (including period with gates tied open) before the sett is deemed inactive. • Following exclusion, to ensure no badger re-enter the sett and to protect the sett from accidental destruction during construction works, badger resistance fencing will be erected around the sett and accompanied by appropriate signage.
5 and 6	Pre-construction check of sett to establish current activity status within 12 months of any construction works commencing. No heavy machinery shall be used within 30m of badger setts at any time, unless agreed and supervised by an Ecological Clerk of Works (ECoW). Lighter machinery (generally wheeled vehicles) shall not be used within 20m of a sett entrance, unless agreed and supervised by an ECoW. During pre-construction monitoring if the sett is deemed active, no works shall be undertaken within 50m of active setts during the breeding season. No pile driving shall be undertaken within 150m of active setts during the breeding season (December to June inclusive). Non-interference zone of 30m (outside of breeding season- July to November inclusive) or 50m (if the sett is active during the breeding season – December to June inclusive) to be established as appropriate using temporary fencing and accompanied by appropriate signage. Works within the 30m/50m/150m distance bands will only be carried out with the approval of and, if required, under the supervision of an ECoW. Works within 50m of the sett will only be carried out during daylight hours so as not to disturb foraging badgers; unless otherwise agreed with ECoW.

36.15.1.6 Otter

There are no changes to the section. Refer to Section 36.15.1.6 of Chapter 36 of the 2024 EIAR.

36.15.1.7 Amphibian & Reptiles

There are no changes to the section. Refer to Section 36.15.1.7 of Chapter 36 of the 2024 EIAR.

36.15.1.8 Bats

The change in this section is an update to mitigation measures during construction phase on bats as a result of updated best practice guidance (Collins, 2023) and NPWS guidance (NPWS, 2025)[2].

Therefore, the following text from the end Section 36.15.1.8 of Chapter 36 in the 2024 EIAR shall be deleted:

"Mitigation measures to ensure protection of bats from loss of roosts

Pre-construction surveys will be undertaken as set out below:

- *Low suitability trees will be subject to a visual inspection at height using an endoscope. If no bats are confirmed to use the tree it will be felled on the same day using sectional felling or soft felling technique. Limbs and tree sections will be left in situ on the ground for at least 24 hours before they are processed, to allow any bats to fly out.*
- *Trees of moderate suitability or higher will be subject to a roost emergence and re-entry survey to confirm there are no bats using the tree prior to felling. If no bats are found to use the tree, it will be felled on the same day using sectional felling or soft felling technique. Limbs and tree sections will be left in situ on the ground for at least 24 hours before they are processed, to allow any bats to fly out.*

[2] NPWS (2025) Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants. Version 1.0. 1 July 2025. Prepared by the Department of Housing, Local Government and Heritage.

- *For trees identified as having moderate PRF suitability, which could be used as a maternity roost, these will be felled during the period March-April and/or October-early November which is outside the maternity season and when bats are capable of flight.*
- *For trees identified as having low PRF suitability, subject to visual inspection as outlined above, these trees can be felled during the period March to early November as there is an unlikely risk of these features having suitability to hold a maternity roost.*

- *To minimise habitat loss due to the removal of PRF trees and areas of treeline, bat boxes to the specification of a woodcrete box intended for bats that normally reside in tree cavities58, or similar, will be installed in appropriate locations within lands under the control of the applicant, including lands at the grid facility and Blakes Cross North. A variety of types of bat boxes will be erected to provide bats with alternatives and a variety of conditions. Bat boxes will be installed by a suitably qualified ecologist, or the project ECoW."*

And replaced with the following text:

Mitigation measures to ensure protection of bats from loss of roosts

Pre-construction surveys will be undertaken as set out below:

- Potential roost feature (PRF)-I suitability trees will be subject to a visual inspection at height using an endoscope. If no bats are confirmed to use the tree it will be felled on the same day;
- Trees of PRF-M suitability or higher will be subject to three roost emergence or re-entry surveys, or three climbing inspections (separated by at least three weeks), undertaken between May and September to confirm there are no bats using the tree prior to felling (Collins, 2023 Table 6.4). Surveys will be carried out by a suitably qualified ecologist. If no bats are found to use the tree, it will be felled on the same day using sectional felling or soft felling technique. Limbs and tree sections will be left in situ on the ground for at least 24 hours before they are processed, to allow any bats to fly out. Cutting the roost feature will be avoided and the roost feature will be left facing upwards to allow any bats present to fly out easily (Reason and Wray (2023).
- For trees identified as having moderate PRF suitability which could be used as a maternity roost, the approach outlined above applies.
- PRF-Ms will not be felled during the period mid-November to February when bats are not capable of flight (i.e. during the hibernation period).

During construction methodology is set out below:

- Felling will use sectional felling or soft felling technique. Limbs and tree sections will be left in situ on the ground for at least 24 hours before they are processed, to allow any bats to fly out; and
- To minimise habitat loss due to the removal of PRF trees and areas of treeline, bat boxes to the specification of a woodcrete box intended for bats that normally reside in tree cavities[1], or similar, will be installed in appropriate locations within lands under the control of the Developer, including lands at the grid facility and Blakes Cross North. A variety of types of bat boxes will be erected to provide bats with alternatives and a variety of conditions. Bat boxes will be installed by a suitably qualified ecologist, or the project ECoW.

There are no other changes to the section. Refer to Section 36.15.1.8 of Chapter 36 of the 2024 EIAR.

[1]An example of such a box is the Convex Bat Box which is a woodcrete box intended for bats that normally reside in tree cavities. It has two access options, one at the front and one at the bottom allowing bats to land on the tree and crawl inside. Available at: https://www.wildcare.co.uk/convex-bat-box.html

36.15.1.9 Breeding Birds

There are no changes to the section. Refer to Section 36.15.1.9 of Chapter 36 of the 2024 EIAR.

