

## Oriel Wind Farm Project

# Directory of Responses to Request for Further Information



# **ORIEL WIND FARM PROJECT**

## **Directory of Responses to Request for Further Information**

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## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### Contents

<b>DIRECTORY OVERVIEW .....</b>	<b>1</b>
Structure of Response to Further Information (RFI).....	1
Approach to preparing further information .....	2
EIAR Addendum .....	2
NIS Addendum .....	10
Report to Inform Screening for Appropriate Assessment – Addendum .....	10
Summary of Project changes .....	13
<b>1 GENERAL MATTERS.....</b>	<b>14</b>
<b>2 SEARCH AND RESCUE REQUIREMENTS – SITE LAYOUT .....</b>	<b>17</b>
<b>3 NATIONAL MARINE PLANNING FRAMEWORK POLICIES: HABITATS AND NOISE .....</b>	<b>18</b>
<b>4 ECOSYSTEM FUNCTIONS AND SERVICES ASSESSMENT .....</b>	<b>20</b>
<b>5 CUMULATIVE IMPACT .....</b>	<b>21</b>
<b>6 MARINE PROCESSES .....</b>	<b>23</b>
<b>7 ORNITHOLOGY.....</b>	<b>28</b>
<b>8 BENTHIC SUBTIDAL AND INTERTIDAL ECOLOGY .....</b>	<b>37</b>
<b>9 MARINE MAMMALS AND MEGAFUNA .....</b>	<b>39</b>
<b>10 FISH AND SHELLFISH ECOLOGY .....</b>	<b>49</b>
<b>11 COMMERCIAL FISHERIES.....</b>	<b>55</b>
<b>12 SEASCAPE, LANDSCAPE AND VISUAL AMENITY .....</b>	<b>56</b>
<b>13 MARINE ARCHAEOLOGY .....</b>	<b>58</b>
<b>14 BATS IN THE MARINE ENVIRONMENT .....</b>	<b>59</b>
<b>15 SHIPPING AND NAVIGATION.....</b>	<b>61</b>
<b>16 AVIATION, MILITARY AND COMMUNICATION .....</b>	<b>62</b>
<b>17 TRANSBOUNDARY CONSULTATION.....</b>	<b>63</b>
<b>18 ROADS AND TRAFFIC .....</b>	<b>64</b>
<b>19 ONSHORE BIODIVERSITY .....</b>	<b>65</b>

### Tables

Table 1: EIAR and EIAR Addendum structure. ....	4
Table 2: NIS and NIS Addendum structure. ....	11
Table 3: Planning Report and Planning Report Addendum structure. ....	12
Table 1-1: Further information requested on General Matters and details on Applicant's response. ....	14
Table 2-1: Further information requested on Search and Rescue Requirements - Site Layout and details on Applicant's response. ....	17
Table 3-1: Further information requested on National Marine Planning Framework Policies and details on Applicant's response. ....	18
Table 4-1: Further information requested on Ecosystem Functions and Services Assessment and details on Applicant's response. ....	20
Table 5-1: Further information requested on Cumulative Impacts and details on Applicant's response .....	21

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

---

Table 6-1: Further information requested on Marine Processes and details on Applicant's response. ....	23
Table 7-1: Further information requested on Ornithology and details on Applicant's response. ....	28
Table 8-1: Further information requested on Benthic Subtidal and Intertidal Ecology and details on Applicant's response .....	37
Table 9-1: Further information requested on Marine Mammals and Megafauna and details on Applicant's response .....	39
Table 10-1: Further information requested on Fish and Shellfish Ecology and details on Applicant's response.....	49
Table 11-1: Further information requested on Commercial Fisheries and details on Applicant's response.....	55
Table 12-1: Further information requested on Seascape, Landscape and Visual Amenity and details on Applicant's response. ....	56
Table 13-1: Further information requested on Marine Archaeology and details on Applicant's response.....	58
Table 14-1: Further information requested on Bats in the Marine Environment and details on Applicant's response .....	59
Table 15-1: Further information requested on Shipping and Navigation and details on Applicant's response.....	61
Table 16-1: Further information requested on Aviation, Military and Communication and details on Applicant's response .....	62
Table 17-1: Further information requested on Transboundary Consultation and details on Applicant's response.....	63
Table 18-1: Further information requested on Roads and Traffic and details on Applicant's response. ....	64
Table 19-1: Further information requested on Onshore Biodiversity and details on Applicant's response.....	65

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

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### DIRECTORY OVERVIEW

Oriel Windfarm Limited (hereafter referred to as “the Applicant”) acknowledges receipt of the letter from An Coimisiún Pleanála (ACP) (formerly An Bord Pleanála (ABP) dated 10 April 2025 with regard to a request for further information (RFI) on the application for planning permission for the Oriel Wind Farm Project (hereafter referred to as “the Project”) (case reference: ABP-319799-24) which was submitted to ABP on 24 May 2024.

The ‘Schedule - Further Information Request’ attached to ACP’s correspondence listed further information requested under 19 topics. This report serves as a ‘Directory’ that outlines the information requested by ACP and provides references to the specific documents prepared by the Applicant in response to those requests. (see sections 1-19). The Directory also identifies where further information has led to changes / updates to the application documents.

Submissions from statutory consultation were received by ACP during the eight-week statutory consultation period which ran from 4 June 2024 to 30 July 2024. A separate document has been prepared to provide the Applicant’s response to the issues raised in the submissions (see Submissions Response Report).

### Structure of Response to Further Information (RFI)

The Applicant has prepared the following documents to provide the further information in response to the RFI:

- Directory of Responses to Request for Further Information (i.e. this report);
- Planning Report Addendum (2025);
- Planning Drawings and an updated Drawing Schedule (2025);
- EIAR Addendum (2025);
- Report to Inform Screening for Appropriate Assessment (2025);
- NIS Addendum (2025); and
- Response to Submissions Report (2025).

A number of planning drawings have been updated as a result of minor changes to the proposed design. The updated Drawing Schedule outlines which drawings have been amended.

The Directory in sections 1-19 of this report refers to these documents and the application documents.

A digital file has also been compiled to meet the requirements of Appendix A of the ‘Schedule - Further Information Request’. This includes the above documents and the following digital files as requested by ACP in the following topics listed in the ‘Schedule - Further Information Request’ :

- 3. National Marine Planning Framework Policies: Habitats & Noise – requested results in response to this item to be provided in GIS format. A cover note explaining the GIS Data is included with the digital files.
- 6.G.iii Marine Processes & Note 1 – requested results in response to this item to be provided in GIS format. A cover note explaining the GIS Data is included with the digital files.

In addition, following further consultation with the Irish Coast Guard (IRCG) in 2025, additional information provided by the Applicant as part of the post application consultation has been provided in response to the following RFI topic:

- 2. Search & Rescue Requirements – Site Layout.

A note explaining the information is also provided with the digital files.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### Approach to preparing further information

The Applicant presents the further information in response to the RFI in addenda to the following application documents:

- EIAR Addendum (2025) - Table 1 provides the EIAR and EIAR Addendum structure by volume, chapter and technical appendix. The Addendum reference is provided for each document prepared in response to the RFI. EIAR chapters and technical appendices for which no additional information was provided are shown in grey text.
  - Further details on the approach to presenting the additional information for the EIAR is outlined below.
- NIS Addendum (2025) - Table 2 provides the NIS and NIS Addendum structure by appendix.
  - Further details on the approach to presenting the additional information for the NIS is outlined overleaf.
- The Report to Inform Screening for Appropriate Assessment – Addendum (2025);
- Planning Report Addendum (2025) - Table 3 provides the Planning Report and Planning Report Addendum structure.

### EIAR Addendum

In the EIAR Addendum, in the chapter section titled 'Introduction', the relevant content listed in the 19 topics in the 'Schedule - Further Information Request' is presented in a table along with the Applicant's response to the item and/or a reference to where the response is provided either in the chapter Addendum and/or the supporting technical appendices (where relevant).

The EIAR Addenda use the same headings and sub-headings included in the EIAR (2024) chapters and technical appendices submitted with the application documents. In general, the Applicant includes the further information in the relevant section/subsection of the Addenda e.g. further information on survey data collected post application is included in section titled 'Baseline Environment' (e.g. section 31.7 of chapter 31 Addendum: Bats in the Marine Environment provides further information on the baseline environment collected post application. Baseline survey data is presented in section 31.7 of chapter 31 submitted with the application documents).

The Applicant includes a statement outlining that there are no changes to the chapter/technical appendix under the headings and sub-headings where no new information is provided in response to the RFI (e.g. in section 1.3 of chapter 1 Addendum: Introduction, the following statement is included 'There are no changes to EIAR chapter 1: Introduction').

It should be noted that updated reports which supersede the version included in the application documents in 2024 for the following two technical appendices are listed in Table 1:

- Appendix 5-4 Addendum: Marine Mammal Mitigation Plan - A new updated report was prepared to include the changes arising from updates to the marine mammal and megafauna assessments included in the Addenda; and
- Appendix 5-8 Addendum: Lighting and Marking Plan - A new updated report was prepared to address concerns raised in the statutory consultation and to also include updates arising from the shipping and navigation assessment included in the Addenda.

Also, the marine processes modelling study documented in appendix 7-1: Marine Processes Technical Report of the Environmental Impact Assessment Report (EIAR volume 2B) has been reproduced in its entirety (see appendix 7-1 Addendum: Marine Processes Technical Report) with the inclusion of the supplementary information. This approach was taken due to the nature of the additional information requested which involved replottting many of the figures and providing additional information throughout.

In general only new information is presented in each Addendum. However, for some documents the information in the EIAR is presented alongside the new information to give context. In this case the new information is presented as blue text. In all cases, the Applicant has explained the approach to the presentation of the new information in the document.

## Oriel Wind Farm Project – Directory of Responses to Request for Further Information

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An EIAR Non-technical summary provides a consolidated summary of the information presented in the EIAR and further information presented in an EIAR Addendum.

### EIAR Addendum - Document naming

The following naming convention has been applied to the EIAR Addendum (see Table 1).

Additional information in response to the RFI is presented as an Addendum to the relevant EIAR chapter or technical appendix. Each Addendum includes the word “Addendum” in its title/reference, as follows:

Chapter: chapter [no.] Addendum: “Chapter title” — e.g. chapter 5 Addendum: Project Description

Appendix: appendix [no.] Addendum: “Appendix title” — e.g. appendix 7-1 Addendum: Marine Processes

For example, supplementary information is provided on the project description in chapter 5 Addendum: Project Description. This Addendum should be read alongside chapter 5: Project Description in the EIAR. The same approach applies for technical appendices. The same convention applies to all Addenda.

Where a new technical appendix is provided to supplement the EIAR (i.e. it was not included in the EIAR that supported the application), it is allocated the next available appendix number. For example, in the EIAR volume 2B (2024), three appendices (10-1 to 10-3) support chapter 10: Marine Mammals and Megafauna. Additional appendices are required to provide supplementary information to the assessment on marine mammals and megafauna and these reports are numbered sequentially and titled 10-4: ‘Title’, 10-5 ‘Title’, etc.

To assist the reader, references to EIAR chapters and technical appendices included in the 2024 application use the volume labels ‘EIAR volume 2A’, ‘EIAR volume 2B’ and ‘EIAR volume 2C’. For example: chapter 5: Project Description (EIAR volume 2A).

References to Addenda and newly prepared technical appendices use the corresponding addendum label: ‘volume 2A Addendum’, ‘volume 2B Addendum’ and ‘volume 2C Addendum’. For example: chapter 5 Addendum: Project Description (EIAR volume 2A Addendum); and appendix 10-5: Appendix 10-5: Underwater Noise Monitoring Experience – Supporting Information (EIAR volume 2B Addendum).

It should also be noted that Addenda have also been prepared where pertinent new information has been published e.g. updated policy that has been published since the application was submitted to ABP (in May 2024). For example, appendix 5-2 Addendum: Annex 2 Marine Pollution Contingency Plan (in EIAR volume 2A Addendum) outlines the updated guidance on safety of navigation and emergency response for offshore renewable energy installations and the Standard Operating Procedure 07-2025 Offshore Renewable Energy Installations (OREI, 2025).

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

**Table 1: EIAR and EIAR Addendum structure.**

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
1			Non-Technical Summary	Yes	Non-Technical Summary – Consolidated Update Incorporating Addendum
2A	1		Introduction	Yes	Chapter 1 Addendum: Introduction
	2		Policy and Legislation	No	N/A
	3		Environmental Impact Assessment Methodology	No	N/A
		3-1	Cumulative Impact Assessment Screening Annex	No	N/A
		-	-	Yes - new appendix provided	Appendix 3-2: Cumulative Impact Assessment Report
	4		Consideration of Alternatives	No	N/A
		4-1	Preliminary Landscape Assessment of Design Options	No	N/A
		4-2	Landfall Options – Survey Report	No	N/A
	5		Project Description	Yes	Chapter 5 Addendum: Project Description
		5-1	Construction Environmental Management Plan	Yes	Appendix 5-1 Addendum: Construction Environmental Management Plan
		5-2	Environmental Management Plan	Yes	Appendix 5-2 Addendum: Environmental Management Plan (including Annex 2 Addendum: Marine Pollution Contingency Plan)
		5-3	Marine Invasive Non-Indigenous Species Management Plan	No	N/A
		5-4	Marine Megafauna Mitigation Plan	Yes	Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan <sup>1</sup>
		5-5	Marine Megafauna: Vessel Code of Conduct	No	N/A
		5-6	Fisheries Management and Mitigation Strategy	No	N/A
		5-7	Emergency Response Co-operation Plan	No	N/A

<sup>1</sup> The updated MMMP replaces the version in the EIAR (2024).



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
		5-8	Lighting and Marking Plan	Yes	Appendix 5-8 Addendum: Updated Lighting and Marking Plan <sup>2</sup>
		5-9	Construction Traffic Management Plan	Yes	Appendix 5-9 Addendum: Construction Traffic Management Plan
		5-10	Marine Archaeological Management Plan	No	N/A
		5-11	Supporting Information Demonstrating the Applicant's Experience on Other Offshore Wind Farm Projects	No	N/A
		5-12	Construction Methodology – Onshore Cable	Yes	Appendix 5-12 Addendum: Construction Methodology – Onshore Cable
		5-13	UXO Desk Study	Yes	Appendix 5-13 Addendum: UXO Desk Study
		5-14	Cable Rating Report	No	N/A
		5-15	Engineering Services Report – Onshore Substation	No	N/A
		-	-	Yes – new appendix provided	Appendix 5-16: Monitoring Programme
	6		Consultation	No	N/A
	6-1		Public and Other Stakeholders Consultation Report	No	N/A
2B	7		Marine Processes	Yes	Chapter 7 Addendum: Marine Processes
		7-1	Marine Processes Technical Report	Yes	Appendix 7-1 Addendum: Marine Processes Technical Report
		7-2	Water Framework Directive Assessment Report	No	N/A
	8		Benthic Subtidal and Intertidal Ecology	Yes	Chapter 8 Addendum: Benthic Subtidal and Intertidal Ecology
		8-1	Intertidal Phase 1 Report	No	N/A
		8-2	Benthic Survey Report	No	N/A
		-	-	Yes – new appendix provided	Appendix 8-3: Sediment Chemistry Results

<sup>2</sup> The updated LMP replaces the version in the EIAR (2024).