36.15.1.10 Wintering Waterbirds

There are no changes to the section. Refer to Section 36.15.1.10 of Chapter 36 of the 2024 EIAR.

36.15.1.11 Aquatic & Fisheries

There are no changes to the section. Refer to Section 36.15.1.11 of Chapter 36 of the 2024 EIAR.

36.15.2 Operational Phase

There are no changes to the introductory text in this section. Refer to Section 36.15.2 of Chapter 36 of the 2024 EIAR.

36.15.2.1 Habitat management

There are no changes to the section. Refer to Section 36.15.2.1 of Chapter 36 of the 2024 EIAR.

36.15.2.2 Monitoring

There are no changes to the section. Refer to Section 36.15.2.2 of Chapter 36 of the 2024 EIAR.

36.15.3 Decommissioning Phase

There are no changes to the section. Refer to Section 36.15.3 of Chapter 36 of the 2024 EIAR.

36.16 Traffic and Transportation Mitigation and Monitoring Measures

36.16.1 Construction Phase

36.16.1.1 Embedded mitigation measures

There are no changes to the section. Refer to Section 36.16.1.1 of Chapter 36 of the 2024 EIAR.

36.16.1.2 Additional mitigation measures

In accordance with RFI Section 19 (a), the Developer submitted an onshore cable route construction indicative phasing plan to FCC, which will be further developed and finalised by the Developer and its appointed contractor(s) in consultation with FCC and other relevant stakeholders prior to the commencement of construction, as agreed with FCC. As part of this consultation, additional mitigation measures have been incorporated to further minimise impacts on the traffic network arising from the proposed development. Further details on the indicative phasing plan are provided in the CTMP in Appendix A of Volume 8 Appendix A9.1.

Therefore, the following text shall be included in Section 36.16.1.2 of Chapter 36 of the 2024 EIAR:

Additional Mitigation following consultation on submissions

Several additional mitigation measures are being considered, over and above the suite of mitigation measures included in the 2024 EIAR, to address points raised in third party submissions, including that of Fingal County Council. These measures will help to further alleviate the potential impacts on traffic and transportation associated with the construction phase of the proposed cable route. The additional mitigation measures are as follows:

- Corduff National School is located on Section 3.1 of the cable route. It is proposed to undertake work in the area surrounding the school during the school holidays.
- It is proposed to undertake work on Sections 12 and 13 (Swords Road and Malahide Rd, close to Malahide Castle) outside of peak concert season (June and July) unless otherwise agreed with FCC.

- The design as it has developed now envisages that, in general, the sequential single lane closures can be reduced from c. 200-300 m (2024 EIAR) to c. 150-200m. This reduction should help to alleviate the impact of the partial road closures; and
- During daytime working hours, and particularly to manage peak traffic time flows and to ensure that buses are prioritised - all single lane closures which have traffic lights deployed to manage the lane closure traffic flows, will have a Traffic Management Engineer deployed on site to monitor and regulate traffic flows at each traffic light head as required, in order to mitigate and prevent unnecessary tailbacks either side of the lane closure.

There are no other changes required to this section. Refer to 36.16.1.2 of Chapter 36 of the 2024 EIAR.

36.16.2 Operational Phase

There are no changes to the section. Refer to Section 36.16.2 of Chapter 36 of the 2024 EIAR.

36.16.3 Decommissioning Phase

There are no changes to the section. Refer to Section 36.16.3 of Chapter 36 of the 2024 EIAR.

36.17 Onshore Archaeology, Architectural and Cultural Heritage Mitigation and Monitoring Measures

36.17.1 Construction Phase

36.17.1.1 Landfall Site

There are no changes to this section. Refer to these Section 36.17.1.1 in Chapter 36 in the 2024 EIAR.

36.17.1.2 Grid Facility

There are no changes to this section. Refer to these Section 36.17.1.2 in Chapter 36 in the 2024 EIAR.

36.17.1.3 Onshore cable route

In response to RFI Section 1 (b), the baseline environment has been updated. Therefore, the change in this section is to note that a new medieval settlement has been recorded within the study area of the proposed onshore cable route (AH38). Accordingly, the mitigation measures for the proposed onshore cable route have been updated. Table A36.12 has been updated to include mitigation for AH38. In addition, a 2024 geophysical survey (EX51) associated with a National Transport Authority project has shown that no archaeological anomalies associated with CH37 extend into the proposed development area. Therefore, CH37 has been removed from Table A36.12 as no mitigation is required for this feature.

To clarify, Table 36.17 of Section 36.17.1.3 of Chapter 36 in the 2024 EIAR shall be deleted and be replaced with the following Table A36.13. The changes in the table are highlighted in grey:

Table A36.13 Mitigation measures as part of the proposed onshore cable route (Replaces Table 36.17 of Chapter 36 of the 2024 EIAR)

Ref.:	Description	Mitigation
AAP04	Watercourse and townland boundary.	Should the construction of the cable impact on the channel or banks of the watercourse (if offline open cut is required), an archaeological wade survey will be carried out in advance. This will be carried out under licence as issued by the DoHLGH.
CH04	Site of structures associated with Ballough	Should the onshore cable route be laid through CH04, the excavation of the trench will be subject to archaeological monitoring, carried out by a suitably qualified archaeologist contracted by the developer, under licence, as issued by the DoHLGH.
BH06	Milestone (not located during field inspection)	It is possible that this small item of roadside furniture has been removed. Further inspection, including the removal of vegetation, will be carried out. If the milestone is located, it will be hoarded off and protected during construction works in order to preserve the feature in-situ.