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
		-	-	Yes – new appendix provided	Appendix 8-4: Benthic Ecology 2025 Survey Report
	9		Fish and Shellfish Ecology	Yes	Chapter 9 Addendum: Fish and Shellfish Ecology
	-	9-1	Fish and Shellfish Ecology Technical Report	No	N/A
	-	9-2	Herring Spawning Technical Report	No	N/A
	10		Marine Mammals and Megafauna	Yes	Chapter 10 Addendum: Marine Mammals and Megafauna
	-	10-1	Marine Mammals and Megafauna Technical Report	No	N/A
	-	10-2	Subsea Noise Technical Report	No	N/A
	-	10-3	Marine Mammal Population Modelling Report (iPCOD)	No	N/A
	-	-	-	Yes – new appendix provided	Appendix 10-4: Updated Subsea Noise Modelling Report
	-	-	-	Yes – new appendix provided	Appendix 10-5: Underwater Noise Monitoring Experience – Supporting Information
	-	-	-	Yes – new appendix provided	Appendix 10-6: NAS Modelling Report
	-	-	-	Yes – new appendix provided	Appendix 10-7: NAS Technical Report - Marine Mammals, Megafauna and Fish
	-	-	-	Yes – new appendix provided	Appendix 10.8: Comprehensive Review of Relevant Mitigation (Noise Abatement)
	-	-	-	Yes – new appendix provided	Appendix 10-9: Seal Survey Report
	-	-	-	Yes – new appendix provided	Appendix 10-10: Cumulative iPCoD Modelling Report
	11		Offshore Ornithology	Yes	Chapter 11 Addendum: Offshore Ornithology
		11-1	Offshore Ornithology Technical Report	No	N/A
		11-2	Ornithological and Marine Megafauna Aerial Survey Results	No	N/A
		11-3	Migratory Geese Survey Report	No	N/A
		11-4	Offshore Ornithology Collision Risk Modelling	No	N/A
		11-5	Offshore Ornithology Displacement Analysis	No	N/A

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
		11-6	Offshore Ornithology Migratory Non-Seabirds Collision Risk Modelling	No	N/A
		11-7	Offshore Ornithology Apportioning Impacts to Individual Colonies	No	N/A
		-	-	Yes – new appendix provided	Appendix 11-8: Aerial Survey Data Comparison
		-	-	Yes – new appendix provided	Appendix 11-9: mCRM
	12		Commercial Fisheries	Yes	Chapter 12 Addendum: Commercial Fisheries
		12-1	Commercial Fisheries Technical Report	No	N/A
	13		Shipping and Navigation	Yes	Chapter 13 Addendum: Shipping and Navigation
		13-1	Navigation Risk Assessment	No	N/A
		-	-	Yes – new appendix provided	Appendix 13-2: Safety Justification for Single Line of Orientation
				Yes – new appendix provided	Appendix 13-3: Response to Department of Transport (MSO)
	14		Aviation, Military, and Communications	Yes	Chapter 14 Addendum: Aviation, Military, and Communications
		14-1	Aviation Technical Report	No	N/A
		14-2	Communications Technical Report	No	N/A
		-	-	Yes – new appendix provided	Appendix 14-3: Communications Navigation and Surveillance (CNS) Technical Assessment Report (Radar Line of Site)
	15		Marine Archaeology	Yes	Chapter 15 Addendum: Marine Archaeology
		15-1	Marine Archaeology Technical Report	No	N/A
				Yes – new appendix provided	Appendix 15-2: Intertidal Archaeological Survey Report
		-	-	Yes – new appendix provided	Appendix 15-3: Marine Geophysical Surveys 2022 - Archaeological Interpretation Report
	16		Infrastructure, Marine Recreation and Other Users	No	N/A

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
2C	17		Climate	Yes	Chapter 17 Addendum: Climate <sup>3</sup>
	18		Population and Human Health	No	N/A
		18-1	Population and Human Health Baseline Information	No	N/A
	19		Onshore Biodiversity	Yes	Chapter 19 Addendum: Onshore Biodiversity
		19-1	Onshore Biodiversity – Supporting Information	Yes	Appendix 19-1 Addendum: Onshore Biodiversity – Supporting Information
		19-2	Intertidal Bird Survey and Onshore Bird Survey Reports	No	N/A
		19-3	Terrestrial Habitat Balance Sheet	Yes	Appendix 19-3 Addendum: Terrestrial Habitat Balance Sheet
	20		Land and Agriculture	No	N/A
	21		Soil, Geology and Hydrogeology	Yes	Chapter 21 Addendum: Soil, Geology and Hydrogeology
		21-1	Coastal Erosion Assessment Report	Yes	Appendix 21-1 Addendum: Coastal Erosion Assessment Report
	22		Hydrology and Flood Risk	No	N/A
		22-1	Flood Risk Assessment	No	N/A
	23		Air Quality	No	N/A
	24		Risk of Major Accidents and Natural Disasters	Yes	Chapter 24 Addendum: Risk of Major Accidents and Natural Disasters
	25		Noise (Airborne) and Vibration	Yes	Chapter 25 Addendum: Noise (Airborne) and Vibration
		25-1	Baseline Noise Monitoring Results	No	N/A
		25-2	Noise Modelling Methodology	No	N/A
	26		Cultural Heritage	Yes	Chapter 26 Addendum: Cultural Heritage
		26-1	Cultural Heritage Report	No	N/A
	27		Seascape, Landscape and Visual Amenity	Yes	Chapter 27 Addendum: Seascape, Landscape and Visual Amenity
		27-1	Seascape, Landscape and Visual Amenity – Accompanying Graphics	Yes	Appendix 27-1 Addendum: Seascape Landscape and Visual Amenity – Accompanying Graphics

<sup>3</sup> No specific information relating to climate was requested in the RFI, however the Applicant has provided this Addendum in light of the publication of updated policy

**ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION**

Volume	Chapter no.	Appendix no.	EIAR 'Title'	Further Information Provided?	EIAR Addendum 'Title'
		-	-	Yes – new appendix provided	Appendix 27-2: World Heritage Site Assessment
	28		Traffic and Transport	Yes	Chapter 28 Addendum: Traffic and Transport
		28-1	Traffic Survey Data	No	N/A
				Yes – new appendix provided	Appendix 28-2: Road Safety Audit
		-	-	Yes – new appendix provided	Appendix 28-3: Design Report
		-	-	Yes – new appendix provided	Appendix 28-4: Technical Note on Cable Construction at M1
	29		Material Assets	No	N/A
	30		Resource and Waste Management	No	N/A
	31		Bats in the Marine Environment	Yes	Chapter 31 Addendum: Bats in the Marine Environment
		31-1	Offshore Bat Survey Technical Report	No	N/A
		-	-	Yes – new appendix provided	Appendix 31-2: Offshore Bat Survey (Autumn Migration 2024) Report
		-	-	Yes – new appendix provided	Appendix 31-3: Offshore Bat Survey (Spring Migration 2025) Report
	32		Interactions	No	N/A

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

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### NIS Addendum

In the NIS Addendum, in the section titled 'Introduction', the relevant content listed in the 19 topics in the 'Schedule - Further Information Request' is presented in a number of tables along with the Applicant's response to the item and/or a reference to where the response is provided either in the NIS Addendum and/or the supporting technical appendices (where relevant).

The NIS Addendum uses the same headings and sub-headings included in the NIS and technical appendices submitted with the application documents. In general, the Applicant includes the further information in the relevant section/subsection of the Addenda e.g. further information on the screening process is included in section titled 'Stage 1 Summary and findings of the report to inform screening for appropriate assessment (section 4 of NIS Addendum).

The Applicant includes a statement outlining that there are no changes to the chapter/technical appendix under the headings and sub-headings where no new information is provided in response to the RFI (e.g. in section 1.2 'Legislative context' of the NIS Addendum, the following statement is included 'There are no changes to the Natura Impact Statement).

Also, the marine processes modelling study documented in appendix B: Marine Processes Technical Report of the NIS (2024) has been reproduced in its entirety (see appendix B Addendum: Marine Processes Technical Report) with the inclusion of the supplementary information. This approach was taken due to the nature of the additional information requested which involved replottting many of the figures and providing additional information throughout.

In general only new information is presented in the Addenda. However, for some sections the information in the NIS is presented alongside the new information to give context. In this case the new information is presented as blue text. In all cases, the Applicant has explained the approach to the presentation of the new information in the document.

### NIS Addendum - Document naming

The following naming convention has been applied to the NIS Appendices (see Table 2).

Additional information in response to the RFI is presented as an Addendum to the relevant NIS technical appendix. Each Addendum includes the word "Addendum" in its title/reference, as follows:

Appendix: appendix [no.] Addendum: "Appendix title" — e.g. appendix E Addendum: Fish and Shellfish Ecology Supporting Information

One new report has been included as appendix L: Cumulative iPCoD Modelling Report. Also, a new Annex 1 is included in appendix F Addendum. Marine Mammal and Megafauna – Supporting Information and a new Annex 9 is included in Appendix H: Offshore Ornithology – Supporting Information.

### Report to Inform Screening for Appropriate Assessment – Addendum

In the Report to Inform Screening for Appropriate Assessment - Addendum, in the section titled 'Introduction', the relevant content listed in the 19 topics in the 'Schedule - Further Information Request' is presented in table along with the Applicant's response to the item and/or a reference to where the response is provided either in the Report to Inform Screening for Appropriate Assessment – Addendum.

The Report to Inform Screening for Appropriate Assessment - Addendum uses the same headings and sub-headings included in the Report to Inform Screening for Appropriate Assessment submitted with the application documents. In general, the Applicant includes the further information in the relevant section/subsection of the Addenda e.g. further information on the screening process is included in section titled 'Stage 1 Screening Appraisal to inform screening for appropriate assessment (section 4).

The Applicant includes a statement outlining that there are no changes to the report under the headings and sub-headings where no new information is provided in response to the RFI (e.g. in section 1.2 'Legislative context' of the NIS Addendum, the following statement is included 'There are no changes to the Natura Impact Statement).



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

**Table 2: NIS and NIS Addendum structure.**

NIS	Appendix no.	Appendix 'Title'	Further Information Provided?	NIS Addendum 'Title'
NIS	A	Report to Inform Screening for Appropriate Assessment	Yes	Appendix A Addendum: Report to Inform Screening for Appropriate Assessment
NIS	B	Marine Processes Technical Report	Yes	Appendix B Addendum: Marine Processes Technical Report
NIS	C	Subsea Noise Technical Report	Yes	<ul style="list-style-type: none"> <li>Appendix C-1 Addendum: Updated Subsea Noise Modelling Report<sup>4</sup></li> <li>Appendix C-2 Addendum: NAS Modelling Report</li> <li>Appendix C-3 Addendum: NAS Comparison Technical Note - Marine Mammals, Megafauna and Fish</li> <li>Appendix C-4 Addendum: Comprehensive Review of Relevant Mitigation (Noise Abatement) &amp; Thresholds</li> </ul>
NIS	D	Benthic Subtidal and Intertidal Ecology – Supporting Information	No <sup>5</sup>	N/A
NIS	E	Fish and Shellfish Ecology – Supporting Information	Yes	Appendix E Addendum: Fish and Shellfish Ecology – Supporting Information
NIS	F	Marine Mammal and Megafauna – Supporting Information	Yes	Appendix F Addendum: Marine Mammal and Megafauna – Supporting Information This Addendum now also includes: <ul style="list-style-type: none"> <li>Annex 1: Seal Survey Report</li> </ul>
NIS	G	Marine Mammals and Megafauna – Technical Report	No	N/A
NIS	H	Offshore Ornithology – Supporting Information	Yes	Appendix H Addendum: Offshore Ornithology – Supporting Information This Addendum also includes: <ul style="list-style-type: none"> <li>Annex 8 Addendum: Offshore Ornithology Population Viability Analysis; and</li> <li>Annex 9: Migratory Collision Risk Modelling (Phase 1 Projects Cumulative Assessment)</li> </ul>

<sup>4</sup> Updated subsea noise modelling has been completed and is included in appendix C-1 Addendum: Updated Subsea Noise Modelling Report. Further modelling has also been undertaken to model Noise Abatement Systems in appendix C-2 Addendum: NAS Modelling Report.

<sup>5</sup> RFI 8 Benthic Subtidal & Intertidal Ecology outlined a number of points relating to the EIAR. These points were not considered relevant to the NIS Addendum and have therefore been addressed in the EIAR Addendum only.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

NIS	Appendix no.	Appendix 'Title'	Further Information Provided?	NIS Addendum 'Title'
NIS	I	Onshore Biodiversity – Supporting Information	Yes	Appendix I Addendum: Onshore Biodiversity – Supporting Information
NIS	J	Screening In-Combination Effects	Yes	Appendix J Addendum: Screening In-Combination Effects
NIS	K	Management Plans:		Appendix K Addendum: Management Plans:
	5-1	Construction Environmental Management Plan	Yes	<ul style="list-style-type: none"> <li>Appendix 5-1 Addendum: Construction Environmental Management Plan</li> </ul>
	5-2	Environmental Management Plan	Yes	<ul style="list-style-type: none"> <li>Appendix 5-2 Addendum: Environmental Management Plan</li> </ul>
	5-3	Marine Invasive Non-Indigenous Species Management Plan	No	N/A
	5-4	Marine Megafauna Mitigation Plan	Yes	<ul style="list-style-type: none"> <li>Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan</li> </ul>
	5-5	Marine Megafauna: Vessel Code of Conduct	No	N/A
-	-	-	Yes – new appendix provided	Appendix L: Cumulative iPCoD Modelling Report

**Table 3: Planning Report and Planning Report Addendum structure.**

Planning Report	Appendix no.	Appendix 'Title'	Further Information Provided?	Addendum 'Title'
Planning Report	A	National Marine Planning Framework (NMPF) Compliance Report	Yes	Appendix A Addendum: National Marine Planning Framework (NMPF) Compliance Report This report includes one new Annex: Annex 1 - Ecosystem Functions and Services Assessment Report
Planning Report	B	Location Maps of Updated Planning History	Yes	Appendix B Addendum: Location Maps of Updated Planning History

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

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### Summary of Project changes

In response to the RFI the Applicant has made the following minor amendments to the Project:

1. Changes to the alignment of the onshore cable route within the subject planning application boundary from the M1 to the onshore substation.
2. Minor relocation of temporary construction compound 3 M1/Railway, located west of the M1 and the associated access. Also minor relocation of temporary access to temporary construction compound 2 River Dee at Richardstown (west).
3. Reconfiguration of existing access to onshore substation to TII standards to ensure no right turns onto/off the N33 (i.e. Left In-Left Out).
4. Minor changes to the location of the Transition Joint Bay (TJB) (options 1 and 2) at Dunany and along the onshore cable route within the planning application boundary.

These changes are referred to in sections 1-19 below.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

# 1 GENERAL MATTERS

**Table 1-1: Further information requested on General Matters and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
1.A	<i>"In providing its response to the matters raised in this request for Further Information, the applicant is requested to clearly annotate any amendments to the EIAR, NIS and other documentation submitted insofar as amendments are necessary and cross reference revised/new information across the submitted documentation, as appropriate. It is requested that all changes are clearly identified."</i>	<p>All matters 1-19 of the RFI have been addressed. The structure of the Applicant's responses is outlined in the 'overview' above. The approach taken regarding the naming of documents is also outlined above.</p> <p>All amendments to the EIAR, NIS and other documentation submitted have been clearly annotated. Revised/new information across the submitted documentation has been cross referenced as appropriate.</p> <p>Chapter 1 Addendum: Introduction (EIAR volume 2A Addendum) and the NIS Addendum (section 1.4) include tables showing the structure of the EIAR and NIS Addenda respectively.</p> <p>This <i>Directory of Responses to Request for Further Information</i> report provides a response or a directory to the response for each RFI. This response in most instances directs the reader to the more detailed response provided in the enclosed documentation.</p> <p>Where the Response to the RFI has impacted on other assessments and documentation these revisions are identified in the column titled 'Further information results in changes / updates to other assessments / documents' in each table.</p>	Not Applicable
1.B	<i>"The scientific information provided as part of the planning application documentation should be based on up-to-date ecological 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."</i>	<p>The Applicant confirms that the information submitted in support of the planning application remains relevant and appropriate at the point of submitting this response.</p> <p>Data validity and limitations associated with the assessment of each topic have been reviewed under the section titled 'Baseline Environment' in each assessment chapter included in the EIAR Addendum. Justification has been provided as to why the information remains relevant and appropriate. Any update to the data validity or limitations has been stated in the relevant chapter.</p>	Not Applicable
1.C	<i>"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 update the planning application documentation, as appropriate."</i>	<p>Further surveys have been completed as described in the section titled 'Site-specific surveys' in the following EIAR chapter Addenda:</p> <ul style="list-style-type: none"> <li>• Chapter 8 Addendum: Benthic Subtidal and Intertidal Ecology;</li> <li>• Chapter 10 Addendum: Marine Mammals and Megafauna;</li> <li>• Chapter 11 Addendum: Offshore Ornithology;</li> </ul>	Additional relevant survey data on Qualifying Interests are also examined in the NIS Addendum.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
		<ul style="list-style-type: none"> <li>Chapter 15 Addendum: Marine Archaeology;</li> <li>Chapter 19 Addendum: Onshore Biodiversity.</li> <li>Chapter 27 Addendum: Seascape, Landscape and Visual Amenity; and</li> <li>Chapter 31 Addendum: Bats in the Marine Environment.</li> </ul> <p>The results from these further surveys are included in the above Addenda which have been considered and assessed as appropriate. In addition appendix 15-3: Marine Geophysical Surveys 2022 - Archaeological Interpretation Report (EIAR volume 2B Addendum) provides the results of an archaeological assessment of geophysical data. Further details are outlined in chapter 15 Addendum: Marine Archaeology (EIAR volume 2B Addendum)</p>	
1.D	<i>"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 monitoring programme should fully inform the requirements of any future decommissioning plans and justify any adaptive mitigation measures required. Proposed operational monitoring should be provided at appropriate intervals, for appropriate periods, and provide for adequate reporting to the relevant compliance authorities."</i>	A monitoring programme is included as appendix 5-16 of EIAR volume 2A Addendum. It provides an over-arching framework by which the Applicant will monitor the response of marine receptors to the Project across its lifetime (including operational and maintenance phase and during decommissioning).	No impact or changes to assessments / documents as a result of this response.
1.E	<i>"Having regard to sections 5.3 and 5.4 of the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, August 2018 (2018 Guidelines), and the volume of documentation comprising the planning application, the applicant is requested, insofar as is possible, to ensure that all text in the soft/digital copy documentation is fully searchable."</i>	All text in the planning application and the response to further information is fully searchable.	Not Applicable
1.F	<p><i>"In relation to the MAC boundary, the applicant is requested to confirm the following, having regard to the provisions of sections 286(3) and (4) of the Planning and Development Act 2000 (as amended) (2000 Act):</i></p> <p><i>i. the temporary construction activities (including, inter alia, turbine installation) required to undertake the proposed</i></p>	The Applicant confirms that having regard to the provisions of sections 286(3) and (4) of the Planning and Development Act 2000 (as amended) (2000 Act): the temporary construction activities (including, <i>inter alia</i> , turbine installation) required to undertake the proposed development in the maritime area will be undertaken within the Consent Area identified in Appendix 1 of the Maritime Area Consent (No. 2022-MAC-001) granted to Oriel Windfarm Limited (the MAC Area).	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>development in the maritime area are to be undertaken within the spatial representation (map) of the MAC consent area,</i></p> <p>ii. <i>that all permanent development (including blade sweep) can be accommodated within the spatial representation (map) of the MAC consent area,</i></p> <p><i>how the design flexibility approved by the Board with respect to the siting of turbines will interact with the MAC consent area.”</i></p>	<p>The Applicant also confirms that all permanent development (including blade sweep) falls within the MAC Area. The design flexibility accorded to the Project by ACP in the opinion given under Section 287A of the 2000 Act (as amended) of lateral deviation for the final exact location of each offshore wind turbine and the offshore substation will not result in activities (including blade sweep) outside the MAC Area.</p>	
1.G	<p><i>“The Board notes that the drawing numbers on the submitted Drawing Schedule, including 18 relating to the offshore infrastructure, 15 relating to the onshore cable drawings and 1 relating to the onshore substation drawings, do not correlate with the drawing numbers on the hard and soft copies. As an example, the drawing for Proposed Search and Rescue Access Corridors is noted as ORI-00-0009-SAR-A1_1.0-100 as per schedule, while both the hard and soft copies of the same drawing are numbered as ORI-00-0009-SEARCH-AND-RESCUE-ACCESS-CORRIDORS-A1_2.0-100. In the main, the difference seems to relate to a drawing version. The applicant is invited to confirm in writing that the appropriate versions of the drawings have been submitted to the Board, and it is requested that the applicant update the drawing schedule with the full and correct drawing numbers and titles where relevant to ensure clarity.”</i></p>	<p>The Applicant confirms that the appropriate versions of the drawings were submitted as part of the planning application in 2024.</p> <p>An updated drawing schedule has been appended to the cover letter for this Response to the RFI. The drawing schedule has been updated to correct errors in the drawing naming and title (these changes are shown in blue).</p> <p>It should be noted that as part of the Applicant’s response to the RFI, updated drawings detailing minor adjustments to the project design (see ‘Summary of Project changes’ above) have been prepared and form part of this response. These updated drawings are detailed in the schedule of enclosures appended to the cover letter.</p> <p>Lastly, as a result of the minor design changes to the onshore cable route along the N33 some drawings (as indicated on the schedule) have been amended to show the distance annotation for the cable route chainage only.</p>	<p>The minor changes to the Project design as outlined in the Directory Overview have been considered in the following relevant assessment chapters in the EIAR Addendum and also the NIS Addendum:</p> <ul style="list-style-type: none"> <li>• Chapter 19 Addendum: Onshore Biodiversity;</li> <li>• Chapter 21 Addendum: Soil, Geology and Hydrogeology;</li> <li>• Chapter 25 Addendum: Noise (Airborne) and Vibration); and</li> <li>• Chapter 26 Addendum: Cultural Heritage.</li> </ul>