Ref.:	Description	Mitigation
BH10	Milestone	The milestone will be hoarded off and protected during construction works in order to preserve the feature in-situ.
CH23	Site of post medieval structures	This is a greenfield area, which will be subject to a programme of geophysical survey and archaeological testing prior to the commencement of construction. This will be carried out under licence as issued by the DoHLGH.
AAP07	Watercourse	Should the construction of the cable impact on the channel or banks of the watercourse (if offline open cut is required), an archaeological wade survey will be carried out in advance. This will be carried out under licence as issued by the DoHLGH.
BH12	Daws Bridge	Should inline HDD be required to lay the cable beneath Daws Bridge, detailed design will be subject to assessment and supervision of a Grade 1 Conservation Architect. Archaeological monitoring may be also required for the works. Any archaeological works will be carried out under licence as issued by the DoHLGH.
AH38	Field System	This site will be avoided by the proposed cable route and preserved in-situ. Prior to the commencement of construction, the site will be set out by an archaeological surveyor and fenced off for the duration of construction works. No excavations, regrading, landscaping, compounds or storage of materials will be allowed in this area.
AH25	Holy well (site of)	This monument appears to have been removed in the past due to the construction of the existing road network; however, all excavation works within proximity of the site will be subject to archaeological monitoring, under licence as issued by the DoHLGH.
AAP08	Estuarine/coastal margin	The excavation of the trench through AAP08 will be subject to archaeological monitoring, under licence, as issued by the DoHLGH.
AAP09	Watercourse	Should the construction of the cable impact on the channel or banks of the watercourse (if offline open cut is required), an archaeological wade survey will be carried out in advance. This will be carried out under licence as issued by the DoHLGH.
AAP10	Watercourse	Should the construction of the cable impact on the channel or banks of the watercourse (if offline open cut is required), an archaeological wade survey will be carried out in advance. This will be carried out under licence as issued by the DoHLGH.
BH19	Milestone	The milestone will be hoarded off and protected during construction works in order to preserve the feature in-situ.
DL14/ Abbey-ville ACA	Designed landscape associated with Abbeyville	This is a greenfield area, which will be subject to a programme of geophysical survey and archaeological testing prior to the commencement of construction. This will be carried out under licence as issued by the DoHLGH.
BH21	Milestone	The milestone will be hoarded off and protected during construction works in order to preserve the feature in-situ.
BH22	Bridge	Should the onshore cable route cross this bridge, detailed design will be subject to assessment and supervision of a Grade 1 Conservation Architect. Archaeological monitoring may be required for the works. Any archaeological works will be carried out under licence as issued by the DoHLGH.
AH30d	Ecclesiastical enclosure at Saint Doolaghs	The excavation of 130m of the cable trench through the road to the east of Saint Doolagh's ecclesiastical site will be subject to archaeological monitoring, under licence as issued by the DoHLGH.
AH30g	Cross at Saint Doolaghs	The cross will be hoarded off and protected during construction works in order to preserve the feature in-situ.
CH10	Bridge	All excavation works across the bridge will be subject to archaeological monitoring under licence, as issued by the DoHLGH.
AAP11	River Mayne	Should the construction of the cable impact on the channel or banks of the watercourse (if offline open cut is required), an archaeological wade survey will be carried out in advance. This will be carried out under licence as issued by the DoHLGH.
BH33	Belcamp House (surviving walled garden)	All excavation works adjacent to the wall will be subject to archaeological monitoring under licence, as issued by the DoHLGH.

36.17.2 Operational Phase

There are no changes required to this section. Refer to Section 36.17.2 of Chapter 36 of the 2024 EIAR.

36.17.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.17.3 of Chapter 36 of the 2024 EIAR.

36.18 Material Assets Mitigation and Monitoring Measures

36.18.1 Construction Phase

There are no changes required to this section. Refer to Section 36.18.1 of Chapter 36 of the 2024 EIAR.

36.18.2 Operational Phase

There are no changes required to this section. Refer to Section 36.18.2 of Chapter 36 of the 2024 EIAR.

36.18.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.18.3 of Chapter 36 of the 2024 EIAR.

36.19 Air Quality Mitigation and Monitoring Measures

36.19.1 Construction Phase

There are no changes to the introductory text in this section. Refer to Section 36.19.1 of Chapter 36 in the 2024 EIAR.

36.19.1.1 Mitigation for all working areas

The change to this section is in relation to the revised air quality assessment (see Chapter 27 Air Quality), which was completed using the updated traffic baseline survey (in accordance with RFI 19 (c)). The following mitigation measure relating to construction traffic is added to Section 36.19.1.1 of Chapter 36 to address the impact which may arise in relation to air quality during construction works:

Construction Traffic

- The Construction Traffic Management Plan (CTMP) will be developed to mitigate potential construction traffic impacts. This will also have the effect of reducing air quality impacts. Refer to Volume 4 Chapter 24, Traffic and Transportation and the CTMP in Volume 8 Appendix A9.1, for further details.

There are no further changes required to this section. Refer to Section 36.19.1.1 of Chapter 36 in the 2024 EIAR.

36.19.1.2 Measures specific to Earthworks

There are no changes required to this section. Refer to Section 36.19.1.2 of Chapter 36 of the 2024 EIAR.

36.19.1.3 Measures specific to Track-out

There are no changes required to this section. Refer to Section 36.19.1.3 of Chapter 36 of the 2024 EIAR.

36.19.1.4 Measures specific to the grid facility construction activities

There are no changes required to this section. Refer to Section 36.19.1.4 of Chapter 36 of the 2024 EIAR.

36.19.1.5 Measures to be applied at the Malahide Estuary

There are no changes required to this section. Refer to Section 36.19.1.5 of Chapter 36 of the 2024 EIAR.

36.19.1.6 Construction Phase Monitoring Measures

There are no changes required to this section. Refer to Section 36.19.1.6 of Chapter 36 of the 2024 EIAR.

36.19.2 Operational Phase

There are no changes required to this section. Refer to Section 36.19.2 of Chapter 36 of the 2024 EIAR.

36.19.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.19.3 of Chapter 36 of the 2024 EIAR.

36.20 Climate Mitigation and Monitoring Measures

36.20.1 Construction Phase

In line with the revised type and quantity of construction materials associated with the design refinements of the proposed development, the quantification of CO_2eq emission savings expected as a result of mitigation measure implementation during construction has been updated.

Therefore, the following text from Section 36.20.1 in Chapter 36 of the 2024 EIAR is deleted:

A series of mitigation measures have been incorporated into the construction design with the goal of reducing the embodied carbon associated with the construction phase of the proposed development. These mitigation measures include:

- *The substitution, where feasible, of concrete containing Portland cement with concrete containing ground granulated blast furnace slag (GGBS). This measure has led to an estimated saving of c.2,800 tonnes of CO_2eq in the current design of the proposed development;*
- *The proposed development will minimise wastage of materials due to poor timing or over ordering on site thus helping to minimise the embodied carbon footprint of the proposed development;*
- *Where practicable, opportunities for materials reuse will be incorporated within the extent of the proposed development including the use of reclaimed asphalt and recycled aggregate. This measure has led to an estimated saving of 2,545 tonnes of CO_2eq; and*
- *Where practicable, materials will be sourced locally to reduce the embodied emissions associated with transport.*

The combined measures, including the incorporation of GGBS, recycled and reused material where practicable has led to an estimated saving of 5,340 tonnes of CO_2eq."

And replaced with:

A series of mitigation measures have been incorporated into the construction design with the goal of reducing the embodied carbon associated with the construction phase of the proposed development. These mitigation measures include:

- The substitution, where feasible, of concrete containing Portland cement with concrete containing ground granulated blast furnace slag (GGBS). This measure has led to an estimated saving of c.1,200 tonnes of CO_2eq in the current design of the proposed development;
- The proposed development will minimise wastage of materials due to poor timing or over ordering on site thus helping to minimise the embodied carbon footprint of the proposed development;
- Where practicable, opportunities for materials reuse will be incorporated within the extent of the proposed development including the use of reclaimed asphalt and recycled aggregate. This measure has led to an estimated saving of 4,215 tonnes of CO_2eq; and
- Where practicable, materials will be sourced locally to reduce the embodied emissions associated with transport.

The combined measures, including the incorporation of GGBS, recycled and reused material where practicable has led to an estimated saving of 5,414 tonnes of CO_2eq.

There are no other changes required to this section. Refer to Section 36.20.1 in Chapter 36 of the 2024 EIAR.

36.20.2 Operational Phase

There are no changes required to this section. Refer to Section 36.20.2 of Chapter 36 of the 2024 EIAR.

36.20.3 Decommissioning Phase

It is expected that the offshore infrastructure will be reused as much as possible, thereby minimising carbon emissions during the decommissioning phase.

There are no changes required to this section. Refer to Section 36.20.3 of Chapter 36 of the 2024 EIAR.

36.21 Seascape, Landscape and Visual Mitigation and Monitoring Measures

36.21.1 Construction Phase

There are no changes to this section. Refer to Section 36.21.1 of Chapter 36 of the 2024 EIAR.

36.21.2 Operational Phase

A revised Landscape Mitigation Plan has been prepared in response to RFI Section 13 (e) to address concerns regarding visual impacts at the Flemington LAP lands to the southeast of the grid facility. The revised landscape plan includes a woodland thicket along the south-eastern boundary, which will serve as a more substantial visual screen than the current hedgerow boundary that it will incorporate. In addition, a revised colour scheme / finish has been applied to the proposed substations in the grid facility as part of embedded mitigation to reduce impact on the LAP.

Therefore, Section 36.21.2 will be deleted in its entirety and replaced with the following:

There are no specific SLVIA mitigation measures proposed during the Operational Phase in relation to the offshore elements of the proposed development.

Mitigation is proposed in relation to the grid facility (see drawing ref. 281240_MCR_ONS_GF_DR_YE_1010, Appendix A7.1), which will consist of perimeter screen planting around the grid facility compound and a colour scheme for the grid facility structures which provides a high architectural quality of finish (see drawing ref. 281240_ARP_ONS_GF_DR_PL_1007 and 281240_ARP_ONS_GF_DR_PL_1008, Appendix A7.1).

The proposed planting measures have been designed in conjunction with the ecology experts who prepared the biodiversity chapter in order to maximise the benefit of both visual screening and to biodiversity Refer to Volume 4, Chapter 23: Biodiversity. The planting consists of native woodland and hedgerow species which will be planted as a combination of small whips, advanced nursery stock (3-4m high trees) and large, semi-mature trees (30-40cm girth / 6-7m tall when planted) in order to allow for resilient and dense establishment and to fill gaps in the existing mature treeline to provide more substantial and consolidated screening. Note: Photomontages show planting having established over approximately 5-6 growing seasons from immediately post construction.

The substation colour scheme/finish (subject to final agreement with EirGrid and Fingal County Council), takes into consideration the adoption of the Flemington LAP, to reflect a future scenario that is more urban edge than the current rural hinterland scenario. This sees a geometric use of dark, light and mid tone cement render to break of the vertical and horizontal massing of the structures and provide a high architectural quality of finish. Thus, the substation structures will appear as ‘urban edge – commercial’ rather than a design which is more ‘rural-industrial’.

The proposed mitigation planting and colour scheme have been incorporated into the relevant substation photomontages and before and after mitigation visual impact assessments were undertaken.