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 2 SEARCH AND RESCUE REQUIREMENTS – SITE LAYOUT

**Table 2-1: Further information requested on Search and Rescue Requirements - Site Layout and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
2.	<i>"The Irish Coast Guard (IRCG), through the Department of Transport, 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."</i>	<p>The Applicant has consulted with the IRCG post application. Further details on the consultation with IRCG and the response to the Department of Transport and IRCG is provided in appendix 13-2: Safety Justification Case for Single Line Orientation and chapter 13 Addendum: Shipping and Navigation (EIAR volume 2B Addendum).</p> <p>The Applicant's response to the Department of Transport and the IRCG is also provided in the Response to Submissions Report.</p> <p>Finally, correspondence from the IRCG in response to consultation is included in appendix 13-2: Safety Justification Case for Single Line Orientation. As requested by the IRCG, the digital files provided to the IRCG during consultation on the safety justification are also included in the digital file enclosed with the Applicant's response to the RFI (see folder titled 2. Search &amp; Rescue Requirements – Site Layout). A cover note explaining the files is also provided.</p>	<p>No impact on other assessments, however updated mitigation for SAR requirements have been included in the following documents:</p> <ul style="list-style-type: none"> <li>• Appendix 5-2 Addendum: Environmental Management Plan;</li> <li>• Chapter 13 Addendum: Shipping and Navigation; and</li> <li>• Chapter 24 Addendum: Major Accidents and Natural Hazards.</li> </ul> <p>Also minor updates were made to appendix 5-13 Addendum: UXO Desk Study to address IRCG submission.</p>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 3 NATIONAL MARINE PLANNING FRAMEWORK POLICIES: HABITATS AND NOISE

**Table 3-1: Further information requested on National Marine Planning Framework Policies and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
3	<p><i>"The Board notes the information contained in Appendix A: National Marine Planning Framework (NMPF) – Compliance Report of the Planning Report submitted with the application, and Section 2.5.1 of the EIAR, which sets out how the project meets the requirements of the NMPF. The Board also notes the March 2024 Commission Notice on the threshold values set under the Marine Strategy Framework Directive 2008/56/EC and Commission Decision (EU) 2017/848, in particular the four thresholds established for habitat loss (D6C4), adverse effects on habitats (D6C5), impulsive noise (D11C1) and continuous noise (D11C2) listed in the Annex to this Commission Notice.</i></p> <p><i>The Board considers the use of these thresholds would assist in achieving consistency in the presentation of the results across the Irish Sea Phase 1 ORE projects, and would facilitate the assessment of the relevant NMPF policies based on EU agreed indicators and thresholds.</i></p> <p><i>The applicant is therefore requested to:"</i></p>	<p>The revised assessment regarding the compliance of the Project with the National Marine Planning Framework is included in appendix A Addendum: National Marine Planning Framework (NMPF) Compliance Report of the Planning Report Addendum.</p> <p>The GIS data (in accordance with Appendix A: Technical Notes of the Schedule – Further Information Request') supporting this assessment is enclosed in the Applicant's Response. A cover note explaining the files is also included in the digital file.</p>	No, however updates to assessments presented in the EIAR Addendum and NIS Addendum have been considered in appendix A Addendum: National Marine Planning Framework (NMPF) – Compliance Report.
3.A	<p><i>"model, map and present the areal and temporal extent of the potential impact of the proposed development for the full construction and operation campaign on the following indicators:</i></p> <ul style="list-style-type: none"> <li><i>i) the potential spatial extent of habitat lost (D6C4),</i></li> <li><i>ii) the potential spatial extent of habitat adversely effected (D6C5),</i></li> <li><i>iii) the modelled impulsive noise (D11C1) with and without abatement, and</i></li> <li><i>iv) the modelled continuous noise (D11C2)"</i> </li></ul>		
3.B	<p><i>"assess the results obtained for potential habitat loss and habitat adversely affected in A above against the</i></p>		

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p>2% thresholds established for habitat loss (D6C4) and the 25% threshold for adverse effects on habitats (D6C5) for the MSFD Celtic Seas North Inner Marine Reporting Unit, as detailed in <a href="#">Ireland's Draft Marine Strategy Part 1 Article 8, 9 and 10 report 2024</a> including its annexes, published in July 2024.”</p>		
3.C	<p>“assess the results obtained from modelled impulsive (with and without abatement) and continuous noise in A above against the relevant thresholds values for impulsive and continuous noise set out in the above referenced Commission Notice.”</p>		
3.D	<p>“incorporate the output from A, B &amp; C above, and all other relevant updates made as a result of this FI, into a revised assessment of the NMPF policies, particularly Biodiversity Policy 2, Seafloor Integrity Policies 1, 2 and 3, Fisheries Policy 5 and Underwater Noise Policy 1. This revised assessment should fully account for the distinction the NMPF places on ‘important’ species and habitats as defined on page 35 and 36 of the NMPF.”</p>		
-	<p>“The spatial extent of the modelled potential habitat loss, habitat adversely effected and impulsive and continuous noise should be provided in GIS format, see Technical NOTE Appendix A.”</p>		

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 4 ECOSYSTEM FUNCTIONS AND SERVICES ASSESSMENT

**Table 4-1: Further information requested on Ecosystem Functions and Services Assessment and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
4.	<p><i>"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 the 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."</i></p> <p><i>"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. The applicant is also requested to submit a synopsis report of the relevant impacts on ecosystem functions and services. In identifying relevant ecosystem services for assessment, including those services classified as provisioning, regulation &amp; 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' (SEMURU 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."</i></p>	<p>In response to the RFI, an <i>Ecosystems Functions and Services Assessment Report</i> has been prepared and is included as Annex 1 to appendix A Addendum: National Marine Planning Framework (NMPF) Compliance Report of the Planning Report. The report also includes a synopsis.</p>	<p>No, however updates to assessments presented in the EIAR Addendum and NIS Addendum have contributed to the ecosystem assessment.</p>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 5 CUMULATIVE IMPACT

**Table 5-1: Further information requested on Cumulative Impacts and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
5.	<p><i>"The Board notes that cumulative assessment is addressed under each topic-specific chapter in the EIAR and addressed within EIAR Appendix 3-1: Cumulative Impact Assessment Screening Annex and Chapter 32 which deals with Interactions."</i></p> <p><i>"The Marine Institute in its submission, includes commentary on the approach to cumulative effects assessment, and while there is no Irish standard methodology in relation to CEA, the Board notes that the applicant has followed the staged approach as outlined in Planning Inspectorate (PINS) (2019) Advice Note 17: Cumulative Effects Assessment Relevant to Nationally Significant Infrastructure Projects. It is advised that this Advice Note Version 2 was updated in September 2024, Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment - GOV.UK (NSIP, 2024)."</i></p> <p><i>"Following the submission of other Irish Sea Phase 1 ORE projects for planning consent, (Arklow WF (ABP-319864-24), NISA WF (ABP-319866-24), Codling Wind Park (ABP-320768-24), and Dublin Array (ABP-321992-25)), the applicant is requested to update the CIA as appropriate and confirm that the Irish Sea Phase 1 ORE projects are assessed as Tier 1 ("Other existing and, or approved development submitted applications under the Planning Acting or other regimes but not yet determined"), and all other relevant developments in the International Council for the Exploration of the Sea (ICES) Celtic Sea and Greater North Sea ecoregions as appropriate. It is further requested that the applicant confirm that the now published documentation has been fully incorporated into the cumulative impact assessment. Any updates to the</i></p>	<p>-</p> <p>The Applicant notes the update to the Guidance. See response in appendix 3-2: Cumulative Impact Assessment Report in EIAR volume 2A Addendum including Table 1-1. Appendix J Addendum: Screening In-Combination Effects in the NIS Addendum.</p> <p>Appendix 3-2: Cumulative Impact Assessment Report in EIAR volume 2A Addendum including Table 1-1. Appendix J Addendum: Screening In-Combination Effects in the NIS Addendum.</p>	<p>-</p> <p>No.</p> <p>The updated Cumulative Impact Assessment concludes that there are no changes to the conclusions of the cumulative impact assessments as outlined in the offshore and onshore assessment chapters of the EIAR (2024).</p> <p>The updated in-combination assessment in the NIS Addendum concludes that there are no changes to the conclusions of the assessment in the NIS (2024).</p>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>CIA, and in the interest of consistency and transparency, are requested be presented in a standalone document, and in accordance with the templates provided in the NSIPS guidance, namely “Appendix 1: Matrix 1 – Identification of ‘other development’ for CEA” and “Appendix 2: Matrix 1 – Assessment matrix” (see attached Appendix B).”</i></p> <p><i>“The applicant is requested to update the application documentation, if necessary and where relevant.”</i></p>	<p>Appendix 3-2: Cumulative Impact Assessment Report in EIAR volume 2A Addendum including Table 1-1.</p> <p>Appendix J Addendum: Screening In-Combination Effects in the NIS Addendum.</p>	
	<p><i>“In the interests of comprehensiveness and for ease of reference, the applicant is encouraged to liaise with the other Irish Sea Phase 1 ORE Project applicants in the preparation of the above assessment and drafting of the tables attached in Appendix B.”</i></p>	<p>The Applicant continued engagement with the other Irish Sea Phase 1 ORE Project applicants post receipt of the RFI. The applicants discussed the approach to updating the cumulative assessment and sharing of information relevant to the topic assessments.</p> <p>Appendix 3-2: Cumulative Impact Assessment Report in EIAR volume 2A Addendum including Table 1-1</p> <p>Appendix J Addendum: Screening In-Combination Effects in the NIS Addendum</p>	



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 6 MARINE PROCESSES

**Table 6-1: Further information requested on Marine Processes and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>Best Practice Methodology</b>			
<b>6.A</b>	<i>"Notwithstanding the lack of guidance relating to marine modelling for offshore wind farms in Ireland, guidance exists for marine processes modelling in terms of calibrating and validating models. Having regard to the information presented in the Marine Processes Technical Report (Appendix 7-1 of the EIAR), the Board notes that a number of the maps presented have excluded the cable corridor. In this regard, it is unclear if the modelling information presented in the submitted documentation is complete and the applicant is requested to submit the following information:"</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	The further information presented on marine processes has been examined to determine if further updates are required to assessments included in the EIAR and NIS: <ul style="list-style-type: none"> <li>• Chapter 8: Benthic Subtidal and Intertidal Ecology;</li> <li>• Chapter 9: Fish and Shellfish Ecology;</li> <li>• Chapter 10: Marine Mammals and Megafauna; and</li> <li>• Chapter 16: Infrastructure, Marine Recreation and Other Users</li> </ul> There is no impact on these assessments as a result of the Applicant's response to this RFI.
i.	<i>"Evidence that modelling has included the cable corridor and confirmation that the proposed cabling armour, scour protection, ploughing/trenching have been modelled. For completeness, please include the cable corridor in all maps."</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments, however updated marine processes modelling has been incorporated into the magnitude section of the impact assessment of chapter 9 Addendum: Fish and Shellfish Ecology (EIAR volume 2B Addendum). There was no change to the conclusions of magnitude of impact or significance of effect from chapter 9: Fish and Shellfish (EIAR volume 2B).
ii.	<i>"The EIAR identifies the RPS Irish Sea Surge model used but does not include evidence of calibration for Hydrodynamic and Wave modelling. In this regard, both statistical and time series plots displaying the validation of the models should be submitted, with a comparison of simulated data with the relevant recorded data collected in the areas of interest."</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
<b>6.B</b>	<i>"In terms of the model set-up and approach, the Board requests the submission of further information in the form of</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1.	No impact on other assessments as a result of updates in this Addendum.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>a map or description of the spatial variation of bed friction values used in the models.”</i>	Appendix 7-1 Addendum: Marine Processes Technical Report.	
6.C	<i>“The Western Irish Sea Gyre has not been referenced in the baseline modelling. The applicant is requested to consider the potential impacts to the hydrodynamics of the Gyre, including potential cumulative impacts associated with the project, across all phases of the project.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
<b>Sensitivity Analysis</b>			
6.D	<i>“The limited range of wind, wave and tidal conditions simulated in the modelling does not appropriately consider the sensitivity of the area. There is no assessment of extreme events 10%, 5%, 2%, 1%, 0.5%, 0.2%, annual exceedance probability (AEP) events or the consideration of joint probability occurrences of tidal, surge and wave events. The applicant is requested to assess these probabilities in modelling scenarios and provide for climate change.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
<b>Sediment Transport and Modelling</b>			
6.E	<i>“In terms of the sediment transport modelling and having regard to the bed sediments within the project area, the modelling which simulates finer particles and flocculation is requested to assess the impact on mud transport in both the short-term and long-term (morphological) time scales. It is further noted that the results plots identified are focused on changes in the array area. Please clarify that the cable armouring associated with the offshore cable corridor, and structures at the coast have been included in the modelling.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum. .
<b>Seabed Disturbance Modelling Scenarios</b>			
6.F	<i>“In terms of the sediment disturbance (include grapnel runs) &amp; dredge modelling, the applicant is requested to revise and update these mapped outputs in conjunction with carrying out more comprehensive modelling to include:</i> i) <i>all proposed construction, operation and, where possible, decommissioning activities, and</i> ii) <i>all infrastructure that would contribute to the specific pressures being modelled.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum. .