The mitigation for the onshore cable route is embedded in its design as it will be run predominantly within the existing roadbed for the majority of its course from the grid facility to the connection at Belcamp. Most watercourse crossings will be by in-road open cut trench or inline HDD. For eight crossings offline HDD and/or offline open cut trench will be considered. Where HDD is employed, it will have less impact on both the watercourses and the riparian vegetation that flanks them.

There will be a few instances where trenching techniques will be employed through hedgerows and treelines and where this occurs it will consist of the minimum disturbance necessary and replanting insofar as possible once construction of the cable route is complete (only non-woody species can be replanted directly above the cable route for maintenance reasons).

36.21.3 Decommissioning Phase

There are no changes to this section. Refer to Section 36.21.3 of Chapter 36 of the 2024 EIAR.

36.22 Noise and Vibration Mitigation and Monitoring Measures

36.22.1 Construction Phase

36.22.1.1 Temporary noise barriers

Due to inclusion of the possibility of 24-hour works (as per RFI Section 19 (a)) and the updated construction assessment of the onshore cable route, the following text shall be deleted:

"The onshore cable route works will progress relatively quickly and will be primarily carried out on roads where the works need to be kept to a minimum of working width to minimise the need for road closures. Therefore, no noise barriers have been assumed for the onshore cable route works other than at the following specific locations:

Temporary noise barriers will be provided between the onshore cable route construction working area and the following four schools:

- *Corduff National School: a primary school on the R132 in Corduff*
- *St Nicholas of Myra National School, Kinsealy on the R107 Malahide Road*
- *St Molagas National School on the R132 Dublin Road, Balbriggan, and*
- *Malahide/Portmarnock Educate Together National School on the R107"*

And be replaced by the following:

The onshore cable route works will progress relatively quickly and will be primarily carried out on roads where the works need to be kept to a minimum working width to minimise the need for road closures. However, if night-time works are required, noise barriers will be provided where these works take place. Elsewhere, for daytime works only, no noise barriers have been assumed for the onshore cable route works other than at specific locations identified below.

Temporary noise barriers will be provided between the onshore cable route construction working area and the following four schools:

- Corduff National School: a primary school on the R132 in Corduff;
- St Nicholas of Myra National School, Kinsealy on the R107 Malahide Road;
- St Molagas National School on the R132 Dublin Road, Balbriggan; and
- Malahide/Portmarnock Educate Together National School on the R107.

There are no other changes required to this section. Refer to Section 36.22.1.1 of Chapter 36 of the 2024 EIAR.

36.22.1.2 Good Industry Practice

There are no changes to this section. Refer to Section 36.22.1.2 of Chapter 36 of the 2024 EIAR.

36.22.1.3 Communications

There are no changes to this section. Refer to Section 36.22.1.3 of Chapter 36 of the 2024 EIAR.

36.22.1.4 Noise and Vibration Monitoring

There are no changes to this section. Refer to Section 36.22.1.4 of Chapter 36 of the 2024 EIAR.

36.22.2 Operational Phase

To comply with RFI 13 (e), additional noise sensitive receptors have been included to represent proposed residential properties under the Flemington LAP. To ensure compliance with EirGrid requirements, all receptors are assessed at the property boundary and additional embedded mitigation are proposed. Therefore, updates to the operational assessment of the grid facility (Section 36.22.2 of the 22024 EIAR) require the following text to deleted:

"For the operation of the grid facility, the following operating parameters have been assumed:

- *A static VAR compensator (SVC) cooler have been selected as the low noise option*
- *The SVC transformer and shunt reactors will be within an enclosure that provides acoustic attenuation; alternatively, lower-noise units which achieve the same reduction in noise level as an enclosure would be used."*

And replaced with the following:

For the operation of the grid facility, the following operating parameters have been assumed:

- The SVC cooler banks have been selected as the low noise option (reducing their source sound power from 90dBA to 70dBA);
- The SVC transformer tank is contained within an enclosure that provides acoustic attenuation (reducing its source sound power from 95dBA to 75dBA). Alternatively, lower-noise units which achieve the same reduction in noise level as an enclosure would be used;
- The SVC transformer cooler bank includes a silencer, reducing its source sound power from 87dBA to 77dBA;
- A partial enclosure, 3 side-walls and roof with a minimum sound insulation performance of Rw30, is assumed on all shunt reactors and shunt reactor coolers. Alternatively lower-noise units with maximum sound power levels for shunt reactors of 78dBA alongside maximum sound power levels for shunt reactor coolers of 76dBA could also be used; and
- A solid noise barrier with a minimum height of 1.8 m above the top of the generator at the Bremore substation (closest to the LAP) on the 2 exposed sides (i.e., blocking line of sight from the generator to the LAP receptors).
- A 3-sided noise barrier has been included around the harmonic filter reactors to their south, east, and west sides. The barrier is solid and free from air gaps and is modelled as 1 m above the top of the harmonic filter reactors.

36.22.3 Decommissioning Phase

There are no changes to this section. Refer to Section 36.22.3 of Chapter 36 of the 2024 EIAR.

36.23 Resource and Waste Management Mitigation and Monitoring Measures

There are no changes required to introductory text in this section. Refer to Section 36.23 of Chapter 36 of the 2024 EIAR.

36.23.1 Construction Phase

There are no changes required to this section. Refer to Section 36.23.1 of Chapter 36 of the 2024 EIAR.

36.23.1.1 General Mitigation Measures

There are no changes required to this section. Refer to Section 36.23.1.1 of Chapter 36 of the 2024 EIAR.

36.23.1.2 Offshore Mitigation

There are no changes required to this section. Refer to Section 36.23.1.2 of Chapter 36 of the 2024 EIAR.