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>6.G</b>	<i>“It is requested that revised modelling be undertaken to simulate entire campaigns in terms of construction and operational requirements of the proposed development such as dredging, disposal, cable laying and WTG installation, and not just in relation to select activities and/or representative locations. Modelling, data and spatial mapping should be comprehensive and include inter alia flocculation of the finer particles, suspended solids, deposition, dumping and disposal mounds. In this regard the applicant is requested to provide the following:”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
	i) <i>“Statistical maximum for sediment deposition depths (cm) and suspended sediment concentration (mg/l) across the model domain for the entire construction campaign presented in the form of heatmaps. This should include heatmaps of predicted percentage change relative to the baseline across the relevant key temporal periods. The applicant should confirm that the modelling used reflects the baseline conditions in terms of the modelled particle size used, i.e., the modelling should be aligned to known baseline conditions. These heatmaps, and other relevant model output, should be used to inform any further ecosystem and cumulative assessments such as smothering or impaired foraging within the relevant sections of an updated EIAR.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum. .
	ii) <i>“Similar to (i) above, the sediment deposition depths and suspended sediment concentration across the model domain for the entire operational campaign should be presented as heatmaps of the percentage change relative to baseline and used to inform relevant EIAR ecosystem and cumulative assessments.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
	iii) <i>“Results should be illustrated on appropriately scaled drawings/maps and be provided as GIS format as per the Technical Note in Appendix A.”</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
		The GIS files (in accordance with Appendix A: Technical Notes of the Schedule – Further Information Request') are included as part of the digital files that accompanies the Applicant's response to the RFI. A cover note explaining the files is also included in the digital file.	
<b>Morphodynamic Modelling</b>			
6.H	<i>"The longer term morphodynamic impact of the development including all cable armouring, scour protections and wind turbine foundations has been assessed over a representative year. The applicant is requested to extend this modelling over a series of longer time horizons (operational plus decommissioning, i.e., 40+ years) and compare with non-developed scenario for same time period."</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
<b>Blockage Modelling</b>			
6.I	<i>The wind blocking, and wake impacts provided appear to be inadequate, and it is requested that this be addressed through site specific wake and wind field modelling considering the entire windfarm layout.</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
6.J	<i>"Thereafter, the combined impact of tidal, wave and wind blockage on coastal processes is required to be considered using coupled modelling in the leeward environments between the array area and the coastal zone."</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 7-1 Addendum: Marine Processes Technical Report.	No impact on other assessments as a result of updates in this Addendum.
<b>Coastal Erosion</b>			
6.K	<i>"It is noted that the landfall site lies within an actively eroding coastline, and that the installation of the Transition Joint Bay (TJB) at either of the 2 option locations, will require works within the footprint of the southern area of the Dunany Point County Geological Site (CGS LH017). The Board notes that the Project Description (and Appendix 5-12: Construction Methodology – Onshore Cable) indicates that a geotechnical investigation of the landfall above the high-water mark was conducted in 2021, including the drilling of boreholes and a geophysical survey of seismic refraction and electrical tomography. It is further noted that</i>	Chapter 7 Addendum: Marine Processes (EIAR volume 2B Addendum) including Table 7A-1. Appendix 21-1 Addendum: Coastal Erosion Assessment Report (EIAR volume 2C Addendum)  A response is also provided in chapter 5 Addendum: Project Description, which presents a revised design to minimise impacts on the cliff at Dunany CGS.	Yes. Further information is also presented in: <ul style="list-style-type: none"> <li>Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum);</li> <li>Chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum);</li> <li>Chapter 21 Addendum: Soils, Geology and Hydrogeology (EIAR volume 2C Addendum); and</li> </ul>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>the installation of the TJB will require a permanent access track to remain in situ.</i></p> <p><i>In the context of coastal processes and having regard to the location of the planned landfall of cables, the desktop study presented in the Coastal Erosion Assessment Report appears to be inadequate. In addition, and while the Board notes Section 4.11.3 of Chapter 4: Consideration of Alternatives of the EIAR, the Board is concerned with the proposal for landing the offshore cable via open trench rather than HDD at this sensitive location. The applicant is requested to submit both coastal processes modelling assessment and shoreline regression/cliff stability modelling to justify the finding of negligible magnitude of impact with the implementation of mitigation measures in the EIAR."</i></p>		<ul style="list-style-type: none"> <li>Chapter 25 Addendum: Noise (Airborne) and Vibration (EIAR volume 2C Addendum); and</li> <li>Chapter 26 Addendum: Cultural Heritage (EIAR volume 2C Addendum).</li> <li>Appendix 5-12 Addendum: Construction Methodology – Onshore Cable presents details (minor updates on TJB).</li> </ul>
<b>NOTE 1:</b>	<p><i>"Any additional modelling in relation to marine processes, which increase the existing significance of effect in that chapter to "Significant" or greater, will also require revised consideration as part of any updates in assessments associated with Chapter 8: Benthic Subtidal and Intertidal Ecology, Chapter 9: Fish and Shellfish Ecology, Chapter 10: Marine Mammals and Megafauna, Chapter 11: Offshore Ornithology, and Chapter 21: Soils, Geology and Hydrogeology, and also the NIS where relevant."</i></p>	-	-
<b>NOTE 2:</b>	<p><i>"The applicant is referred to the Technical Note in Appendix A.</i></p>	-	-
	a) <i>Technical Note GIS Data Submission</i>	Accompanying digital files are included as part of the response to the RFI.	Not Applicable
	b) <i>Technical Note on Models and Submitting Model Outputs"</i>	See Cover Note to appendix 7-1 Addendum: Marine Processes Technical Report – Supporting GIS in digital files that accompany the response to the RFI.	Not Applicable

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 7 ORNITHOLOGY

Table 7-1: Further information requested on Ornithology and details on Applicant's response.

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
7.A	<i>From the information presented, the Board note concerns that there is an over-reliance on baseline surveys to include, and exclude, important ecological features potentially affected by the project. It is noted that species "recorded in very small numbers or very infrequently during the baseline surveys are excluded because the risk of impact to their populations is considered negligible." The Board requires that a clear, evidence-based justification for the inclusion and/or exclusion of species is submitted, particularly given the risk of excluding species that are less readily sampled by the particular survey methodologies applied and given the location of the site partially within the North-west Irish Sea cSPA, and location relative to bird colonies at Rockabill SPA, Lambay Island SPA &amp; Irelands Eye SPA.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.B	<i>It is noted that the surveys were undertaken prior to the 2022 Highly Pathogenic Avian Influenza (HPAI) season, which is known to have had significant negative impacts on range of seabird species. The applicant is requested to provide justification that the original digital area surveys and boat-based data remain relevant and appropriate at the point of submitting additional information to support the proposed development.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. Appendix 11-8: Aerial Survey Data Comparison (EIAR volume 2B Addendum) NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
<b>Reference Population</b>			
7.C	<i>The robustness of population calculations used within Chapter 11: Offshore Ornithology, and associated appendices, is important in assessing the potential effects of the proposed development. While the Board notes the approach of estimating reference populations employed in the EIAR, the applicant is requested to provide further detail on the breeding season populations used - including both breeding adults and juveniles / immature birds - and how the figures have been derived. At present, it is not clear how juveniles have been treated in the population estimates. The applicant should provide evidence-based justification for the method applied, which should comprise the most appropriate and precautionary method for estimating the breeding season populations to inform assessment conclusions.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
<b>Disturbance &amp; Displacement</b>			
7.D	<i>The rationale for decisions to screen out bird species for assessment of disturbance and displacement if determined to have a low sensitivity to disturbance and displacement or which were recorded in low numbers is not clear, giving rise to concerns regarding the robustness of the conclusions in the EIAR</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	and NIS. The applicant is requested to provide justification for the approaches taken for screening out in such instances.	NIS Addendum and Table 1A-5.	
7E	<p>The Board notes the submission of Appendix 11- 07: Offshore Ornithology Apportioning Impacts to Individual Colonies of the EIAR which seeks to apportion predicted mortalities from displacement and collisions of the project to seabird colonies. In terms of disturbance and displacement, four species have been identified as potentially at risk:</p> <ul style="list-style-type: none"> <li>• Common Guillemot (<i>Uria aalge</i>);</li> <li>• Razorbill (<i>Alca torda</i>);</li> <li>• Great northern Diver (<i>Gavia immer</i>); and</li> <li>• Northern Gannet (<i>Morus bassanus</i>);</li> </ul> <p>The Board notes that the applicant has assessed predicted annual mortalities for a number of species based on a single mortality rate, rather than the industry recommended range of mortality rates. Chapter 11 of the EIAR bases conclusions on a rate of 50% displacement and 1% mortality rate for auks<sup>1</sup>, 100% displacement and 0.5% mortality for GND and 60% to 80% displacement and 1% mortality rate for gannet during the operational phase of the project. Given the location of the site partially within the North-west Irish Sea SPA (and proximity to colonies at Rockabill SPA, Lambay Island SPA &amp; Irelands Eye SPA) the applicant is requested to update the EIAR to adopt a range of relevant mortality rates in the estimates of predicted mortalities for relevant species, and that these be clearly presented in the EIAR.</p>	<p>Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.</p> <p>NIS Addendum and Table 1A-5.</p>	No impact or changes to assessments / documents as a result of this response.
7.F	<p>Dundalk Bay is noted to be a very important foraging area for birds, likely linked to the prey resources known to exist there, including spawning habitat of the Atlantic Herring <i>Clupea harengus</i>. The rate of displacement does not appear to have been fully considered in the context of potential indirect and cumulative effects of the project on birds, such as Manx Shearwater, who forage in Dundalk Bay in large numbers, where a low rate of displacement may induce a population-scale impact. The applicant is requested to address potential changes in the distribution and abundance of important prey populations on birds.</p>	<p>Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.</p> <p>Appendix 3-2: Cumulative Impact Assessment Report (EIAR volume 2A Addendum).</p> <p>NIS Addendum and Table 1A-5.</p>	No impact or changes to assessments / documents as a result of this response.
<b>Collision Risk</b>			
7.G	<p>The Board notes the submission of Appendix 11-4 – Offshore Ornithology Collision Risk Modelling (CRM) which identifies five seabird species as potentially at risk due to their recorded abundance in the offshore wind farm area and their likelihood of flying at potential collision height (PCH) between the lowest and highest sweep of the WTG rotor blades above sea level:</p> <ul style="list-style-type: none"> <li>• Northern Gannet (<i>Morus bassanus</i>);</li> </ul>	<p>Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.</p> <p>NIS Addendum and Table 1A-5.</p>	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<ul style="list-style-type: none"> <li>• Kittiwake (<i>Rissa tridactyla</i>);</li> <li>• Common gull (<i>Larus canus</i>);</li> <li>• Herring gull (<i>Larus argentatus</i>); and</li> <li>• Great black-backed gull (<i>Larus marinus</i>).</li> </ul> <p><i>It is noted that the findings of the CRM rely on limited empirical data and avoidance rates for waterbirds which are not up to date. The level of confidence with regard to avoidance rates for a significant proportion of waterbirds is very low and this should be given due consideration when drawing conclusions on impacts. The use of the original Band (2012) model in its various forms may not be justified, and the Board is concerned that the conclusion of the applicants' assessment is not supported given the limitations identified. It is recommended that more appropriate methodologies are developed and implemented to gather relevant empirical data to support the assessment of effects, including updating all parameters using the most up to date empirical data, or if not appropriate, provide comprehensive justification for the methodology employed.</i></p>		
7.H	<p><i>In terms of the estimated collisions for the above bird species, the Board notes that Natural England have accepted a 70% reduction in Northern Gannet collision mortality estimates to account for macro-avoidance at previous developments, such as Hornsea 4. However, this is applied where developments are much further from the coast and from Northern Gannet colonies. Given the proximity of the project to the coast and to the gannet colony at Ireland's Eye SPA and Lambay SPA, approximately 52km to the south of the project site and within the foraging range of this species, a more precautionary approach is recommended. The applicant is requested to consider the approach taken in relation to Northern Gannet collision estimates, so they are not reduced by 70% to account for macro-avoidance.</i></p>	<p>Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.</p>	<p>No impact or changes to assessments / documents as a result of this response.</p>
7.I	<p><i>The Board notes that a number of species have been screened out as being vulnerable to collision risk, where abundances are noted to be high or very high due to their flight behaviours and responses, particularly, tending to fly below the sweep of the turbine blades. It is noted that those include species associated with nearby SPAs. The applicant is requested to provide further information on the rationale to exclude certain species in terms of the abundances identified and where, in certain conditions, they may fly higher than expected. Where a species is numerous, modelling of collision risk may produce fatality estimates that are concerning for particular populations, the Manx Shearwater (<i>Puffinus puffinus</i>) for example (a Qualifying Interest (QI) of the North-west Irish Sea SPA and the second most frequently recorded species within the Offshore Ornithological Study Area). This concern should be fully addressed and the EIAR and NIS revised accordingly.</i></p>	<p>Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.</p>	<p>No impact or changes to assessments / documents as a result of this response.</p>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
7.J	<i>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.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
<b>Combined Disturbance and Displacement and Collision Risk</b>			
7.K	<b>Northern Gannet (<i>Morus bassanus</i>)</b> - The Board notes that the overall impacts to species in terms of the predicted mortalities arising from displacement and/or collision events, are contextualised using the BDMPS as set out in Furness (2015). This area is significantly larger than the western Irish Sea and it is requested that the EIAR is revised to ensure that the assessment of predicted annual mortalities uses the western Irish Sea for context.	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.	No impact or changes to assessments / documents as a result of this response.
7.L	<b>Red-throated diver (<i>Gavia stellata</i>)</b> - Red-throated diver is identified as a QI for the Northwest Irish Sea SPA and a species known to be highly sensitive to offshore wind farm developments due to displacement effects. Recent empirical evidence indicates that the species avoids a larger area than the 4km buffer afforded in the EIAR and NIS, with a 10 km buffer being recommended as per UK Joint SNCB Interim Displacement Advice Note (2022). The EIAR indicates that the species was identified in low abundance (106 birds) in the north and west of the study area during the surveys. While noting the high sensitivity of the species to disturbance and displacement however, the low abundance recorded during site-specific surveys resulted in the species being screened out for EIA purposes. However, the 'Digital video aerial survey of birds in intertidal habitats of Gormanstown December 2018 to March 2019' (HiDef, 2019), commissioned by the Marine Institute, indicates the known extent of Red-throated Diver and their densities and shows the species concentrating in the shallow Dundalk Bay waters and in and around the proposed Oriel Project area. This survey data (HiDef, 2019) suggest that notable densities of the species may be present within 10 km of the array area.  In this regard, the Board is concerned that the EIAR does not set out the recorded density values for this species and scopes out red-throated diver for further consideration in terms of disturbance, displacement and mortality. The applicant is requested to include the HiDef surveys in the assessment of potential impacts on red-throated diver and other North-west Irish Sea SPA QI species sensitive to displacement during both construction and operational phases of the project (e.g. Great Northern Diver <i>Gavia immer</i> , Common Scoter <i>Melanitta nigra</i> ), in terms of predicted mortalities based on a displacement buffer of 10km with regard to the	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>North-west Irish Sea SPA and consider the significance of the effects on this species for all seasons, individually and combined.</i>		
7.M	<b>Black-legged Kittiwake (<i>Rissa tridactyla</i>)</b> - The Board note that Black-legged kittiwake, a species identified as being in decline, is a QI for North-west Irish Sea cSPA, as well as Lambay Island SPA and Ireland's Eye SPA, and that Black-legged Kittiwake has variable responses to offshore wind farms (OWFs). There is a colony in Northern Ireland which may also forage in this area. In this regard, the Board requests that the applicant include this species as a receptor of disturbance and displacement impacts during operation and maintenance. The scoping out of the species is considered to run contrary to the advice of NatureScot (2023) for species where both collision risk and displacement are considered. The applicant is requested to submit further information to identify and evaluate the impact of displacement of Black-legged Kittiwake in conjunction with collision risk. The application documentation should be revised to fully address the potential for significant impacts on this species.	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.N	<b>Great Northern Diver (<i>Gavia immer</i>)</b> – The Board note that the application area is important for wintering Great Northern Divers, a species known to be vulnerable to disturbance, including from construction activities and associated vessel movements as well as during the operational phase of the project. Bird Watch Ireland raise concerns about this Annex I species who consider that the concentration of this species in the outer Dundalk Bay may reach thresholds for international importance. A 'no mitigation' approach as proposed, particularly during the construction and operational phases is not considered appropriate. The applicant is requested to address these concerns, particularly in terms of the cumulative unknowns identified in the EIAR.	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.O	<b>Colonies at Rockabill</b> – the applicant is requested to provide additional information on the movement of auks (Guillemots ( <i>Uria aalge</i> ) and Razorbills ( <i>Alca torda</i> )) from Lambay to show that there is no significant impact on the Rockabill, Lambay and Irelands Eye populations, given their range of foraging grounds, including the area of the project.	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.P	<b>Other</b> - The waters in and adjacent to the proposed Oriel Wind Farm are an important resource for the western Irish Seas marine bird populations. The passage of marine birds through the development area does not appear to have been fully characterised because of the data regime adopted. It is requested that the EIAR adopt a range of relevant mortality rates in the estimates of predicted mortalities for relevant species and that the EIAR is revised to ensure that the assessment of predicted annual mortalities uses the western Irish Sea for context. It is recommended that the developer cross reference to NPWS Article 12 reports	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>which provide information on the current status, pressures and future prospects for sea birds.</i>		
7.Q	<i>The applicant is requested to provide further analysis of the potential effects of the proposed development in relation to predicted mortalities from both collision and displacement impacts for relevant species. This should, at a minimum, incorporate the relevant available data including for example, HiDef (2019) and ObSERVE Phase II data where appropriate. Graphical representation Population Variability Analysis (PVA) results are considered to be of assistance to interpret model outputs where appropriate.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.R	<b>Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</b> - The Board notes the results of the vantage point surveys undertaken to establish the migratory movements of Light-Bellied Brent Geese across Dundalk Bay during the spring and autumn migration periods (EIAR Appendix 11-3: Migratory Geese Survey Report). The observed movements of birds, low and close to the shoreline, likely reflect commuting movements of flocks aligned to tidal cycles and movement between established foraging areas in Dundalk Bay and Carlingford Lough, while the significant migratory move of the 14/15th April would coincide with the northern migration of light-bellied brent geese. Autumn movements are noted to be different to the spring movements, particularly in terms of the volume of birds and sites being used from Strangford Lough and south towards Dublin and Wexford. The Board note the primary survey method of coastal vantage point surveys by human observers, at a distance of between 6-12km from the project site, and which the DAU have considered to be insufficient, with concerns that this methodology could discount the potential for the geese, and other species, to fly through the proposed array area. Reliance on published literature does not provide detailed or precise data movements, and as many of these movements occur overnight, the routes taken are not known. Therefore, and based on known flight heights and potential flightlines between the major concentrations in Strangford Lough and sites along the East Coast of Ireland, there is potential for there to be a significant potential for large numbers of Brent geese flying through the proposed array area during both day and night, over very short timescales, and particularly in autumn. The potential impact of siting wind turbines on a migratory route for this species without appropriate mitigation during such short-term events could be potentially catastrophic for Light-Bellied Brent Geese populations, the vast majority of which winter in Ireland. The applicant is requested to address these concerns in relation potential effects of the project on migrating geese. Any potential specific adaptive mitigation measures to minimise the effects of the project, particularly during the Spring and Autumn migrations and which identify the timings of the migrations, depletion of food supply etc, should also be included and addressed in the EIAR.	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum). NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>Migratory Species – Non seabirds</b>			
7.S	<i>The Board notes the international importance of Ireland, including Dundalk Bay SPA, for a range of waterbird species. The AA screening report does not detail the potential impacts upon and interactions of the proposed project with migratory waterbirds, with a focus on foraging and breeding birds only. It is noted that all migrating birds have been scoped in for further assessment, which is welcome, but the applicant is requested to update the AA to include a reference to potential impacts and interactions with regard to migratory waterbirds which are SCIs of SPAs. A review of the screened-out Natura 2000 sites and water bodies is required to be undertaken to ensure that the NIS has considered all relevant pathways appropriately, as well as migratory or normal flight paths of avian species.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. Report to Inform Screening for Appropriate Assessment – Addendum. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.
7.T	<i>The applicant is further requested to clearly address the potential for ex situ impacts upon species listed for Dundalk Bay SPA that occur outside the red-line boundary.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.
7.U	<i>The Board has concerns regarding the methodologies employed with regard to the survey and monitoring of the movement of migratory waterbirds at key migration times. The primary survey method of coastal vantage point surveys by human observers, at a distance of between 6-12km from the project site, and which appear to primarily focus on geese, is considered to be insufficient and inappropriate to assess the migratory movements of birds through the array area, and the potential impacts on these species. In addition, the reliance on literature to fill knowledge gaps, while useful, does not provide adequate data to ensure a comprehensive assessment of potential effects on birds.</i> <i>The applicant is requested, having regard to the comments above, to address the purported existing data gap to enable the assessment of potential impacts of the proposed development on migratory birds. Radar (horizontal and vertical surveys) or similar at the Array Area during peak migration periods might be utilised to provide site-specific data, which could be used to support the applicant's current assessment and provide quantitative information on passage of birds to feed into collision modelling. Should radar not be conducted and an alternative survey methodology utilised, comprehensive justification for the alternative should be provided. Peak migration periods during which data are to be collected can be further informed through review of existing data and published literature relevant to the project area and region. Whilst the DAU makes reference to the key migration times being spring and autumn, the Board considers that migration</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>information during the winter months would also be of assistance to the assessment (e.g. irruptive cold weather movements from the continent and UK). The applicant is invited consider this aspect for inclusion also.</i>		
7.V	<i>In terms of the findings of the Migratory Non-Seabirds Collision Risk Modelling (Appendix 11-06 of the EIAR), and noting the comments in the DAU submission, the conclusions arrived at in this regard, may rely on limited empirical data and the avoidance rates applied in the model for waterbirds are not up to date. The level of confidence with regard to avoidance rates for a significant proportion of waterbirds is very low and as such, the validity of the conclusions arrived at are potentially understated. It appears therefore, that the conclusion of the NIS may not be fully supported given the limitations identified. The applicant is requested to address these concerns, having regard to the DAU submission.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.
7.W	<i>The applicant is requested to justify the screening out for further assessment of all passerines (Table 11-15 of the EIAR), which considers the risks to migrating passerines as negligible 'due to the relative size of the project and the behaviour of the birds (e.g. passage movements restricted to twice annual events, large population sizes and flight heights typically above risk height)'. It is noted that many hundreds of thousands of migrants come to Ireland for the winter, moving west as autumn progresses and returning north and east as spring advances. The applicant is requested to provide more information and assessment with regard to these species and to consider the potential effects of the development at the project level as well as cumulatively.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. Appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.
<b>Terrestrial Bird Species</b>			
7.X	<i>Chapter 19 of the EIAR considers the potential effects of the project on onshore birds and intertidal birds and includes Appendix 19-02: Intertidal Bird Survey and Onshore Bird Survey Reports. The DAU note that the focus of data collection to support the application has been on marine-dwelling avifauna as opposed to land-based avifauna, with knowledge gaps with respect to transboundary and migratory movements of land-based avifauna in Irish waters and beyond. As such, it is noted that no new empirical data have been collected for land-based migratory birds as part of the monitoring programme, to detect and assess the level of bird migration through the proposed development site area. This would provide a better understanding of the potential impact and cumulative impacts of the project, and other ORE developments in terms of the Irish Sea. The applicant is requested to address these concerns, including those raised in the DAU submission on the project.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
7.Y	<i>The CRM identifies 3 terrestrial bird species as being vulnerable to wind turbines, including Corncrake (Crex crex), Merlin (Falco columbarius) and Hen Harrier (Circus cyaneus). However, the predictive power of the model employed is low, particularly for species that are not foraging in the offshore area. As such, the use of SOSS2 Migration Assessment Tool (SOSSMAT) may not have incorporated the most up-to-date estimates of flight speeds for migrating species and may not provide robust yearly collision estimates for land-based birds with a high degree of confidence. It is requested that the potential operational impacts of the project on migratory movements/passage of land-based birds and potential options for on-site monitoring of species, etc be addressed within the application documentation.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5.	No impact or changes to assessments / documents as a result of this response.
7.Z	<i>In terms of proposed works within the intertidal environment, the applicant is requested to clarify the timing of works, particularly in relation to the landfall location. The Board notes that the summary of potential environment effects, mitigation and monitoring (Table 19-18 of Chapter 19: Onshore Biodiversity of the EIAR) indicates that timing of the construction/operational works may influence the magnitude in terms of commuting, foraging, breeding and migratory birds in terms of disturbance and loss or fragmentation of habitat. Noting the measures included in the project, it would appear that the timing of works will be restricted to a very short window. The applicant is therefore requested to submit a draft programme of works which provide a clear intention in terms of mitigating effects on birds.</i>	Clarification regarding the timing of works at the landfall location is provided in chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum).	No impact or changes to assessments / documents as a result of this response.
<b>Cumulative &amp; Transboundary Effects</b>			
7.AA	<i><u>Migratory Waterbird Species:</u> Migratory birds have not been included in the Cumulative Impact Assessment presented in the application documentation. As stated previously (Migratory Species – Non seabirds points S to W and Terrestrial Bird Species points X to Z), the assessment of the impact on migratory birds (both terrestrial and waterbird groups) arising from the project alone appears to be insufficient, and that further data should be provided to inform the assessment. The applicant is requested to assess cumulative impacts to migratory bird populations, considering effects of the Irish Sea Phase 1 ORE projects and other existing or currently proposed plans and projects that may affect the same migratory populations.</i>	Chapter 11 Addendum: Offshore Ornithology (EIAR volume 2B Addendum) including Table 11A-1. NIS Addendum and Table 1A-5. See appendix 11-9 addendum: mCRM (EIAR volume 2B Addendum).	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 8 BENTHIC SUBTIDAL AND INTERTIDAL ECOLOGY

Table 8-1: Further information requested on Benthic Subtidal and Intertidal Ecology and details on Applicant's response

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
8.	<i>While it is acknowledged that best practice in the preparation of the EIAR has been applied, there remains a degree of uncertainty, in particular in relation to the baseline characterisation of the Offshore Cable Corridor (OCC). The applicant is requested to submit the following further information:</i>	-	-
<b>Baseline Characterisation and Reef Habitat</b>			
8.A	<i>There is uncertainty around the presence, location and extent of hard substrate habitats within the OCC, and in addition if these habitats represent rocky reef (stony and /or bedrock). The applicant includes evidence from EMODnet in their EIAR to show predicted habitats across the study area, and this predicts areas of 'circalittoral rock and biogenic reef' overlapping the Offshore Wind Farm Area and OCC (EIAR Chapter 8: Benthic Subtidal &amp; Intertidal Ecology, Figure 8-2). However, it is noted that the EMODnet map in the EIAR differs in terms of levels of classification and spatial extent of habitats from that seen on the EMODnet website. It also appears that the broad scale habitat mapping based on the Ireland Marine Atlas and reproduced in the EIAR varies from that of EMODnet, with differences in extent of these rocky habitats<sup>3</sup>. The applicant is requested to detail how the habitat maps used in the EIAR were created (source of layers, methods to amalgamate layers, if any), and to review any outputs containing EMODnet data to ensure that the correct habitat mapping is used within the EIAR.</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum) including Table 8A-1.	No impact or changes to assessments / documents as a result of this response.
8.B	<i>Project-specific survey data is used to ground-truth these wider modelled habitat predictions. The Board notes that two site-specific surveys were undertaken for the Oriel Windfarm project, in 2006 and 2019. Due to the cable corridor design changing between these two campaigns, the 2019 survey campaign undertaken across the OCC did not fully spatially replicate the earlier 2006 survey. There, therefore, seems to be a data gap within the current OCC due to lack of coverage (see Chapter 8, Figure 8-4). The nearshore benthic data provided by the Marine Institute unfortunately does not provide coverage across the OCC itself (Chapter 8; Figure 8-3).  Data collected during these 2019 surveys reported rocky habitats as present at some stations, as shown in the drop-down video images within EIAR Appendix 8-02: Benthic Survey Report (e.g. Figures 2.6, 2.7, 2.12). In Chapter 8 it is noted that "The offshore cable corridor contained mostly sandy muds with some sample stations reporting sand sediments and infralittoral rock". While it is stated that the site-specific benthic subtidal surveys did not indicate the presence of biogenic reef,</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum) including Table 8A-1 and supporting appendices: Appendix 8-3: Sediment Chemistry Results provides 2024 sediment survey chemistry results; and Appendix 8-4: Benthic Ecology 2025 Survey Report.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>there is no confirmation of either the presence (or absence) of rocky reef. The applicant is requested to review all available project-specific survey data collected to confirm if additional information is available (or not) to inform the presence and extent of hard substrates.</i>		
8.C	<i>In both Appendix 8-02 and Chapter 8 of the EIAR, it is not clear how biotopes were ascribed. As such, the applicant is requested to detail the approach for ascribing rocky biotopes to the imagery data collected.</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum) including Table 8A-1.	No impact or changes to assessments / documents as a result of this response.
8.D	<i>It is understood that “a pre-construction phase survey will be undertaken to identify areas of reef habitat. Should reef areas be identified, appropriate measures will be agreed with regulatory and nature conservation bodies to avoid direct impact on these features” (see EIAR Chapter 8; Section 8.14; Table 8-25). The applicant is requested to provide sufficient information on the proposed scope of the pre-construction surveys (data collection, analysis and assessment) to ensure that the current purported data gaps seen in the OCC are fully considered, allowing a coverage of habitats to support the impact assessment.</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum) including Table 8A-1.	No impact or changes to assessments / documents as a result of this response.
<b>Receptor Groupings and Impact Assessment</b>			
8.E	<i>It is noted that within the description of Important Ecological Features (IEFs), subtidal coarse sediment is defined as including biotopes from both coarse sediments and mixed sediments (see EIAR Chapter 8, Table 8-10). The applicant is requested to review the impact assessment for coarse sediments (for all project phases) and consider mixed sediments and coarse sediments as separate IEFs, to ensure that the full range of sensitivity and magnitudes are considered for understanding significance.</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology (EIAR volume 2B Addendum) including Table 8A-1.	No impact or changes to assessments / documents as a result of this response.
<b>Scoping of Impacts</b>			
8.F	<i>It is noted that electromagnetic field (EMF) emissions are not discussed as an impact for benthic ecology. Given that it is scoped in for Fish and Shellfish Ecology, it is considered that it should be scoped in for benthic ecology. The applicant is requested to submit a clear audit trail of the pressures arising and associated impacts to the benthic ecology, including noise related potential effects.</i>	Chapter 8 Addendum: Benthic and Intertidal Ecology in EIAR volume 2B Addendum including Table 8A-1 in chapter 8 Addendum.	No impact or changes to assessments / documents as a result of this response.
<b>Landfall Construction Methodologies</b>			
8.G	<i>In terms of minimising the impacts on intertidal sediment communities, the Board notes that the use of dredge/cut construction methods with regard to the onshoring of the cable is not consistent with best practice, and that horizontal directional drilling (HDD) is considered to be more appropriate. The applicant is requested to submit a justification for the proposal to use dredging in this instance while ensuring the protection of existing eroding cliffs or alternatively update application documentation to provide for HDD at the point of landfall.</i>	Chapter 5 Addendum: Project Description (EIAR volume 2A Addendum) provides justification to use open cut methods to install the cable in the intertidal sediment.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 9 MARINE MAMMALS AND MEGAFUNA

**Table 9-1: Further information requested on Marine Mammals and Megafauna and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>Underwater Noise – Mitigation &amp; Noise Abatement</b>			
<b>9.A</b>	<p><i>"The details that have been submitted in relation to underwater noise arising from the proposed development acknowledges the potential for impacts to arise on marine fauna from both Permanent Threshold Shift (PTS) and Temporary Threshold Shift (TTS) over significant areas. The Wildlife Act 1976, as amended, lists marine mammals, including all dolphin, porpoise, seal and whale species as protected (with subsequent regulations also applying protections to all species of marine turtles and similar protections to basking sharks), stating that it is an offence to hunt, injure, or wilfully interfere with/destroy the resting or breeding place of such species. The January 2014 National Parks and Wildlife Service (NPWS) 'Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources' published by the Department of Arts, Heritage and the Gaeltacht (NPWS (2014)), notes that sound sources with the potential to induce TTS in a receiving marine mammal has the potential to cause both disturbance and injury. This guidance has a statutory basis under Regulation 71 of SI No. 477 of 2011, and refers to the "offence to injure" under the Wildlife Act, 1976, noting that TTS "may constitute such an injury".</i></p> <p><i>Having regard to the 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 submissions from prescribed bodies and observers, the Board requires a comprehensive suite of noise abatement measures to be submitted and assessed in addition to the existing mitigation measures referenced in the planning documentation. The applicant is requested to submit:"</i></p>	-	-
	<p>i) <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</i></p>	<p>Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.</p> <p>Appendix 10.8: Comprehensive Review of Relevant Mitigation (Noise Abatement) (EIAR volume 2B Addendum). The suitability of these</p>	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	available, including consideration of, at a minimum, bubble curtains, casings, resonators, and 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. “	measures for the construction of the Project is also outlined. NIS Addendum and Table 1A-3.	
ii)	“The applicant must also consider and draw on the best available technology and thresholds, including as applied in other EU jurisdictions (e.g. Germany; Belgium; Netherlands; Denmark), to identify and provide for suitable noise abatement to reduce the level and extent of potential noise impacts arising from the proposed development. Examples include the German 160 dB re 1 $\mu\text{Pa}^2\text{s}$ SELss and 190 dB re 1 $\mu\text{Pa}$ SPLpeak thresholds that must not be exceeded at a distance of 750m from a piling site; or the frequency weighted SELcum PTS thresholds (e.g. harbour porpoise 155 dB re 1 $\mu\text{Pa}^2\text{s}$ ) that must not be exceeded for a fleeing animal with a starting distance of 200m in Denmark.”		
iii)	“Revised noise modelling and mapping which provides detailed consideration of the noise abatement strategy selected in response to (ii) above and include:	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.	The Applicant has updated appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (MMMP) (EIAR volume 2A Addendum) in response to RFI 9.
a)	The modelled SPLpeak and SELcum PTS and TTS contours for each functional hearing group potentially present, emanating from the existing locations proposed in the application at the periphery of the proposed development to demonstrate the full potential spatial extent of underwater noise propagation. Modelling must also show the noise level (SPLpeak, SELss) at 750m from the locations of each of the piling activities selected.	Appendix 10-6 Addendum: NAS Modelling Report (EIAR volume 2B Addendum) presents the results of noise modelling of noise abatement scenarios.	
b)	The modelled SELss contours for 120-180 dB re 1 $\mu\text{Pa}^2\text{s}$ at 5 dB increments at the locations in (a) above. Mapping provided must show the relevant noise contours in the context of implementing the abatement technologies/ measures identified at (i) above and should be displayed alongside the noise contours in the absence of any such noise abatement measures being implemented.	Appendix 10-7: NAS Technical Report - Marine Mammals, Megafauna and Fish presents further information in response to RFI 9.A (iii) a. to 9.A (iii) e.	
c)	Revised details showing the change in total impacted individuals of each species before and after consideration of noise abatement technologies.	An updated Cumulative Impact Assessment is provided in appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum).	
d)	Modelling must be performed for monopiles and pin piles, as both are under consideration within the project design envelope.	NIS Addendum and Table 1A-3.	