36.23.1.3 Onshore Mitigation

There are no changes required to this section. Refer to Section 36.23.1.3 of Chapter 36 of the 2024 EIAR.

36.23.2 Operational Phase

There are no changes required to this section. Refer to Section 36.23.2 of Chapter 36 of the 2024 EIAR.

36.23.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.23.3 of Chapter 36 of the 2024 EIAR.

36.24 Population and Human Health Mitigation and Monitoring Measures

36.24.1 Construction Phase

There are no changes required to this section. Refer to Section 36.24.1 of Chapter 36 of the 2024 EIAR.

36.24.2 Operational Phase

There are no changes required to this section. Refer to Section 36.24.2 of Chapter 36 of the 2024 EIAR.

36.24.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.24.3 of Chapter 36 of the 2024 EIAR.

36.25 Socio-Economic, Tourism and Recreation Mitigation and Monitoring Measures

36.25.1 Construction Phase

There are no changes required to this section. Refer to Section 36.25.1 of Chapter 36 of the 2024 EIAR.

36.25.2 Operational Phase

There are no changes required to this section. Refer to Section 36.25.2 of Chapter 36 of the 2024 EIAR.

36.25.3 Decommissioning Phase

There are no changes required to this section. Refer to Section 36.25.3 of Chapter 36 of the 2024 EIAR.

36.26 Major Accidents and Disasters Mitigation and Monitoring Measures

There are no changes to the section. Refer to Section 36.26 of Chapter 36 of the 2024 EIAR.

36.27 Offshore Bats

36.27.1 Mitigation Measures

The change in this section addresses RFI Section15 (f) in which An Bord Pleanála states;

"The applicant is requested to examine the need for mitigation measures, in addition to monitoring during the operational phase, to reduce potential impacts on bats, and is requested to provide details in relation to potential mitigation measures, for example, including, inter alia, measures such as curtailment or feathering of blades under certain conditions."

This section can be deleted in the 2024 EIAR and shall be replaced with the following:

In response to RFI Section 15 (f) and following the incorporation of the 2024 offshore bat monitoring results and the refinements made to Impacts 3, 4, 6, 7 and 8, the assessment concludes that no significant effects on bats are predicted to occur during the construction, operational or decommissioning phases of the proposed development. Offshore bat activity within the array area has been shown to occur at very low levels, consistent with other offshore wind projects in Irish waters, and any interactions with project infrastructure are expected to be rare, short-lived and of negligible biological consequence.

On this basis, additional mitigation measures such as curtailment or feathering are not considered necessary or proportionate for the proposed development. No bat-specific mitigation is therefore proposed. Standard environmental management measures associated with construction, operation and decommissioning will be implemented as part of the wider project environmental controls.

There are no further changes to this section. Refer to Section 36.27.1 of Chapter 36 in the 2024 EIAR.

36.27.2 Monitoring Measures

This section shall be deleted from the 2024 EIAR. The 2024 surveys are detailed in Section 35.2.4 Data Collection and Collation and Section 35.3.5 Field Survey results 2024. Further details may be found in Appendix A35.1: Bat Monitoring Report 2024.

There are no further changes to this section. Refer to Section 36.27.2 of Chapter 36 in the 2024 EIAR.

36.27.3 Further Monitoring

This section shall be updated with details of an Operational Monitoring Plan, drafted in response to RFI Section 1 (d). Therefore, the following shall be added to Section 36.27.3 of Chapter 36 of the 2024 EIAR:

An Operational Monitoring Plan (OMP, Appendix A6.3: Operational Monitoring Plan) has been drafted to outline the approach for delivering the anticipated monitoring measures required by conditions associated with any granted permission. The OMP provides a framework for a final OMP, which is anticipated to be required under conditions of the planning consent and will be developed post-consent.

A final detailed OMP will be submitted to the relevant authority for approval, prior to the start of construction, based on further discussions post consent with An Coimisiún Pleanála and the relevant regulatory authorities to agree the exact detail (timings, methodologies etc.) of the monitoring that is required.

There are no further changes to this section. Refer to Section 36.27.3 of Chapter 36 in the 2024 EIAR.

36.28 Likely Significant Residual Effects

There are no changes required to the introductory text of this section. Refer to Section 36.28 of Chapter 36 of the 2024 EIAR.

36.28.1 Construction Phase

Following the response to the RFIs and the refinement of elements of the design, an update to the Likely Significant Residual Effects is required. For the purposes of clarity, Table 36.18 from Chapter 36 of the 2024 EIAR shall be deleted and replaced with Table A36.14. The change in the table is highlighted in grey.

Table A36.14 Summary of likely significant residual effects during the construction phase of the proposed development (Replaces Table 36.18 of Chapter 36 the 2024 EIAR)

Assessment Topic	Relevant Receptor	Likely Significant Residual Effects
Marine Geology, Oceanography and Physical Processes	N/A	No likely significant residual effects
Marine Water and Sediment Quality	N/A	No likely significant residual effects
Benthic Subtidal and Intertidal	N/A	No likely significant residual effects

Assessment Topic	Relevant Receptor	Likely Significant Residual Effects
Fish and Shellfish Ecology	N/A	No likely significant residual effects
Marine Mammal Ecology	N/A	No likely significant residual effects
Offshore Ornithology	N/A	No likely significant residual effects
Commercial Fisheries	N/A	No likely significant residual effects
Shipping and Navigation	N/A	No likely significant residual effects
Offshore Archaeology and Cultural Heritage	N/A	No likely significant residual effects
Aviation and Radar	N/A	No likely significant residual effects
Infrastructure and Other Users	N/A	No likely significant residual effects
Land and Soils	N/A	No likely significant residual effects
Water	N/A	No likely significant residual effects
Biodiversity	FW2 Lowland depositing river	Negative, short-term, reversible likely significant residual effect due to habitat loss at a local geographical scale, until lowland depositing rivers are reinstated at dry working areas
	WL1 Hedgerows, WL2 Treelines	Negative, short-term, reversible likely significant residual effect due to habitat loss at a local geographical scale until replacement planting is established at the landfall site and Blakes Cross North.
	Breeding birds	Negative, short-term, reversible likely significant residual effect due to habitat loss at a local geographical scale until habitats are reinstated and replacement planting is established at the landfall site and Blakes Cross North.
	Aquatic & fish species	Negative, short-term, reversible likely significant residual effect due to habitat loss at a local geographical scale until watercourses are reinstated at dry working areas.
	Badger	Negative, short-term, likely significant residual effect at local scale while badger habituate to the onshore infrastructure, in particular at the grid facility. No long-term significant residual effect.
Traffic and Transportation	Local diversion routes (as listed in tables A24.29, A24.30 and A24.31 of Chapter 24: Traffic and Transportation) during temporary full road closures associated with construction of the onshore cable route	Negative, and temporary likely significant residual effects from increased traffic flows along local diversion routes
Onshore Archaeology	N/A	No likely significant residual effects
Material Assets	N/A	No likely significant residual effects

Assessment Topic	Relevant Receptor	Likely Significant Residual Effects
Air Quality	N/A	No likely significant residual effects
Climate	N/A	No likely significant residual effects
Seascape, Landscape & Visual	N/A	No likely significant residual effects
Noise and Vibration	LAP2	Slight to moderate magnitude of noise impact. Temporary, but a likely significant effect
Resource and Waste Management	N/A	No likely significant residual effects
Population and Human Health	Communities as listed in Table 32.9 of Volume 5: Chapter 32: Population and Human Health local to the proposed development	Negative and temporary likely significant effects relating to accessibility and journey patterns as a result of full and partial road closures during the construction of the onshore cable route
	Economic regeneration, as listed in Table 32.10 of Chapter 32	Positive and long-term likely significant residual effect on economic regeneration
Socioeconomic, Tourism and Recreation	Employment impact on regional economy	Positive and short-term likely significant residual effect
	Gross Value Added (GVA) impact on regional economy	Positive and short-term likely significant residual effect
	Sense of Place	No likely significant residual effects
Major Accidents and Disasters	N/A	No likely significant residual effects
Offshore Bats	N/A	No likely significant residual effects

There are no other changes required to this section. Refer to Section 36.28.1 in Chapter 36 of the 2024 EIAR.

36.28.2 Operational Phase

As discussed in Section 36.28.1, an update to the Likely Significant Residual Effects is required. For the purposes of clarity, Table 36.19 from Chapter 36 of the 2024 EIAR shall be deleted and replaced with Table A36.14. The change in the table is highlighted in grey.

Table A36.15 Summary of likely significant residual effects during the operational phase of the proposed development (Replaces Table 36.18 of Chapter 36 the 2024 EIAR)

Assessment Topic/Receptor	Relevant Receptor	Likely Significant Residual Effects
Marine Geology, Oceanography and Physical Processes	N/A	No likely significant residual effects
Marine Water and Sediment Quality	N/A	No likely significant residual effects
Benthic Subtidal and Intertidal	N/A	No likely significant residual effects
Fish and Shellfish Ecology	N/A	No likely significant residual effects
Marine Mammal Ecology	N/A	No likely significant residual effects
Offshore Ornithology	N/A	No likely significant residual effects
Commercial Fisheries	N/A	No likely significant residual effects

Assessment Topic/Receptor	Relevant Receptor	Likely Significant Residual Effects
Shipping and Navigation	N/A	No likely significant residual effects
Offshore Archaeology and Cultural Heritage	N/A	No likely significant residual effects
Aviation and Radar	N/A	No likely significant residual effects
Infrastructure and Other Users	N/A	No likely significant residual effects
Land and Soils	N/A	No likely significant residual effects
Water	N/A	No likely significant residual effects
Biodiversity	Terrestrial Mammals- Badger	Short-term residual effect on the local population while badger habituate to the onshore infrastructure of the proposed development. No long-term residual effects are anticipated at a population level due to the resilient nature and widespread distribution of badger in Ireland
Traffic and Transportation	N/A	No likely significant residual effects
Onshore Archaeology	N/A	No likely significant residual effects
Material Assets	Electricity network in Ireland	Positive and long-term likely significant effect on the electricity network in Ireland
Air Quality	N/A	No likely significant residual effects
Climate	Greenhouse gas emissions	Positive and long-term likely significant effect
Seascape, Landscape & Visual	N/A	No likely significant residual effects
Noise and Vibration	N/A	No likely significant residual effects
Resource and Waste Management	N/A	No likely significant residual effects
Population and Human Health	Economic regeneration	Positive and long-term likely significant residual effect
Socioeconomic, Tourism and Recreation	Regional economy – employment	Positive and long-term likely significant residual effect
	Regional economy – GVA generation	Positive and long-term likely significant residual effect
	Community benefit fund	Positive and long-term likely significant residual effect
Major Accidents and Disasters	N/A	No likely significant residual effects
Offshore Bats	N/A	No likely significant residual effects

There are no other changes required to this section. Refer to Section 36.28.2 in Chapter 36 of the 2024 EIAR.

36.28.3 Decommissioning Phase

There are no changes to this section. Refer to Section 36.28.3 of Chapter 36 of the 2024 EIAR.

36.28.4 Likely Significant Residual Cumulative Effects

In response to RFI 5, the NSIP Guidance has been adopted into the Cumulative Effects Assessment of the proposed development to supplement the previous assessment which relied on European Guidance and Directives and the Environmental Protection Agency guidelines. Therefore, the overall cumulative effects summary has been updated.