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	e) <i>Any additional abatement and/or mitigation measures should also be considered where practicable in terms of their potential for reduction of cumulative effects with other projects in terms of underwater noise.”</i>	It should be noted that pin piles are not proposed for the Project and therefore have not been considered.	
9.B	<i>“The applicant is requested to provide a detailed justification for the 500m (Geophysical acoustic surveys) - 1,000m (pile driving) Marine Mammal Mitigation Zones (as detailed in the Marine Mammal Mitigation Plan (MMMP) (Appendix 5-4 of the EIAR), acknowledging that the results of the underwater noise assessment on marine mammals indicate impacts (TTS) may be experienced beyond mitigation zones for a number of species (Table 1-5 of the MMMP).”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (MMMP) (EIAR volume 2A Addendum) NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.C	<i>“The EIAR should address the inconsistency in deterrence from different Acoustic Deterrent Device manufacturers and device specifications across studies, and some appear to be misrepresented in the chapter text in terms of their effectiveness. The type of ADD and source level / frequency selected will have direct implications for its effectiveness of impact on different species. Not all species will be equally impacted by a single device, variations in both sound level and frequencies across devices. The applicant is therefore requested to clarify the relevant mitigation measures to be utilised, including their commitment to using specified devices.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (MMMP) (EIAR volume 2A Addendum) NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.D	<i>“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.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.E	<i>“The Board notes the applicants’ commitment to implement phased piling as part of a Piling Strategy which will be prepared in collaboration with other offshore windfarms in the western Irish Sea to reduce the potential for an in-combination effect. Noting that the Irish Sea Phase 1 ORE projects are independent of one another, the applicant is requested to provide further information regarding the piling strategy outlined in Appendix 05-02: Environmental Management Plan, including an outline of the programming schedules of the other projects to provide a more robust assessment of the potential adverse effects of cumulative noise (airborne and</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. An updated Cumulative Impact Assessment is provided in appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum). NIS Addendum and Table 1A-3. Cumulative airborne noise effects from piling were screened out in the EIAR (chapter 25:	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>underwater) from concurrent pile driving across the Phase 1 projects in the Irish Sea.”</i>	Airborne Noise and Vibration) due to distances from the Project.	
9.F	<p><i>“The Board acknowledges the applicant’s extensive experience in offshore renewable projects in both the North Sea and Baltic Sea, and other jurisdictions, including the information presented in the EIAR (Appendix 5-11: Supporting Information Demonstrating the Applicant’s Experience on Other Offshore Wind Farm Projects). The applicant is invited to submit any details or monitoring/reporting available from previous experience of offshore development in other EU jurisdictions which demonstrates the efficacy of mitigation measures adopted (and proposed in the current application) in relation to underwater noise.</i></p> <p><i>In all cases where mitigation is proposed or requested as above, the applicant is requested to comply with all aspects of NPWS (2014) Guidelines including soft start times, delay durations, mitigation zone sites, 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.”</i></p>	<p>Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.</p> <p>Appendix 10-5: Underwater Noise Monitoring Experience – Supporting Information (EIAR volume 2B Addendum), provides details on the measures used on Arcadis Ost 1 project, which includes the use of Big Bubble Curtains.</p> <p>Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (MMMP) (EIAR volume 2A Addendum).</p> <p>NIS Addendum and Table 1A-3.</p>	No impact or changes to assessments / documents as a result of this response.
<b>Underwater Noise Modelling</b>			
9.G	<i>“In terms of the underwater noise modelling assessment, a conversion factor (CF) is mentioned in the text of the EIAR but there is no further discussion of this value (e.g., description, justification) in the EIAR or in the Subsea Noise Technical Report (EIAR Appendix 10-02). The applicant is requested to provide a description of the value and how this value was selected.”</i>	<p>Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.</p> <p>Appendix 10-4: Updated Subsea Noise Modelling Report (EIAR volume 2B Addendum).</p>	No impact or changes to assessments / documents as a result of this response.
9.H	<i>“It is noted that recent research (Wood et al., 2023) suggests that the modelling method of Weston (1971) used in the application, has been found to be problematic and potentially underestimates the received levels from the noise sources. The 0.5% value used in the Subsea Noise Technical Report is within a reasonable range, however no justification for this value has been provided, therefore it cannot be assumed it has been chosen based on specific aspects of the operations. Options for this value vary, and may reach up to 1.56%, which would give a difference of 4.9dB from the 0.5% used in the assessment. The applicant is requested to address these concerns</i>	NIS Addendum and Table 1A-3.	



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>and, in particular, to provide a justification for the modelling methodology employed.”</i>		
9.I	<i>“The modelling methodology for Acoustic Deterrent Device (ADD) use is not clear in the Subsea Noise Technical Report, for example whether the applicant considers complete exclusion, or if the sound level or frequency of the representative ADD has been considered. It does not appear that the ADD modelling is informed by the dose-response curve. The applicant is requested to clarify this.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.J	<i>“EIAR Chapter 10 and Appendix 1-21 of the Subsea Noise Technical Report consider underwater noise impacts associated with each phase of the project. The applicant is requested to clarify whether Ultra-short Baseline (USBL) positioning systems will be used during pre-construction surveys. If so, the applicant is requested to include these systems in the assessment for auditory injury.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.K	<i>In terms of the species densities values, it is noted that Table 10-6 of the EIAR describes the two values that will be selected for density of each species, to provide a range. In Table 10-30, however, these values are presented as ‘Average’ and ‘Maximum’, which is not accurate. The value presented as the ‘Average’ is the lower of the two values of the range. The maximum density should be used to establish the highest number of animals potentially affected, to ensure a robust conservative assessment. The applicant is requested to review and adjust the document as necessary.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.L	<i>“In addition, a number of inconsistencies are noted in terms of the application of densities across sources. For example, the SCANS-IV surveys have been used as the ‘Average’ density in some cases and the ‘Maximum’ in others without any commentary on the appropriateness of the choices made. The applicant is requested to provide separate assessment tables for each density source used, (i.e. one table with the consistent use of SCANS-IV for all densities and separate tables where SCANS-III or site-based surveys have been used). All relevant species should be included.”</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
<b>Behavioural Disturbance</b>			
9.M	<i>“The EIAR does not appear to adequately justify the screening out of injury and/or disturbance to marine megafauna from operational underwater noise. While the scientific papers cited in the justification for omission are noted (Norro et al., 2011; Hastie et al., 2015), the Board is concerned that the scale of the turbines referenced (3MW</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	and 5MW turbines) do not compare with the proposed 25 no. 15MW turbines proposed for the Oriel Project, and that the combined noise effect of the installation may not be 'unlikely to be at a level sufficient to cause injury or behavioural changes to marine mammals, fish or turtles' as indicated in the Subsea Noise Technical Report. It is further noted that the desktop study of operational noise from wind turbines (Table 1-31 of Appendix 10-2: Subsea Noise Technical Report) considers turbines of between 2MW and 5MW. The Board, therefore, requests that disturbance from operational turbines be assessed in the context of the size and the number of turbines proposed, and that the assessment of the combined noise effects of all turbines be examined and relevant disturbance ranges identified."		
9.N	"The applicant is requested to more clearly define the methodology for the dose-response assessment. The studies on which the dose-response assessment is based (Graham, 2017; 2019) are explained in detail, however the specific threshold within the dose-response curve that has been used is not stated (Table 10.21 the threshold is listed as "Based on SEL 5 dB contours"). The process of applying the dose-response curve to density maps to determine number of individuals disturbed is not clearly elaborated upon (e.g. description of density calculation within each isopleth and summing). The applicant is requested to address this issue."	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.O	"The Board note the use of NOAA Level B Harassment Threshold (National Marine Fisheries Service, USA) rather than more recently defined thresholds in European jurisdictions (e.g. Danish threshold of 143 dB re 1µPa (or 103 dB re 1µPa VHF-weighted) single strike sound exposure level (SELss) (Tougaard, 2021). The Board further note the threshold values recommended by TG Noise (Sigray et al., 2023) and thresholds used in the Ireland's Draft Marine Strategy Part 1, Articles 8, 9 and 10 report 2024 and its Annex III. The applicant is requested to discuss these thresholds and justify why they have not been used in the assessment."	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.P	"Please address the following comments regarding the presentation of Disturbance data: i) The EIAR requires a discussion of the maximum range of disturbance for NOAA Level B harassment. ii) Table 10-25 of the EIAR appears to be missing a column. The applicant is requested to include SELcum mitigated	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.

## Oriel Wind Farm Project – Directory of Responses to Request for Further Information

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>injury range for piling at the east modelled location (initiation + soft start + ramp up).</i></p> <p>iii) <i>The applicant is requested to expand Table 10-30 of the EIAR to display the min, max, and mean range to the selected disturbance threshold.</i></p> <p>iv) <i>The worst-case number of piling events does not account for contingency of having to move and re-pile if substrate does not accept the pile. The applicant is requested to add in this consideration or justify its exclusion for the worst-case scenario."</i></p>		
<b>Survey/Monitoring</b>			
9.Q	<p><i>"With reference to the Guidance on Marine Baseline Ecological Assessments &amp; Monitoring Activities for Offshore Renewable Energy Projects Part 2, April 2018 by the Department of Communications Climate Action and Environment (DCCAE) (DCCAE (2018) Guidance), the applicant is requested to provide additional justification/assessment in relation to the following:</i></p> <p>i) <i>The selection of a 4km buffer area extending around the Array Area. The DCCAE (2018) Guidance recommends a minimum buffer of 10km for cetaceans and seals with monthly haul-out site surveys.</i></p> <p>ii) <i>The lack of empirical acoustic data, noting the DAU submission which states the omission of acoustic monitoring does not allow the site to be fully characterised for all Annex IV species.</i></p> <p>iii) <i>The lack of any vantage point surveys or monitoring for pinniped species at the cable landfall location."</i></p>	<p>Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.</p> <p>Appendix 10-9: Seal Survey Report (EIAR volume 2B Addendum).</p> <p>NIS Addendum and Table 1A-3.</p>	No impact or changes to assessments / documents as a result of this response.
9.R	<p><i>"The DAU note that monitoring for pinniped species at the location where the proposed development interacts with the shore was not carried out by the applicant and therefore there is no information on whether harbour and grey seals use this site. The applicant is requested to submit further information by means of specific surveys of the site for pinnipeds and that this should also be set in the context of seasonal changes in distribution of these species. The applicant is requested to refer to the most up-to-date NPWS seal data and DCCAE (2018) Guidance."</i></p>		
9.S	<p><i>"The applicant is requested to confirm whether any on-going or additional surveying has been carried out on the site in relation to</i></p>		

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>mobile species since the application was lodged. If so, the applicant is invited to submit any further survey data results and incorporate these into the assessments within the application documentation as appropriate."</i>		
<b>Cumulative and Transboundary Impacts</b>			
9.T	<i>"The applicant is requested to map maximum masking, and behaviour impacts in the cumulative noise impact assessment on marine mammals and fish and behavioural impacts for shellfish for all phases of the project, including the operational phase. The cumulative assessment should model impacts based on concurrent construction with and without noise abatement with at least one other windfarm in the Irish Sea. Critical periods of breeding and spawning should be identified and if these are associated with any known vocalisations."</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.U	<i>"The assessment of cumulative impacts appears to deviate from standard practice in that the Cumulative Impact Assessment (CIA) should consider the cumulative percentage of disturbed individuals for each species within the respective Management Unit. The applicant is requested to address this."</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.V	<i>Under the current definition of Medium magnitude in the EIAR ("reversible or irreversible in individuals, could result in some population-level effects, but not a level that would alter the relevant population trajectory over a generational scale"), when considering &gt;5% of the reference population that may be impacted for some species, certain evaluations of magnitude could fall within the Medium category. Please provide justification for their assessment as lower magnitude."</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.W	<i>In addition to the above, the CIA sensitivity appears to be redefined for each of the receptors from the sensitivities used during assessment alone. This is contrary to best practice. While magnitude of the disturbance may change when considering cumulative effects rather than effects from piling alone, the sensitivity should remain constant. The applicant is requested to address this."</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
9.X	<i>The Board notes that the Oriel project took part in consultation across all Irish Sea Phase 1 ORE Projects to assess whether cumulative disturbance resulting from pile driving activities across the five Irish</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>Sea Phase 1 ORE Projects is predicted to result in population level impacts to four marine mammal species (harbour porpoise, bottlenose dolphins, harbour and grey seals). However, there has been no iPCoD modelling performed for the CIA, nor inclusion or consideration of an indicative piling schedule any of the other Phase 1 projects within the EIAR or Appendix 10-03: Marine Mammal Population Modelling Report (iPCoD). The applicant is requested to update the document with iPCoD modelling to be used in the CIA, including indicative piling schedules for the other Irish Sea Phase 1 ORE projects, and to submit to the Board any documentation resulting from the aforementioned consultation.</i>	Appendix 10-10: Cumulative iPCoD Modelling Report (EIAR Volume 2B Addendum), which models the other Irish Sea Phase 1 ORE projects and additional projects in the Irish Sea.  NIS Addendum and Table 1A-3.	
<b>9.Y</b>	<i>Notwithstanding the rationale provided in relation to the assessment of impacts of operational underwater noise on marine megafauna, and the scoping out of injury and/or disturbance to marine megafauna, including basking sharks and sea turtles, from operational underwater noise (Chapter 10, Table 10-13), the applicant is requested to assess potential impacts from operational underwater noise in terms of the cumulative assessment with other Irish Sea Phase 1 ORE projects.</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
<b>Collisions</b>			
<b>9.Z</b>	<i>The DAU state in their submission on this application that when assessing the risk of collisions between marine mammals and vessels, the applicant must include all data relevant to Irish waters and not solely rely on reports from UK monitoring programmes, e.g. those reported in Irish Whale and Dolphin Group Cetacean Stranding Schemes and Irish Whale &amp; Dolphin Group Deep Diving and Rare Species Investigation Programme (both supported by NPWS funding). The applicant is requested to address this issue and incorporate the findings of these data sources in to the submitted documentation.</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1. NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.
<b>Appropriate Assessment</b>			
<b>9.AA</b>	<i>In terms of the NIS submitted in support of the proposed development, it is noted that the Lower River Shannon SAC and West Connacht Coast SAC, located on the west coast of Ireland, are two sites with bottlenose dolphin identified as designated features. Given the noted connectivity between the west and east coasts of Ireland, the applicant is requested to justify the omission of these two important sites for this species from the screening process.</i>	NIS Addendum and Table 1A-3. Report to Inform Screening for Appropriate Assessment – Addendum.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>NOTE 1</b>	<i>In the interests of minimising the potential for cumulative effects to arise on the environment and marine fauna, and to further inform the Boards consideration of this matter, the applicant is strongly advised to liaise with the other Phase I projects in order to develop a robust suite of appropriate mitigation measures that will reduce the propagation of noise into the Irish Sea and ensure that maximum protection is afforded to all relevant species who inhabit/transit these waters. In all cases where mitigation is proposed or requested as above, the applicant is requested to comply with all aspects of NPWS (2014) Guidelines including soft start times, delay durations, mitigation zone sites, 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 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.</i>	Chapter 10 Addendum: Marine Mammals and Megafauna (EIAR volume 2B Addendum) including Table 10A-1.  Appendix 5-4 Addendum: Marine Megafauna Mitigation Plan (MMMP) (EIAR volume 2A).  NIS Addendum and Table 1A-3.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