For the purposes of clarity, Table 36.21 from Chapter 36 of the 2024 EIAR shall be deleted and replaced with Table A36.16.

Table A36.16 Overall Cumulative Effects (Replaces Table 26.21 of Chapter 26 of the 2024 EIAR)

Potential Cumulative Effects on Environmental Factors	
CEA of all screened in projects together with the proposed development	**Marine Geology, Oceanography and Physical Processes:** The CEA undertaken in Section 10.9 of Chapter 10 and presented in Section 38.2.3.1 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with marine geology, oceanography and physical processes.
	Marine Water and Sediment Quality: The CEA undertaken in Section 11.9 of Chapter 11 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with marine water and sediment quality.
	Intertidal and Subtidal Ecology: The CEA undertaken in Section 12.9 of Chapter 12 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with intertidal and subtidal ecology.
	Fish and Shellfish Ecology: The CEA undertaken in Section 13.9 of Chapter 13 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with fish and shellfish ecology.
	Marine Mammals: The CEA undertaken in Section 14.9 of Chapter 14 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with marine mammals
	Intertidal and Offshore Ornithology: The CEA undertaken in Section 15.9 of Chapter 15 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with intertidal and offshore ornithology.
	Commercial Fisheries: The CEA undertaken in Section 16.9 of Chapter 16 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with commercial fisheries.
	Shipping & Navigation: The CEA undertaken in Section 17.9 of Chapter 17 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with shipping and navigation.
	Offshore Archaeology and Cultural Heritage: The CEA undertaken in Section 18.9 of Chapter 18 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with offshore archaeology and cultural heritage as there are no projects which were screened into Stage 3 and 4.
	Aviation & Radar: The CEA undertaken in Section 19.9 of Chapter 19 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with aviation and radar.

Potential Cumulative Effects on Environmental Factors	
	Infrastructure and Other Users: The CEA undertaken in Section 20.9 of Chapter 20 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with infrastructure and other users.
	Offshore Bats: The CEA undertaken in Section 35.9 of Chapter 35 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with offshore bats.
	Land and Soils: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with onshore land and soils.
	Water: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with water (onshore).
	Biodiversity: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with biodiversity (onshore).
	Traffic and Transport: There are likely to be negative, significant but temporary residual effects from the proposed development alone during construction due to road closures on local and strategic diversion routes. As a result, the CEA undertaken in Section 38.2.3 presents an outcome of likely significant temporary negative cumulative effects during the construction stage. No likely significant effects are predicted for the operation and decommissioning stages.
	Archaeological, Architectural and Cultural Heritage: The CEA undertaken in in Section 38.2.3.16 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with archaeological, architectural and cultural heritage (onshore).
	Material Assets: The CEA undertaken in Section 38.2.3 presents an outcome of a positive, significant and long-term cumulative effects arising with renewable energy projects and MaresConnect on the national electricity supply (due to the combined generation/connection of renewable energy into the grid).
	Air Quality: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with air quality.
	Climate: The CEA undertaken in Section 38.2.3 presents an outcome of a significant beneficial impact on climate due to the proposed development alone is predicted to occur over its lifecycle. Thus, there is no potential for adverse cumulative impacts associated with any project identified on the "long list". For renewable energy projects, a significant beneficial cumulative effect is anticipated due to the combined reduction in greenhouse gas emissions compared to emissions from non-renewable power plants. On that basis, no adverse residual impacts will arise.
	Seascape, Landscape and Visual Impact Assessment: The CEA undertaken in Section 29.9 of Chapter 29 notes that the assessment concluded that the greatest significance of effect on the seascape and landscape of the area, and on visual amenity, will be major to moderate negative, which is not significant in EIA terms. The cumulative effect assessment carried out for the Seascape, Landscape and Visual Chapter concluded that though there is Negligible or Low-negligible contribution of the proposed development to the overall cumulative effect from the southerly viewpoints (VP36 to VP47), it is acknowledged that a significant cumulative effect is generated at these viewpoints predominantly in relation to other projects. The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with landscape and visual.

Potential Cumulative Effects on Environmental Factors	
	Noise: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects for the impacts assessed on receptors associated with noise.
	Resource and Waste Management: Whilst it is noted that the proposed development has a negative, moderate construction phase effect (which is not significant in EIA terms), the CEA undertaken in Section 38.2.3 presents an outcome of a direct, negative, significant and short-term cumulative effect on the capacity of waste management facilities and waste industry trends in Ireland during the construction phase due to an increased demand on waster recovery and/or disposal sites in combination with several of the screened-in projects.
	Population and Human Health: The CEA undertaken in Section 38.2.3 presents an outcome of likely significant negative but temporary cumulative effects for the impacts assessed on receptors associated with population and human health due to significant negative cumulative traffic effects predicted with the proposed development alone.
	Socio-Economic, Tourism and Recreation: The CEA undertaken in Section 38.2.3 presents an outcome of a cumulative positive, significant and long-term effect given that Projects 2-5 will also each be providing a Community Benefit Fund and employment. The CEA also concluded that there will be no significant residual effect arising from the Phase One Projects (Projects 2-5) in combination with the proposed development on tourism and recreation.
	Major Accidents and Disasters: The CEA undertaken in Section 38.2.3 presents an outcome of no likely significant cumulative effects with the potential to cause a major accident or disaster or result in the proposed development being vulnerable to a major accident or disaster during the construction, operation or decommissioning phases of the proposed development.

There are no other changes required to this section. Refer to Section 36.28.4 in Chapter 36 of the 2024 EIAR.

36.28.5 Likely Significant Residual Transboundary Effects

There are no changes to this section. Refer to Section 36.28.5 of Chapter 36 of the 2024 EIAR.