# 10 FISH AND SHELLFISH ECOLOGY

**Table 10-1: Further information requested on Fish and Shellfish Ecology and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
<b>Study Area</b>			
10.A	<p><i>"The Fish and Shellfish Ecology EIAR chapter has considered both a 'Western Irish Sea Fish and Shellfish Ecology' Study Area, and a 'Fish and Shellfish Ecology' Study Area. It is stated that the 'Western Irish Sea Fish and Shellfish Ecology' Study Area will be used to aid in determining the baseline, and for the determination of magnitude of impacts that extend beyond the project boundary.</i></p> <p><i>Whilst it is appropriate that the 'Western Irish Sea Fish and Shellfish Ecology' Study Area is used in the determination of a baseline, its use may result in decreased perception of impacts to local populations and/or critical supporting habitat.</i></p> <p><i>Further, the 'Western Irish Sea Fish and Shellfish Ecology' Study Area is referenced across a wide range of impacts in the determination of impact magnitude and significance, even when those impacts do not extend beyond the project boundary. This has the potential to result in an underestimate of local population impacts.</i></p> <p><i>As such, the Board considers that while the 'Western Irish Sea Fish and Shellfish Ecology' Study Area is acceptable to establish the baseline, this study area is too large to contextualise impacts. The applicant is requested that, where impacts have been assessed against the 'Western Irish Sea Fish and Shellfish Ecology' Study Area, these are reassessed against a more appropriate study area so that impact magnitude is assessed against a more suitable frame of reference."</i></p>	Chapter 9 Addendum: Fish and Shellfish Ecology (EIAR volume 2B Addendum) including Table 9A-1.	No impact or changes to assessments / documents as a result of this response.
<b>Baseline Environment</b>			
10.B	<p><i>"Table 9-8 of EIAR Chapter 9 indicates a number of species determined as being unlikely to occur within the study area, based on results of the 2007 Baseline Survey. Results of this survey are not presented in the EIAR, and these determinations can, therefore, not be verified. In certain cases, these findings appear to contradict those indicated in other sources, including Ellis et al. (2012), and therefore results of this survey should not be considered in isolation of other available data. The applicant is requested to include the 2007 Baseline Survey report/results as an Appendix in the EIAR, as well as providing a review of how the different sources were applied proportionally in the assessments."</i></p>	Chapter 9 Addendum: Fish and Shellfish Ecology (EIAR volume 2B Addendum) including Table 9A-1.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
10.C	<i>“With regard to Atlantic herring, the Board notes the submission of Appendix 09-02: Herring Spawning Technical Report. This report identifies a wide area of habitat suitable for Atlantic herring spawning, both within and surrounding the Project Area, with a ‘Main Area of Spawning Aggregation’ adjacent to the northwest corner of the Project Area. The report also recommends that further data collection is undertaken “to gain a better understanding of the specific location of the grounds within Dundalk Bay and the precise timing of the spawning events to validate the extent of the spawning period”. Data and anecdotal evidence suggest a spawning period of mid-August to March. The findings made within this report are not referenced within the EIAR, and adequate consideration of potential impacts on this herring population are not made within the assessment. The Board, therefore, requests that the applicant applies the findings of the Herring Spawning Technical Report in the impact assessment for Atlantic herring throughout the EIAR.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology (EIAR volume 2B Addendum) including Table 9A-1.	The updated information provided in response to 10.C has been considered as an indirect effects on herring as a source of prey for SCI bird species in the NIS Addendum.
10.D	<i>“Any potential mitigation measures deemed necessary as a result of the updated assessment required at B and C above should be clearly identified and considered in any updated application documentation.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology (EIAR volume 2B Addendum) including Table 9A-1. NIS Addendum including Table 1A-4.	No impact on other assessments as a result of updates in this Addendum, however, additional mitigation for herring has been included in the commitments in appendix 5-2 Addendum: EMP (EIAR volume 2A Addendum).
<b>Impacts Scoped Out of the Assessment</b>			
10.E	<i>“The Board has concerns in terms of potential impacts which have either - been scoped out for Fish and Shellfish Ecology, or have not been considered (see Table 9-11 of Chapter 9 of the EIAR):”</i>	-	-
i)	<i>“Seabed disturbance leading to the release of sediment contaminants and resulting potential effects on fish and shellfish ecology is scoped out. The justification for scoping states that “site specific sediment contamination levels are unknown”, but that “there is limited potential of contamination to sediments from anthropogenic activities given the levels identified within the offshore wind farm area and offshore cable corridor”. It is not clear whether data were available to support this statement. Further justification states that this impact was scoped out based on negligible impacts identified to Benthic Ecology receptors. The Board requests that the applicant review and justify the scoping out of this impact given the</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>sensitivity of the area in terms of fish and shellfish ecology. The planning documentation should be updated accordingly.</i></p> <p>ii) <i>Impacts associated with unexploded ordnance (UXO) are not considered within the assessment of impacts within the Fish and Shellfish Ecology Chapter of the EIAR. As a source of impulsive noise, UXO has the potential for significant impacts on marine receptors, including Fish and Shellfish impact assessments, or that rationale is provided as to why it is to be scoped out. Evidence available from the relevant supporting information (e.g. Appendix 5-13: UXO Desk Study) should be referenced.</i></p> <p>iii) <i>Colonisation of hard structures is scoped out of assessment. Whilst the scoping decision suggests that the total area of hard infrastructure is likely to be “extremely small”, Table 9-9 indicates that up to 50% of cables may require cable protection. It is also noted that this impact was scoped into the assessment of Benthic Ecology (EIAR Chapter 8). It is requested that the impact of the colonisation of hard structures is reconsidered and is scoped in and fully assessed.”</i></p>		
<b><i>Injury and/or Disturbance to Fish from Underwater Noise during Pile-Driving</i></b>			
<b>10.F</b>	<i>“The Board considers, based on the application documentation, that the assessment and consideration of underwater noise, appear under precautionary with regard to modelling and impact assessment, as follows:”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
	<p>i) <i>“While the use of soft start procedures is considered a mitigation for marine mammals, industry best practice would suggest that fish are to be considered a stationary receptor and, therefore, the references to ‘expected fleeing behaviour’ are not relevant to fish. This approach has the potential to greatly underestimate the impact ranges on fish populations. The applicant is invited to revise the planning documentation with fish considered as stationary receptors or justify this methodology.”</i></p>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
	<p>ii) <i>“It appears that there is an error in the EIAR, in that the wrong table from the Subsea Noise Technical Report (Appendix 10-02) has been transposed into Table 9-17 of the EIAR (Table 1-20 of Appendix 10-02 was transposed, but it should have been</i></p>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>Table 1-21). The transposed data indicate reduced ranges when compared to the correct data and may result in the magnitude of impacts associated with underwater noise having been underrepresented. This should be corrected (noting a request for further changes presented in point iii below)."</i>		
iii)	<i>"With regard to the noise modelling employed in the assessment, the Board has already noted above in Section 10 H of this report that the equation used has recently been reviewed within Wood et al. (2023)<sup>4</sup>, and that the modelling method of Weston (1971)<sup>5</sup> used in the application has been found to be problematic and potentially underestimates the received levels from the noise sources. The applicant is requested to address these concerns and, in particular, to provide a justification for the modelling methodology employed. In this regard, the Board is concerned that the EIAR has adopted an under precautionary approach to underwater noise."</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. Appendix 10-4: Updated Subsea Noise Modelling Report (EIAR volume 2B Addendum).  NIS Addendum including Table 1A-4.	No impact on other assessments as a result of updates in this Addendum.
iv)	<i>"Underwater noise impacts should be updated to ensure impacts are measured against the most sensitive hearing receptor group (fish with a swim bladder used in hearing e.g. Atlantic herring)."</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
v)	<i>"The total area anticipated to be impacted by underwater noise effects, at each dB threshold, should be presented alongside figures."</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
vi)	<i>"Given the extensive distance of Temporary Threshold Shift (TTS) on fish with a swim bladder used in hearing, the location of sensitive Atlantic herring spawning grounds within the boundary of the site, and the sensitivities of the species in terms of their spawning habitat in the region, the applicant is requested to assess the possibility for the use of Noise Abatement Systems (NAS) to reduce the spatial impact of underwater noise associated with impact piling beyond soft start procedures."</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.

## Oriel Wind Farm Project – Directory of Responses to Request for Further Information

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
vii)	<i>“Further to the above, the applicant is requested to provide additional information in relation to the decision to scope out the potential disturbance to fish from underwater noise generated by wind turbines during operation and impacts to fish from geophysical survey noise generated during operational and maintenance surveys, in light of any updates to the modelling requested above and to ensure impacts are measured against the most sensitive hearing receptor group (fish with a swim bladder used in hearing e.g. Atlantic herring).”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1 in chapter 9 Addendum.	No impact on other assessments as a result of updates in this Addendum.
<b>Increased suspended sediment concentrations and associated sediment deposition</b>			
10.G	<i>“The determination of magnitude of increased suspended sediments as presented in the EIAR, Section 9.10.3 of Chapter 9, excludes a number of important factors when determining potential impacts. Whilst consideration is given to suspended sediment concentrations, no quantitative assessment is made relating to spatial extent of plumes at given concentrations, or to sedimentation depth over spatial extent. Concentrations over distance, sediment settlement depths over distance, and actual peak concentrations should be presented in heatmaps. Values should also be consistent and represent the worst-case scenario (e.g. sediment concentrations are indicated to be both 500mg/l, and up to 2000mg/l within this section). Determinations of magnitude, sensitivity, and significance are required to be revised in line with and informed by provided values.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
<b>Electromagnetic Fields (EMF) from Subsea Electrical Cabling</b>			
10.H	<i>“Having regard to submissions from observers, the current understanding of the potential impacts associated with EMF in the marine environment is frequently updated via published academic research and reviews. It is requested that reference to additional and recent literature is incorporated into the assessment to ensure findings are supported by the most current understanding of potential impacts.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
10.I	<i>“Background measures have been provided in microtesla, however, contextualisation of EMF magnitude is given in milligauss. Differences between these units should be discussed, or sources should be used that use similar units to allow for a comparison between baseline conditions and operational conditions. Where magnitude is assessed, further clarity is required when discussing the findings of CSA (2019), and additional explanation as to how these values compare to those</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<i>anticipated in association with this development as no information relating to cable design is presented.”</i>		
<b>Cumulative Impact Assessment</b>			
<b>10.J</b>	<i>“In terms of cumulative impacts, the applicant is requested to consider the findings of the proposed North Irish Sea Array project application documentation which potentially overlaps with the Oriel project in terms of underwater noise. This should also be considered in terms of the potential wider ecological impacts on fish stocks/prey base, which are essential to fully assess the impact on other important ecological features such as seabirds, marine mammals and megafauna.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. Appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum). NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
<b>10.K</b>	<i>“Assessment of the cumulative impacts of underwater noise should be reassessed, following any changes made to underwater noise modelling, as requested in previous comments. Potential impacts on vulnerable species (e.g. Atlantic herring) should be assessed when considering potential for barrier effects restricting access to potential spawning habitat at a wider scale than presented in the application documentation and should also be considered in the context of the operational phase of the projects.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1. Appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum). NIS Addendum including Table 1A-4.	No impact or changes to assessments / documents as a result of this response.
<b>Other</b>			
<b>10.L</b>	<i>“In terms of the data validity and limitations (Section 9.7.4 of Chapter 9 of the EIAR), the Board notes that additional literature has been used to 10.Mcorroborate information used in older datasets used to inform the Fish and Shellfish Ecology Technical Report (Appendix 9-1 of the EIAR), and in particular, the baseline evaluation or impact assessment. The applicant is requested to provide the additional literature referred to in order to substantiate assumptions and statements.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1.	No impact or changes to assessments / documents as a result of this response.
<b>10.M</b>	<i>“There appears to be some ambiguity around the determination of magnitude of impacts in the EIAR. It is noted that where the significance of an impact is determined to fall within the category of slight/moderate, they are exclusively determined as being ‘slight’. Evidence should be presented to indicate the rationale for these assessment determinations.”</i>	Chapter 9 Addendum: Fish and Shellfish Ecology in EIAR volume 2B Addendum including Table 9A-1.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

# 11 COMMERCIAL FISHERIES

**Table 11-1: Further information requested on Commercial Fisheries and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
11.	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 documentation in support of the application including the Fisheries Management and Mitigation Strategy (Appendix 05-06 of the EIAR), all submissions made, and the location of the project site within a Designated Shellfish Waters area of the Irish Sea, the applicant is requested to submit the following further information:	-	-
11.A	The applicant is requested to respond to the concerns raised in the prescribed bodies and observers' submissions in relation to the potential impacts on commercial fishing arising from the proposed development within both the array and the cable route corridor areas. The applicant is requested to respond to concerns, specifically the practicality of co-existence with reference to Co-existence Policy 1 in the NMPF.	Chapter 12 Addendum: Commercial Fisheries in EIAR volume 2B Addendum including Table 11A-1.	No impact on other assessments as a result of this response, however updates have been made to the NMPF Compliance report (appendix A Addendum of the Planning Report Addendum).
11.B	The applicant is requested to address the submission made by the Marine Institute which raises concerns with regard to the effect of displacement of fishing activity during the operational phase of the project for mobile fishing vessels, potentially increasing fishing pressure and competition in the remaining accessible areas and will also have an impact on smaller vessels which cannot travel beyond their main area of activity. The applicant is requested to consider, in a holistic and integrated manner, the cumulative impacts associated with the potential for such displacement of the fishing effort associated with other Irish Sea Phase 1 ORE projects in this area.	Chapter 12 Addendum: Commercial Fisheries in EIAR volume 2B Addendum including Table 11A-1 in chapter 12 Addendum. Appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum).	No impact or changes to assessments / documents as a result of this response.
11.C	In terms of the submitted Commercial Fisheries Technical report (EIAR Appendix 12-01) as the assessment is based on International Council for the Exploration of the Sea (ICES) data covering the period 2012-2016, these data might be considered out of date, particularly when these data are updated regularly. The applicant is requested to update its assessment of impact and findings using the best available recent data or justify the use of the 2012-2016 data if it can be clearly shown to be the most appropriate to use.	Chapter 12 Addendum: Commercial Fisheries in EIAR volume 2B Addendum including Table 11A-1.	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

# 12 SEASCAPE, LANDSCAPE AND VISUAL AMENITY

**Table 12-1: Further information requested on Seascape, Landscape and Visual Amenity and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
12.A	The Board acknowledges the comprehensive visual impact assessment undertaken in support of the project. However, the applicant is invited to address the concerns raised by Meath County Council in terms of the potential visual impacts associated with the project on views to and from historic sites including the Bru na Boinne World Heritage Sites, approximately 28.5km from the offshore array area. Having regard to the sites UNESCO World Heritage Site designation, recognised for its Outstanding Universal Value (OUV), the applicant is requested to assess the proposed development having regard to the World Heritage Convention UNESCO Guidance Notes as they relate to visual impact assessment and wind energy projects, including 'Guidance and Toolkit for Impact Assessments in a World Heritage Context' (UNESCO, 2022), 'Guidance for Wind Energy Projects in a World Heritage Context' (UNESCO, 2023), and available UNESCO case studies relating to the assessment of offshore projects on World Heritage sites.	The Applicant's response to the concerns raised by Meath County Council is included in the 'Response to Submissions Report'. Chapter 27 Addendum: Seascape, Landscape and Visual Amenity (EIAR volume 2C Addendum) provides an assessment of the indirect landscape effects of the Project on the World Heritage Site (WHS) as well as supporting appendices: Appendix 27-1 Addendum: Seascape Landscape and Visual Amenity – Accompanying Graphics; and Appendix 27-2: World Heritage Site Assessment.	No impact on other assessments as a result of updates in this Addendum.
12.B	Further to the above request and noting the applied 5km Zone of Influence assigned to the onshore elements of the project, the applicant is requested to submit a revised Seascape Landscape Visual Impact Assessment which has regard to the cumulative impact of the proposed development and other permitted and proposed projects on the Boyne Valley and the UNESCO Sites. The cumulative impact of projects in the Irish Sea should also be considered in terms of cultural heritage and the cultural ecosystem services provided by the coastline and seascape.	Chapter 27 Addendum: Seascape, Landscape and Visual Amenity (EIAR volume 2C Addendum) provides a summary assessment of the cumulative landscape and visual effects on the WHS. Appendix 3-2 Addendum: Cumulative Impact Assessment Report (EIAR volume 2A Addendum) provides an updated cumulative assessment on seascape, landscape and visual amenity.	Further information is also presented in the Ecosystem Functions and Services Assessment Report included as Annex 1 to appendix A of the Planning Report Addendum. This provides an assessment of the cultural ecosystem.
12.C	Having regard to the Regional Seascape Character Assessment for Ireland 2020 and to observers submissions, the importance of the landscape/seascape and visual character of the Irish Sea coast as noted in the Louth County Council Development Plan 2021-2027, and to observers submissions, the applicant is requested to provide an analysis of the proposed development's potential impact on the area's sense of place and cultural identity on local communities.	Chapter 27 Addendum: Seascape, Landscape and Visual Amenity (EIAR volume 2C Addendum) provides an assessment of the potential of the Project to impact on the area's sense of place and cultural identity on local communities.	No impact on other assessments as a result of updates in this Addendum, however this assessment has been considered in chapter 26 Addendum: Cultural Heritage (EIAR volume 2C Addendum).



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
12.D	The Board notes the concerns raised by Fáilte Ireland in respect of the subject application. The applicant is requested to provide further detail and justification in relation to the effects on tourism, having regard to the Fáilte Ireland submission.	The Applicant's response to the concerns raised by Fáilte Ireland is included in the 'Response to Submissions Report'.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 13 MARINE ARCHAEOLOGY

**Table 13-1: Further information requested on Marine Archaeology and details on Applicant’s response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
13.	The Board notes that no specific intertidal archaeological study, including metal detection, has been undertaken at the proposed landfall as recommended in the Underwater Archaeological Impact Assessment Oriel Wind Farm, Dundalk Bay off Dunany, Co. Louth (Annex 2 of Appendix 15-01: Marine Archaeology Technical Report). Given the potential for finds and sites or isolated remains/features dating to the prehistoric period or later as detailed in Section 26.10.1 of the EIAR, the applicant is requested to carry out an archaeological survey of the proposed landfall at Dunany Point, which includes metal detection.	Chapter 15 Addendum: Marine Archaeology (EIAR volume 2B Addendum) including Table 15A-1.  Appendix 15-2: Intertidal Archaeology Survey Report (EIAR volume 2B Addendum) provides the results of the intertidal archaeological survey of the proposed landfall at Dunany Point, which was carried out by ADCO in January 2025.	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 14 BATS IN THE MARINE ENVIRONMENT

**Table 14-1: Further information requested on Bats in the Marine Environment and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
14.	<p><i>"The Board notes the submission of the DAU in relation to bats, both offshore and migratory, noting the effort to collect bat data both offshore and on coastal headlands. The applicant is requested to respond to the submission made by the DAU and address concerns raised.</i></p> <p><i>The applicant is requested to submit the following further information:"</i></p>	-	-
14.A	<p><i>"The applicant is requested to provide clarity in terms of the surveys undertaken, particularly within the landfall location, and confirm the dates of the most recent surveys for bat activity in this area. Bat surveys are required to be undertaken at coastal headlands proximate to the project site in order to provide data on the potential migratory movements of bats identified within the EIAR, particularly within an established migratory period."</i></p>	<p>Chapter 31 Addendum: Bats in the Marine Environment (volume 2C Addendum) including Table 31A-1.</p> <p>Appendix 31-2: Offshore Bat Survey (Autumn Migration 2024) Report and appendix 31-3: Offshore Bat Survey (Spring Migration 2025) Report (EIAR volume 2C Addendum)</p>	No impact or changes to assessments / documents as a result of the response.
14.B	<p><i>"In view of the identified significance of impacts associated with the proposed development in terms of the operational and maintenance phase of the project, due to barotrauma and collision risk, and in the absence of published empirical data, further information is required to be provided on the details of the proposed mitigation system (detection and active response curtailment (DARC)) and evidence of its effectiveness in the off-shore environment in mitigating potential impacts on bats to ensure an assessment of impacts on bats can be undertaken in terms of potential mortality and disturbance."</i></p>	Chapter 31 Addendum: Bats in the Marine Environment (volume 2C Addendum) including Table 31A-1.	No impact or changes to assessments / documents as a result of the response.
14.C	<p><i>"The Board notes that the EIAR has scoped out disturbance from lighting for bats. However, the applicant is requested to provide an assessment (with regard to appropriate lux contours) having regard to the lighting and marking plan, to determine the extent, if any, to which lighting in the offshore array area, including turbines and the offshore substation platform, may result in the vertical displacement of bats, and potentially increasing activity within the swept zone."</i></p>	Chapter 31 Addendum: Bats in the Marine Environment (volume 2C Addendum) including Table 31A-1 in chapter 31 Addendum.	No impact or changes to assessments / documents as a result of the response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
14.D	<i>“The Isle of Man has made a submission in terms of potential transboundary effects noting its the exclusion as a potential migratory route for bats. The applicant is requested to comment on this submission.”</i>	Chapter 31 Addendum: Bats in the Marine Environment (volume 2C Addendum) including Table 31A-1. See also Response to Submissions Report (section 4).	No impact or changes to assessments / documents as a result of the response.
14.E	<i>“In terms of the impacts to terrestrial bats, the Board notes the high activity for bats at the eastern crossing of the River Dee. It is further noted that the development will include the felling of 7 mature trees – BT4, BT5, BT14-18 – all of which have been identified as having low suitability for roosting bats. The Board notes that trees BT14-18 are located within close proximity to the identified ‘hotspot’ at the eastern crossing of the River Dee. While potential direct effects have been identified to bats in the EIAR, and notwithstanding the disturbance measures included in Table 19-12 of Chapter 19: Onshore Biodiversity of the EIAR, the Board requests further justification in terms of the removal of the above 5 trees which are clustered proximate to this hotspot, together with the removal of the other trees identified, with regard to potential impacts to bats. The potential location for bat boxes, as indicated as an enhancement measure, should also be identified.”</i>	Chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum).	No impact or changes to assessments / documents as a result of the response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 15 SHIPPING AND NAVIGATION

Table 15-1: Further information requested on Shipping and Navigation and details on Applicant's response

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
15.A	<i>"The Department of Transport has made a submission in terms of the potential impacts of the location of three specific turbines on established routes identified in traffic surveys of 2019 and 2022. The Marine Survey Office recommends that turbines ORI-A04, ORI-A05 and ORI-B05 are relocated elsewhere within the site to ensure that shipping navigation to the north of the windfarm can maintain adequate under keel clearance and a minimum safe distance from turbine ORI-A04, and the 10m contour line that lies to the east of Cooley Point and Castle Rocks. The applicant is requested to comment on the submission from the Department."</i>	<p>A response to the Department of Transport and the Marine Survey Office is provided in appendix 13-3: Response to Department of Transport (MSO) in EIAR volume 2B Addendum.</p> <p>Further details on consultation with the MSO and response to the issues raised are also included in chapter 13 Addendum: Shipping and Navigation (EIAR volume 2B Addendum).</p>	<p>No impact on other assessments, however updated mitigation for shipping and navigation has been included in the following documents:</p> <ul style="list-style-type: none"> <li>Appendix 5-2 Addendum: Environmental Management Plan</li> <li>Chapter 24 Addendum: Major Accidents and Natural Hazards.</li> </ul>
15.B	<i>"The applicant is requested to address the concerns noted by the Commissioner of Irish Lights in relation to the Lighting &amp; Marking Plan (LMP) and any agreed contingency measures with the Commissioner of Irish Lights, including in the case of failure of aids to navigation during all phases of the development, any proposed amendments/clarifications should be incorporated into an updated and finalised LMP, and submitted in response to the further information request."</i>	<p>An Updated Lighting and Marking Plan is included in appendix 5-8 Addendum: Updated Lighting and Marking Plan (EIAR Addendum volume 2A)</p> <p>A response to the Commissioner of Irish Lights is provided in the Response to Submissions Report.</p> <p>Further details on consultation with the CIL and response to the issues raised are also included in, chapter 13 Addendum: Shipping and Navigation (EIAR volume Addendum 2B).</p>	<p>No impact on other assessments, however updated mitigation for shipping and navigation has been included in the following documents:</p> <ul style="list-style-type: none"> <li>Appendix 5-2 Addendum: Environmental Management Plan</li> <li>Chapter 24 Addendum: Major Accidents and Natural Hazards.</li> </ul>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 16 AVIATION, MILITARY AND COMMUNICATION

**Table 16-1: Further information requested on Aviation, Military and Communication and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
16.A	<i>"The applicant is requested to address the concerns raised by the Dublin Airport Authority (DAA) Dublin Airport and the air navigation service provider (ANSP) Air Nav Ireland regarding the proposed development. The response should include a review of any potential impacts arising on instrument flight procedures and communication, navigation and surveillance equipment at Dublin Airport associated with the cranes used during construction phase of the project as well the operational of the turbines. The applicant is requested to engage with the DAA Dublin Airport and the air navigation service provider (ANSP) Air Nav Ireland in this regard."</i>	Chapter 14 Addendum: Aviation, Military and Communications (EIAR volume 2B) including Table 14A-1.	No impact on other assessments, however updates have been included in: <ul style="list-style-type: none"> <li>Appendix 5-8 Addendum: Updated Lighting and Marking Plan (EIAR volume 2A Addendum).</li> </ul> Also, updated mitigation regarding consultation is included in appendix 5-2 Addendum: EMP (EIAR volume 2A Addendum).
16.B	<i>"The Board notes the submission of EIAR Appendix 14-02: Communications Technical Report in support of the project, which focuses on the offshore elements of the project. While EIAR Chapter 29: Material Assets address the onshore elements of the project, the Board notes an anomaly in terms of existing telecommunication crossings along the cable route, and the reference to Table 29-4: Summary of the electrical network in the vicinity of the onshore cable route (as shown in Figure 29-2 to Figure 29-5) rather than the correct Table 29-5: Summary of telecommunication infrastructure in the vicinity of the onshore cable route. There is a further error in the referencing of the Table presenting a summary of the potential impacts, mitigation measures and residual effects in respect to material assets. The applicant is requested to address the anomalies within this chapter."</i>	The Applicant notes three referencing errors in chapter 29: Material Assets (EIAR, volume 2C). The first paragraph in section 29.7.7 'Built Services Crossings' should reference Table 29-6.  An incorrect reference to Table 29-4 for telecommunications services in Table 29-6 of EIAR chapter 29: Material Assets should state Table 29-5.  An incorrect reference to Table 29-17 in section 29.14.6 of EIAR chapter 29: Material Assets should state Table 29-13.  These corrections do not change the assessment and conclusions presented in chapter 29: Material Assets (EIAR, volume 2C).	No impact or changes to assessments / documents as a result of this response.



## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

### 17 TRANSBOUNDARY CONSULTATION

**Table 17-1: Further information requested on Transboundary Consultation and details on Applicant's response**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
17	<i>“An Bord Pleanála notes that the submission received by the Territorial Sea Committee on behalf of the Isle of Man, raises, inter alia, concerns in relation to the lack of consideration of designated Manx sites, with potential for transboundary impacts in particular in relation to birds, fish/shellfish, and marine mammals as well as potential impacts on Manx infrastructure and transport activities, including shipping and aviation. The applicant is requested to address the Isle of Man submission.”</i>	<p>A response to the submission from the Territorial Sea Committee on behalf of the Isle of Man is included in the Response to Submissions Report.</p> <p>Appendix 14-3: Communications Navigation and Surveillance (CNS) Technical Assessment Report (Radar Line of Site) was prepared following consultation with the Department of Infrastructure, Isle of Man on Ronaldsway Airport.</p>	No impact or changes to assessments / documents as a result of this response.

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

# 18 ROADS AND TRAFFIC

**Table 18-1: Further information requested on Roads and Traffic and details on Applicant's response.**

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
18.A	<i>"The applicant is requested to address the submission made by Transport Infrastructure Ireland (TII), which raises concerns with regard to the proposed onshore elements of the project, and in particular, the impacts, both directly and indirectly, on the N33 and the M1 routes. The applicant is requested to assess the project in terms of the provisions of national policy and the Section 28 Ministerial Guidelines 'Spatial Planning and National Roads Guidelines for Planning Authorities' (DoECLG, 2012), which seeks to avoid the creation of new accesses or the generation of increased traffic from existing accesses to national roads with a speed limit greater than 50kph."</i>	Chapter 28 Addendum: Traffic and Transport (EIAR volume 2C Addendum) including Table 28A-1. Also the following supporting appendices <ul style="list-style-type: none"> <li>Appendix 28-2: Road Safety Audit (EIAR volume 2C Addendum);</li> <li>Appendix 28-3: Design Report (EIAR volume 2C Addendum); and</li> <li>Appendix 28-4: Technical Note on Cable Construction at M1.</li> </ul>	Yes. Chapter 5 Addendum: Project Description (EIAR volume 2A Addendum) presents details on the minor changes outlined in items 1-3 in 'Summary of Project changes' in 'Directory overview' including the realigned onshore cable route along the N33. See also appendix 5-9 Addendum: Construction Traffic Management Plan. The minor changes to the Project design have also been considered in the following relevant assessment chapters in the EIAR Addendum and also the NIS Addendum:
18.B	<i>"The applicant will also note the submissions made by TII and the Louth County Councils Senior Engineer in relation to the location of the proposed site compound off the N33, temporary access tracks and the crossing of the M1 motorway. The applicant is requested to address the submissions in terms of the completion of a Road Safety Audit and Design Report for the access to the N33 for the Onshore Substation and construction compound, as well as the temporary access tracks to the N33 and Junction 14 of the M1."</i>	The Response to Submissions Report provides a response to the TII submission. Details on the Applicant's post application consultation is included in chapter 28 Addendum Traffic and Transport (EIAR volume 2C Addendum).	<ul style="list-style-type: none"> <li>Chapter 19 Addendum: Onshore Biodiversity including supporting appendices (appendix 19-1 Addendum: Onshore Biodiversity – Supporting Information and appendix 19-3 Addendum: Terrestrial Habitat Balance Sheet);</li> <li>Chapter 25 Addendum: Noise (Airborne) and Vibrations;</li> <li>Chapter 26 Addendum: Cultural Heritage; and</li> <li>Chapter 24 Addendum: Risk of Major Accidents and Natural Disasters.</li> </ul>
18.C	<i>"The applicant is requested to address the submission by TII, which raises concerns with regard to the acceptance of a Design Report and demonstration that all works to the national road comply with TII Publications and technical design standards for national roads. The applicant is also requested to submit proposals confirming the approach to be taken should any damage be caused to the pavement of the existing national road due to the construction activities, including the laying of cable on the N33, the proposed M1 motorway crossing at Junction 14 and the N33 Dee River crossing."</i>		Updated Planning Drawings have been prepared to show the minor changes to the design of the onshore cable between the M1 and the proposed onshore substation site.
-	<i>"Prior to submitting a response to the roads and traffic concerns raised in the submissions above, the applicant is requested to consult with Louth County Council as the relevant Roads Authority and TII as appropriate."</i>		

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

## 19 ONSHORE BIODIVERSITY

Table 19-1: Further information requested on Onshore Biodiversity and details on Applicant's response.

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
19.A	<p><i>"The proposed landfall for the offshore cable is located within the Dunany Point pNHA (Site Code: 001856), and within a Sedimentary Sea cliff habitat as detailed in the EIAR (Appendix 19-01). The EIAR also identifies that the offshore cable corridor comes on shore 'at a shingle bank extending from the scrub (WS1) and dry calcareous and neutral grassland (GS1) habitats to below the High-Water Mark (HWM). Vegetation was restricted to the upper section of shingle and contained a single species of rare occurrence, curled dock Rumex crispus. Below the shingle bank a tidal mudflat and sandflat was present.' The Board notes that the occurrence of shingle beach adds to the scientific importance of Dunany Point pNHA, and that this habitat is as an Annex I habitat in the Habitats Directive."</i></p>	-	-
	<p>i) <i>"The DAU considers that the description of onshore habitats is limited in the EIAR, and that sections of the cliff habitat at and in the vicinity of the Dunany Point landfall might correspond to annexed habitat Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]. The applicant is requested to submit further information in this regard, including additional survey/data, to determine if the habitats show characteristics of Annex 1 habitats, at and in the vicinity of the Dunany Point landfall."</i></p>	<p>Chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum) including Table 19A-1.</p> <p>Appendix 19-1 Addendum: Onshore Biodiversity – Supporting Information (EIAR volume 2C Addendum).</p>	<p>No impact on other assessments, however updated mitigation is included in the following document:</p> <ul style="list-style-type: none"> <li>• appendix 5-1 Addendum: Construction Environmental Management Plan (EIAR volume 2A Addendum).</li> </ul>
	<p>ii) <i>"The impacts to the identified habitats, within this eroding coastline are noted to arise due to the proposed use of dredge/open cut construction technique to allow on-shoring of the cable. This is not considered to be consistent with best practice in terms of management of impacts on intertidal sediment communities. Notwithstanding the inclusion of Section 4.11.3 of the EIAR (Consideration of Alternatives – Offshore cable construction at the landfall) the applicant is advised that the Board is not satisfied that the promotion of this construction technique within these coastal habitats is justified, given that HDD drilling is likely to be less impactful. The applicant is requested to submit a justification for the proposal to use dredge/open cut construction"</i></p>	<p>Chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum) including Table 19A-1</p> <p>Chapter 5 Addendum: Project Description (EIAR volume 2A Addendum) provides further justification on the requirement to use open trench methods for the installation of the offshore cable corridor.</p>	<p>No impact on other assessments, however updated mitigation is included in the following document:</p> <ul style="list-style-type: none"> <li>• appendix 5-1 Addendum: Construction Environmental Management Plan (EIAR volume 2A Addendum).</li> </ul>

## ORIEL WIND FARM PROJECT – DIRECTORY OF RESPONSES TO REQUEST FOR FURTHER INFORMATION

RFI	Request for Further Information	Response / Reference to Response	Further information results in changes / updates to other assessments / documents?
	<p><i>technique to facilitate the on-shoring of the cable in this instance or alternatively update application documentation to provide for HDD to facilitate the on-shoring of the cable and incorporate an assessment of any alternative impact arising throughout the application documentation where relevant.”</i></p> <hr/> <p><i>“The responses to the above should be incorporated into the assessment of the landfall of the offshore cable in terms of the significance of the impact on this coastal environment and in terms of the appraisal of Options for the location of the TJB.”</i></p>		
<b>19.B</b>	<p><i>“The Board notes that access to rivers was restricted due to flood conditions during the field survey, and therefore, the aquatic bio-index assessment was not applied in some water bodies. In addition, it is noted that the EIAR addresses this limitation by applying the latest EPA River Q-Values to supplement the assessment of aquatic features. Given the sensitivity of the aquatic habitats and the features they support, together with the fact that the aquatic bio-index assessment was not applied in some waterbodies, the applicant is requested to justify the proposal for open trench crossings of water bodies at three locations, as well as at the landfall location, where HDD might be considered less intrusive and best practice.”</i></p>	<p>Chapter 19 Addendum: Onshore Biodiversity (EIAR volume 2C Addendum) including Table 19A-1 in chapter 19 Addendum.</p> <p>Appendix 19-1 Addendum: Onshore Biodiversity – Supporting Information (EIAR volume 2C Addendum).</p>	<p>No impact or changes to assessments / documents as a result of this response.</p>